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See Page 72.

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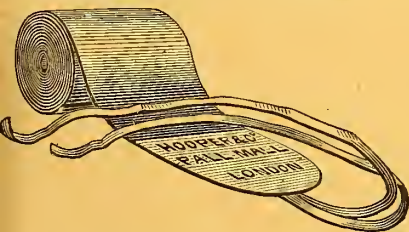
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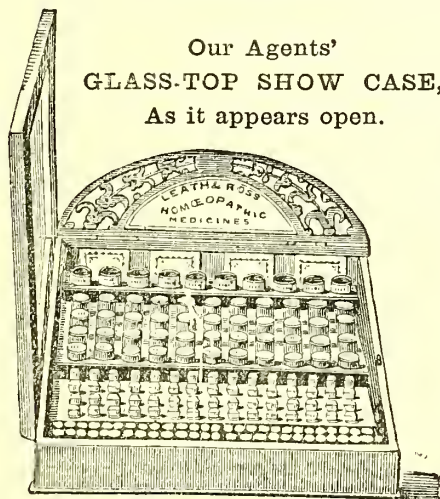
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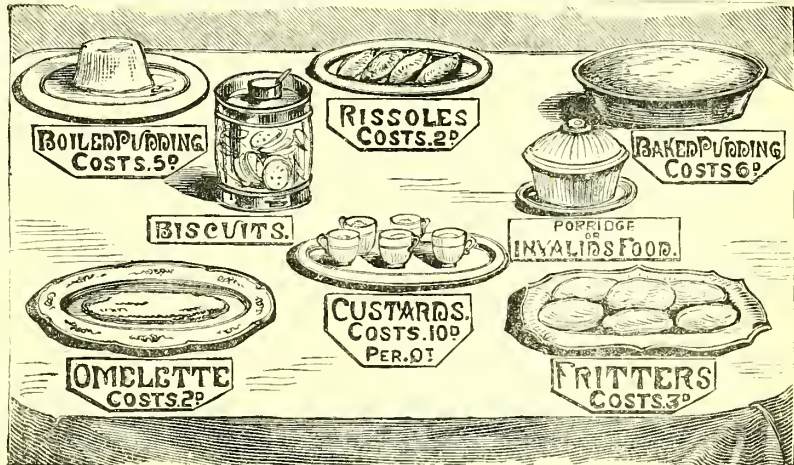
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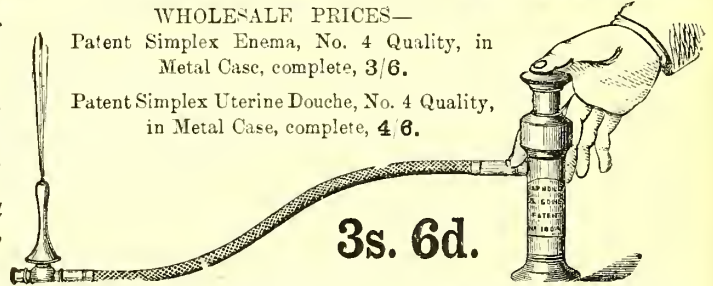


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Vide *The Lancet*, August 17, 1872; *British Medical Journal*, June 22, 1872; *Medical Times and Gazette*, June 22, 1872; *Medical Press and Circular*, June 26, 1872.



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Vide *The Lancet*, Jan. 11, 1879; *British Medical Journal*, Feb. 8, 1879; *Medical Times and Gazette*, April 12, 1879.

Extract of Letter received from J. F. FINCHETTE, Esq., Portland House, Brunswick Square, W., dated Feb. 18, 1879.

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COBDEN'S Pills (Quinine & Phosphorus). Mr. G. OSBORNE, *Coming Events Office, Fleet Street, London*, writes, October 31, 1877:—"Having taken 'Cobden's Pills' for a short time, I find myself greatly improved in health. They have had a wonderful effect on my nerves."

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COBDEN'S Pills (Quinine & Phosphorus). Mr. W. RANDALL, of Sanger's Amphitheatre, writes, October 8, 1877:—"I have derived immense benefit from taking 'Cobden's Pills.' For a long period I had been a martyr to nervous debility, and the existence I endured was sometimes unbearable. After taking them three weeks I am a new man. I eat well and sleep well, and giddiness, timidity, and lassitude have entirely gone."

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COBDEN'S Pills (Quinine & Phosphorus). They act directly on the blood, vitalising and enriching it to a surprising degree, building up the system, and throwing off the germs of disease. They thoroughly recruit the general bodily health, and restore the nervous system to a proper healthy condition, no matter from what cause impaired.

COBDEN'S Pills (Quinine & Phosphorus). Should be adopted by all abstainers as having a better and more lasting effect as a stimulant than alcohol, without possessing any of its terrible consequences. They have a certain and speedy effect in repairing the partial dilapidations Time or Intemperance may have effected on the system. They fortify it against contagion, and infuse health and vigour to resist disease.

COBDEN'S Pills (Quinine and Phosphorus). The Rev. JOHN SHEWARD, writes from Milton, Sittingbourne, Kent, October 29, 1878:—"I am happy to inform you of the great benefit I have derived from your 'Cobden's Quinine and Phosphorus Pills.' I have been a sufferer for many months from extreme diarrhoea, great weakness, and severe mental depression; my nerves were so shattered that I dreaded the simplest duties, and lost all energy and pleasure in the performance of them. The despondency I endured became almost unbearable. I tried so many things without avail, that I began to fear my complaint would refuse to yield to any treatment. I saw your Pills advertised, but my little faith prevented me sending for them until the 7th inst., when I determined to try a 2s. 9d. box. The only thing that I now regret is that I did not send for them sooner. I have been taking them just over a fortnight, and the change in my health for the better is very marked. I have lost that horrible depression, my nerves are much stronger, and my general health very much improved. I cannot express how truly thankful I feel for the remarkable and pleasing change. I shall continue to take the Pills, and always resort to them on the first intimation of failing health."

COBDEN'S Pills (Quinine & Phosphorus). Vitalise, purify, and enrich the blood. Regulate the supply of blood to diseased nerves. Nourish diseased spinal nerves. Act as a brain tonic. Act as a general tonic. Are infallible in Neuralgia. Invigorate the whole system. Are the best tonic. They afford a ready mode of gaining strength. Are pre-eminent as a means of gaining appetite. Particularly useful for delicate females. Powerfully assist the digestive organs. Throw off germs of all diseases, and thoroughly recruit the general bodily health.

COBDEN'S Pills (Quinine & Phosphorus). May be considered a specific in Neuralgia. Their remarkably rapid and lasting effects in this complaint are perhaps their most striking therapeutical power. In this as in that of some other diseases, they exert a double power; in some instances merely regulating the blood supply to the affected nerves—in others acting in addition as a tonic or nourisher of the diseased spinal nerves, or of the affected nerves themselves. Three doses will invariably cure.

COBDEN'S Pills (Quinine & Phosphorus) increase the capacity for mental and physical exertion. If the patient has the dose while in a state of fatigue, then he feels his strength renewed; if while in a state of despondency he takes a more cheerful view of things. A state of depression *does not ensue*; therefore, whilst acting as a stimulant they differ from all other stimulants, as they leave no distressing after effects.

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COBDEN'S Pills (Quinine & Phosphorus).—Mr. RICHARD ROBINSON, Schoolmaster, All Saints' School, Crawley Down, Crawley, writes, November 19, 1877:—"I and my wife took 'Cobden's Pills,' and have derived considerable benefit from them—especially me. My appetite is increased, and I work better, sleep better, feel more 'a master' than I have for some years, and I am very pleased with and thankful for the results."

COBDEN'S Pills (Quinine & Phosphorus). Assist the digestive juices to convert what we eat and drink into healthy matter, so as to afford proper nourishment to the body. Are most useful in allaying the nervous, irritable, and weakly state occasioned by over brainwork, mental anxiety, loss of rest, violent shocks, fast living, overtaxing the powers, or from any of the causes combined under the head of "indiscretions of youth." They are easy to take, being very small and perfectly tasteless. They are prepared with the greatest care by duly qualified Chemists, with improved machinery and all the modern appliances for producing perfect admixture.

COBDEN'S Pills (Quinine & Phosphorus). Are food for the brain, blood, and nerves. Are a specific in Ague. Are infallible for all Low Fevers. Are a preventative of Contagion. Are very useful in Rheumatism. Are given with success in Gout. Are the best remedy for failing powers. They cure depression of spirits. Cure pains in the back. Cure Blood Poisons. Cure Melancholia. Cure Skin Eruptions. Cure Languidness. Cure Impotence.

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All Wholesale Houses, or of the Sole Proprietors,
THE SUSSEX DRUG COMPANY, 135 Queen's Road, Brighton.

THE "PERFECTED" COD LIVER OIL

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Sole Manufacturers, **ALLEN & HANBURYS.**

The "Perfected" Cod Liver Oil is prepared by an altogether new and special process. The following advantages are claimed for it—viz., that—it is free from nauseous taste and smell. It does not produce offensive eructations or sickness. It is consequently digested without inconvenience, and can be taken by many who cannot bear ordinary cod liver oil, even of the finest quality. It presents the medicinal and nutritive qualities of the remedy in their highest degree of excellence.

Sold **ONLY** in Imperial Pints - - - - 4/9. Per dozen, 44/- } Each Bottle bears the Trade Mark
 Half-pints - - - 2/6. " 23/- } (a Plough) and the
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TO BE HAD OF ALL PATENT MEDICINE HOUSES, AND OF THE MAKERS.

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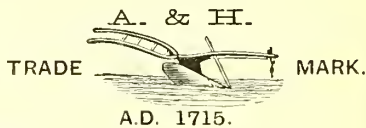
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PREPARED BY PATENT PROCESS.

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BLACK CURRANT
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JUJUBES,
 2/-

PER LB.,
 or in tin
 boxes.

2/4
 PER LB.

1 lb. size. 1/- size. 6d. size.
 Per doz. Per doz. Per doz.

30/- 8/- 4/-
 " " "
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 See Pectoral Fruit Pastilles.
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 34/ 8/6 4/4
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PASTILLES,
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 boxes.

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1 lb. size. 1/- size. 6d. size.
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32/- 8/6 4/4
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CHRISTMAS HOLIDAYS;

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FOR THE PURPOSE OF STOCK-TAKING.

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ON **WEDNESDAY**, JANUARY 21st, 1880.

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A. ATIWOOD
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GEORGE BARCLAY
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£1,000	£2,970	£1,567
200	594	287
3,000	7,160	1,988
1,000	1,917	642
2,000	3,864	955

Original Sum Assured.	Amount Payable.	Premiums Paid.
£3,000	£7,430	£4,018
2,500	6,108	3,088
300	721	336
3,000	7,349	1,913
1,000	2,414	1,321

The amounts payable under the above "Policies in force" will increase with each additional year of their subsistence.

The NEXT DIVISION of PROFITS is to be made as at 31st December, 1880.

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TWO YEARS' BONUS.

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November, 1879.

Aw. H. TURNBULL, *Secretary.*

"YOU DIRTY BOY!"

BY
GIOVANNI FOCARDI.



OF the many thousands of varied and beautiful exhibits at the Paris Exhibition nothing has proved so attractive or is so well remembered as this wonderfully realistic Statuette, well named in the pages of "Punch" as "*a souvenir of 1878*," and it will always be associated with this the greatest of all International Exhibitions as the "*pièce de résistance*" — the one thing universally known and admired. There is always some such remembrances of each Exhibition, from 1851, with its "Happy Boy and Unhappy Boy," and 1862 with its "Reading Girl," to this present instance, but in no former case has so extensive a popularity been achieved.

The experience it delineates is so common to us all, and the work of the sculptor so thoroughly true to nature, that it at once appeals to the youngest as well as the oldest amongst us. On its pedestal in Paris it was from morning to night surrounded by a crowd representing the people of every nationality, the expression in every face testifying to the skill of the sculptor and the irresistible humour of his subject.

It is now well known that this Statuette was a commission in the marble from A. & F. PEARS, Soap Makers to H.R.H. the Prince of Wales, to Signor Focardi, at a cost of £500, for the adornment of their Warehouse, and the Proprietors, at the request of many Connoisseurs and admirers of Art, have caused reproductions to be made in Terra

Cotta of about the size of the original marble, which they now offer at the prices annexed. As an attraction for the Wholesale or Retail Warehouse in any business it has never been equalled, for, as Mr. George Augustus Sala has said of it, it arrests the attention of "old and young, gentle and simple"; and it may be safely stated that, displayed as an advertisement and means to popularity, it is the cheapest ever offered, for an expenditure of ten times the amount on newspaper or other advertisement in the public press would fail to produce an equal notoriety in any city or town of the world. Annexed are a few extracts from among hundreds of criticisms.

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The Statuette has been a brilliant advertisement: my Pharmacy is visited by every one curious to see the "DIRTY BOY." The local press have given it a most flattering notice.

Yours faithfully,

GEORGE CHEVERTON.

Cooper's Effervescing Lozenge Warehouse, Oxford Street, London, W.

"YOU DIRTY BOY" is a never-ending amusement: every passer stops to smile.

W. T. COOPER.

"THE DIRTY BOY" is the attraction of the town. It is worth £20 to me as an advertisement alone.

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Trade Price of Terra Cotta Reproductions, delivered in London.

£6 6s. net.

{	Height of the Figure.	Size of its base,
	25 in.	depth. width.
		17½ in. 13½ in.

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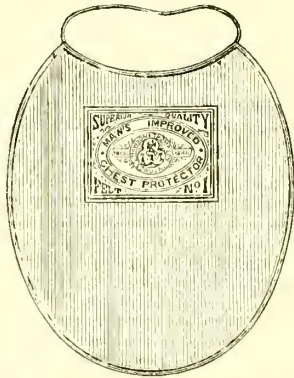
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(ELEGANT JAPANESE CUPS.)
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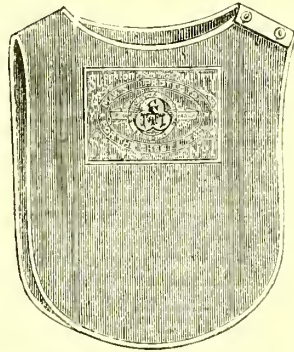
SINGLE.

DOUBLE.

No.	PER DOZ.	
	s.	d.
1 ...	7	6
2 ...	9	6
3 ...	11	6
4 ...	14	0
5 ...	20	0



All
Scarlet,
or
Assorted
Scarlet
and
White.



No.	PER DOZ.	
	s.	d.
1 ...	17	0
2 ...	22	6
3 ...	28	0
4 ...	34	0
5 ...	45	0

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ASSORTED SIZES { AUSTRALIAN OPOSSUM 16/- per dozen.
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The above are sent out in Half-dozen Boxes each, or Assorted.

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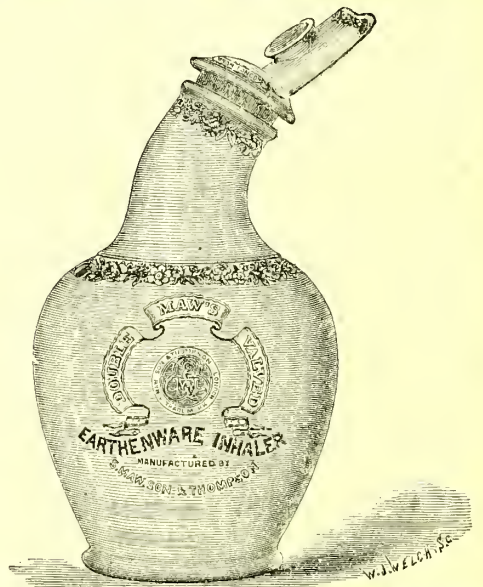


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With Elastic Tube and extra Glass Mouthpiece, 54s. per dozen.



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Ditto, with Elastic Tube, 78s. per dozen.

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A new preparation PERFECT as a BASIS for OINTMENTS, of admirable consistency, bland, emollient, antiseptic, and healing.

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"Moderate in price, and deserving a careful trial."—BRITISH MEDICAL JOURNAL.

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OZOKERINE is unsurpassed as an *unguent basis*; *unchangeable* in itself, except by the action of the *most powerful chemical agents*, it preserves other bodies with which it may be incorporated from all tendencies to decomposition. The *superiority of Ozokerine to lard* in this respect *cannot be over-estimated*.

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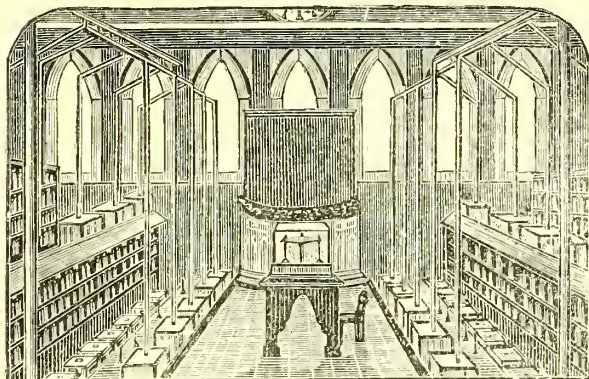
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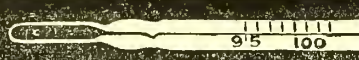


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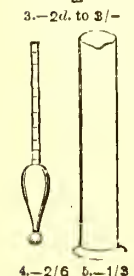
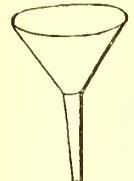
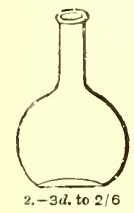
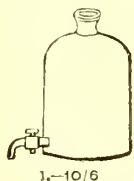
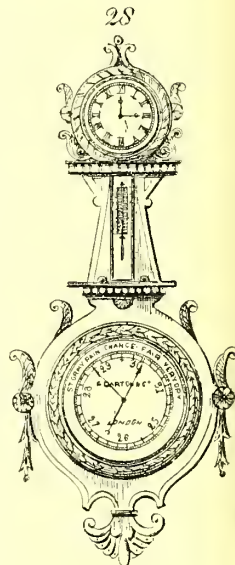
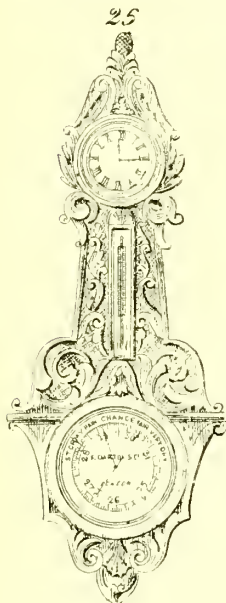
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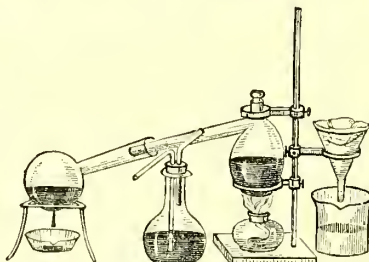
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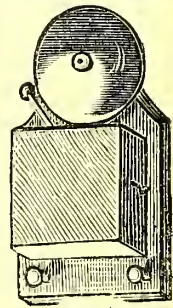
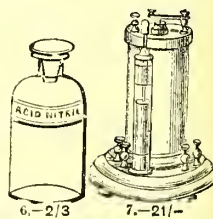
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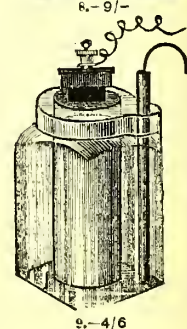


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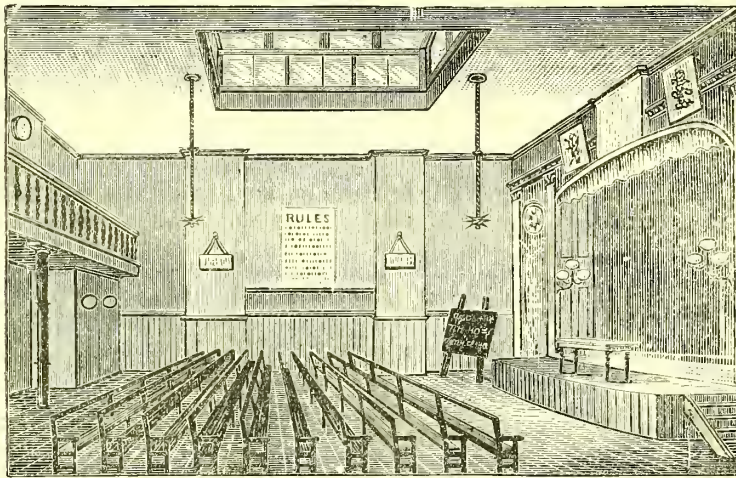
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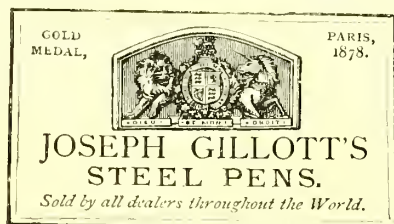
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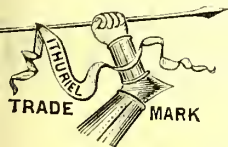
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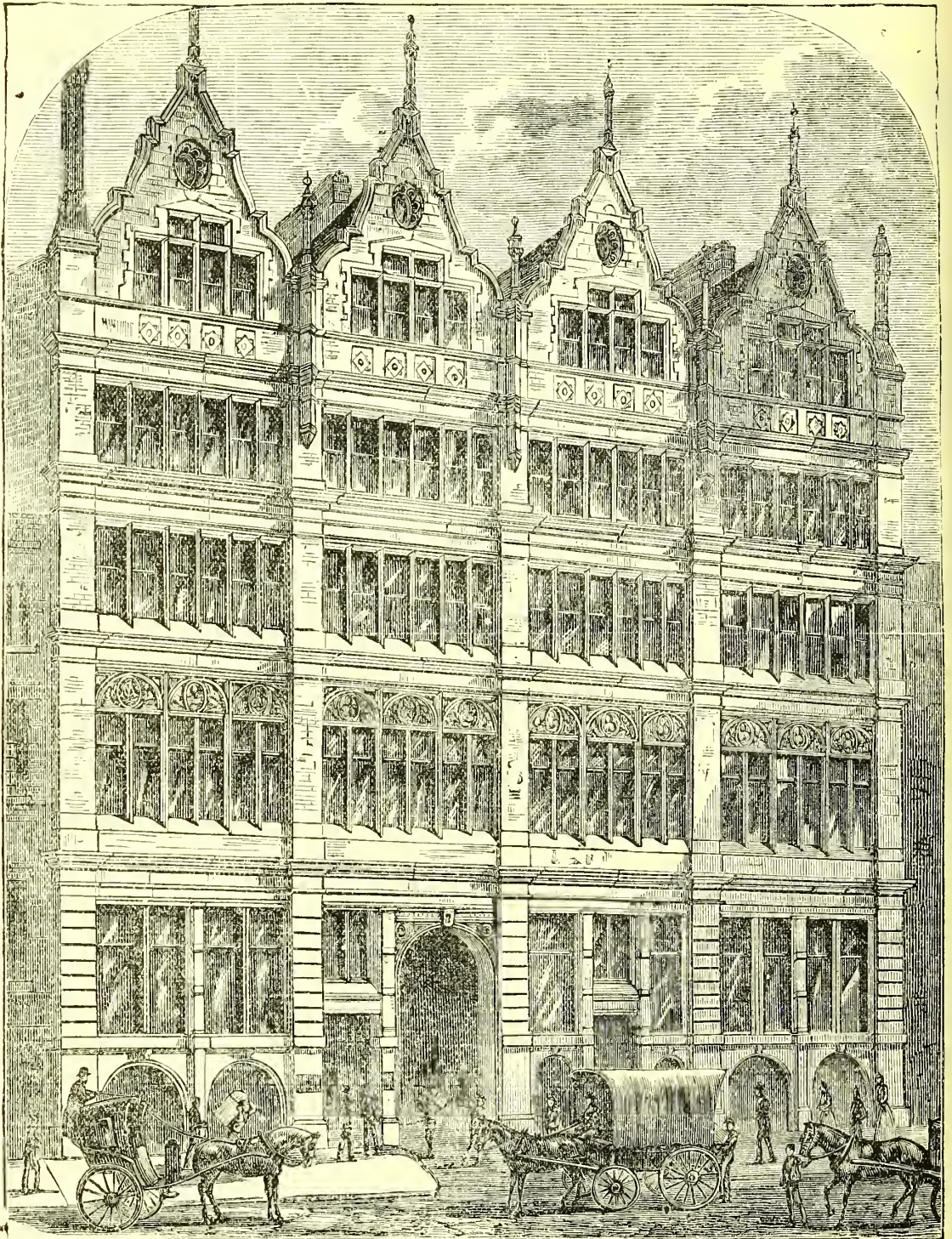
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CONDY v. MITCHELL. COURT OF APPEAL, LINCOLN'S INN, Nov. 27, 1877.

LORD JUSTICE JAMES (without needing to hear defendant's counsel) said—That such a suit should have been instituted at all was very remarkable; but that, after the learned Vice-Chancellor's judgment, this appeal should have been brought on was particularly strange. Dr. Mitchell had obtained his right by payment of a substantial money consideration, and CONDY'S FLUID AND CONDY'S OZONISED WATER WERE AS MUCH HIS PROPERTY AS THE PLAINTIFF'S. Having that right, Dr. Mitchell was entitled to set up the Condyl's Fluid Company.

LORD JUSTICE BAGGALLAY was of the same opinion. The style of the partnership had been "Bollmann Condyl & Co.," and the plaintiff set up in his own name of "H. Bollmann Condyl." It was not necessary to consider whether he might have been restrained from so doing; but he came into court with a very bad grace. To get evidence HE HAD RESORTED TO WHAT WAS, IN FACT, A TRAP TO CATCH CHEMISTS.

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RIMMEL'S AROMATIC OZONIZER, a fragrant powder which, simply spread on a plate in R apartments or places of public resort, evolves the refreshing and healthy emanations of the Pine and Eucalyptus, and produces a quantity of *Ozone*, the great air purifier. It is in use in the principal Hotels, Clubs, and Theatres, and also in the Saloons and Cabins of several Lines of Steamships. In 4 oz. tins, 1s.; by post for 15 stamps; 1 lb. tins, 3s. 6d.; Spreading Plate, 6d.

RIMMEL'S OZONIZED PERFUMERY.

DR. DAY, of Geelong, who has devoted much time and attention to sanitary questions, has discovered that alcoholic perfumes form excellent vehicles for diffusing ozone in the atmosphere and destroying noxious emanations and miasma. At his suggestion, E. Rimmel has prepared a series of Toilet Waters (Eau-de-Cologne, Lavender, and Florida), which are oxygenated by a chemical process, and evolve a quantity of Ozone. They are strongly recommended to be used on the handkerchief when attending crowded places, visiting the sick, or travelling by land or sea; also to be sprinkled on beds or carpets, or on a pad hung up in the air. Dr. Day writes to E. Rimmel (November 28, 1877):—"In manufacturing and making known the hygienic value of oxygenated perfumery you will be conferring a great benefit to the public, for it is the best means of disinfecting bedrooms, closets, &c.

PRICES:—Rimmel's Ozonized Eau-de-Cologne	4 oz. round bottles	2s. 6d.
Rimmel's Ozonized Lavender Water	8 do. do.	5s. 0d.
Rimmel's Ozonized Florida Water	16 do. do.	9s. 0d.

Sanitary Pads to be impregnated with the above and hung up in the air, 1s. The usual allowance to the Trade. Wholesale Lists on application to

EUGENE RIMMEL, *Perfumer by Appointment to H.R.H. the Princess of Wales,*
96 STRAND, LONDON.

LUXURIANT HAIR.

PETROLINE

(REGISTERED)

HAIR CREAM

THE MOST POWERFUL OF HAIR PRODUCERS'

It causes the Hair to grow on Bald Spots, by nourishing and vitalising the capillaries, and is the *only preparation* which specially acts on the Roots of the Hair. It preserves and prevents the Hair from falling off, and removes dandruff; allays all irritating sensations, and imparts a richness, lustre, and softness unapproached by any other preparation. As a Hair Dresser, Preserver, and *Producer* it is unequalled. Retail price, 3s. 6d. per Bottle (cased). To the Trade, 27s. per dozen, less 10 per cent. Handsome Show Cards and Bills with each order.

DR. DELORME'S

AMA ROSA

(REGISTERED)

TOOTH PASTE

IN COLLAPSIBLE TUBES AND GLASS TOP BOXES.

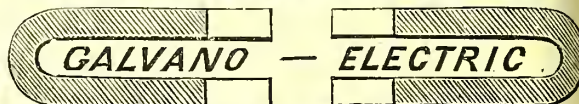
The quantity contained in these Tubes is greater than a Pot of corresponding price. Retail, 6d. and 1s. each. Special quotation, 3s. 3d. and 6s. per dozen net. Cards and Bills with every package.

Sole Proprietors—NERWICH & CO.,
WYNNE ROAD, BRIXTON, LONDON, S.W.

The Proprietors are prepared to treat for spaces in Price Lists. Terms on application.

VALUABLE DISCOVERY FOR THE TEETH!

DR. LINCOLN'S



BRUSH.

Is furnished with a perfect Battery, sufficient to relieve Toothache, Neuralgia, &c.

Price 9s. per dozen, with attractive Show Card.

PERFECTION AT LAST!

"THE GRIP" TOOTH BRUSH.

6s. 6d. per dozen.

Has every Bristle securely fastened.

Mr. Salter's Perfect Pattern Tooth Brushes are now secured by the New Grip Process.

G. SALTER & CO.,
RED LION SQUARE, LONDON,

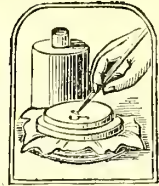
OR THROUGH WHOLESALE HOUSES.

GREAT REDUCTION OF PRICES.

6d. and 1s. PEDESTALS, Glass Cases included.

20 per cent. off £100 Orders.

10 " " " £50 " "



CAUTION

I AM DETERMINED TO PREVENT IN ALL CASES EVERY COLOURABLE IMITATION TO PROTECT MY RIGHTS & PROPERTY.

WRIT OF INJUNCTION GRANTED NOV. 28, 1877.

COMMON PLEAS DIVISION,
JAN. 15.

(Sittings before Lord Coleridge and
Justices Grove and Denman.)

HICKISSON v. ASHTON.

Defendant moved for a NEW
TRIAL.

Application REFUSED.

This action, which was brought for the alleged infringement of the Plaintiff's Trade Mark, was tried at the last sittings at Guildhall, before Mr. Baron Cleasby, when the verdict was for the Plaintiff with damages.

The PLAINTIFF was the HUSBAND of the DAUGHTER of the late JOHN BOND, the PROPRIETOR of BOND'S CRYSTAL PALACE MARKING INK. The Defendant was a Druggist, and he had sold a Marking Ink manufactured by a Mr. Murphy, and the Plaintiff complained that the Labels on Murphy's Ink were an infringement on his Labels. A TRADE MARK is not only a SYMBOL or CHARACTER, but the general appearance of a label, whereby the public would be deceived.

Their Lordships this morning, after consulting Mr. Baron Cleasby on the matter, refused the rule, that learned judge having expressed his satisfaction with the verdict.—RULE REFUSED. *vide* daily papers.

ANOTHER GOLD MEDAL AWARDED, PARIS ACADEMIE.

For Merit and Superiority of Finish, 2nd Award.

PRIZE MEDAL, PARIS, 1878, 2ND AWARD.

3 Gold and several Silver and Bronze Medals.
Hon. Mention, Paris, 1878.

PRIZE MEDAL AND GRAND DIPLOMA,
8 Medals.] PHILADELPHIA EXHIBITION, 1876. [7 Diplomas.

PURVEYOR TO THE LORDS COMMISSIONERS OF THE ADMIRALTY.

CAUTION.—The only GOLD Medal Marking Ink. Gold and Silver Medals and Diploma, Silver Medal and Diploma, London. Prize Medal, Lyons, Certificate of Merit, signed Albert Edward, Prince of Wales; and Dublin Diploma. Marking Ink Maker under Royal Warrant to Her Majesty the Queen and Court of Holland.

GOLD MEDAL, SOUTH AFRICA, 1877.

HONOURABLE MENTION and ESPECIAL NOTICE from the FRENCH PRESIDENT and H.R.H. the PRINCE OF WALES, Paris Exhibition, 1878.

HONOURABLE MENTION and DIPLOMA awarded by the JURORS, 1878.

SECOND GOLD MEDAL awarded by the PARIS ACADEMY, 1878, for Merit and Superiority of Production.

J. HICKISSON, Proprietor of the Daughter of the late John Bond's Crystal Palace Marking Ink, 75 Southgate Road, London,

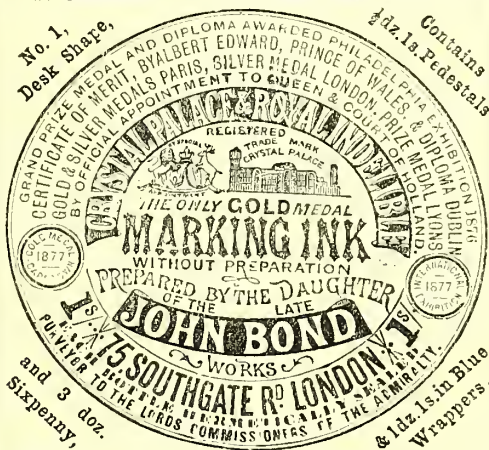
BOND'S MARKING INK.

CAUTION to Wholesale and Retail Vendors.—TAKE NOTICE that on Nov. 26th, 1877, IN AN ACTION "HICKISSON & ANOTHER against MURPHY" JUDGMENT was given for PLAINTIFFS, WITH DAMAGES AND COSTS, AND A PERPETUAL INJUNCTION GRANTED RESTRAINING the said MRS. MURPHY and her AGENTS FROM USING the word "BOND" upon any labels or pedestals manufactured by or for her, OR FROM IN ANY WAY REPRESENTING THE INK MANUFACTURED BY HER TO BE BOND'S MARKING INK.

GRANTED NOV. 28, 1877.

- d. Bottles in Round Blue Cases (Grand Show Card enclosed with each Packet of one dozen) ... 30s.
- s. Do. do. do. (Handsome Show Card enclosed with each dozen) ... 60s.
- d. Round Blue Wrapper upon Show Card of one dozen ... 30s.

FACSIMILE OF THE GENUINE LABEL.



DEAR HICKISSON, — Send on receipt the £200 order, as we are much increasing our trade by pushing your Ink in place of useless Novelties, as some other Wholesale Houses are sending other Makers', and thereby the Retail are closing their accounts. The 50 No. 1 Glass Cases are sold. Repeat order immediate.—Yours,
BROWN & CO.

29/4/78.

No Heating Required if allowed to remain three hours previous to Washing.

Where are the thousand and One would-be Makers that have expended and entirely lost large sums in trying to oppose this old-established preparation? Chemists, return all others forced upon you, and do not offend a Customer by sending a substitute.

Have you seen the New Black and Gold Glass Cases with Hinged Black and Gold Framed Linen Specimen of the Crystal Palace with elaborate GOLD Mounts?

Blue Wrappers. Black and White Oval Label.

- No. 2 CASE, containing 3 doz. 1s., Crystal Palace and Royal Indelible, Blue Wrapper, Black and White Oval Label, old style. 18s. each.
- No. 3 CASE, containing 1 doz. 1s., Crystal Palace and Royal Indelible, Blue Wrapper, old style, and 2 doz. 6d. do. do. 11s. each.
- No. 4 CASE, containing 3 doz. 6d., Crystal Palace and Royal Indelible, Blue Wrappers, Black and White Oval Label, old style. 8s. 6d. each.

CAUTION WILL PROSECUTE IN EVERY CASE OF MISREPRESENTATION OR COLOURABLE IMITATION

No Business transacted on Saturdays.

No Business transacted on Saturdays.

AWARDS : London and Vienna Exhibitions } **Wood Stains,** { AWARDS : London and Vienna Exhibitions

IN LIQUID AND POWDER.

Packed in 1-lb., ½-lb., ¼-lb., and 2-oz. Boxes, ½-pint 6d. Bottles, and bulk.

Specimen Boards and Circulars supplied when ordered.

MANUFACTURER,

THOMAS S. JACKSON,
199 BOROUGH, LONDON, S.E.,

And of all Patent Medicine Warehousemen. Write for New Price Lists of Oil and Spirit Varnishes, Colours, Paints, &c.

EWENS' CLARIFIED LARD, MARROW, SUETS, AND OILS.

JAMES EWEN & SONS are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in ointments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (*vide* P. J. Vol. I., No. 8). Direct, "for Cash only," from

JAMES EWEN & SONS' CLARIFIED FAT WORKS,
5 HATFIELD STREET, STAMFORD STREET, S.E.;

Or through any of the Wholesale Houses, with their usual credit, at a small advance.

CAUTION.—See that each package bears their label with name and weight.

WOODS' ARECA NUT TOOTH PASTE.

For Removing Tartar and Whitening the Teeth, without injuring the Enamel. Sold in Pots, at 6d. and 1s. each.

WOODS'

QUININE, CANTHARIDINE, & ROSEMARY HAIR CREAM

(WITH GREASE). Restores the Hair if weak or falling off. Price 9d., 1s. 6d. and 3s. 6d. per bottle.

WOODS'

QUININE, CANTHARIDINE, & ROSEMARY HAIR WASH

Similar to the above (without grease). Price 1s. 6d. and 3s. 6d. per bottle.

WOODS' DANDRUFF POMADE.

Never fails. 1s. per pot.

Proprietor : **W. WOODS, M.P.S.,** Chemist, Plymouth.
SOLD WHOLESALE BY ALL LONDON HOUSES.

TRADE MARK



P. A. STEVENS, Chemist and Dentist, 70 HYDE ROAD, HOXTON, LONDON, N., Sole Proprietor and Maker of the SILVERY WHITE GUTTA PERCHA ENAMEL for Stopping Decayed Teeth.

P. A. S. is prepared to supply the above to Wholesale Houses and Chemists, in any quantity, with their name stamped upon each stick, cut any length.

To be obtained of all Wholesale Houses. Price List and Samples sent post free. SPECIAL NOTICE.—The words SILVERY WHITE GUTTA PERCHA ENAMEL are registered as a Trade Mark, and will be protected.

TRY IT! SPANISH

In Bottles,



IT NEVER FAILS! WASH!!

2/6 & 5/- each.

Unrivalled for RESTORING HAIR, RENEWING, CLEANSING, THICKENING, and PREVENTING the Hair

from FALLING OFF or Turning Grey, instantly removing all Scurf or Dandruff, leaving the skin pure and healthy.

Of Messrs. Low & Haydon, 330 Strand, London; Barclay & Sons, 95 Farringdon Street, London; or of any Chemist or Hairdresser; or of A. P. Muddiman, Leighton Buzzard, Beds.

ROUND AND OVAL CHIP AND WILLOW BOXES,

WARRANTED TO STAND ALL CLIMATES,

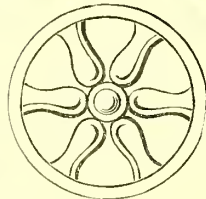
Of any size, in the very best quality that can possibly be made.

LARGE STOCK KEPT IN LONDON.

Only the Trade supplied.

Every large buyer of these goods should compare my samples and prices before ordering elsewhere.

PAUL METZ,
MANUFACTURERS' AGENT,



Please observe my

REGISTERED TRADE MARK,

And see that every Parcel bears the same on the LABEL AS GUARANTEE,

As for obvious reasons many bad foreign productions are being brought into the market.

217 UPPER THAMES STREET, LONDON, E.C.

Bankers—London and Westminster Bank, Lothbury, E.C.

1/6 JUDSON'S 1/6 GOLD PAINT.

- | | |
|------------------------|---------------------------|
| { 1 Bottle Gold Powder | } 12s. per dozen sets. |
| { 1 " Mixing Liquid | |
| { 1 Mixing Bowl | |
| { 1 Brush | |
| { 1 Bottle Gold Paint | } 10s. 6d. per doz. sets. |
| { 1 " Mixing Liquid | |

For regilding picture and glass frames.
For gilding lamp stands and gas-fittings.
For renewing ormolu ornaments.
For illuminating on paper, silk, or leather.
For artistic cabinet work.
And for a thousand useful and domestic purposes.

GREENSILL'S FAR-FAMED MONA BOUQUET

THE ORIGINAL AND ONLY GENUINE.

The great popularity of this exquisite Perfume is a proof of its excellence and superior qualities.

T. S. GREENSILL, Chemist, Douglas, Isle of Man, Inventor, Proprietor, and Maker.

AGENTS—LONDON: Sanger; Maw; Edwards; Newbery; Mather; Barclay; Whittaker & Grossmith; Hovenden; Parton & Osborne; Butler & Crispe; Tidman & Son; Barron & Squire; Wright, Layman & Umney; Jno. Thompson; Burgoyne, Burbidge & Co.; Grimwade, Ridley & Co.; Baiss Brothers. LIVERPOOL: Evans, Sons & Co.; Clay, Dod & Case; R. Sunner & Co.; Raimes & Co. MANCHESTER: J. Woolley; Lynch & Bateman; Jewsbury & Brown; Mather. EDINBURGH: Duncan & Flockhart. DUBLIN: M^rMaster; Hodgson. YORK: Sutcliffe & Headley; Clark, Bleasdale. THIRSK: Wm. Foggitt. BRISTOL: Ferris & Co. LEEDS: Goodhall & Baekhouse. BIRMINGHAM: Churchill & Son; P. Harris & Co.; Parton & Osborne; Southall Bros. & Barclay.

Agents for CALCUTTA: Smith, Stanistreet & Co. MONTREAL: Sugden, Evans & Co. NEW ZEALAND: Kempthorne, Prosser & Co. MELBOURNE: Grimwade, Ridley & Co.

Introduced in 1852.

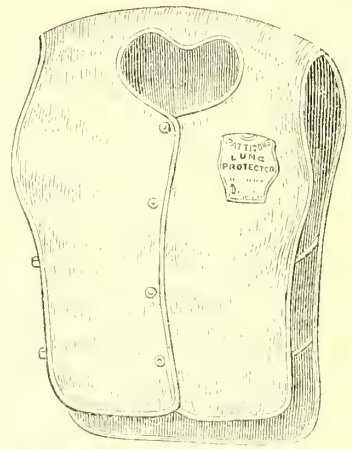
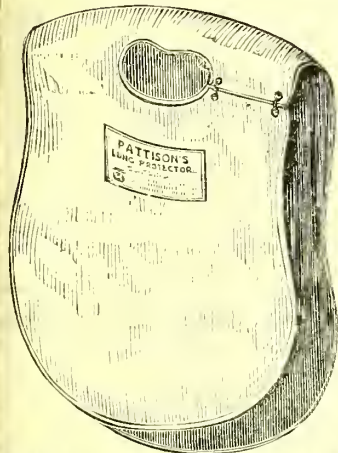
Registered Trade Mark—"Tower of Refuge, Douglas Bay."

INDEX TO ADVERTISEMENTS,

See pages 35 and 36.

THE LUNG PROTECTOR

(REGISTERED).



THE LUNG PROTECTOR.
ORIGINAL PATTERN.

LUNG PROTECTOR.
THE AMERICAN.

LUNG PROTECTOR.
THE CANADIAN.

PRICES.

ORIGINAL PATTERN, Six sizes—No. 0, 14/-; 1, 18/-; 2, 26/-; 3, 34/-; 4, 42/-; 5, 52/- per dozen.

THE AMERICAN, Five sizes—No. 1, 20/-; 2, 28/-; 3, 36/-; 4, 44/-; 5, 54/- per dozen.

THE CANADIAN, Six sizes—No. 1, 22/-; 2, 30/-; 3, 40/-; 4, 50/-; 5, 60/-; 6, 70/- per dozen.

FELT CHEST PROTECTORS.

PRICES:—No. 00, 4/-; 0, 6/-; 1, 8/-; 2, 10/-; 3, 12/-; 4, 16/-; 5, 20/- per dozen.

ALL IN SCARLET OR WHITE.

SPECIAL NOTICE.—The words "Lung Protector" are a Registered Trade Mark.

This and all other rights will be strictly protected.

IMITATORS AND DEALERS ARE HEREBY CAUTIONED.

PROPRIETOR AND SOLE MANUFACTURER,

GEORGE PATTISON,

139 ST. JOHN STREET ROAD, LONDON, E.C.

Supplied by all Patent Medicine and Wholesale Houses, subject to their usual terms.

YOUNG'S

Annicated White Felt

CORN AND BUNION PLASTERS,

Established 1846, and favourably known in all parts of the world.

Supplied throughout the Wholesale Trade.

MANUFACTORY:

72 CLERKENWELL ROAD, LONDON, E.C.

COPYRIGHT—ORIGINAL—AND ONLY GENUINE

WHITAKER & GROSSMITH'S PURE WHITE GLYCERINE SOAP.

Richly perfumed, and guaranteed to contain the necessary quantity of GLYCERINE for effectually imparting to the SKIN the softening and healing properties for which it is so justly famed. 1s. 6d. Boxes of Three Tablets, 12s. per Dozen Boxes.

SELECT TOILET PREPARATIONS, extensively increasing in demand, which attests their excellent quality.

TOILET SOAPS. Per doz.		BOUQUETS. Per doz.		POMADES, &c. Per doz.	
Cent-Fleur (copyright) 2/6	Boxes of 3 tablets 20/	Cent-Fleur (copyright)		Cent-Fleur (copyright) ...	8/ 12/ & 20/
Jockey Club "	1/6 "	Star of India ...	In Glass Stopped	Petroleum Pomade ...	12/ & 18/
Sandringham "	1/6 "	White Lilac ...	or	Brilliantine ...	8/ 12/ & 20/
Eucalyptus Oil "	1/6 "	Birthday ...	Sprinkling	Anglo Eau de Cologne ...	8/ & 12/
Wild Thyme (Thymol) 1/	" 8	Hawthorn ...	cap	Eucalyptus Vinegar ...	12/ & 20/
Semi-Cut Bars "	1/ Bars of 3 kinds 8/6	White Violet (and 50 others)	Bottles.	White Cherry Tooth Paste	8/ & 12/

Trade Price Lists sent and Orders executed through Wholesale Houses, or direct from the Manufacturers,

WHITAKER & GROSSMITH, Wholesale Perfumers, 120 Fore Street, City, London.

RECTIFIED

SPIRITS OF WINE

One Quality only—Finest BRITISH SPIRIT.

Not less than 2 Gallons, 56° o.p., 20/6; 60° o.p., 21/0 per Gallon.

" " 6 " 56° o.p., 19/9; 60° o.p., 20/3 " "

FOR CASH ON DELIVERY ONLY. COUNTRY ORDERS MUST CONTAIN A REMITTANCE.

HENRY BRETT & CO.,

OLD FURNIVAL'S DISTILLERY, 26 & 27 HIGH HOLBORN, LONDON, W.C.

BURROUGHS

SPIRITUS RECTIFICATUS, P.B.

CHEMICALLY PURE SPIRITS OF WINE.

The Best English Grain Spirit, Free from Fusel Oil.

60 over proof, 20s. 6d. per gallon; 56 over proof, 20s. per gallon; less 6d. per gallon for five gallons. Lower quotations for quantities. Cash on delivery or with order. Packages charged, and money repaid when empties returned, 2s. 6d. for two gallons; 5s. for five gallons. Country Orders must contain remittance or reference to London House.

CALE STREET DISTILLERY, LONDON, S.W.

Also Duty Free for Exportation.

THE MOST PROFITABLE BRAND.

EAU DE COLOGNE

OF THE

NUN

MARIA CLEMENTINE MARTIN,
OPPOSITE THE CATHEDRAL, COLOGNE.

SOLE AGENT FOR THE UNITED KINGDOM—

ARTHUR I. JOSEPH, St. Leonard's-on-Sea.

PRICE LIST.—Duty paid, net. In bond.

2 oz. shorts, Eau de Cologne	.. .. 8/-	.. .. 5/-
4 oz. " " " "	.. .. 15/-	.. .. 10/-
4 oz. " " " wickered	.. .. 20/-	.. .. 15/-
Half-pints " " " "	.. .. 25/-	.. .. 17/3
Pints " " " "	.. .. 50/-	.. .. 34/6
Quarts " " " "	.. .. 100/-	.. .. 69/-

Small Cases assorted to order (of not less than 3l. value in bond) delivered free freight to London, less 7 1/2 per cent. discount. May be obtained on these terms of any Wholesale House, or at the London Depot—

14 Australian Avenue. H. C. MASON, Agent.

PURE SPIRITS OF WINE

FOR

TINCTURES, ESSENCES, PERFUMES, &c.,
OXFORD ROAD DISTILLERY, MANCHESTER.

MESSRS. SMITH & GIBB

Beg to call the attention of CHEMISTS and DRUGGISTS to the under-mentioned Prices of Pure Spirits of Wine:—

Strength per cent.	Specific Gravity.	Price per gallon.
63 over proof ..	0.8238 ..	21 0
60 " " ..	0.8298 ..	20 8
55 " " ..	0.8366 ..	20 2
50 " " ..	0.8482 ..	19 6

Special quotations for large quantities.

Terms—Cash on Delivery. Jars to be returned or paid for.

Orders from the country must be accompanied with a remittance, including the price of the Jars, which are charged as follows:—2 galls. 3/-; 3 galls. 3/6; 4 galls. 4/-; 6 galls. 6/-. When the empties are returned the money will be repaid. Can be had free for exportation.

Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester. May be had from S. Maw, Son, & Thompson; Barclay & Sons; F. Newbery & Sons; Sanger & Sons; and any Wholesale House in London. Price 2s. per Box, and Family Jars 10s. each.

INDEX TO ADVERTISEMENTS

See Pp. 35 and 36.

ESTABLISHED 100 YEARS.

TOILET AND FANCY SOAPS
OF EVERY DESCRIPTION.

CHOICE PERFUMES IN BULK.

N^o 1 extra 12/ per pint of 20 ozs.
N^o 2 9/6 " " "
N^o 3 8/ " " "
* *Put also in great variety of size, style, and price.*

SOAPS.

Zi. Sulphur, Petroleum, 6d. & 1/
Pouline, Juniper Tar, & 4/ & 8/
Other Medicated Soaps .. doz.
Glycerine Jelly, 6d. and 1/
Scented Soaps, 4/ & 8/
petrol.

T. F. BRISTOW & CO.
TOILET SOAPS & PERFUMERY.
MANUFACTURERS,

PRICE LISTS
ON APPLICATION.

BRISTOW'S SPECIALITIES.

Carbolic Acid Soap... In boxes 3 thits.
Glycerine and Carbolic Acid 1/ & 1/9
Glycerine and Oatmeal Soap 1/8 & 12/ per dz.
Baby Soap for Nursery use In bxs. 4 & 12 thits.
(Illustrated Label) 1/9 and 27/ per doz.
Family Soap, in bxs. 4 & 12 thits (1/ & 2/9) 8/ & 24/ "
Cold Cream Soap, in bxs. 3 thits. in bx (1/6 & 2/6) 12/ & 21/ "
Stockholm Tar Soap } in boxes, 3 tablets in box (1/6) ... 12/ "
Pure Coal Tar Soap ... } in 4d., 6d. & 8d. thits, in 3 doz. bxs. 2/6, 3/6, 4/6 doz.
Transparent Soap, in boxes 3 tablets (1/ and 1/6) 8/ & 12/ "
Superior Lavender Soap, in boxes, 3 tablets (1/ and 1/6) 8/ & 12/ "
White Glycerine Soap, in boxes, 3 tablets (1/6) 12/ "
Dog Soap (Illustr. Wrapper), Carpet & Cloth Soap, Pumice Stone Soap (6d. & 1/)... 3/6 & 7/ doz.

5 BISHOPSGATE AVENUE, LONDON.

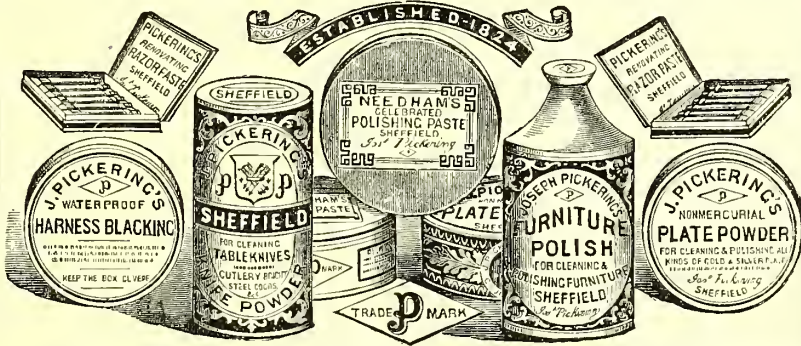
DIPLOMA OF MERIT, VIENNA EXHIBITION, 1873.

Joseph Pickering & Sons (J. Needham), Albyn Works, Sheffield,
LATE MANUFACTURERS OF

Needham's
Polishing Paste,
For Cleaning Brass,
Copper, and Britannia
Metal Goods, &c.

Pickering's Razor
Paste,
For Sharpening Razors, &c.

Waterproof
Harness Blacking,
For Black Leather
Harness.



SOLD BY ALL CHEMISTS, GROCERS, IRONMONGERS, ETC.

Sheffield Knife
Powder,
For Table Knives, Fire
Irons, &c.

Plate Powder,
For Electro-plated
Articles, &c.

Furniture Polish,
For cleaning French
Polished Furniture, &c.

Brunswick
Black,
For all kinds of
Iron Work.

H. BESSEMER'S GOLD PAINT,

RETAIL PRICES:—

Small Bottles of Gold with Liquid . . . 1s. 6d.
Medium " " & Bowl & Brush 2s. 6d.
Large Bottles of Gold . . . 3s. 6d.
" " Liquid . . . 0s. 6d.

To be obtained of all Chemists, Artists' Colourmen, and
Druggists' Sundriesmen.

NEW 1/6 & 2/6 PACKETS.

CONTENTS:—1 Bottle Gold Powder, 1 Bottle Mixing Liquid,
1 Mixing Bowl, 1 Brush, in Cardboard Box.

Where the Bowl and Brush are not required, the usual 1/6 Packet should
be purchased, as it contains a large quantity of both Gold and Liquid.

COPPER AND SILVER PAINT, AT THE SAME PRICES, AND YIELDING EQUALLY
GOOD RESULTS, CAN BE OBTAINED.

SOLE PROPRIETOR AND MANUFACTURER,

RICHARD J. ALLEN,
MANSFIELD PLACE, KENTISH TOWN,
LONDON, N.W.

Translations are supplied, Circulars, Cards, or Labels will be printed in
any language necessary for its sale.

FOR CLEANING PLATE.

**BRADLEY & BOURDAS'S
ALBATEM or WHITE ROUGE,**

For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge,
quarter of a century ago, the sale has amazingly increased
both at home and abroad. A trial is only needed to prove its
superiority over other plate powders in use. Sold in Boxes at
1s. and 2s.; Tins, 6s. 7 Pont Street, Belgrave Square,
and 48 Belgrave Road, London, S.W.

**OKELL'S ORIGINAL
MONA BOUQUET**

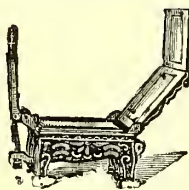
Retail, 1, 1/9, and 3/6; Wholesale, 9/ 15/, and 30/ per doz.
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Joseph Okell), may be obtained from the leading Patent Medicine
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Manchester.**

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Plate Powder**

For more than a Quarter of a Century this Powder has sustained an
unrivalled reputation throughout the United Kingdom and the Colonies as
the BEST and SAFEST article for Cleaning Plate.
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Sold by leading Wholesale Houses and Factors, and by the Inventor,
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INTERNATIONAL EXHIBITION, 1870.
283, CLASS 3.

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Specimens of Work, One Stamp.
Inventor
JABEZ FRANCIS, Rochford, Essex.
Type and Materials for Amateurs.
Amateur's Guide, 64 pp., 13 stamps.



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 9, Bond Court, WALBROOK,
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 Manufacturers of * * * * *

Patent Parchment,
 SOFT ELASTIC, White or Coloured, for tying
 over Drugs, Preserves, &c., CAPPING and
 CORKING Bottles of Chemicals, &c., &c.

White Split Skins,
 Best quality only, for CAPPING Bottles,
 from 7/6 to 20/- per doz. Also Coloured Splits.

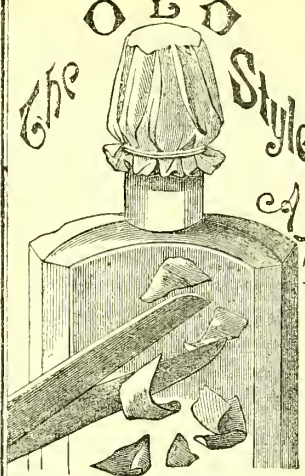
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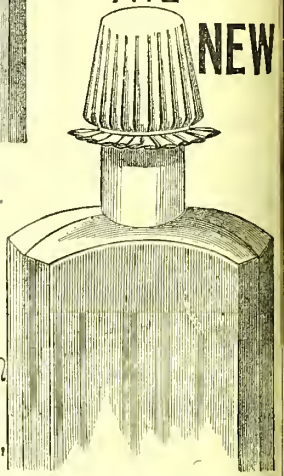
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**THE
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PLEATED BY
**PATENT
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 SOLD BY ALL
 DRUGGISTS, SUNDRIESMEN
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 CHEMICALLY PURE GLYCERINES
 AND
 TOILET GLYCERINE ARTICLES.**

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Sarg's Double Distilled Glycerine, Chemically Pure,
 30° Beaumé, in Cases of Four 56-lb. Tins each; Twenty 5-lb. Bottles, Fifty 1-lb. Bottles, and 100 ½-lb. Bottles,
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In registered Packets of three Tablets, 1s. Warranted to
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Best preventive against chapped hands, 1s., and unrivalled
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In Bottles at various prices. Either pure or diluted with water,
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Sole Wholesale Agents for the United Kingdom and the Colonies:

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Is a great improvement upon the "DENTAL SYRINGE," as the fluid is contained in a glass bulb, which enables its contents to be seen, also prevents the liability to evaporation through long keeping or exposure.

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N.B.—Both the above are exempt from Stamp Duty by permission of the Board of Inland Revenue.

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(Registered under the new Trade Marks Act),

A DELIGHTFUL, REFRESHING, AND FASHIONABLE PERFUME.

"Chemists may gratify their loyalty to their hearts' content by selling a perfume just introduced by Mr. B. Robinson, of Pendleton, Manchester, and 'The Empress of India's Bouquet.' The perfume is remarkably cheap, and is by no means lacking in richness. The shilling bottles are good sized ones, corked with the patent sprinklers, and decorated with a faithful likeness of the Empress alluded to."—Editor of *The Chemist and Druggist*, Number 15th, 1876.

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CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopœia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a full supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate.

N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopœia.



	Per lb.		Per lb.		Per lb.		Per lb.
Aqua Anethi, Concent.	4/0	Aqua Cinnam. Ver. Concent.	6/0	Aqua Fœniculi, Concent.	4/0	Aqua Pimentæ, Concent.	4/0
" Anisi, "	4/0	" Cassiæ "	4/0	" Menth Pip. "	4/0	" Rose "	8/6
" Camphoræ "	4/0	" Flor. Aurant. "	8/6	" Aug. Con. 6/0		" Rosæ Virgin "	10/6
" Carui "	4/0	" Flor. Sambuci "	8/6	" Virid. "	4/0		

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B. ROBINSON, Operative Chemist, Distiller and Brewer of British Wines, Manchester.

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JEWSBURY AND BROWN'S ORIENTAL TOOTH PASTE.

This old-established and increasingly favourite Dentifrice has been Forty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

JEWSBURY and BROWN, CHEMISTS, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered.

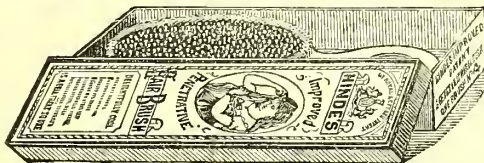
Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address card, and directions for enclosure.



HINDE'S PATENT WIRE HAIR BRUSH.

Silvered Wires and Rings of Bristle.



EACH BRUSH PACKED IN A SEPARATE BOX.

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which, with TINNED Wires, are claiming the speciality of the "Silvered Wire Brush," without its value and advantages.

Patronised by H.R.H. the Prince of Wales; H.I.H. the late Louis Napoleon; the Rt. Hon. W. E. Gladstone, M.P.

CHEAPER AND MORE DURABLE THAN BRISTLE; PLATED WIRES, AND WILL NOT SCRATCH.

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**MATHER'S
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Letters Patent.

"Unique in shape, and possesses advantages over all others."

Fitted with Boxwood Corks,	3/6 per doz.;	Black or Red Fittings,	4/3
" " Earthenware Caps,	7/0	" " " "	8/0
" " Screw Cap and Valve	12/0	" " " "	13/0

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CLOUD RESPIRATOR**

Strongly recommended by the Medical Profession for protecting the Mouth and Nostrils in damp, cold, and foggy weather, and for its Simplicity, Lightness, Cleanliness, Elegance, and Cheapness. The "CLOUD RESPIRATOR" will be found particularly valuable to persons exposed to sudden changes of temperature, or on leaving heated rooms.

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(As supplied to the Army and Navy at Scutari Hospital.)

Stamped Long Shape	1/6, 2/3, 3/0, 4/6, 6/8 per doz.
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(No Preparation or Heating required.)

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IN PATENT METAL SLIDE BOXES

A Customer writes:—"I must congratulate you on sending out the cheapest pennyworth I ever saw. Send me two gross more of your Cachous; though only opened late last night, nearly the whole of the box sent have been disposed of."

Cachou lozenges	7/0 per gross.
" (aromatisé)	14/0

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CHEMICAL FLY-PAPERS**

Price, 20/0 per 1,000 sheets.

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MATHER'S Adhesive Spread Plaister.
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TEN PER CENT. DISCOUNT FOR CASH. SPECIAL QUOTATIONS TO WHOLESALE AND EXPORT BUYERS.

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December 15, 1879.

SCALE OF CHARGES FOR ADVERTISEMENTS.

Whole Page, £5. Half Page, £2 15s. Third Page, £2. Quarter Page, £1 12s. Sixth Page, £1 5s. Eighth Page, 18s.

Special Rates for Wrapper and pages preceding and following Literary matter, also pages facing inside of Wrapper. The above Scale of Charges will be subject to a discount of 10 per cent. upon 7 and 20 per cent. upon 13 insertions, prompt quarterly payments.

N.B.—An order for 13 insertions means 12 in the CHEMIST AND DRUGGIST and 1 in the CHEMISTS' AND DRUGGISTS' DIARY. The same rule also applies to an order for 7 insertions, or to an order for insertion until countermanded, if such order is in force in October of any year.

All Advertisements intended for insertion in the current Month must be sent to the PUBLISHER OF THE CHEMIST AND DRUGGIST on or before the 12th, except Employers' and Assistants' Advertisements, which can be received up to 10 A.M. on the morning previous to publication.

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MATHER, W.	Specialties, &c.	34
MAWSON & SWAN	Norwegian Cod Liver Oil	5
MAW, SON & THOMPSON	Bromo Paper	15
MAW, SON & THOMPSON	Feeding Bottles	47
MAW, SON & THOMPSON	Respirators	43
MAW, SON & THOMPSON	Chest Protectors—Inhalers	14
MAW, SON & THOMPSON	New Show Rooms	22, 23
MAW, SON & THOMPSON	Lint	85
MAW, SON & THOMPSON	Notice—Christmas Holidays.	10
MAWER, E.	Dandelion Coffee	102
MAY & BAKER	Manufacturing Chemists	2
METZ, PAUL	Willow Boxes	28
MILLS & CO.	Bourne Aerated Waters	92
MONDOLLOT & CO.	Soda Water Machinery	94
MONK	Extract of Herbs and Fruit.	41
MUDDIMAN, A. P.	Spanish Wash	28
MUMFORD, G. I.	Pure Crushed Linseed	536
MURPHY, J.	Marking Ink	26

(N)

NELSON, DALE & CO.	"Home Comforts"	19
NERWICH & CO.	Tooth Paste, &c.	26
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NEUSTADT & CO.	Chemicals.	78
NEWBERY & SONS.	Berdoe & Co's Perfumes, &c.	57
NEWBERY & SONS	Warner's Preparations—Chest Protectors	59
NORTH BRITISH CHEMICAL CO.		59
NUBIAN MANUFACTURING CO.	Nubian Blacking	55
NUTTALL, C., & SONS	Teething Powders—Pills	80

(O)

ODET, M. C.	Solution Odet	62
ORIENTAL COMPANY	Tea	101
ORRIDGE & CO.	Chemists' Transfer Agents	38
OSBORNE, E. M.	Golden Drops for Deafness	78

(P)

PAGNY, WALLACE & CO.	Vin de Baudon	63
PARNELL	Chalybeate Saline	90
PARTNERSHIPS.		39
PATTISON, G.	Bath Gloves, Lung Protectors, &c.	29
PEARCE, ALLEN & CO.	Trusses for Hernia	54
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PETERSON & CO.	Sponge	51
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PICKERING, J., & SONS	Polishing Paste, &c.	31
PLUMBAGO CRUCIBLE CO.		50, 110
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(R)

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ROBERTS & CO.	Foreign Chemists	61
ROBINSON, B.	Dental Syringes, Corn Solvent Pencils, &c.	33
ROBINSON & SONS.	Flax and Cotton Lint	86
RUBECK, H.	Oleum Caryoph.	65

(S)

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SANGER & SONS.	Patent Medicines, &c.	58
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SAVORY & MOORE	Special Preparations	56
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SCHMEDES & CO.	Sarg's Glycerine, &c.	32
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SCOTTISH WIDOWS' FUND MERCANTILE LIFE ASSURANCE COMPANY.		11
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SILICATED CARBON FILTER CO.		98, 99, 110
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SMALE BROS.	Dental Materials	83
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SMITH, W. F.	Dandelion Antibilious Pills	80
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SOLPORT BROS.	Felt Corn and Bunion Plasters.	51
SOUTHALL BROS. & BARCLAY.	Al Cod-Liver Oil.	56
SOUTH LONDON SCHOOL OF PHARMACY.	W. Bazler, Sec.	17
STANTEN & BECKER	Ambor Vanishes	62
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STEVENS, P. A.	White Gutta Percha Enamel.	28
SUSSEX DRUG CO.	Cobden's Quinine and Phosphorus Pills	8
SUTTON & PHILLIPS	Sporokton Disinfectant	106
SYMES & CO.	Araroba—Lac Bismuthi—Ol. Lavand. Rect., &c.	69, 74

(T)

TAYLOR, T. & F. J.	Aerated Waters	105
TEA SUPPLY ASSOCIATION		105
THOMPSON & CAPPER	Homeopathic Chemists	71
THOMPSON, H. A.	Liquor Preparations	44
TOMLINSON, R.	Shop Fitter and Valuer	42
TOOMEY, M. E.	Surgeon Dentist	83
TOWLE, E. T.	Pills for Females	79
TREBLE, G., & SON	Shop Fittings, &c.	45
TULLY, J.	Teacher of Chemistry	16
TYLER, HAYWARD & CO.	Soda Water Machinery	88

(V)

VAN DUZER & RICHARDS	Bay Leaf Water, &c.	41
VICHY NATURAL MINERAL WATERS.		60

(W)

WALKER & DALRYMPLE	Tea Agency	105
WASHBURN & CO.	Salicylic—Care for Gout	66
WEST, THOMAS	Okell's Mona Bouquet	31
WESTMINSTER COLLEGE OF CHEMISTRY AND PHARMACY		20
WHEELER & CO.	"Lime Juice Saline"	100
WHITAKER & GROSSMITH	Perfumery	30
WHITE, A. J.	Mother Seigel's Curative Syrup, &c.	64
WILCOCKS, N. G.	Soda Water Machinery	96, 97
WILSON, MRS.	Female Pills	80
WOODS, W.	Arcaea Nut Tooth Paste, &c.	28
WRIGHT & BUTLER	Lamps	40
WYLEYS & CO.	Wholesale Druggists	70

(Y)

YATES, W. S.	Chemists' Shop Fitter	110
YOUNG & POSTANS	Phosphorised Cod Liver Oil. TEXT	536

(Z)

ZIMMERMANN, A. & M.	Agents for the Chemische Fabrik auf Actien, Berlin—Schering's Celloidine, &c.	75
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(Full Standard Sizes, Best Quality Scarlet or White Felt.)

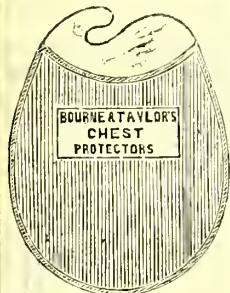


Fig. 1.

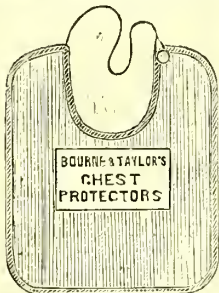


Fig. 2.

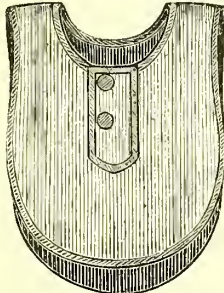


Fig. 3.

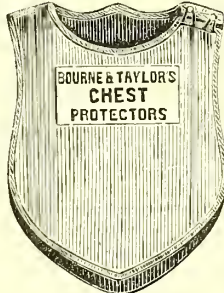


Fig. 4.

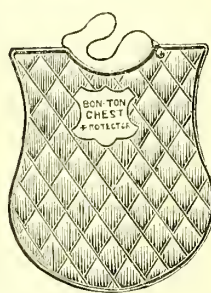
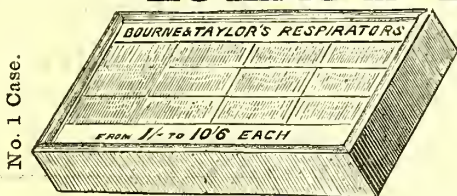


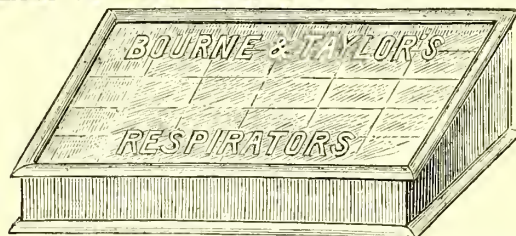
Fig. 5.

Fig. 1.—Red or White Felt, No. 0, 6/-; 1, 7/6; 2, 9/6; 3, 11/6; 4, 15/6 per doz.
 Fig. 1.—Chamois Skin, Lined with Flannel, No. 0, 6/-; 1, 8/-; 2, 12/-; 3, 16/-; 4, 20/- per doz.
 Fig. 2.—Ladies' Shape, Red or White Felt, No. 1, Size 11 by 11, 16/-; 2, 12 by 12, 20/-; 3, 13 by 13, 24/- per doz.
 Fig. 3.—Vests, for the Chest and Back, Red or White Felt, No. 0, 27/-; 1, 36/-; 2, 42/- per doz.
 Fig. 4.—Lung Preservers, Red or White Felt (these are cut out of one piece, and have no seam on the shoulder), No. 1, 19/-; 2, 25/-; 3, 32/-; 4, 38/- per doz.
 Fig. 4.—Lung Preservers, Chamois Skin, lined with Flannel, No. 1, 20/-; 2, 28/-; 3, 36/-; 4, 45/- per doz.
 Fig. 5.—The "Bon Ton," Quilted Satin, very handsome, No. 1, 18/-; 2, 21/-; 3, 24/- per doz.
 Hare Skins, lined with Silk, 18/-, 21/- per doz.
 Opossum ditto, 18/-, 21/-, 24/- per doz.
 English Rabbit, 12/- per doz.
 Labrador Fox, 16/- per doz.
 White Polish Rabbit, 18/-, 21/- per doz.
 (B. & T.'s Chest Protectors are neatly put-up in Glass-top Boxes, containing One Dozen.)

RESPIRATORS.



No. 1 Case.



No. 2 Case.

The following assortment contains the leading Patterns:—

No. 1 Case—		Nos.	Producing retail	£4	5	6
Two each,	1, 2, 3, 4,		£2	6	8	
One	5, 8, 10, 12, 14, 15, 17, 18, 20, 21, 22		Less 10 per cent.	0	4	8
				2	2	0
			Showing a PROFIT of £2 3 6			

No. 2 Case—		Nos.	Producing retail	£10	18	6
Six each,	1, 2, 3, 4,		£5	18	2	
Two	5, 6, 8, 10, 12, 17, 18, 21, 22		Less 10 per cent.	0	11	10
One	7, 9, 11, 13, 14, 15, 16, 20, 23, 25			5	6	4
			Showing a PROFIT of £5 12 2			

No.	Description	Shape	Retail Price	Wholesale Price
			Each.	per doz.
1.	The Shilling Respirator	Oval	1/-	£0 8 0
2.	Metallic, Cotton Velvet Pads	"	2/-	0 12 0
3.	" Silk Velvet Pads	"	2/6	0 18 0
3A.	Silver-plated Wire, Silk Velvet Pads	"	2/6	0 18 0
4.	" " " "	"	3/-	1 1 0
5.	" " " "	"	4/-	1 8 0
5A.	" " " " Without Ends	"	3/6	1 4 0
6.	" " Elastic Silk Mouthpiece	"	4/-	1 10 0
7.	Gold-plated " Silk Velvet Pads	"	7/6	2 8 0
8.	Three-fold Silver-plated, Velvet Pads and Silk Mouthpiece	"	6/-	1 16 0
9.	" Gold-plated " "	"	7/6	2 8 0
10.	The Aërial Respirator, Silver-plated, Ladies'	Oval	5/-	1 10 0
11.	" " Gold-plated " "	"	6/-	2 2 0
12.	" " Silver-plated, Gents'	"	6/-	1 16 0
13.	" " Gold-plated " "	"	7/6	2 8 0
(The Aërials may be had covered with black or drab.)				
14.	Gold-plated Wire, full size	"	7/6	2 8 0
15.	Gold-plates, full size	"	7/6	2 8 0
16.	Orinasal, Silver-plated Wire	Square	4/-	1 10 0
17.	Ladies' Miniature, Silver-plated	Oval	5/-	1 10 0
18.	" Gold-plated " "	"	6/-	2 2 0
19.	The Manifold Respirator, of variable power, containing six Metallic Plates, four of which are movable, Gold-plated	Square	10/6	3 12 0
20.	Ditto ditto ditto ditto ditto ditto	Oval	10/6	3 12 0
(The Manifold Respirator may be worn with or without plates a and b.)				
21.	Gents' full size, Silver-plated	"	5/-	1 10 0
22.	" " Gold-plated " "	"	6/-	2 2 0
23.	The Cotton-wool Respirator, Silver-plated	Orinasal	5/-	1 16 0
24.	" " Gold-plated " "	"	8/6	3 0 0
25.	" " " " " "	Oval	5/-	1 16 0
(As recommended by Professor TYNDALL.)				

Nos. 1, 2, and 3 Contain 1 Metallic Plate. Nos. 7, 8, 9, 12, 13, 14 and 15 Contain 3 Metallic Plates.
 " 4, 5, 6, 10, 11, 16, 17, 18, 21, 22, 23, 24, & 25 " 2 " Plates. " 19 and 20.. " 6 " "

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32 LUDGATE HILL, LONDON (14 Doors from St. Paul's Churchyard).

MESSRS. ORRIDGE AND CO., CHEMISTS' TRANSFER AGENTS,

May be consulted at the above address on matters of SALE, PURCHASE, and VALUATION.

Immediate attention given to Foreign Commissions.

The Business conducted by Messrs. ORRIDGE and Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade.

VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment.

PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

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MESSRS. ORRIDGE & CO. are instructed to transfer—

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3.—BROMLEY, E. " £480	About £450	11.—READING (near)..... " £200 per ann.	" £200
4.—BERKS " 1,100	Price £1,300	12.—SURREY (Suburb) " 700	" £700
5.—CAMDEN TOWN.. .. upwards of £800	" £700	13.—WELLINGTON, SOMERSET.. Returns £400 per ann.	" £300
6.—CLAPHAM..... .. " 700	" £700	14.—SOUTH AFRICA, Port Elizabeth district, a good investment offers;	
7.—DURHAM " £410 per ann.	" £350	capital required £1,200; the business is rapidly increasing.	
8.—EARLESTOWN.... .. " about £500 per ann.	" £200	Particulars on application.	

Many other Businesses, Town and Country, on application.

ORRIDGE & CO., 32 Ludgate Hill, E.C.

MIDLAND COUNTIES TRANSFER AGENCY.

F. J. BRETT,

VALUER TO THE TRADE,
LEICESTER.

All kinds of Chemists' Stock and Fixtures valued. Partnerships arranged. Particulars of different classes of Businesses forwarded to Buyers.

Through this Agency Businesses are disposed of quickly, and with as little publicity as possible.

F. J. BRETT, having relinquished the Retail, is now enabled to devote the whole of his time to Transfers and Valuations.

Terms on application. May be consulted personally or by letter upon matters in connection with the Trade *entirely free of charge.*

LIVERPOOL.—Death Vacancy; First-class Family, Retail, and Dispensing; in prominent position; very old established; average returns for last three years £1,100.

The three Death Vacancies advertised recently are now all sold.

NOTTINGHAM.—Death Vacancy in central position; established 20 years; returns last year, £900; price, £450.

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SOMERSETSHIRE.—Country Retail, with Mineral Water Factory; capable, with capital, of great extension; present returns, £600; for £550.

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NORFOLK.—Country Retail, in market town; no paints, tobacco, &c.; returns £12 per week; price about £500.

WORCESTERSHIRE.—Thoroughly genuine Retail; returns, which are increasing, are now £600 and of very profitable character; price, £425.

LANCASHIRE.—In fashionable seaport; good shop, house, and garden; stock and fixtures at valuation.

F. J. BRETT, LEICESTER.

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May be consulted every morning, from 10 till 2 o'clock, on all matters of Sale, Purchase, or Valuation, and now submits:—

1.—PARTNERSHIP in small Wholesale House in London; capital required for working Partner £500, secured.

2.—PARTNERSHIP in Retail Druggist's in London to work in conjunction with a surgeon, capital required only £150, but highest references.

3.—SOMERSET.—A well-established Retail, low rent on long lease, and doing a profitable trade, luxuriously fitted in mahogany, for £100 and valuation.

4.—AN OLD-ESTABLISHED country light Retail, having an extensive connection at large profits; house and premises are most convenient at really nominal rent; from £2,000 to £3,000 required, but part might remain at interest.

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Many others in all parts of England, ranging from £500 to £2,000.

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Advertisements appearing under the following Headings are charged at the rate of 4s. 6d. for 7 lines and under, and 6d. extra for every additional line, payable in advance.

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BUSINESSES WANTED.

THE ADVERTISER wishes to invest from £1,400 to £1,600 in a first-class Dispensing and Family Business which will bear investigation. Address, B. C. V., Albert House, 3 Lambert Road, Brixton Rise, S.W., London.

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FOR DISPOSAL the old-established Dispensing and Light Retail Business of Newhall & Mason, 10 Derby Road, Nottingham; satisfactory reasons for leaving. For particulars, apply as above, or F. White, Chemist and Trade Valuer, London Road, Nottingham.

DRUG, OIL, AND DRY-SALTERY.—To be Disposed of an old-established Wholesale Business, with large and valuable connection; one or two persons with £2,000 or £3,000 would find this an opportunity that seldom occurs. For particulars, apply Tomlinson & Co., Shude Hill, Manchester.

PRESCRIBING and Retail Business for immediate disposal, in the City of Bristol; established over 50 years; rare opportunity for an energetic person; corner shop; a week's trial allowed; satisfactory reasons for disposal; price £200. Address, "Chemist," Mr. Walters, 81 Kingsdown Parade, Bristol.

IMMEDIATELY.—Near Liverpool; established 1846; corner of two principal thoroughfares; Dispensing and Light Retail; returning nearly £1,200 per annum, with good profits; will bear the strictest investigation; shop handsomely fitted and well stocked; good house. Apply M. P. S., care of Messrs. Evans, Sons & Co., Hanover Street, Liverpool.

TO BE SOLD, with possession at Christmas, a compact Chemist's and Mineral Water Manufactory, situated in a pleasant market town in the West of England; has a good connection, and is guaranteed a *bona fide* Business; introduction given if desired; price about £600. Reasons for Disposal, and all particulars, of Mr. Hine Gilbert, Transfer Agent, 17 Hart Street, Bloomsbury Square.

£140.—Immediately for cash, the Stock, Fixtures, and Fittings of a Chemist and Druggist, in a thickly-populated part of Sunderland, where a mixed business has been carried on over 20 years; rent of house, shop, and warehouse, £38, part can be let off; proprietor going to a lighter business; nothing asked for goodwill. Apply to W. Dodd, 20 Moor Street, Sunderland.

TO CHEMISTS AND DRUGGISTS.—For Sale by Private Treaty, as a current-going concern, the Stock in Trade, Fixtures, and Business of a Chemist and Druggist, situated in a rising town in the North of England; the excellent freehold business premises may be secured on favourable terms. For further particulars, apply to Gillespie Brothers & Co., Public Accountants, Cross House Chambers, Westgate Road, Newcastle-on-Tyne.

TO WHOLESALE AND RETAIL CHEMISTS.—To be Disposed of at once, in consequence of the death of the Proprietor, the old-established Wholesale and Retail Business, 36 Wellington Street, carried on for the last 35 years by the late Mr. Thomas Rushworth; this is a chance for an energetic young man seldom met with. Apply, by letter in first instance, to Mrs. Rushworth, 169 Woodhouse Lane, Leeds.

TO CHEMISTS AND DRUGGISTS.—For Sale by private treaty as a current going concern, the Stock-in-Trade, Fixtures, and Business of a Chemist and Druggist, with a good House, Shop, Plate-glass Front, Cellar, and Warehouse, carried on by the owner for more than 20 years, in the centre of Derby; the excellent Freehold business Premises may be secured on favourable terms. For further particulars apply to Mr. S. Wolley, Curzan Street, Derby.

FOR DISPOSAL.—A profitable Business (established 1856) in an excellent thoroughfare in Sheffield; Retail and Prescribing; no heavy trade; fixtures, £100; stock at valuation; good shop, plate-glass windows; large commodious house; no opposition; proprietor having other engagements; property increasing in value; a rare opportunity for an energetic man with small capital. Reference to Messrs. James Woolley, Sons & Co., Manchester. Address, "Chemist," 19 London Road, Hockley, near Sheffield.

PARTNERSHIP.

PARTNERSHIP, ABOUT £2,000.—Advertiser, who is a good chemist, is desirous of entering a Manufacturing or Wholesale Business, in or near London, requiring the above capital; must bear strictest investigation. Address, A. J. Z., Messrs. Deacons, 154 Leadenhall Street, London.

EMPLOYERS WANTING ASSISTANTS.

Advertisements are inserted under this Heading at a charge of 4s. 6d. for 7 lines and under; every additional line, 6d., payable in advance.

IMPROVER or Junior, in a Mixed Business. Apply, with usual particulars, to W. Colley, 64 and 65 Sherlock Street, Birmingham.

APPRENTICE.—Charles H. Ridley (successor to Wimble & Co., Wholesale Druggist and Family and Dispensing Chemist, Maidstone, has a Vacancy for a respectable well-educated Youth as an Apprentice; indoors.

MESSRS. MARRIOTT & CO., Dispensing Chemists and Homœopathic Pharmacologists, Havelock Road, Hastings, want a young man as Assistant; must be a neat dispenser and good salesman. Apply, stating age, salary, &c.

A COMPETENT ASSISTANT for a Mixed Country Retail and Prescribing Business in the County of Durham; single; not under 22; outdoor; one accustomed to a similar trade preferred; only those whose character, ability, and references are undeniable, need apply. State full particulars to "Chemist," 28 Bigg Market, Newcastle-on-Tyne.

WANTED (with a view to Partnership) on February 1 a Licentiate of the Pharmaceutical Society, Ireland, to manage a light Retail and Compounding Business in Ireland. None need apply whose character will not bear strictest investigation. Applications, with testimonials, to be addressed to "Medicus," Office of THE CHEMIST AND DRUGGIST, 44A Cannon Street.

SITUATIONS AT HOME.

The Proprietors of "THE CHEMIST AND DRUGGIST," anxious to make their Journal more than ever the medium of communication between Employers wanting Assistants, and Assistants wanting Situations, have decided henceforth to print that class of Advertisements on a separate sheet, as well as in the body of the Journal, and this separate sheet will be forwarded post-free to any address on the 15th of the month on receipt of a penny stamp. The Proprietors will be much obliged if Chemists' Assistants will make this announcement known as generally as possible, as it is in their interest that the plan is proposed.

ASSISTANTS WANTING SITUATIONS.

Please note that replies to Advertisements ordered to be addressed to Post Offices are liable to be forwarded to the Dead-Letter Office.

Assistants Wanting Situations have the liberty of inserting advertisements of 12 words for 1s.; every additional 3, 4, or 6 words, 6d., payable in advance.

A S JUNIOR, aged 23, Disengaged in January. T. Hulme, jun., 132 Huddersfield Road, Oldham.

A S JUNIOR ASSISTANT, height 5 feet 9½ inches, good reference. Apply to J. Palmer, Chemist, Littleport.

SITUATION wanted, by a young man in Warehouse, bottle-washing, packing, or porter; good character. W., 72 Lillingston Street, S.W.

EVENING Employment wanted, Dispensary or Retail; salary moderate. D., Office of THE CHEMIST AND DRUGGIST, 44A Cannon Street.

A S ASSISTANT; age 23; Minor; 7 years' experience. Address, S. W., Chemists' Association, Church Institute, Leeds.

A S ASSISTANT, or to Manage a Branch; 17 years' experience; has been in business on own account for 12 years. Letters to "Chemicus 1," CHEMIST AND DRUGGIST Office.

WANTED, a Situation as Improver, or Junior Assistant, in a good-class business; preference given to a large town. Apply, J. F. Keating, 12 Bridge Street, Stratford-on-Avon.

ONE used to the Retail requires an Engagement either in the counting-house, or to travel for a wholesale firm. W. F., 42 Baldwin Street, Bristol.

A GENTLEMAN wishes to meet with an Engagement as Assistant in a first-class Dispensing and Family Retail Business. Apply to H. Clarke, 21 Surrey Street, Norwich.

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WHOLESALE DRUGGISTS.—The Advertiser, age 27, married, is open to accept a permanent Engagement as Manager, or superintend office work; first-class London and country experience. Full particulars to "Chemists," 122 Bedford Place, Reading, Berks.

A REGISTERED CHEMIST, age 31, single, seeks a Re-engagement; has managed a London Branch for four years, and one at Brighton for two; excellent references. H. A. N., 127 Hemingford Road, Barnsbury, N.

MISCELLANEOUS.

TO SURGEONS, CHEMISTS, DISPENSERS, &c.; rent £42.—To be Let, Corner Premises, with double-fronted Shop in populous and growing neighbourhood, close to Wandsworth Road Station, and offering special opportunity for the establishment of good Chemist's open Surgery or Dispensary, which are much needed. Apply, Mr. Ferguson, 83 Lombard Street, E.C.

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TO PATENT MEDICINE PROPRIETORS.

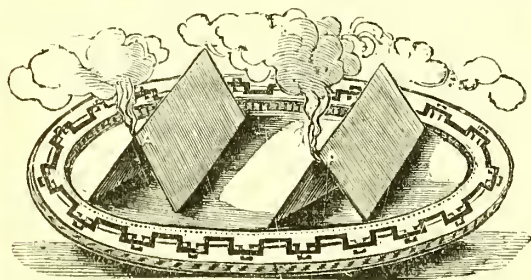
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Supplies the above, loose, at 7/- per gross; and in boxes at 8/-, 9/-, and 10/- per doz., through the Wholesale Houses, or from 29 OLD STREET, LONDON, E.C.; and will forward list of articles packed by him on application.

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FOR THE IMMEDIATE RELIEF AND SUBSEQUENT CURE OF

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DIRECTIONS.—Fold and place one or two pieces of paper on a dish; and light the top at point A. A dense fume will then arise and gradually fill the room; and after inhaling it for a few minutes the air-tubes will be cleared of mucus, difficult respiration will cease, and the patient will fall into a sound and refreshing sleep. The outer air must be excluded by keeping the windows, doors, and chimney closed. The paper may be burnt in the day as well as at night if necessary.—Price 2s. 9d., 4s. 6d., and 11s. per box.

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FOR THE LIVER AND FOR THE BLOOD.

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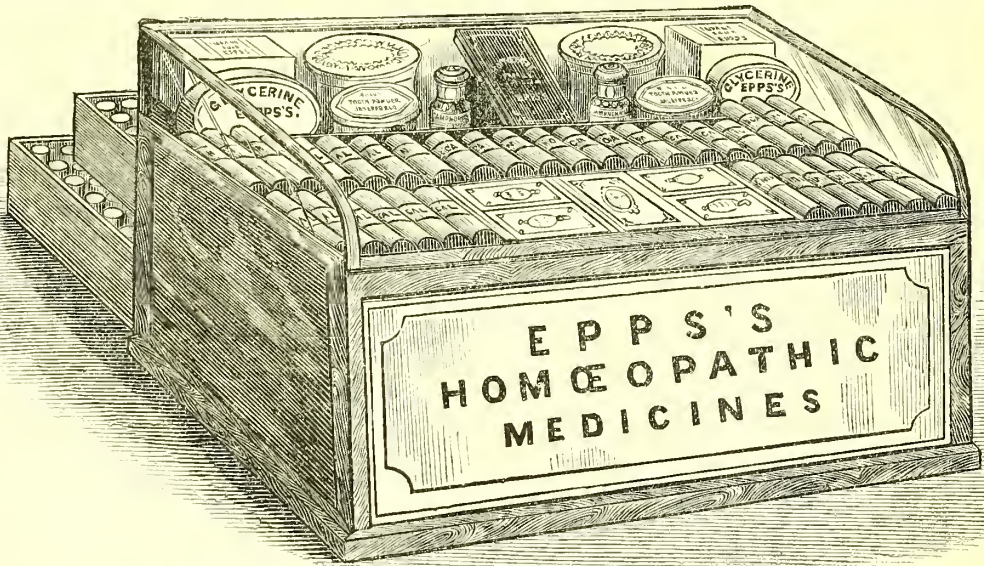
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 A Mild Smoking Tobacco. } Foil, 2 oz., 1 oz.
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PACKED SHAG.

Superfine Shag	$\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb.	
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For Retailing at 3d. per oz.	{	Good Shag	...	$\frac{1}{8}$ lb., $\frac{1}{16}$ lb., $\frac{1}{32}$ lb.
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ESTABLISHED ONE HUNDRED AND FIFTY YEARS.

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Maw's Incorrodible Metallic, each in handsomely labelled box,—

No. 1	2	3	4	5	6	7	8	
10/-	21/-	30/-	32/-	40/-	45/-	50/-	56/-	per doz.
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								£	s.	d.
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Oral , second or full power, ladies' or gentlemen's	8/0	12/0	5/8	8/6	3/0	4/6
Oral , ditto children's	3/8	5/6
Orinasal , variable power, medium to low, ladies' or gentlemen's	9/4	14/0	7/0	10/6	4/0	6/0
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Chemists commencing Business, Fitting-up Shops, or making alterations to their premises, should first inspect KIDSTON'S modern and unique style of manufacture, so much approved of by the Profession for its elegant appearance and superior finish.

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Which can be seen at the Show Rooms,

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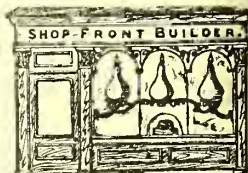
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ESTABLISHED 1830.

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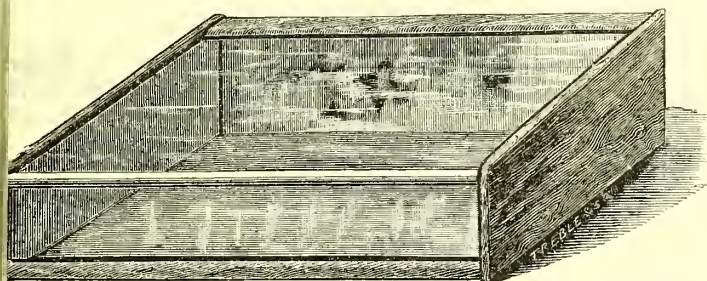
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R. T. will wait upon parties fitting up, to plan and advise. 2nd-class fare only charged
FOR SALE, FIXTURES FOR SHOP, ABOUT SIXTEEN FEET BY TWELVE.

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THE WELL-KNOWN "LONDON" SHOW CASE.

SIMPLE, ELEGANT, AND USEFUL.

Made of Solid Mahogany and French Polished; Polished Plate Glass Top and Front $\frac{1}{4}$ inch thick.

This Show Case cannot be equalled at the price.

Among the many advantages combined in this useful and inexpensive SHOW CASE, we may mention that it is so made that two or any number may be placed together, to occupy full length of counter if required. It is made 24 in. long, 18 in. wide, 8 in. high at back, and 7 in. in front. A bright burnished silvered Bar has been introduced in front, which has an excellent effect; does not change colour; is ways bright, and merely requires dusting. The back of Case is hinged to open, and secured by a brass spring catch. The bottom of Case is covered with blue leatherette.

Special Price, 18/6 for Cash.



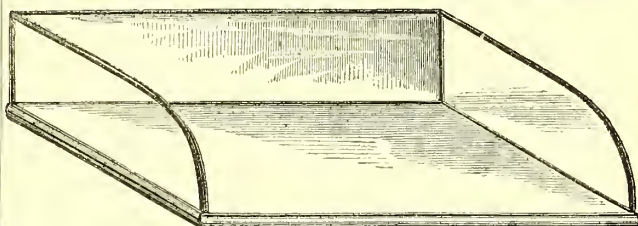
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SIZE.**

REGISTERED
CRYSTAL
CUT GLASS
DRAWER KNOB
PRICE 4/6 doz.

Borers for Making Holes,
and Tool for making the
Screw in drawer front,
1s. each.

A Sample Knob will be sent by Post
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TREBLE'S HALF-GUINEA SHOW CASE.



10/6 Cash.

Packed in Deal Box for enclosure Free of Charge.

This neat and elegant little Show Case is 14 inches long, 10 inches back to front, 3 inches deep inside, with clear bent glass top, glass ends, silvered glass mirror back, the bottom lined with blue velvet, and edged with ebony.

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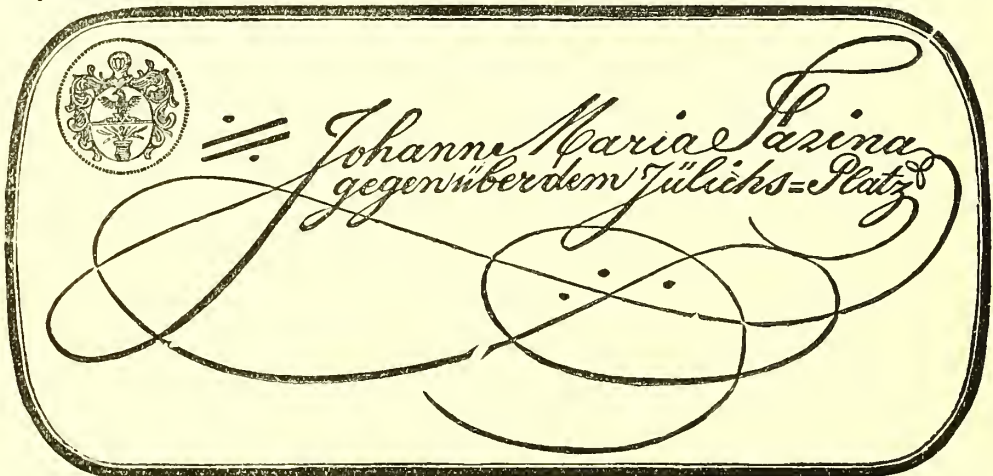
By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales; William, King of Prussia;



Albert II., King of Saxony; Alexander II., Emperor of Russia; Francis Joseph, Emperor of Austria; Lewis, King of Portugal; H.R.H. Frederik of Denmark; William, Crown Prince of Prussia.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologn. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 12s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

MESSRS. J. & R. McCracken,

No. 38 Queen Street, Cannon Street, London, E.C.

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	} as per figure plate	12 bottles	} to one dozen.
.. 2. Short White Bottles		...	...	...	...	12 "
.. 3. Double ditto		...	...	...	...	6 "
.. 4. Wickered Bottles (small)		...	...	...	...	8 "
.. 5. ditto (medium)		4 "	
.. 6. ditto (large)		2 "	

JOHANN MARIA FARINA

Opposite the Jülich's Place.

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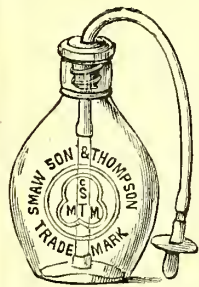
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Green Glass, SCREW GLASS stoppers, in boxes of 1 doz.	0	4	0
Green Glass, SCREW METAL caps, in boxes of 1 doz.	0	4	3
Green Glass, METAL caps, in boxes of 1 doz.	0	3	9
Green Glass, WOOD-TOP corks, in boxes of 1 doz.	0	3	4
White Glass, EARTHENWARE caps, and each with tube and bottle brush, in neat box	0	6	6
White Glass, SCREW GLASS stoppers, and each with tube and bottle brush, in neat box	0	7	0
White Glass, SCREW METAL caps, and each with tube brush, in neat box	0	7	6

MAW'S "ALEXANDRA."

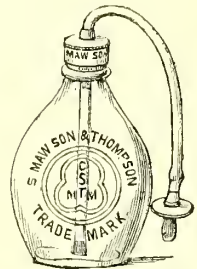
	£	s.	d.
Green Glass, WOOD TOP corks, in boxes of 1 doz.	0	3	6
White Glass, EARTHENWARE caps, and each with tube brush, in neat box	0	7	0
White Glass, SCREW GLASS stoppers, and each with tube and bottle brush, in boxes	0	10	0
White Glass, EARTHENWARE caps, extra teat, glass tube and valve, and with tube and bottle brush, in boxes	0	10	0
White Glass, SCREW METAL caps, extra teat, glass tube and valve, and with tube and bottle brush, in boxes	0	10	0
White Glass, GILT PORCELAIN caps, superior fittings, brown indiarubber tubing and teat, tube and bottle brush, extra indiarubber tube and teat, and with glass tube and valve, in strong boxes	0	18	0

A Liberal Discount to Large Buyers.



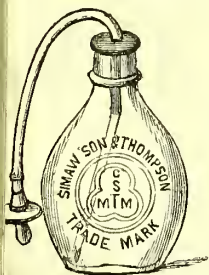
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Export Feeding Bottle.
Screw Glass Stopper.



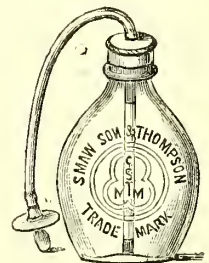
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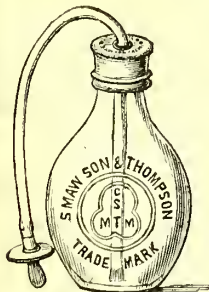
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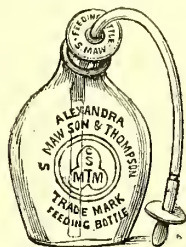
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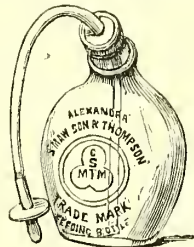
1/-.

Export Feeding Bottle.
Earthenware Cap.



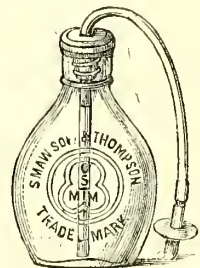
1/-, 1/6, & 2/6.

Alexandra Feeding Bottle.
Earthenware Cap.



1/6.

Alexandra Feeding Bottle.
Screw Glass Stopper.



1/-.

Export Feeding Bottle.
Screw Glass Stopper.

S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, London.



TRUSSES



TRADE MARK.

TRADE MARK.

LYNCH & CO.

Have devoted particular care and attention to the manufacture of **TRUSSES** and other Instruments or the cure and alleviation of diseases and deformities. Every article is manufactured by skilled workmen, under the direction of an experienced foreman. L. & Co. can, therefore, with confidence guarantee each article bearing their name as the best of its respective kind.

Competent Assistants are employed, so that patients can be measured and fitted on the premises, or at their own homes, without any risk or annoyance to the Chemists.

LYNCH & CO. have introduced a new **TRUSS**, by which the pressure of the Pad on the Hernia can be *increased* or *lessened* at pleasure, and *the angle of the Pad with the spring can be altered*, so as to adapt the Instrument to the shape of the body and the situation of the Hernia.

The following are prices of Trusses in most general use:—

	<i>Single.</i>	<i>Double.</i>
LYNCH'S ADAPTABLE TRUSS, by which the pressure can be increased or lessened, and the angle of the Pad altered ...	£0 12 6	£1 5 0
FOR FEMORAL HERNIA—		
Circular Springs per doz.	1 4 0	2 0 0
Ditto, with Narrow Springs, of superior make, very light and durable per doz.	3 0 0	—
FOR INGUINAL HERNIA—		
Circular Springs, covered with basil and chamois, ordinary quality per doz.	1 1 0	1 14 0
Ditto, covered with calf "	1 16 0	2 12 0
Ditto, covered with morocco "	1 16 0	2 8 0
Ditto, with Sliding Backs "	—	3 3 0
Ditto, on Cole's principle each	0 5 6	0 10 6
Ditto, Moc Main Lever "	0 8 0	0 13 6
Ditto, on Salmon & Ody's principle per doz.	1 16 0	3 12 0
Ditto, ditto, very superior finish "	2 10 0	5 10 0
FOR PROLAPSUS ANI each	1 0 0	and 1 10 0
FOR PROLAPSUS UTERI "	0 17 6	and 1 10 0
Ditto, Hull's principle, with Lynch's improvement "	15/-, 21/-,	and 1 10 0
FOR SCROTAL HERNIA per doz.	2 8 0	4 4 0
FOR UMBILICAL HERNIA, on Cole's principle each	9/6, 12/6,	and 17/6
Ditto, on Salmon & Ody's principle "	7/6, 9/6,	and 12/6
Ditto, plain "	8/6	

Sizes 10 in. to 40 in. kept in Stock; large sizes made specially to order, with extra charge, according to size.

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LYNCH'S IMPROVED BELT,

With Regulating Straps, by which the weight of the Abdominal Viscera is supported, and immediate relief given in cases of pendulous abdomen.

SUPERIOR ELASTIC STOCKINGS,

UMBILICAL BELTS, Instruments for every description of deformity, &c.

LYNCH'S "TEARABLE" LINT,

In 1-lb. Rolls, 1s. 8d. per lb.

Discount—10 per cent. Monthly, 5 per cent. Half-yearly.

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PATENT PLUMBAGO CRUCIBLE COMPANY

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EXHIBITION AWARDS:—

Paris, 1878, Gold Medal.

Only Medals in London, 1862. Dublin, 1865. New Zealand, 1865. Oporto, 1865.

Paris, 1867, only First-Class Medals (Silver). Havre, 1868 (Silver). Amsterdam, 1869 (Highest).

Moscow, 1872, only First-Class (Gold).

Philadelphia Centennial Exhibition, Medal.

CLAY CRUCIBLES, ETC.

EXTERIOR DIMENSIONS.

Attention is drawn to the description on the Crucibles below, and in ordering these particulars should be given to prevent errors and disappointments.

BATTERSEA ROUND.

Stamped as on Illustration.

No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.	No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.
A	2 3/4	1 1/2	£0 0 5	0/6	B	3	1 7/8	£0 0 6	0/6
C	3 3/4	2 1/4	0 0 9	0/6	D	4	2 3/8	0 0 10	0/6
E	4 1/2	3 1/4	0 1 4	0/9	F	5	3	0 1 5	1/0
G	5 5/8	3 3/4	0 2 0	1/0	H	5 7/8	3 3/8	0 2 1	1/3
J	6 1/2	4 1/4	0 3 0	1/6	K	7 1/4	4 1/2	0 3 2	2/0
L	8	5 1/2	0 5 6	2/0	M	8 1/2	5 3/4	0 6 6	2/6
N	9 1/2	6 1/4	0 9 0	3/0	O	10	7 1/2	0 13 6	3/6
P	11	8 1/4	0 15 0	3/6	Q	12	8 3/4	0 17 0	4/0
R	13	9 3/4	1 3 0	5/0					

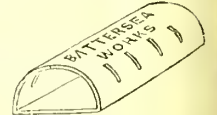
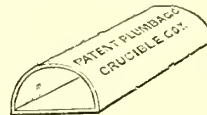
The above 9 sizes form one nest. Price 60/0 per dozen nests. Any size can be had separately.

The above 8 sizes form one nest. Price 45/0 per dozen nests. Any size can be had separately.



MUFFLES.

With or without apertures.



No.	Long, in.	Wide, in.	High, in.	Price, per doz.	No.	Long, in.	Wide, in.	High, in.	Price, per doz.
A.	7	3 3/4	2 1/4	12s.	G.	11	4	3 3/4	21s.
B.	7 1/2	4 3/8	2 3/4	15s.	H.	10 1/2	5 1/4	3 3/4	25s.
C.	8	4 1/2	3	18s.	J.	12	6	4	33s.
D.	8 1/2	5	3 1/4	21s.	K.	14	8	5	48s.
E.	9	5 1/2	3 3/8	24s.	L.	15	9	6	54s.
F.	10	6	4	27s.					

Sizes A to F are suited for the Furnaces of the same letters.

H to L have one slit at back only, none at sides.

In addition to those priced above, Muffles are made of all shapes and sizes, suitable for Assayers, Enamellers, Dentists, &c.

BATTERSEA TRIANGLE.

Stamped as on Illustration.

No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.	No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.
S	4 1/4	4 1/4	£0 2 0	1/0	T	4	3 3/4	£0 1 6	1/0
U	3 3/4	3 3/4	0 1 1	0/9	V	3 1/2	2 3/4	0 0 10	0/9
W	2 3/4	2 3/4	0 0 8	0/6	X	2 1/2	1 3/4	0 0 6	0/6
Y	2 1/4	2 1/4	0 0 5	0/6	Z	1 3/4	1 3/4	0 0 4	0/6



The above 4 sizes form one nest. Price 4/2 per dozen nests. Any size can be had separately.

The above 4 sizes form one nest. Price 3/2 per dozen nests. Any size can be had separately.

The BATTERSEA ROUND and TRIANGLE forms are particularly well suited for packing, being made to nest, ensuring great economy in freight and shipping charges.

SCORIFIERS.

(PER GROSS.)

Inches Diam.	Price.	Inches Diam.	Price.
1	5s. 0d.	2 1/2	6s. 0d.
1 1/2	3s. 6d.	3	7s. 6d.
1 3/4	4s. 0d.	3 1/2	9s. 0d.
2	4s. 6d.	4	10s. 6d.
2 1/4	4s. 6d.	5	12s. 0d.
2 1/2	5s. 0d.		



ROASTING DISHES.

No.	Diam. in.	Per doz.	No.	Diam. in.	Per doz.
1	2 1/2	1s. 3d.	3	4	1s. 9d.
2	3	1s. 6d.	4	5	2s. 0d.



ASSAY CRUCIBLES.

THE MINT OF THE UNITED STATES AT SAN FRANCISCO,

OFFICE OF THE ASSAYER,

SAN FRANCISCO, CAL., April 19, 1877.

SIRS,—I have tested and used the Assay Crucibles and Annealing Cups, and can with assurance recommend their superior quality and durability.

Respectfully yours, &c.,

O. D. MUNSON, Assayer.

STATE ASSAY OFFICE,

SAN FRANCISCO, May 1, 1877.

We have given the Crucibles and Muffles a fair trial, and can recommend them for use of Assayers and Chemists.

Yours, &c.,

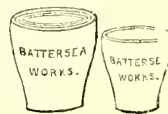
FALKENAU & REESE.

1.—FOR GOLD.

THESE ARE PERFECTLY SMOOTH, AND OF THE CORRECT POROSITY.

No.	Diam. in.	Height, in.	Per doz.
A.	1 1/4	1 1/2	2s. 0d.
B.	1 1/2	1 1/2	2s. 0d.
C.	1 3/4	1 1/2	2s. 0d.
D.	1 3/4	2	2s. 0d.

Covers for either size, 6d. per doz.



2.—FOR COPPER.

CORNISH FORM AND QUALITY.

Nest of Two { 3 1/2 in. high, 3 in. diam. } 2s. per doz.
Single .. 2 " 2 1/2 " " 1s "

All Forms and Sizes can be had.

Among the English Firms who have received Awards at the Centennial, Philadelphia, are the Patent Plumbago Crucible Company, Battersea Works, London, for Jewellers' and Chemists' Furnaces, Muffles, Crucibles, and Scorifiers.—*Chemist and Druggist.*

Other particulars on application to

PATENT PLUMBAGO CRUCIBLE CO., BATTERSEA WORKS, LONDON, S.W.

CRAWSHAW'S CRYSTAL DYES.

- 3d. BOXES CRAWSHAW'S CRYSTAL DYES } 48/-
In ½ gross (7 doz.) Counter Case with Glass Lid. } per gross.
- 3d. BOXES CRAWSHAW'S CRYSTAL DYES } 48/-
In Boxes of 1 doz. (14). } per gross.
- 3d. PACKETS CRAWSHAW'S USEFUL DYES } 21/-
In ½ gross Cardboard Boxes. } per gross.
- 3d. PACKETS CRAWSHAW'S USEFUL DYES } 21/-
Mounted on Cards of ½ gross. } per gross.
- 2d. PACKETS CRAWSHAW'S USEFUL DYES } 14/-
In ½ gross Cardboard Boxes. } per gross.

- 2d. PACKETS CRAWSHAW'S USEFUL DYES } 14/-
Mounted on Cards of ½ gross. } per gross.
- 1d. PACKETS CRAWSHAW'S USEFUL DYES } 7/-
In 3 gross Counter Case with Glass Lid. } per gross.
- 1d. PACKETS CRAWSHAW'S USEFUL DYES } 7/-
In ½ gross Cardboard Boxes. } per gross.
- 1d. PACKETS CRAWSHAW'S USEFUL DYES } 7/-
Mounted on ½ gross Cards. } per gross.

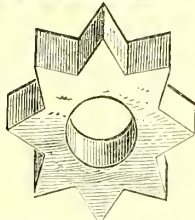
THE EXCELSIOR PENNY DYES. Mounted on Cards of ½ gross each. These Dyes are good value for the money; suitable for low class Wholesale Trade, and where Cheap Goods are required. There is no Maker's Name on the Packets or Cards. } 5/6 per gross.

EMERALDINE { A New Colour for Chemists' Show Bottles, which gives with transmitted light a beautiful golden colour showing a splendid green fluorescence. } 2/6 per Bot.

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NEW ARNICATED
STAR
CORN AND BUNION
PLAISTER.



(REGISTERED)

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SHAPE
CORN AND BUNION
PLAISTER.

They will be found to possess greater advantages over all other Plaisters hitherto produced.

Their chief qualities depend upon their superior adhesiveness, being composed of very adhesive ingredients, and, owing to their shape, are not so liable to be drawn off with the sock or stocking.

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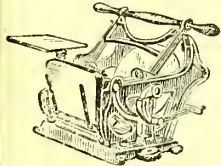
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25 BARR STREET, BIRMINGHAM.

AND THOSE WHO ALWAYS PRINTED THE MORE."



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M. PETERSON & CO., Importers.

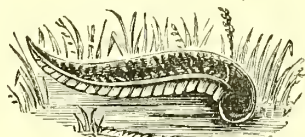
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LIVERPOOL.

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Wholesale only.

HAMBRO SPECKLED.



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Warranted Healthy. Wholesale and for Exportation, Direct from Marshes.

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Leech Breeders,

MAWSELLES, & 55 PENTONVILLE ROAD, LONDON, N.

LIQUOR BISMUTHI SCHACHT

Carefully purified from Arsenic, Copper, Silver, Tellurium, Selenium, and all contaminations. Dose: 5 j. diluted.

MANUFACTURED IN THE LABORATORY OF

SCHACHT & TOWERZEY, Clifton, Bristol,

And to be obtained of all Wholesale Druggists in London and the Province.

SYRUPUS CINCHONÆ ALCOHOLICUS SCHACHT

Bark minus woolly fibre. Dose: 10 to 30 drops.

6^d. EMOLLIENT CAMPHOR. 6^d.

Truly effectual for the relief of Chapped Hands, Lips, &c., &c.

Put up in beautiful Japanese Cups, "Wicker covered." The Cup itself a Cabinet Curiosity, alone worth the money
4s. per dozen. Send for a Sample.

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WHOLESALE & EXPORT DRUGGISTS,
AND
MANUFACTURING PHARMACEUTICAL CHEMISTS,
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Price Lists sent on application. Special quotations given for
Shipping Orders.

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Recognised throughout the World as the Trade Organ of Chemists and Druggists.

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Specimen Copies of the first issue of the new volume which will appear on January 15, 1880. To accomplish this they will after the issue of the usual edition

REPRODUCE IN MINIATURE

by Photographic and Lithographic Processes the whole of that number including every Advertisement which may appear in the original. At least

TEN THOUSAND EXTRA COPIES

will be thus prepared and circulated, and Wholesale Druggists, Manufacturing Chemists, Proprietors of Specialties and others will judge for themselves whether the opportunity thus presented of addressing the trade universally is worthy of their attention.

We wish to make it distinctly understood that every Advertisement in the January Number will appear in both forms, namely, in the ordinary type and in the photolithographic reproduction.

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IN NEW PATENT METAL BOXES,

UNIVERSALLY PATENTED.

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Perfectly Round Corners in Square Boxes.

RETAILING AT ONE PENNY.

Orders through Wholesale Houses.

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Patentee,

33 ST. PAUL'S ROAD, CANONBURY, N.



W. H. BAILEY & SON,

16 OXFORD STREET, LONDON,

ESTABLISHED A.D. 1833.



**FIRST PRIZE (SILVER MEDAL) FOR TRUSSES AWARDED BY THE
WORSHIPFUL COMPANY OF CUTLERS OF THE CITY OF LONDON, MAY 1879.**

FIG. 1.

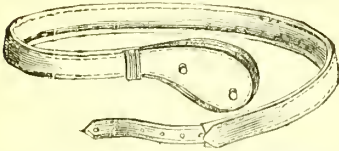


FIG. 4.

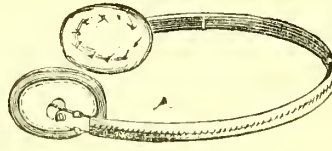
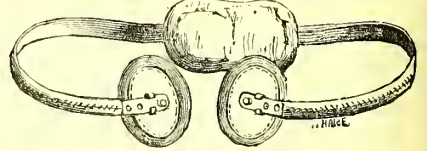


FIG. 5.



TRUSSES.

Circular Trusses, single, as Fig. 1, basil and chamois or basil and moleskin	per doz.	£1 1 0
Circular Trusses, double, basil and chamois or basil and moleskin	per doz.	1 14 0
" " " with extending backs	" "	2 14 0
Salmon & Ody's Expired Patent, single, Fig. 4	" "	1 10 0
" " " double, Fig. 5	" "	3 0 0
Moc-Main Lever, single	each	0 8 0
" " " double	" "	0 13 6
Coles's Expired Patent, single	" "	0 5 6
" " " double	" "	0 10 6
Scrotal Trusses, basil and chamois or moleskin, single	" "	0 4 0
" " " " double	" "	0 7 0

SUSPENSORY BANDAGES.

No. 1. Cotton Bags and tape under-straps	per doz.	0 8 0
2. Cotton Oxonian, with drawing-strings	" "	0 10 0
3. Silk Bags and tape under-straps	" "	1 1 0
4. Silk Oxonian, with drawing-strings	" "	0 18 0
5. " " Bags bound with elastic	" "	1 4 0

SUSPENSORY BANDAGES—continued.

No. 6. Silk Oxonian, superior quality, bands of buff jean, with drawing-strings	per doz.	£1 4 0
7. Silk Bags, to button on, with tape under-straps	" "	1 1 0
8. " " " under-straps to button	" "	1 4 0

ELASTIC STOCKINGS, KNEE-CAPS, ETC

Manufactured expressly for Export, and warranted to stand a hot climate better than any others in the Market.

	Silk.	Super. Silk.	Cotton.	Super. Cotton.
Stockings pair	£ s. d. 0 9 0	£ s. d. 0 13 6	£ s. d. 0 5 3	£ s. d. 0 6 6
Knee-caps	0 6 0	0 9 6	0 3 6	0 5 0
Calf-pieces	0 6 8	0 9 0	0 4 0	0 5 6
Socks	0 5 0	0 7 6	0 3 3	0 4 6
Wristbands	0 2 0	—	0 1 6	0 2 0
Knee Stockings	0 15 0	1 3 0	0 8 9	0 11 6
Belts, to draw on each	0 15 0	1 1 0	—	0 9 0

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ROBERT GIBSON,

MEDICATED LOZENGE MANUFACTURER,

CARLTON WORKS, HULME, MANCHESTER, AND 1 FINSBURY CIRCUS, LONDON,

MAKER BY STEAM POWER OF MEDICATED AND HIGH-CLASS LOZENGES OF EVERY KIND.

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Fragrant Bouquet Lozenges, 100 in an Ounce, have an immense sale.

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Keep in any Climate, give great satisfaction, and have an increasing demand, especially in Africa and Australia. Put up in Tins, each containing 6 Dozen or 12 Dozen Cakes.

Price List, sent by post on application. Our Goods can be bought through any Wholesale House in London.

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 UNION CHEMICAL WORKS,
 DEBNAM'S RD., SOUTH BERMONDSEY, S.E.

MANUFACTURERS OF
**PHARMACEUTIC, PHOTOGRAPHIC, and PURE
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SPECIAL PREPARATIONS:—

HYDROGEN PEROXIDE	FRUIT ESSENCES
ZODOFORM	FERRUGINOUS SYRUPS

SCALE PREPARATIONS, &C.

TRUSSES FOR HERNIA.

Price List for Export, &c., on application to
ALLEN PEARCE & CO.,
 Truss Makers,
BRISTOL.

A PROFITABLE ADDITION TO A DRUGGIST'S BUSINESS.

THE NEW DISCOVERY.

TRADE



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NUBIAN WATERPROOF BLACKING

Is an Oily Liquid Preparation, entirely free from Acid.

Will NOT INJURE the Leather; gives a PERMANENT POLISH of great brilliancy without brushing), which does not rub off or soil the clothing; is Waterproof; and through RAIN, SNOW, and MUD will last a Week.

And when dry may be brushed off with a stiff brush, or may be washed off, and the polish will remain the same.

NUBIAN BLACKING

Is suitable for Ladies' and Gentlemen's Boots and Shoes of every description; also Belts, Purses, and Travelling Bags, Harness, Military Accoutrements, &c.

Easily applied with Sponge attached to the Cork, and should NOT be used more than once or twice a week.

AN AGENT WANTED IN EACH TOWN throughout the World (where none has been established), to whom Counter Bills, with address on, also Show Cards, will be furnished free.

Can be Ordered through any Merchant, Shipper, or Wholesale House.

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The A1 COD LIVER OIL

IS REMARKABLE FOR

SPECIAL DELICACY OF FLAVOUR, PURITY, BRILLIANCY,

AND ITS WELL-KNOWN PROPERTY OF

REMAINING BRIGHT in COLD WEATHER.

Price—9/- per Gallon in Winchester Quarts, or 8/9 per Gallon in 25-Gallon Casks.

BLUE LABELS FOR CORKS of Bottles, also Medical and Retail Circulars supplied.

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DRAPER'S INK (DICHROIC)

THE NEW BLACK INK, different from anything else ever produced.

Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

It writes almost instantly full black.

Does not corrode Steel Pens.

Dries rapidly on the Paper.

Is cleanly to use, and not liable to blot.

Flows easily from the Pen.

Blotting-paper may be applied at the moment of writing.

In Jars, 6d., 1s., and 2s. each.

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BEWLEY & DRAPER, Limited, DUBLIN.

See "CHEMIST AND DRUGGIST," December 15th, 1874.

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PANCREATIC EMULSION, or MEDICINAL FOOD, in Consumption and Wasting, will always take precedence of Cod Liver Oil by reason of its introducing the Stable Solid Fats into the system instead of the evanescent fluid fats or oils.

No Oily Emulsions of any kind, not even Cod Liver Oil itself, can supply the kind of fat necessary for sound and vigorous human life. In addition to this, all the Oily Emulsions are liable to rancidity, and most of them are highly objectionable in consequence of the Saponification, and ultimate Putrefaction, produced by the *Chemical agents used instead of Pancreatic Juice*, so that

PANCREATIC EMULSION, or MEDICINAL FOOD, is the most reliable form of nutriment for counteracting all tendencies to Phthisis and other wasting Diseases. It presents to the Lacteals fat in essentially the same condition for assimilation and absorption as in the vigorous human frame, and the agent of the important change is the natural secretion of the Pancreas.

PHOSPHORISED COD LIVER OIL. Originated by SAVORY & MOORE. The advantage of this preparation over the imitations of it consists in the ability to administer a SUFFICIENT dose of Phosphorus without the admixture of a LARGE quantity of Cod Liver Oil. Supplied in Bulk or Small Bottles.

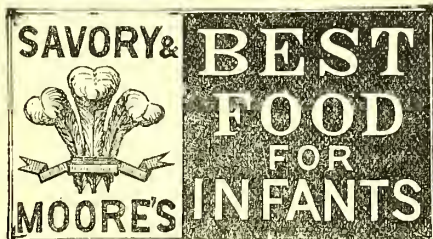
PHOSPHORUS PILLS. 1-32nd of a grain, or any other strength required, non-resinous and perfectly soluble.

PANCREATISED (Digestive) COD LIVER OIL. By combining the Pancreatic Juice with the Oil, the digestion of the latter is easily and rapidly effected, nausea is prevented, and the beneficial properties of the Oil are increased.

PANCREATINE (Powder or Granules) represents the active principle of the Pancreatic Juice, by which fats and oils are digested and assimilated. In Bottles, Wholesale and Retail.

PANCREATINE WINE.

PEPSINE PORCI. PEPSINE WINE. In Bulk or in Small Bottles.



USED IN THE ROYAL NURSERIES,

AND POSSESSING EVERY REQUIREMENT NECESSARY IN A DIET FOR CHILDREN BROUGHT UP WHOLLY OR PARTIALLY BY HAND.

Containing the highest amount of nourishment in the most digestible and convenient form.

THE MOST PERFECT SUBSTITUTE FOR HEALTHY MOTHER'S MILK.

N.B.—This Food has only the sugar natural to healthy milk, and is therefore free from the baneful sweetness of highly sugared Foods.

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Post free to every country in the world. Single Copies, 1s. each.

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General Post Office.

An index to the advertisements, and the terms for insertion, will be found
on page 33.

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The Chemists' and Druggists' Diary for 1880 has now, we
hope, reached all our subscribers. For many kind words in
reference to it we are grateful. If by accident any sub-
scriber has not yet received his copy, a post-card from him
will receive our prompt attention. Any subscriber can have
an extra copy for 2s. 6d., but orders must be sent in at once,
as we shall soon be out of print.

The Pharmaceutical Council have almost unanimously
resolved to admit to their monthly meetings reporters other
than the one representing the *Pharmaceutical Journal*.
Practically this means that one from this journal is to be
admitted. It is probable, therefore, that we shall commence
next year with independent reports of the proceedings of the
Council. (See page 519.)

A proposal made by Mr. Hampson to ask the Medical
Council to give pharmacists a share in the compilation of
any new edition of the *British Pharmacopœia*, has been re-
jected by a majority of the Pharmaceutical Council. It
appears that a previous letter on the same subject to the
Medical Council received no answer, and some members
think that the Council would lose dignity by subjecting
themselves to the chance of another snub. Others think the
Medical Council is very friendly disposed towards pharma-

cists, and such an application might offend them. The two
views are difficult to reconcile, though they seem to be held
by the same persons. All agree as to the justice of the
claim; such delicacy as is manifested by this vote is there-
fore very much out of place in a representative body. (See
page 524.)

The officers of the Inland Revenue Department are
moving, we hear, in certain parts of the country in reference
to medicines sold by pennyworths liable to the stamp. We
have previously stated that they allow a properly-stamped
packet of medicine to be divided out into small quanti-
ties; but it must be borne in mind that any medicine
recommended for the cure or relief of any disease, or in
which an exclusive power of manufacture is claimed, is
required to be stamped, no matter how small its value may be.
Such terms as "antibilious pills" are allowed as forming
part of the title, but "X's antibilious pills" would be liable
as claiming an exclusive power of preparation, and "pills
for the relief of biliousness" would be liable as recommend-
ing the medicine for a disease.

Weights and measures have occupied a good deal of at-
tention during the month, in consequence of the publication
by the Board of Trade of descriptions of "local standards."
Local authorities will be provided with these local
standards if they make application for them, but they are
not likely to get them for some months. They will then
be ready to test apothecaries' weights and measures, and it
is very important that chemists should ascertain when this
opportunity will occur, so that they may get their weights
and measures properly stamped.

A very important series of experiments by Mr. Boverton
Redwood, chemist of the Petroleum Association, and Mr. T.
Horne Redwood, with some of the most popular mineral-oil
lamps is published on page 539. The authors indicate the rela-
tive economy and efficiency of 18 different forms of lamps, and
they also give some remarkable facts showing the relative
cost of light from petroleum, gas, and colza. Chemists who
deal in petroleum might with advantage study this article,
and increase their trade by adding some lamps to their
stock.

A paper by Mr. A. P. Luff, which we print on page 531,
gives an exhaustive review of the various methods of water
analysis.

Dr. Silvanus Philips Thompson, in a lecture on "Appren-
ticeship" to the Society of Arts, has stated that pharmacy
is the only trade, art, or craft he knows of in England in
which the conditions of apprenticeship are rational and
adequate. (See page 519.)

A quiet condition of trade has succeeded the excitement
of last month, but prices have been fairly well maintained,
and the volume of trade in drugs and chemicals has been
satisfactory. (See page 554.)

A very full index to the current volume of *THE CHEMIST
AND DRUGGIST* will be ready next month. In closing this
volume we have the satisfaction of stating that our journal
has circulated in the past year more extensively than ever
before, and we may hope that with the new year brighter
times for traders generally will set in, in which case we
shall look for a still wider circle of friends wherewith to
begin the new decade.

There seems to be something wrong in the law, or in the
interpretation of it, when a firm can establish by its aid an
exclusive title to so simple a combination of words as
"family salve." This has been done by Messrs. Reinhardt
& Son, of Leeds, and the sale of anything of that name
not of their manufacture is therefore illegal. (See page 546.)

Pharmacalia.

EUPHORBIIUM VARNISH.

THERE seems a fair amount of promise in the experiments made with euphorbium varnish as a protective coating for iron. Some years ago the workmen at Natal found that when they cut certain plants of the family Euphorbiaceæ with an iron or steel instrument, a layer of very adherent gum was left upon the blade. The metal so coated appeared entirely protected from rust. Consequently further attempts were made to see if gum euphorbium could not be practically utilised for the preservation of metals. Sheets of iron coated with the gum were plunged into sea water at South Africa where the well-known rapidity of the growth of vegetation exercises a most deleterious action upon iron-coated vessels. As euphorbium can be obtained at Natal close along the sea coast, great facility was offered for putting its anti-corrosive capabilities to the test. The experiments are said to have been completely successful; and with a view of confirming these results, a tincture was made of gum euphorbium dissolved in spirit. This solution was readily applied to the bottom of ships' keels, and to other metallic surfaces. On evaporation of the spirit, the gum was left permanently adherent. Trials of this same preparation made during the past two years at Chatham have shown that iron so varnished remained uninjured after considerable exposure to the corrosive action of the water of the docks. In Africa the gum varnish has proved successful against the ravages of white ants, probably owing to its extreme bitterness.

PHARMACISTS RECOMMENDED BY PHYSICIANS.

Great difference of opinion evidently exists with respect to the relations between the physician and the dispensing pharmacist. Mr. A. Kinnimont, of Glasgow, has drawn attention to the practice of some medical men insisting that their prescriptions, particularly when containing special ingredients, should be made up at some establishment indicated by themselves. This proceeding is not only natural, but unavoidable; and we as pharmacists can no more complain that certain chemists and druggists have gained particular reputation, than that individual members of the profession have done the same thing. Every pharmacist is in the constant habit, when consulted by a customer, of recommending particular physicians in distinct cases; and he does so unbiassed by the hope of extra, or, indeed, of any, remuneration. It is to the honour of chemists as a body that their conduct in this respect is influenced by the pure wish of rendering most effectual service. It frequently happens, and we speak from actual knowledge, that the practitioner so recommended is personally a stranger to his recommender, and that the name is proposed solely on account of his known public superiority. In such cases it would be an injustice to the pharmacist to credit him with any but the highest motives, and, indeed, the whole transaction is one which links him with professional life and reflects infinitely to his credit. We should hesitate before we judged the physician by a lower standard when we find him in special instances recommending special pharmacists. Such was the practice of the late Sir Benjamin Brodie, James Startin, and many others of a past generation: such is the practice of many physicians of the present day. It appears to us to be an encouragement to every pharmacist to give such attention to departments of his art as that the excellence of some of his preparations may command attention. Care so bestowed will inevitably be rewarded, and will not only produce a result from which the pharmacist may reap special benefit, but will give a character to

his ordinary business life. It is another question altogether when we find a physician virtually asserting that some one house, known to himself, is alone capable of correctly compounding a prescription—or when we see another degrading a profession by the use of cabalistic signs and mysterious remedies. Then we know that the physician has sunk down into the petty tradesman or the quack, and as either is very undesirable companion to the pharmacist.

PROPERTY IN PRESCRIPTIONS.

There is a second point, also touched upon by Mr. Kinnimont, about which opinions are divided. To whom does a prescription, once written and paid for, in reality belong? Is it the property of the patient for whom it was prescribed, or of the pharmacist who may happen to have made it up? We entirely agree with the president of the Glasgow Chemists' Association that it remains the property of the patient. It may be repeated to his occasional detriment, chiefly when a cumulative medicine is concerned; but the pharmacist does not stand in the position of guardian over the patient's private acts. Were that the case his personal responsibility would be tremendous, and he would not only be the dispenser but the judge of the effect of every recipe entrusted to his care. We admit that there are instances in which a pharmacist is called upon to exercise discretion—whether as regards an unusual dose or the too frequent exhibition of a powerful drug—but in the vast majority of prescriptions this plea will not hold good, and the dispenser cannot surely claim as his own that which an accident has placed within his hands. He has been requested to prepare a formula belonging to a person who has bought that formula. That is his business, and he has no right to assume on a theory of his own manufacture, a theory for which he can quote no legal authority, that he has become the possessor of a formula temporarily committed to his charge. He is not bound, except out of civility, to give copies of the recipe. Our friends the American druggists think otherwise—they paste prescriptions in a book. From the large number of American recipes which have come under our own immediate notice, we may be allowed to say without offence, that they are scarcely of that strictly professional character, in composition or arrangement, which is associated in our minds with physicians' prescriptions. Judging from two or three thousand specimens which were once in our possession, they appeared more like medical memoranda, and the comparison between English and American usage is not quite fair. We may state, however, with confidence, that the higher classes in England arbitrarily settle the question. A West-end London pharmacist who refused to return the original prescription would take the last view of his customer, and would excite an amount of indignation which would keep him comfortably warm.

CO-OPERATION AND CASH.

We venture to hope that the depression which has marked universal trade during the past year may be replaced by increased activity in the future. Things have undoubtedly been bad, and we are told no branch of industry has suffered more than retail pharmacy. The pressure has driven men of all classes to seek to obtain the necessaries of life at the cheapest possible rate, and in consequence there has sprung up a huge system of self-help which goes by the name of co-operation. How this has tampered with and affected the rights of pharmacists: how its development has nullified in some respect the provisions of the Pharmacy Act: and how its working has rendered the professional standing of pharmacists of less value, we need not stay to demonstrate. Yet out of evil good may come. There

as existed—we might better say, has flourished—a most unhealthy and disastrous system in our special occupation—long credit. Custom has established a feeling in the public mind, that while the linendraper, the wine merchant, the revision furnisher of every description must be dealt with on the principle of prompt cash, the chemist and druggist is one of those ethereal beings who can live on his respectability, and may be paid at some remote convenient season. Custom is so inexorable that no speedy change can be effected, and for the chemist suddenly, but in however polite a manner, to request a remittance for his small account would be resented by the astonished customer as a breach of the canons of propriety. Now this is a cause of anxiety to large establishments, and fetters their operations; the young commencer who has started his corner shop in a new neighbourhood it is a serious embarrassment. Should the spread of co-operation issue in a practice of cash payment, and should credit be virtually abolished, it is doubtful whether the balance of advantage and disadvantage would not be in favour of the retail pharmacist.

PHARMACEUTICAL APPRENTICESHIP.

In all other, save in commercial prospects, pharmacy has to be congratulated. The many well-managed educational establishments which have arisen, and whose energies are directed to the complete instruction of the pharmacist, have begun to be a power. We shall soon have not an uneducated man nor an incompetent man in our ranks—and these splendid higher schools of pharmacy have raised the general tone of our society. Only a fortnight back (December 3) there was a meeting held at the Society of Arts, over which presided an eloquent chairman, Professor Huxley. The subject chosen was "Apprenticeship, Scientific and Unscientific," and the lecturer, Professor Silvanus Phillips Thompson, gave a graphic description both of the want of any systematic teaching of handicraft in England, and of the abundant facilities in the way of technical training abroad. In the course of his remarks, which were pungent and well worthy of being read, he made the following observation:—"Is there any place, then, any workshop, factory, or institution, where anything approaching a rational and scientific apprenticeship exists? Is there any trade, art, craft, or profession, the apprenticeship of which can be regarded in any sense as rational or adequate? Outside the limits of the so-called professions I know of none in England unless we except the pharmacists. Thanks to the determination of the leading pharmacists of England, it is now almost impossible for a youth to obtain an employment as a dispenser of drugs without having spent some months in a pharmaceutical school or college, in addition to the years of practical experience which he must serve in the trade, the degree of his attainments being tested by sundry examinations worked on an unusually judicious and satisfactory system."

Such testimony, coming from outside, is particularly valuable, and shows how strongly the current of appreciation has set with regard to the efforts which of late have been made in the advance of pharmaceutical education. Doubtless the time will come when this recognition will be complete and universal—a time when a medical council, unsolicited, will ask the British pharmacist to share in the compilation of the authorised standard of British pharmacy.

RED SEA TREASURES.

The year now rapidly drawing to a close has not been allowed to end without a slight sensation. It seems that at a meeting of Orientalists held in London a few years back, Professor Owen threw doubts upon the possibility of the occurrence mentioned in the Biblical account of the Red Sea.

The Abbé Moigno, always zealous in endeavouring to show that religion and science may be reconciled, is extremely wroth at these sceptical observations—and having seriously undertaken to maintain his opinion has invited the Christian world to unite with him in "a grand and noble enterprise." This is no less than "to organise a scientific expedition to recover the *eloquent* remains of the Egyptian cavalry, chariots, horses, and treasures now buried in the Red Sea." The Abbé believes that the preservative influence of the salt by which they are encrusted would render it possible to regain the whole absolutely intact. However much this plan may appear fanciful and Utopian, its originator has determined to convert the attempt at least into a reality, and accordingly subscribers are asked to take shares in a financial company, which is to recoup itself for its expenses by the sale of the submarine antiquities when found. The proposal just stated is quite serious, and may be seen in the current number of *Les Mondes*, the admirable little scientific journal of which the Abbé Moigno is the editor.

The Pharmaceutical Council.

EIGHTEEN out of the 21 members were present. Messrs. Churchill, Slipper, and Squire were the absent ones.

THE PRESIDENT WITHDRAWS HIS RESIGNATION.

THE PRESIDENT (Mr. G. W. Sandford) referred to the remarks he had made at the previous meeting of the Council when he had asked his colleagues to provide another president in his place. So many kind remonstrances had been made that if he disregarded them it might seem as if his proverbial firmness were drifting into obstinacy.

ADDITIONS TO THE REGISTER.

The following names were placed on the Register as having been in business before July 31, 1868:—Charles Stevens Budgett, Pevensey Road, Eastbourne; Mr. Hardcastle, Hunslet, and John Charles Young, Bishops Waltham. In Mr. Hardcastle's case the medical practitioner who had signed the certificate did not, of his own knowledge, know that applicant had been in business, but he had fully satisfied himself by inquiries. The Registrar had objected to this certificate, but the Council, on appeal, over-ruled his decision after a division.

THE BOARDS OF EXAMINERS

For England and Scotland were re-appointed. There was no change in their constitution.

ADMISSION OF UNOFFICIAL REPORTERS TO THE COUNCIL MEETINGS.

The following important discussion then took place.

Mr. SYMES moved according to notice—

That reporters, other than the one officially employed by the Society, be admitted to the Council-room during the ordinary business of the monthly Council meetings.

He said this subject was by no means a new one, and it would probably have been better if it had been in the hands of an old member of Council, but perhaps he had one advantage in bringing it forward, for being a junior member he was able to refer to it from the point of view which he had taken when he had not the honour of being on the Council, and could therefore better represent the views of outside members. He did not wish any of his remarks to be of a vituperative nature, or to blame those who voted against this motion before, because his experience was that all members of the Council were desirous of serving the interests of the trade and of pharmacy to the best of their ability. It was simply a question of what means would be best for that purpose. These opinions had been strengthened the more he had become acquainted with members of

Council, and, therefore, if there was anything which made him anxious to carry this motion it was that others who were outside the Council should participate in a more close acquaintance with their doings and with the feeling he had gained by his membership there. He thought that if the feelings, wishes, and views of the Council were better known to the trade generally, there would be much less complaint, because the trade would be better acquainted with the Council, and he believed the Council would be better acquainted with the trade. If this motion were passed to-day, there would not probably be 10 members out of the 4,000 constituting the Society, or even out of the 10,000 constituting the trade, who would blame the Council for so doing; and, as it legislated for the whole trade, he considered that the whole trade had a right to have the fullest information on matters with which it dealt. When this motion was proposed two or three years ago, a large majority felt the proper time had not arrived for carrying it; but opinion had now matured, and last year it was only lost by the casting vote of the President. This showed the time was arriving when the Council, in common with all other public bodies, should be fairly and fully reported. In saying this he was not in any way wishing to blame the work of the present reporter. The members of Council could all bear testimony that he did his work well, and if his were a verbatim report, which would perhaps be undesirable, half-a-dozen reporters, if present, could not differently report the proceedings if their accounts were faithful; but as it was necessarily an epitome, several reporters might report the speakers each in a different way, and thus the trade would have a more fair and full representation of what took place. They spoke of the reporter as the "official reporter," which implied to the trade outside that he was acting for the Council, and he could not see why the trade or the body outside should not also be represented. He would not trespass on the time of the Council longer, because the arguments had been very largely threshed out. He must say, as a member of the Society, he was much disappointed, and he had met with many leading members of the trade who were also much disappointed, in fact there was a general disappointment amongst all who took an interest in the trade throughout the country, when this motion was negatived on a former occasion. It was known that a large number of the trade took practically no interest in the Society; but it should be, and was, he believed, the object of the Council to create that interest. The Council desired that the Society should be as comprehensive and broad as possible, and would be only too pleased if every member of the trade could be registered as a member of the Society. One step in that direction would be the passing of this motion, because it would show that the Council was holding out the hand of fellowship to them, that it desired them all to come in and give their numerical strength and assistance to the Society, by doing which they would also elevate the trade. When this subject was first introduced, a considerable anxiety was felt by some as to whether the Council would not be committing itself to something very serious; but the custom of reporting was extending, the reports had grown and become more extensive, and he would ask any gentleman if he would willingly return to the old state of things, or if any of the evils had been seen which it was supposed would ensue. His acquaintance with reporters was not extensive, but he had always been treated with the utmost courtesy by them, and he did not anticipate that anyone but gentlemen would be sent there. He had learned to respect the profession and to regard its members as gentlemen, and he was quite sure that if reporters were introduced they might be treated with every confidence, and the reporters being free would give confidence to the whole body. He hoped there would not be a division to-day, but that the Council would be unanimous in deciding that the time had arrived when it would have other reporters than the one employed by itself.

Mr. HAMPSON had much pleasure in seconding the motion. He said it would be difficult for him to add anything to the remarks made by Mr. Symes. It appeared to him that the time had arrived when the Council probably might vote unanimously in favour of this motion. It was easy to understand that people are disposed to remain on the old lines which they have been accustomed to, but the Council could not ignore the social force outside on such

a question as that. The Society surely ought to be above suspicion, and whilst the Council reported itself that could not be the case. The fact of having an independent reporter, who had no interest to serve except to give a faithful report to some journal or journals, would remove all feelings of that kind, and he was quite sure it would also benefit the whole body of the Council in the mode in which the work was done, and it would probably get through the work in a more convenient form. There would probably be less desultory conversation, and members would come prepared with their views on the questions to be discussed.

Mr. FRAZER doubted if Mr. Symes' and Mr. Hampson's anticipations could be realised with the motion in its present form, and he would suggest that an intermediate course be taken, and that one additional reporter, namely, one representing THE CHEMIST AND DRUGGIST, should be invited to co-operate with the present reporter. The reason he named that paper was simply that it undoubtedly represented the trade and the trade interests, and in doing so, it represented the interests of the members of Council, for they were all traders, although THE CHEMIST AND DRUGGIST had occasionally criticised their proceedings in a manner they did not approve. But there was no question that this had been done entirely in good faith, and he did not expect that even if THE CHEMIST AND DRUGGIST reporter was to appear there, that the reports would in any sense differ materially from what they now were; but it would remove any ground of suspicion that the reports did not fully represent the Council. He thought the reports hitherto given were eminently satisfactory, and that an additional one given by another journal would not modify that materially. He did not think it was absolutely necessary as a question of principle that this motion should be carried, but as a matter of the highest expediency he thought the proceedings of the Council should be thoroughly open, and that would be sufficiently insured by having one additional reporter.

The PRESIDENT asked if this was an amendment.

Mr. SYMES said he could not accept Mr. Frazer's suggestion. He had well considered that matter.

Mr. FRAZER said in that case he would move as an amendment—

That in addition to our present reporter, a reporter from THE CHEMIST AND DRUGGIST be invited to attend the Council meetings.

Mr. ROBBINS asked if Mr. Symes meant that any reporter who chose to come in, or that any reporter coming in would have to ask permission?

Mr. SYMES said the reporters would have to send in their application. His motion would cover the whole ground, and the Council having passed this resolution would not be able frivolously or lightly to refuse admission, but only on some special grounds. Still, it would have power on special grounds to refuse admission to anyone.

Mr. WILLIAMS thought, taking the words of the motion, there was no such power. It simply said that reporters other than the one officially employed be admitted.

Mr. HAMPSON asked if the members of Council thought they were likely to have an avalanche.

Mr. HILLS said he would second the amendment.

The VICE-PRESIDENT said it would be easy to limit the resolution if it were passed. He was not quite so sanguine about it being so unanimously voted, for there might be in the minds of some an opinion that no other reporters should be introduced, and it would be almost better that that point should be decided first. He did not see, therefore, that Mr. Frazer's amendment was quite in order.

The PRESIDENT thought it would be more regular to put Mr. Frazer's amendment in the ordinary way.

Mr. GOSTLING said he had another suggestion to make, which perhaps would meet the case. He was in favour of the meetings being fully reported. He quite felt, as Mr. Symes had said, that the reports had been most excellent, most faithful, and most true; but it was very disagreeable to hear the remarks which were sometimes heard in the country—persons calling attention to infringements of the Pharmacy Act, and expressing surprise that the Council was so indifferent to the interests of the trade upon this matter. It was also disagreeable to see in print the ungenerous and unjust remarks which were sometimes seen, and it appeared to him that if the public were in possession of the facts with regard to the attention given by the members of the Council

to the work devolving upon the Committees, and also round that table, and the care and anxiety which were given to the proper fulfilment of their duties, they would hear less of those complaints. He therefore would propose that the Council should resolve that it was prepared favourably to consider any application for the admission of independent reporters.

The PRESIDENT said the Council must take one amendment at a time.

Mr. SAVAGE said his object in rising was to support in a large measure, as he had hitherto, that there should be a reporter or reporters; but he was going to suggest that the present motion should only extend to one year, so that there should be no difficulty in the event of its being found inconvenient, or anything arising to justify the Council in changing its opinion at the expiration of a year, in returning to the old system, as it would be then known that the period for which the extra reporters had been elected had then terminated, and there would be no offence committed by not re-electing them. At the same time he had no fear of its being permanent when once adopted; still some gentlemen did object to it, and feared something serious would occur. There was also a feeling outside the Council that the reports of its proceedings were garbled by reason of having only its own reporter. The members of Council knew that such was not the case, and if there were half-a-dozen reporters they could scarcely report better than was already done, except perhaps a little more fully, but it would remove a suspicion which at present existed in the minds of those who did not know the facts. If there were any matter of importance to be brought forward any gentleman who came there, seeing the notice of Committee stuck up, would respect it in the same way as now, and any proceedings which it was not desirable to be brought forward in public might be discussed in Committee, and the Council would not have, as it did frequently, to go over the ground again which had been already gone over by the Committee.

Mr. MACKAY did not agree with Mr. Symes that the time had arrived when other reporters should be admitted, nor even that the amendment should be carried. He certainly, of the two, looked upon the motion of Mr. Symes as being by far the more objectionable, because to put it as he had done, as he said, after full consideration, that reporters of any kind or description and in any number should be admitted would be a thing he thought the Council could scarcely agree to. On the other hand the proposal of Mr. Frazer was not so objectionable, because the members of Council knew THE CHEMIST AND DRUGGIST found its way into the hands of an immense number of the trade. At the same time, he failed to see the necessity of even a reporter from that journal coming in, and for this reason—the Council meetings took place early in the month, and what to his mind was a fair report of the proceedings was given, although as he had always argued not quite so full a report as might be given, in the Society's own journal. THE CHEMIST AND DRUGGIST was published about the middle of the month, and he could not see that it was placed at any great disadvantage, inasmuch as it had in its hands, ten days or so before hand, the proceedings of the Council. But he rose more to argue that the Council had been hitherto a little remiss in not giving effect to what he had more than once suggested, and which he held more strongly than ever, that it should admit the editor of the Journal. He should be very much pleased to see some such plan as that tried, that the editor of the Journal be admitted to the Council-room during the ordinary business of the Council meetings. He knew that outside many remarks had been made regarding the reporting of the proceedings; sometimes brevity had been named as a fault, and sometimes it had been stated that they had not been as correctly reported as they might have been. When the editor had been applied to, his reply had been that he had nothing to do with what went on in the Council-room, that he only printed the report furnished to him. Now if he were present in the room the report might be more extended, or he would be in a position to answer some of these complaints. He did not know what effect these two motions might have, but he was exceedingly anxious that the Council should admit the editor to a seat at the reporter's table.

Mr. RICHARDSON had great pleasure, as a young member of the Council, in supporting Mr. Symes's motion. He might say in the first place how astonished he was at his friend Mr. Mackay, coming from Liberal Scotland, not supporting it also.

Mr. SYMES here said that he was desirous of adding a rider to his motion, namely—

That the Council retain power to consider each application for admission on its merits.

Mr. RICHARDSON said he entirely concurred in that condition. The members of Council ought in justice to themselves to have some discretionary power as to the expulsion of reporters if they in any way exceeded their legitimate duty, for they were not now an exclusive body as they were before the passing of the Pharmacy Act, but were legislators for the whole trade. As had been said, the Journal only circulated to 4,000 members and associates of the Society; but there were 10,000 chemists and druggists, 6,000 of whom, therefore, were not supposed to have a proper knowledge of the actions of the Council, and they ought to be considered. The only way to do that was by the introduction of independent reporters. Having watched the proceedings at the Council, he was much disposed to think that it would facilitate the progress of business if independent reporters were admitted. He might be thought, perhaps, impertinent in saying so, but he did seriously think that a great deal of time was wasted in the Council by work which was really committee work, and which there was no necessity for dealing with there at all. He maintained that if there were some method of independent reporting those desultory conversations would not occur, and the Council would have a much more progressive mode of conducting business. There was a very great deal of complaint, and those who, like himself, lived in the country, were constantly hearing it. He did not wish to say one word against the Council's reporter, for he had sufficient knowledge of him to see that his sagacity was irrefragable, but if there were a method of open reporting it would take the sting out of a great deal which was now said about the Council, not only by THE CHEMIST AND DRUGGIST, which was a very excellent journal, but also by those constituents whom the Council was supposed to represent. THE CHEMIST AND DRUGGIST had been mentioned, but he should not confide himself to that journal. If the *Times* wished to send a reporter there the Council had no right to refuse him admission. It must be remembered that the Council was legislating for the public as well as in the interests of chemists and druggists. It was not an executive body, which was supposed to be legislating for the benefit of chemists and druggists solely, but it also represented the public, and he should be the first to send in his resignation if he thought he did not fulfil his duty to the public as well as to chemists and druggists. He should, therefore, support Mr. Symes's motion rather than the amendment. He remembered a letter written by Mr. Joseph Ince, who some years ago prognosticated that if THE CHEMIST AND DRUGGIST did not follow a certain line it would become a matter of history, and would be used for lining boxes; but he had watched the progress of that paper, and it had become a very great power in the pharmacy of the country. It had a large circulation, and was read very extensively. Mr. Mackay complained that it was only published monthly.

Mr. MACKAY said, he did not complain at all; he only stated it as a fact.

Mr. RICHARDSON said a very few years ago the *Pharmaceutical Journal* was only published monthly, and possibly when THE CHEMIST AND DRUGGIST was admitted to report the meetings of the Council it also would become a weekly publication. One other reason why he wished independent reporters to be admitted was that the members of Council might be able to answer the continuous complaints addressed to them by private letters. Since he made a little speech at the last meeting, complaining that the Registrar did not exercise sufficient vigilance in testing applicants to be placed on the register, he had had no less than twenty letters making similar complaints. If the meetings of Council were open the sting might at once be taken out of all these complaints. It was impossible for him to answer twenty letters to twenty gentlemen every month, but if the

reporting were thrown open to any papers representing the pharmaceutical body, and to the public prints if they liked to come, it would give very great satisfaction to the trade, and especially to those whom he represented.

Mr. MACKAY asked if Mr. Richardson meant to convey that if THE CHEMIST AND DRUGGIST reporter were admitted that publication would change from a monthly to a weekly one?

Mr. RICHARDSON replied that he did not say that at all. He said that perhaps it might be the case.

The SECRETARY asked Mr. Richardson if he would give him the letters of the gentlemen who had complained, and he would guarantee to satisfy both the Council and those gentlemen that there had been no want of vigilance on his part.

Mr. WILLIAMS said if there were 20 reporters present, he did not see how it would affect such a question as this.

Mr. RICHARDSON said he did not come there to be catechised by the Secretary. In no other deliberative assembly did he ever hear of one of the staff being permitted to speak, unless he were asked a question. Those letters were written to him in confidence, and he should certainly not give them up to the Secretary. After the discussion, Mr. Richardson withdrew any remarks which might have been offensive to the Secretary. He said he had meant to convey that more open reports would tend to remove misapprehensions, and lessen the labour of the Registrar.

Mr. WOOLLEY had much pleasure in supporting the motion with the addition which had been made to it. He had not intended to say anything, thinking it would probably be carried more unanimously than now seemed likely, but for one or two expressions which had fallen from Mr. Gostling and Mr. Mackay. Mr. Gostling had said that the reports were most faithful, most true, and most correct, and Mr. Mackay said they were generally very fair. Now he knew one instance where he thought he had very good grounds for complaint, and he gave this as an instance to show why it would be better to have other reporters present. He was not complaining of the reporter, who, he believed, did his work most properly; but, at the August meeting, if he recollected rightly, the Council agreed to raise the salary of the Editor and Sub Editor—the Editor's by 100*l.*, and the Sub-Editor's by 50*l.* That piece of business was not reported, and in September he drew attention to it and was most careful in giving the figures, which he had given again now, in the hope that they might get into the Journal. He had very good reason to believe that the reporter took due note of those figures both in August and September, but by some mysterious process which he did not understand, and he did not know who was to blame for it, notwithstanding his efforts to get the figures published in the Journal they were left out. He thought ordinary constitutional procedure ought to have dictated to whoever had these reports before him the propriety of making such an expenditure of money as that public to the body which found these funds. That was an illustration of the advantage which would accrue from having an independent reporter present.

Mr. HILLS had only one word to say on the subject. Mr. Symes said that other institutions had reporters; but he (Mr. Hills) believed that neither the College of Physicians, nor the College of Surgeons, nor the Society of Apothecaries ever published reports. All these were qualified gentlemen, and chemists and druggists also were qualified, their qualifications being decided by examination. It was not as if theirs was an open trade. At any trade meeting of the members of these institutions, or at a vestry, reporters might be desirable. With regard to THE CHEMIST AND DRUGGIST, it was a well-known paper, which represented chemists and druggists, and therefore stood on a different footing, but he was not prepared to say that this should be the only exception. He should be quite ready to admit any other reporter when he made good his claim.

Mr. SHAW said that on several former occasions when this matter had been before the Council he had voted for additional reporters, and he might remind Mr. Symes that the matter was first brought forward about ten years ago, when it was said to be utterly impracticable. If his memory served him correctly, at the second meeting he had the honour of attending as a member of Council, the subject was brought forward by Mr. Reynolds, his motion being to the effect that other reporters be admitted, and remain at

the continued pleasure of the Council. So far it coincided with Mr. Symes's motion as now amended. Last year the matter was brought forward by Mr. Hampson, when he moved that an invitation be given to the editor of THE CHEMIST AND DRUGGIST to send a reporter, and it struck him that it would be very desirable that this should be done. This was what Mr. Frazer's amendment amounted to. There were only two journals which represented pharmaceutical interests, the Society's own journal and THE CHEMIST AND DRUGGIST, and therefore he should like to see an invitation given to the latter to send a reporter. He was quite certain the editor of that paper would not use the information he gained there to the disadvantage of the trade, or members of the Council, for whatever was detrimental to them would certainly be detrimental to that paper. There could be no objection to the present reporter being supplemented by another. For his own part he was thoroughly satisfied with the manner in which the reports were given; in fact he was astonished at the marvellous accuracy with which they were rendered. At the same time, mistakes occasionally would occur, and he remembered on one occasion Mr. Woolley making restitution of some speech attributed to him which had been delivered by someone else. He thought it would be a relief to the present reporter to have another one present, and it would do away with a large amount of feeling throughout the country.

Mr. ATKINS said last year he had the pleasure of seconding the motion of Mr. Hampson that a reporter from THE CHEMIST AND DRUGGIST be permitted to attend the meetings, and he would not detain the Council with the reasons he then gave, but he believed it would be better to pass the wider resolution, because of necessity the greater included the lesser, but the converse did not hold good. There was no doubt that in all these debates what the members of Council had present in their minds was the fact of the reporter of THE CHEMIST AND DRUGGIST being admitted; they did not anticipate there would be any applications from any other sources whatever, although he should not be at all alarmed at an application from the *Times* if there were any matter coming forward of public interest. He had no complaints to make with respect to the reports in the Journal. He would not stop to repeat the well-earned compliments that had passed round the table on this matter, but he believed as a matter of expediency it was very desirable that this motion should be carried. It was deeply to be regretted that there was a considerable amount of estrangement, most undesired, on the part of some of their constituents towards the Council, and he believed the wider the representation was made, and the more broadly the debates were printed and circulated, the healthier it would be, and the more united they would be as a body. With regard to THE CHEMIST AND DRUGGIST he could speak most impartially, and he believed if the tone of that journal were altered, as he thought it might and he hoped it would be, towards the deliberations of the Council, it would very largely affect their constituents outside. A large section of them read that paper, and did not read their own journal, and if the tone of THE CHEMIST AND DRUGGIST towards the deliberations of the Council were a little more considerate and impartial it would have a very good effect, not so much on that paper itself as on their constituents at large, and it would be a splendid day for them as a body when they had not, as they now had, a divided camp. He longed for the day when there should be a more thorough appreciation of the work done at the Council Board, and he knew no better means of accomplishing this than that the organ which confessedly took a somewhat antagonistic position towards the members of Council should be brought more thoroughly into accord with them. He would remind Mr. Hills that the nearest analogy he knew of to that Council was the town councils, which were representative bodies, and also to a certain extent executive bodies, and in many respects were parallel in their action to that Council. In their case it was the right of every newspaper to send a representative. Of course they had the power in the case of any private matter coming forward to ask them either not to notice it, or to leave the room, and at present he was not conscious of any reason why the same could not be done in that room.

Mr. FRAZER asked if he might be allowed to dissent from the statement made by Mr. Atkins that THE CHEMIST AND

DRUGGIST was antagonistic to that Council? Had he thought so he certainly would not have proposed the amendment. He believed it was thoroughly in accord with the Council, although it sometimes criticised it.

Mr. ATKINS said that Mr. Frazer had somewhat misconceived him. He simply referred to the general tone of THE CHEMIST AND DRUGGIST, a paper which he regularly read himself, and he would ask them, was its general tone one of cordial appreciation or not? He believed it might be brought thoroughly into accord with the Council.

Mr. GREENISH did not wish to give a silent vote on this occasion, though he had nothing to add to that which he stated two years ago. He then thought the time had arrived when the Council might admit reporters other than its own to that room. He could not help stating, however, that the present reports were marvellously accurate. In fact, very frequently, when the proof was sent to him he had not to make the slightest verbal alteration in anything he had said. If this motion passed, however, he hoped that it would not merely be passed for the editor or reporter of THE CHEMIST AND DRUGGIST to be admitted, but on the broad principle that, on application being made, any reporter would be admitted. Mr. Richardson had stated that he believed a great deal of time was wasted at the Council. It was possible he had been somewhat unfortunate in the meetings other than those of this Council which he had attended and taken part in, but it seemed to him that time was always more or less wasted, and he did hope that at that Council the time was far distant when members would cease to take an interest in and criticise the reports of the various committees which were brought before them. It would be a most unfortunate thing if when a few gentlemen, forming a committee out of 21, presented a report, the others should simply receive it without any criticism whatever. He was not at all an advocate for the reports of committees being pulled to pieces systematically, but he did hope that members would not cease to take an interest in these matters which were brought before them.

Mr. BOTTLE said he proposed to give his vote differently to the way he did last year. He then voted in great measure on personal grounds, and that question had again been mooted as to whether THE CHEMIST AND DRUGGIST commented fairly on the proceedings of the Council. At any rate, he had noted during the past year that there was a manifest improvement in the tone of that paper towards the Council and the Society, and, as showing his appreciation of that, he intended to vote in favour of admitting the reporter of THE CHEMIST AND DRUGGIST. On the other hand, he should oppose the wider scheme of Mr. Symes's motion, more especially so as it would open the way for what Mr. Richardson said he should like to see—the reporter of the *Times* being there.

Mr. RICHARDSON said he did not say that. He said that if that reporter applied, they had no right to refuse him admission.

Mr. BOTTLE said that to pass such a general resolution was a serious matter, especially considering the limited space at command. If the reporter of the *Times* had a right to admission, the Council could not refuse the reporter of any other morning paper, or of even the *Figaro* or *Penny Folks*. The accommodation was not sufficient to allow of asking all, and it could not admit one and refuse another; but THE CHEMIST AND DRUGGIST was a publication which was known to be increasing in circulation among the members and the trade generally, and he would ask the Council—certainly as a first step—to restrict admission to one other reporter, rather than to open the door wide and have to admit any gentleman who might make application.

Mr. WILLIAMS said he had hitherto felt it his duty to oppose this motion, and he was sorry to say that notwithstanding all he had heard, he must still hold that opinion. It was not that he in any way wished to restrict reporting; on the contrary, he should be very glad to see, if possible, the meetings more fully reported than they were now. But he thought that should be done by an arrangement quite different to that of having extra reporters. He did not see how extra reporters could give the result they were all desiring, viz., increased reports; on the contrary, there was no doubt when other reporters were present the Council

would have to arrange that a great deal of business should be done not in the presence of reporters at all, and it would be going in the opposite direction to that which was desired. He believed great practical inconvenience would result. As he had said before, he should like to see the reporting done on the principle of taking down all that took place in committee or otherwise, and that then the report should, before publication, be submitted to a committee or some one who should have the power of striking out only portions which would be obviously improper for publication. In that way there would be obtained a full and nearly perfect report of the proceedings of the Council. He need not say that the introduction of a second or non-official reporter to the Council-room would stand in the way of any such process as that, and also that it would be very difficult indeed at any future time for the Council to go back from the step it was now proposed to take. If it once passed this resolution it would entail a great deal of odium to attempt to go back from it. He really thought if the Council looked at the question from the proper point of view it would be seen that to accomplish the end the members all desired, namely, fuller and more consistent reports of their own proceedings, so that members in the country and elsewhere might really have a knowledge of all that was doing, as far as practicable, there might be devised a better mode of arriving at it than by having an independent reporter who would be merely present when a debate like the present was going forward, but who would not be able to give the constituents any account of the more private or more important business which might often be of the greatest interest, and might be published without detriment. Under these circumstances he should vote against both the amendment and the motion.

The VICE-PRESIDENT wished to point out a very essential difference in the wording of the motion as it stood, and in the style of language adopted by the mover of the amendment. In the one case something like a broad principle was asserted, in support of which broad principles could be urged; in the other case the attendance of a reporter of a particular journal was invited. He scarcely thought the amendment could be carried, inasmuch as by a strange coincidence, due to the introduction of such an amendment on such a motion, both those who opposed Mr. Symes's motion and many who approved of it would vote against this amendment. On the other hand, if the Council adopted the amendment it would do away with the motion, whilst at the same time it would alter the present arrangements with regard to reporting. He did not see, therefore, any chance of the amendment being carried. With regard to the original motion he should like to say that, for his own part, he thought it should be carried upon the broad principle that the members of the Council were the administrators of an Act of Parliament, in which the whole public were interested equally with themselves, and that all such proceedings ought to be conducted in such a way that the outside public could, if it liked, approach and see what they were doing. If it were carried the chances were there would be no other applications than from the one journal named in Mr. Frazer's amendment, so that practically, in all probability, the result of carrying the resolution would be merely to admit the reporter of THE CHEMIST AND DRUGGIST, if the editor chose to apply. But the principle should be either that the proceedings should be private or that they should be public and open to any inspection from the outside public which the public chose to require, and this was the view he took, seeing that they were administrators of an Act of Parliament. One more argument he should like to use was, that the Council would better consult its own dignity in adopting this abstract motion than by sending an invitation to the editor of any particular paper. He was not quite certain of the relation in which the members of the Council stood to their present reporter, but he believed they had not asked the editor of the *Pharmaceutical Journal* to send a reporter, and if it would be a strange thing to invite the editor of THE CHEMIST AND DRUGGIST to do so. Be that as it may, he thought the Council would be best consulting its own dignity, and at the same time better consulting the public interests committed to its charge, if it left the matter perfectly open, reserving only the right of imposing such limitations on the

action of the reporters as it was supposed to do at present. There were certain simple regulations which they would be required to adhere to, and if forty were present, supposing there were room for them, he did not think any harm would be done, while at the same time the Council would be disabusing the public mind of any notion that it was acting unfairly.

Mr. SYMES said he would not reply at any length to the observations which had been made, several of which had been ably answered by Mr. Schacht. The editor of THE CHEMIST AND DRUGGIST was exactly in this position at the present moment. His journal was very largely read by a number of persons who never read the *Pharmaceutical Journal*, and whether it were published at the beginning of the month, or in the middle, was of little importance. It was read by a large number of persons, and the editor was in this invidious position, that he had either to copy the report of the *Pharmaceutical Journal*, or to make an epitome of it. He might say that he thought some of the remarks made were rather unjust to that editor, inasmuch as he was placed in this very awkward position. The Council did not allow him to know anything of the proceedings, except what he gained from the official report. It was not likely that an editor placed in that position would simply copy the report; he made certain inferences and deductions of his own which seemed to some of them ridiculous and perverted, but which were really the natural deductions of any person outside the Council. Anybody else drawing deductions would probably draw deductions quite as full of error as any in THE CHEMIST AND DRUGGIST. He did not wish to say a word against their own journal or THE CHEMIST AND DRUGGIST, but some gentlemen had complained that other reporters being there would merely furnish the editor of THE CHEMIST AND DRUGGIST with further means of enlarging his reports, but the fact was if his reporter were present the Council could pin him to his own report, and there would be no necessity for deductions. In answer to Mr. Hills, he would say that the Medical Council admitted reporters, and that was the body which practically corresponded to the Pharmaceutical Council, as representing the medical profession. The Colleges of Physicians and Surgeons were private bodies, but the legislative body was the Medical Council. Mr. Bottle had some anxiety as to the room, and he could quite understand his anxiety that the room should not be over-crowded, but the Council could refuse admission to any reporter on any plausible ground, and if ever so eligible a man applied for admission and there was not room, he could be told so, and there was nothing in the motion to prevent that. As had been said, the broader motion was far more dignified, and as the greater included the less, it would be perfectly eligible to anyone to oppose any other reporter being present, except the one from THE CHEMIST AND DRUGGIST, but the question of broad principle was most important. Mr. Williams, he thought, had been a little inconsistent, because he proposed that a committee should be formed which should have the power, not of adding anything, but only of striking out anything, which it might think objectionable. Yet the first thing Mr. Williams did that morning was to ask to have something added to the minutes, whereas such a committee as he proposed would be utterly powerless to put in anything that was omitted or to set anything right. He was quite convinced that no ill result would follow from the adoption of his motion, and that if he had the honour of being on the Council three or four years hence, when it had been tried, he should be able to stand forward and ask if the adoption had not served both the interests of the Council and those of the outside public, in whom it was interested.

The amendment was then put with the following result:—
For—Messrs. Bottle, Frazer, Hills, and Shaw.

Against—Messrs. Atkins, Gostling, Greenish, Hampson, Richardson, Rimmington, Robbins, Savage, Schacht, Symes, Williams, and Woolley.

The amendment was therefore lost.

The President and Mr. Mackay did not vote.

The motion with the words subsequently added by Mr. Symes was then put with the following result:—

For—Messrs. Atkins, Frazer, Gostling, Greenish, Hampson, Richardson, Rimmington, Robbins, Savage, Schacht, Shaw, Symes, and Woolley.

Against—Mr. Williams.

The motion was therefore carried.

The President, Messrs. Bottle, Hills, and Mackay did not vote.

A question afterwards arose as to the procedure with regard to reporters and committees. Mr. Greenish thought when the Council went into committee reporters should be asked to leave the room. Mr. Mackay thought other reporters than their own should leave the room. But Mr. Atkins objected to invidious distinctions, and did not think it would be practicable to keep reporters trotting about from one room to another. Finally a committee was appointed to make proper arrangements and regulations for reporters.

SHALL PHARMACISTS OFFICIALLY AID IN THE PREPARATION OF THE NEXT BRITISH PHARMACOPEIA ?

Mr. HAMPSON moved that the General Medical Council should be asked to receive a deputation to urge upon them the desirability of the Pharmaceutical Council being legally empowered to nominate pharmacists to co-operate in framing and amending new editions of the British Pharmacopœia. He said that such a representation was made by the Pharmaceutical Council to the General Medical Council in 1874, but he believed it had not been acknowledged. It was true that the Medical Council had employed Professor Redwood and another practical pharmacist, and these gentlemen had rendered great service, but they had no recognised status. The Medical Council might alter or expunge formulæ, and pharmacists had no voice in the matter. Courts of law regarded the Pharmacopœia as a standard, as did public analysts, and pharmacists were completely at the mercy of its formulæ. In no other civilised country did pharmacists occupy such an undignified position. He did not wish to give offence to the medical profession nor to trench on medical grounds. But he thought the time had come when, as the faculty of pharmacy, the society might ask for a friendly conference with the Medical Council on this subject.

Mr. SCHACHT seconded the proposition. He did not wish to say a word as to any ulterior course of action until he knew the result of this application, but he reminded the Council that there was a Sovereign on the throne who appointed a part of the Medical Council, to whom an appeal might properly be made.

Mr. WILLIAMS sympathised with the object of the motion, but thought that, as the Medical Council had not regarded the request of the Pharmaceutical Council on a previous occasion, great care should be taken in moving in the matter, lest there should be a loss of dignity.

Mr. MACKAY took a somewhat similar view.

Mr. GREENISH would cordially vote for the motion. Foreign pharmacists were astonished that those in this country had no recognised rights in the framing of the Pharmacopœia.

Mr. HILLS thought it would be better to wait until the publication of a new edition of the Pharmacopœia was decided on.

Mr. SYMES supported the motion.

The PRESIDENT said there was only one feeling as to the abstract right, but he considered that, as a question of policy, the motion was not wise, as it might expose the Council to a rebuff and convert the Medical Council into antagonists.

Mr. FRAZER thought that those who prescribed should be responsible for the formulæ, and he therefore opposed the motion.

After some further discussion the motion was put to the vote, and Messrs. Greenish, Hampson, Schacht and Symes voted for it; and Messrs. Bottle, Frazer, Hills, Mackay, Rimmington and Robbins voted against it. The motion was therefore lost. The President and Mr. Williams did not vote.

HUNT'S PATENT PLEATED PAPER BOTTLE CAPS are now sold at 30 per cent. less than when they were first introduced. This is in consequence of the extended manufacture. Messrs. W. F. Hunt & Co.'s new manufactory for France is at 60 Prado, Marseilles, not at 152 Rue Paradis, as we stated in our last.

Metropolitan Reports.

CHARGE OF ASSAULT.—At the Guildhall Police Court on November 21, Mr. Dugald Sinclair, landlord of the Old Parr's Head public-house, 32 Knightrider Street, was summoned for assaulting Mr. Edmund Hawes Hill, 42 Wilson Street, Finsbury Square, wholesale druggist. After hearing the evidence the Alderman dismissed the summons, saying that if he had the power he would make the complainant and defendant change places.

POISONED BY VAPOURS.—At an inquest held on a little girl, five years old, at Walworth, on November 22, the jury returned the following verdict: "That death was from exhaustion consequent upon a violent attack of sickness, brought on by the deceased inhaling poisonous fumes while being nursed in painter's clothing." Her father, a painter, was found of nursing her before the fire in his working clothes. One day she complained of sickness, and was soon afterwards seized with vomiting. She died two days after from exhaustion. The above is a curiosity in verdicts.

ROBBERY FROM A CHEMIST'S SHOP.—At the Guildhall, on November 24, Thomas White, who at first refused his name and address, was charged before Mr. Alderman Staples with stealing goods from the shop of Messrs. Wood & Layng, chemists, 4 Finsbury Pavement.—A witness named Bradshaw, assistant to the prosecutors, stated that on the previous Saturday the witness came into the shop and asked witness to make him up some pills, and he directed the ingredients for them. While he was making them up other customers came in, and he missed from the counter a box of glycerine jujubes. Shortly afterwards he missed another box of jujubes. When he had made up the pills he charged him 3*d.* for them. Just before he paid the money witness saw him take two boxes of Browne's bronchial troches. The prisoner said he would call for the pills shortly, and left the shop. After he left witness went round the counter, and missed four boxes of jujubes, &c. He went after the prisoner, found him in Fore Street, and gave him into custody. He was brought back to the shop, and the missing property found on him. About two months ago the prisoner came into the shop, and every time he visited the shop goods were missed. His visits had been continued for the last six months.—James Stroud, police sergeant, gave evidence, and said prisoner told him he was in the habit of taking an ounce of laudanum a day. Witness took him to the hospital, where he slept for three hours, after which the hospital authorities sent him back to the station in custody. He then searched him, and found on him shaving soap, lozenges, and other things, which he said that he had bought.—The prisoner was remanded for inquiries.

THE ALEGED THEFT BY A CHEMIST'S ASSISTANT.—At the Central Criminal Court on November 29, George Blunt, 26, surrendered to his bail on an indictment charging him with having embezzled 1*l.* 2*s.* 6*d.*, the money of his employers, Messrs. Roberts & Co., of New Bond Street. Mr. Besley prosecuted; Mr. Geoghegan defended. The prisoner was in the employ of the prosecutors, and for some time past had been suspected of robbing them. On Saturday morning, November 1, five marked half-sovereigns were placed in the till and two marked sovereigns were paid across the counter. About Monday the till was emptied, and the five half-sovereigns were found there, but the two marked sovereigns were gone. Detective-sergeant O'Dea was called in, and, on telling him the charge, the prisoner produced the two sovereigns from his pocket, and said that he had replaced them with four half-sovereigns. In the till, in addition to the marked half-sovereigns, were three unmarked half-sovereigns, two of which were alleged on the part of the prosecution to have been paid in by a boy named Fitzgerald on account of a gentleman. This boy, however, in cross-examination by Mr. Geoghegan, said it was 25 minutes past 12—the till was emptied at 12 o'clock—when he paid the money. Mr. Geoghegan, commenting upon the latter fact, argued that it went to corroborate the prisoner's story. The jury acquitted the prisoner.

Provincial Reports.

ABERDEEN.

SOCIETY OF CHEMISTS AND DRUGGISTS.—The inaugural address in connection with the Aberdeen School of Pharmacy was delivered on December 9 by Mr. John Gordon (Messrs. J. & J. Urquhart), teacher of the chemistry class. Mr. R. D. Presslie, presided, and there was a large attendance. The subject of the lecture was "Chemical Force." The lecture was illustrated by many experiments. The school, which is conducted gratuitously by Messrs. Gordon & Strachan, now enters on its second session. Mr. Strachan conducts the class in Materia Medica, and early in the ensuing summer a class for the study of botany will be formed under the charge of Mr. Presslie.

BIRKENHEAD.

POISONING BY PHOSPHORUS.—Bridget Ward, respectably dressed, and apparently about 20 years of age, was charged before the Birkenhead Stipendiary on December 2 with having attempted suicide. She had been found running about the streets with phosphorus fumes coming from her mouth. Edward Edwards said he saw the prisoner with a young man in a public-house. She was behaving in a silly manner, and some sharp words passed between her and the young man. They left the house together, and in the street the woman took some phosphorus from her pocket and "slat" it into her mouth. She was taken to the hospital, and a doctor stated that she was insane. She was remanded for a week, the magistrate directing her removal to the workhouse.

ARSENIC POISONING.—Early on November 2, Elizabeth Harry, 24, a domestic servant in respectable service, was seen by a fellow-servant eating part of a slice of bread and butter. Shortly after she was seized with vomiting, and speedily died. An inspection proved that the bread and butter were sprinkled with arsenic, and her fellow-servant was found to have had arsenic for poisoning rats. It is alleged, however, by the other servant that the deceased took arsenic to remove spots from her face.

CAMBRIDGE.

"NORFOLK" BAKING POWDER.—On November 20 the Cambridge magistrates were engaged for about five hours in hearing a charge against the Messrs. Warren, grocers, for having sold the "Norfolk" baking powder, which, it was contended, was injurious as an article of food. Mr. W. Cockerell, instructed by the Town Clerk, appeared to prosecute on the part of the Corporation; Mr. Blofeld defended, on behalf of Messrs. Smith & Co., wholesale druggists, Norwich, the manufacturers of the powder, and the real defendants in the case. For the prosecution Mr. Knight, Public Analyst for Cambridge and Cambridgeshire; Mr. M. Pattison Muir, Pralector at Caius College; Dr. Armingon, Medical Officer of Health for Cambridge; and Dr. Bradering, Physician at Addenbrooke's Hospital, were examined, and proved that the baking powder contained phosphate of alumina, which rendered the bread or dumplings, &c., made from it indigestible, and therefore deleterious. For the defence Mr. Sutton, Analyst for Norfolk, Great Yarmouth, Lowestoft, and Thetford; and Dr. Beverley, Assistant-surgeon at the Norfolk and Norwich Hospital, denied the evidence for the prosecution. The magistrates convicted defendants in the penalty of 40*s.* and costs, and notice of appeal was given.

CHESTER.

THE MAYOR AND THE PHARMACISTS.—We mentioned last month that Mr. Charles James Blelock, chemist, had been elected Mayor of Chester for the current year. On November 25 the other members of the trade met him at the Town Hall to congratulate him on the honour which his fellow-citizens had conferred upon him. An address conveying these congratulations had been prepared, and bore the signatures of all the chemists of Chester. The border of the address had been painted by Mr. E. B. Baker, and represented poppies, belladonna, thorn-apple, clove, roses, aniseed, and henbane. It was enclosed in a massive gilt frame,

and the mount bore the Pharmaceutical arms, Mr. Blelock's own arms and monogram being on the frame itself. Mr. Shephard made an introductory speech, Mr. Baxter read the address, and Messrs. Hope, J. D. Bowers, and J. E. Williams added some complimentary remarks. The Mayor expressed his high appreciation of the honour which had been conferred on him, which in his opinion was equal to the honour which he had lately received in the Council Chamber.

DERBY.

SHOP ROBBERY.—Patrick Flynn was committed for trial by the borough magistrates on November 21 charged with stealing 5s. 9d. from the till of Mr. Lugar, chemist, Osmaston Road, Derby. The prisoner had been found in the shop behind the counter with money missing from the till on his person.

DOVER.

DOVER CHEMISTS' ASSOCIATION.—The annual meeting was held on Friday, November 7. Mr. Cotterell and Mr. Wilford were re-appointed to the respective offices of President and Secretary for the ensuing year. After the transaction of business the members adjourned to the supper-table, and a pleasant evening was passed. In replying to the toast, "Success to the Dover Chemists' Association," the president expressed his gratification at the continued success and usefulness of the Association, which had now entered upon its fourth year, and hoped that in the future these would be increased.

GLASGOW.

CHEMISTS AND DRUGGISTS' ASSOCIATION.—The second meeting of the session was held in Anderson's College on December 3, Mr. Alexander Kinninmont, F.C.S., president, in the chair, when Dr. J. T. Whittaker gave a lecture on the "Chemistry of Digestion." The processes of digestion were explained with the assistance of a large diagram, and the action of its various artificial aids, such as pepsine, pancreatic juice, and malt extract, was discussed at some length.

THE NEW APOTHECARIES' HALL.—The Glasgow Apothecaries' Company have lately removed into their new premises built on the site of their former establishment destroyed by fire some year and a half ago. The new building is, in addition to the basement, five storeys in height, with a frontage towards Virginia Street of 60 feet, and extending 70 feet backwards. The style of architecture adopted is the modern Italian, and while the chisel has been freely employed in ornamenting the upper portions, the general effect is very materially heightened by the frontage up to the first storey being faced by Peterhead polished granite. The premises are entirely devoted to the wholesale and retail departments, and the manufacturing branch has been removed to St. Rollox. One half of the ground floor is given up to the retail business. The public hall is of spacious dimensions, and is finished in a very tasteful style, the wall and roof lining being of clear pitch pine varnished, while it is fitted up in a most handsome and complete manner. For those who are specially interested in these matters, it may be mentioned that the rows of shelving identified with such establishments are filled with the new patent recess labelled bottles of American introduction, for which the company are agents in the United Kingdom. Behind the hall there is a large saloon—lighted by means of a glass roof—where are all the requisites for carrying on the dispensing department. The other division of the ground flat is apportioned off as offices and packing and dispatch hall in connection with the wholesale section. The four flats above are wholly relegated to the wholesale trade. In one part of the attics there is a range of tubs for washing and ovens for drying the bottles and roots. In the basement there is ample cellarage accommodation, as well as a fire-proof store for the keeping of the more valuable drugs and essential oils, and a series of huge tanks for common oils. A hydraulic hoist and a hand-lift, going from the basement to the top flat, have been constructed, while electric bells and speaking tubes are laid down throughout the entire premises. With the view of protecting the building as far as possible from a fate similar to that of its predecessor, the

centre wall has been constructed of the prescribed fireproof material, and the communicating passage on each floor is covered by double iron doors.

HALIFAX.

A QUACK DOCTOR AND HIS PATIENTS.—On December 2, at the Halifax Borough Court, Joseph Carney, quack doctor, of Prussia Street, Lady Lane, Leeds, *alias* "Professor Joseph," was committed for trial on three charges of obtaining money by false pretences. In the first case he had called at the house of Thomas Sutcliffe, Halifax, and undertaken to cure the daughter of blindness. He had the physis with him, which he said was 7s. 6d. per ounce, and made up two bottles of medicine, for which he received 3l. He wrote his address as "Professor Joseph, residence Botanic Dispensary, Knot Mill, Manchester." Detective Harland went over to Manchester, but could find no such person or place. He also inquired into the truth of four testimonials, all said to have been given by Halifax people who had been cured of ailments, but could find none of the persons mentioned. Mr. George Jarman, the borough analyst, proved that one medicine, to be used as eye vapour, consisted of aloes and chalk in solution, and the other, for internal application, of aloes alone. In other cases the prisoner had supplied similar medicines to cure a "catch" in the throat and deafness. In one instance he gave an address at Bradford, but Detective Harland found no such address. One witness had paid the prisoner 3l. 18s., and another 30s. Mr. Jarman said the aloes mixture cost 1½d. a pint, and the chalk 1d. an ounce. Prisoner was admitted to bail.

LEEDS.

FIRE AT SMEETON & PICK'S.—On November 25 a fire was discovered at about 9.30 P.M. on the second floor of a building in Bond Street, Leeds, occupied in part by Messrs. Smeeton & Pick, wholesale druggists. Several fire brigade companies were soon on the spot, but the premises were completely gutted before the flames were subdued. The damage amounts to several thousand pounds, and is said to be partly covered by insurance.

LINCOLN.

ILLEGAL SALE OF POISONS.—Hannah Taylor, shopkeeper, of 50 Newland Street, West, was summoned before the City Police Court on December 4 for having on November 27, sold to Police-constable Henry Revill two pennyworth of laudanum, a poison within the meaning of the Pharmacy Act, and which poison, when sold, was contained in a bottle not distinctly labelled with the name and address of the seller of the poison. Police-constable Revill stated that on Wednesday night week he went to the defendant's shop and asked for three pennyworth of laudanum. Defendant told him she did not sell it, but as he turned to leave the shop she said, "Oh, stop, if I sell you some, it will be all right. We used to sell a great quantity; the chemists have got it into their own hands now. We have to be cautious." Witness placed a small bottle and threepence on the counter, and defendant reached a bottle from the back of the counter, and poured a small quantity of the contents into his bottle. She then said, "Oh, stop, I have only given you one pennyworth, I will let you have another. I have never been caught yet, but you see we like money." After she had poured a little more in witness's bottle, she said, "I will see if I have a label." She then searched for a label, and having found one, placed it on the bottle, and said, "Now we shall be all right." He then left the shop. Witness produced the bottle, which was labelled with the name and address of Mr. R. Drury, chemist, Lincoln, and not of the defendant. In answer to the charge, defendant admitted that she had no right to sell the laudanum, but the officer, who was in plain clothes, pressed her so much that she mistook him for a man whose wife was ill, and she accordingly let him have some out of a small 3-ounce bottle that she kept for her own use. Revill, recalled, denied that he pressed the defendant unduly. The Chief Constable, in reply to the Bench, said that this was the first case of the kind that had been brought under his notice. The ex-Mayor (Mr. F. J. Clarke), told defendant she had rendered herself liable to a penalty of 5l., but as this was the first case that had been

brought before the magistrates, the fine would be reduced to 1s. Defendant expressed a wish to "lay it out," but the bench gave her the opportunity of reconsidering her determination by allowing her seven days for payment.

LISKEARD.

WHO KILLED THE COWS?—Daniel Bray, a farmer, of Altarnun, lost some cows, and told Richard Young, a chemist, of Liskeard, about the circumstances of their death. The latter, after some inquiries, told the farmer that he believed the deaths were due to an irritant poison, which he supposed might have been administered in some drenches which had been obtained from a man in Liskeard, named Humphries, who traded as a chemist. Mr. Bray agreed to have a drench analysed, and Mr. Young undertook to bear the expense if the analysis did not prove the presence of poison. A drench was therefore sent to Messrs. Allen & Hanbury, of London, who certified that it consisted of nitrate of potash, with a small admixture of some species of starch. Mr. Young paid two guineas for the analysis, less 20 per cent. Mr. Bray accepted the analysis at two guineas, but, on taking legal advice, was informed that the analysis did not prove the presence of poison. He refused to pay the two guineas, and an action for the amount was brought by Mr. Young in the Liskeard County Court on November 17. The Judge (Mr. Montague Bere, Q.C.), on referring to the analysis, remarked that it did not state the quantities, and did not prove that the drenches were poisonous. Mr. Young said he understood from the analysts that there was more than 80 per cent. of nitrate of potash present. His Honour said that an action against Mr. Humphries on this analysis would have entirely broken down, and, as plaintiff had agreed under such circumstances to pay for the analysis he gave a verdict for the defendant.

LIVERPOOL.

MISTURA VERY COMPOSITA.—On the 10th instant a grand associated soirée of eighteen scientific and literary societies of Liverpool and the neighbourhood was held at St. George's Hall. In an economic sense this idea of concentrating eighteen soirées in one evening is an excellent one. We can only pray that it may some day strike the duller brains of London secretaries. If one of those Liverpool geniuses would only discover a means of concentrating the same number of public dinners into one night's work his claim to our gratitude would be greater still. But the system will not work long. It may answer in Liverpool, where, perhaps, scientific jealousies are unknown, but it would break down the first year in London. Fancy how an "insect" would sneer at a "coin," and what would a "philomath" say to a "polytechnic"? Madame Historicus would hardly condescend to be seen in conversation with the "naturalist" girls, and the engineer's wife would certainly say something nasty to the chemist's spouse. The geologist and the mineralogist would never agree about a scientific frontier, and the Art Club would hardly mix with the amateur photographers. In Liverpool, however, on Wednesday last the affair seems to have passed off splendidly. The Chemists' Association certainly contributed its fair share towards the success of the entertainment. Amongst others, Dr. Symes lectured on the "Philosophy of a Tea-kettle," and Mr. A. H. Mason instructed and pleased the juveniles and their relatives with experiments and explanations of the "Chemistry of a Candle." Among the exhibits were many objects of interest contributed by the Chemists' Association itself; bismuth and laboratory apparatus by Messrs. Symes & Co.; coal-tar colours from Messrs. Hallawell & Co.; iodine products from Messrs. Evans, Sons & Co., of Liverpool; rare metals from Messrs. Johnson & Matthey; cinchona alkaloids from Mr. Whiffen, of Battersea; food illustrations from Messrs. Southall & Co., and scientific apparatus from Messrs. Philip Harris & Co., of Birmingham; candle materials from Messrs. J. C. & J. Field; mercurial products from Messrs. May & Baker, of Battersea; and other objects of chemical and pharmaceutical interest.

MANCHESTER.

EXPLOSION.—On November 26 an explosion occurred at the chemical works of Bouck & Company, Manchester. A defective naphtha still was being repaired, when it exploded,

blowing the still for a distance of 70 yards, killing the fitter, and seriously injuring one of the principals of the firm and some workmen. The damage was considerable.

NEWCASTLE.

DEATH BY CHLORODYNE.—An inquest was held on November 20 on the body of a married woman named Mary Crib, 62 years of age, who died somewhat suddenly at her residence, 3 Tyne Street, St. Anthony's, on November 19. The deceased had been an invalid for three years, and for some months had been in the habit of taking chlorodyne, as a sedative. Dr. Hirst, of Walker, had warned her that if she went on taking the drug it would kill her. On the afternoon of November 19, after taking two doses of chlorodyne, she became very ill, and was dead before medical assistance arrived. Dr. Page examined the body, and was of opinion that the cause of death was an overdose of chlorodyne. Verdict accordingly.

PLYMOUTH.

FIRE.—A fire broke out on November 26, in a store-room occupied by Mr. Allen, chemist, Bedford Street, Plymouth. It was extinguished with some difficulty.

RHYL.

SUPPOSED POISONING BY KETCHUP.—An inquest has been held on the body of John Davies, Tynewydd, Rhyll, farmer, aged 52 years, who died on the 3rd ult. under suspicious circumstances. The deceased on October 25 last, in company with Morris Roberts, was at Pwllheli, and about an hour after he reached home that evening he became very ill, and had a violent attack of vomiting and purging, with acute pains in the stomach. He complained of an unpleasant taste of ketchup, which he said he had taken during the day. Dr. Roberts made a post-mortem examination, and considered that the irritant which had caused two dark patches in the stomach was the primary cause of death. Dr. Campbell Brown (Liverpool) had analysed the viscera, but found no trace of any mineral poison. So far as the report went, organic poison might have been taken and all traces removed by the excessive vomiting and purging. With regard to the ketchup theory, Dr. Brown said it was very possible that fungi had been used in the preparation of the ketchup, which would have been quite sufficient to cause the irritant effects indicated. The Jury returned a verdict "That the deceased came by his death through having taken an irritant poison, but when and where he took it there was not sufficient evidence to show. Roberts, his companion, died three days after the visit to Pwllheli, with symptoms like those presented by the deceased.

RYDE (ISLE OF WIGHT).

ADMINISTERING A NOXIOUS SUBSTANCE.—At the Ryde Borough Police Court on November 24, a curious case was investigated. A married woman, named Amelia Gilkes, who resides in a fashionable part of the town, was charged with "unlawfully and maliciously administering a certain noxious substance—viz., lamp oil—to Ada Partridge," a widow lodging with her. It appeared from the evidence that on November 14 the prosecutrix had been superintending the cooking of some soup, and when her back was turned the defendant, it was deposed by the servant, went to the pot and poured in the contents of a cup, muttering words to the effect, "That will finish her." A servant deposed that she had seen the defendant mixing cod-liver oil, paraffin, and some third ingredient in the cup in question. Mrs. Partridge partook of a cupful of the soup, but finding a disagreeable taste with it, and feeling unpleasant pains in the region of the stomach, took the contents of the saucypan to Dr. Wilks, the borough medical officer, who discovered that paraffin oil had been mixed with the soup; but at the hearing of the case he was of opinion, judging from her appearance, that the prosecutrix was not in any way injured. The defendant pleaded that the charge was a conspiracy, but she was committed for trial.

SHEFFIELD.

CONVICTION UNDER THE EXPLOSIVES ACT.—At the Town Hall on November 13, Mr. A. M. Carr, druggist, Hilltop, Attercliffe, was fined 10s. and costs for exposing for sale 10 lbs. of fireworks otherwise than in a substantial case, bag, or canister as required by the Act in all cases exceeding 5 lbs. in weight. Mr. Carr was also fined 10s. and costs for keeping explosives in unregistered premises, the Act requiring dealers in explosives to renew their registration annually, which Mr. Carr had failed to do. Mr. A. J. Appleton, druggist, High Street, Attercliffe, was fined 10s. and costs for exposing 14 lbs. of fireworks otherwise than as required by the regulations. A second summons against this defendant for keeping explosives in excess of the regulations was withdrawn.

SHOTLEY BRIDGE, NEWCASTLE.

POISONING BY SALTS OF LEMON.—Hannah Bullerwell, wife of a carrier, lately died at Shotley Bridge under unusual circumstances. She was subject to headaches, and was accustomed to take for them a mixture of magnesia and bicarbonate of soda, which was kept in a cup in the cupboard. In a similar cup was kept "salts of lemon, or oxalic acid," used for cleansing. On November 2 Mrs. Bullerwell went to the cupboard and brought out a cup, poured some water into it, and drank the contents. Immediately afterwards she complained to her husband of being ill, and added that she "hoped she had got nothing wrong." She continued to get worse, and her husband, who did not know of the salts of lemon, feared she had taken rat-poison. Dr. Richards, assistant to Dr. Renton, attended, and, on this supposition, administered emetics, which had the desired effect. Mrs. Bullerwell recovered from the immediate effects of what she had taken, but as she did not wholly recover, inquiries were made by Dr. Renton, who was then informed that the poison was "oxalic acid," or, as it is more commonly known, "salts of lemon." The patient lingered for 15 days—an unprecedented time—and died on November 17. At the inquest held on November 19, Dr. Renton stated that she had died from the remote effects of corrosive poisoning. The verdict was in accordance with this, adding that the poison was mistaken for medicine by the deceased herself.

WAKEFIELD.

SELLING PATENT MEDICINES WITHOUT A LICENCE.—At the Wakefield Borough Court on November 19, Herbert Kelly, bookseller, Northgate, was charged with selling patent medicines without a licence. Mr. Trim, Supervisor of Inland Revenue, said Mr. Kelly had held a licence for the sale of patent medicines for a long time, but on September 9 he had not renewed his licence, and although he was visited by witness himself and one of his officers, his licence remained unrenewed until October 9. The sale of a box of pills in the interval having been proved, the defendant said it was a mere oversight on his part, and he had no intention of doing wrong. The licence was put in dated September 2, which was the renewal date, and called forth some remarks from the Mayor and Mr. Gill, who stated that in other cases the date when the money was actually paid was inserted, in the case of a dog licence for instance. Mr. Trim said that his instructions were to fill up the licence from that date whenever the money was paid. After some consideration the bench imposed the mitigated penalty of 5*l.*, but recommended the case to the consideration of the Inland Revenue Office to further mitigate the fine to 2*l.* 10*s.*

HEARING, AND SOME OF ITS DEFECTS.

(Continued.)

IT is essential to examine well the whole canal of the meatus externus in cases of deafness. This is effected by means of a speculum, the inner surface of which, being bright, readily transmits light to any part of the cavity, and so enables a careful and accurate examination to be made. The first point to be noticed is what is called the "cerumi-

nous circle," just within the meatus, consisting of a circle of fine hairs, covered, in health, by a kind of brownish wax. This wax may be in excess, and then the canal is seen to be filled with a dark compact mass: or this wax may be deficient in quantity, and giving rise to deafness. The canal is then seen to be dry and shining, with red and granular patches, and dried wax adhering here and there. The membrana tympani is generally opaque. The treatment of the former state was considered in our last; of the latter, it is necessary to bear in mind that it is generally associated with some constitutional affection, and it is most important to recognise and treat it. Locally, a solution of acetate of lead or nitrate of silver, very weak, should be dropped into the meatus night and morning. When it is due to a rheumatic taint, the application of warmth will be useful, in the form of hot fomentations.

The most important point in the examination with the speculum is to note the state of the membrana tympani, which closes the meatus at its inner extremity. It should be of a greyish hue and semi-transparent, so that the handle of the little bone, called the malleus, may be seen approaching it from above downwards, and slightly attached to it at a point which causes a slight convexity forwards, and appears as a bright point. In introducing the speculum the auricle should be pulled backwards so as to straighten the canal, and its direction forwards and inwards should be remembered so as to direct the instrument aright; no force should be used, and to avoid any likelihood of this it is better to use a dilating speculum, recollecting that the outer part only of the meatus is cartilaginous, and therefore the only part dilatable. The ceruminous glands are very apt in children to become inflamed, giving rise to much pain, swelling of the meatus so as to block it, causing deafness, and after a longer or shorter time the little abscess gives way, and with the occurrence of discharge there is immediate relief. The best treatment is to give an aperient at once, to apply hot louse-meal poultices and hot fomentations when changed, and if there is any part which can be felt to fluctuate a free incision relieves at once.

Children are very apt to put beads, peas, marbles, &c., into their ears, and thus cause much irritation. It not infrequently happens that violence is used to remove such bodies, with a result disastrous to hearing and even fatal to life. The utmost care and gentleness should be used. It must not likewise be lost sight of that every now and then children are brought with some irritation about the ear, said to be due to some foreign body lodged there, but careful examination may not only reveal the falseness of this, but show that the symptoms are due to quite other causes. In the first place, instruments of various make have been designed to remove bodies, and any of these may be tried, always using the utmost care, and desisting as soon as pain is complained of. If there is any great difficulty, it is well to wait a day or two, to let the intruding agent become covered with wax, and then a careful syringing with warm water will probably bring it away, but syringing must not be resorted to when a vegetable body has to be dealt with, as from absorption of fluid it will become larger, and not only more difficult of extraction, but give rise to much pain. Smooth bodies may remain for years without causing any unpleasant results, but if of a rough or uneven surface may give rise to obstinate discharge. The golden rule is to use the utmost gentleness, and never to make prolonged efforts to remove any foreign body. Sometimes a snare of twine may be introduced and acts successfully, and has the very great advantages of not causing pain and being incapable of inflaming injury.

Insects of various kinds are apt to enter the meatus, and may give rise to very acute suffering, or only to slight irritation at the time, but serious symptoms afterwards from becoming imbedded in the soft tissues. The writer was called up one night to see a woman who was said to be mad with pain in one ear. On arriving she was pacing the room; a speculum revealed blood in the meatus, and on withdrawing the instrument, something appeared to be clinging to it, and a shake deposited on the table a fine specimen of a bug, with instant relief to the patient. The membrane of the whole meatus may become inflamed, especially in children during dentition. The symptoms are very similar to those described as being caused by the inflammation of the ceruminous glands; indeed it frequently commences in this

way, and spreads over the surface, generally owing to cold or some other form of irritation. The discharge is often very offensive, and may continue for years, giving rise to troublesome granulations, or to the formation of polypi. An offensive discharge from the ear goes by the name otorrhœa, but it is not a separate disease, only a symptom common to several.

The early stage should be treated as in the case of the ceruminous glands being affected. When the discharge is established strict cleanliness should be enforced, the ear gently syringed out several times daily with some disinfectant, such as a carbohc acid lotion (1-40) warmed.

Weak astringent lotions may also be used; for this purpose alum, tannin, and sulphate of zinc are all useful. If there is much pain a blister behind the ear is useful, or one or two leeches in the same place. Warm sweet oil is useful, as it prevents the discharge forming scales, and has a soothing effect.

As a result of this last form of inflammation, polypi or pedunculated growths may result. These are accompanied by much discharge, and the only treatment is by removal with polypus forceps. They can be recognised as red growths projecting into or from the meatus, and having a distinct pedicle.

There is another result of this inflammation, and that is the formation of numerous red, growing granulations, which have no pedicle, and therefore are not true polypi. This form is generally associated with some cachectic state, and part of the treatment must be general, and directed to this. Locally, the affected parts only may be touched with a solution of nitrate of silver, and weak astringent injections are of use. The term "ear cough" is often heard, and as expressive of the fact that irritation of the meatus will produce by reflex action a cough is perfectly correct. In syringing the ears for impacted wax, the first intimation that all the wax is removed is a cough, from the water irritating the membrana tympani; and in like manner any of the previous affections may in like way give rise to the same kind of cough.

There are certain definite symptoms which are dignified with special names and received as diseases, but it is most important to bear in mind that, after all, they are but symptoms of very various, and even opposite, conditions, and that their successful treatment depends on finding out their cause in the special case under consideration, and removing this; as symptoms they possess no significance over others. These symptoms are discharges from the ear (otorrhœa), noises in the ears (tinnitus aurium), and ear-ache (otalgia).

Otorrhœa simply implies a discharge from the ears, and may be due to inflammation of ceruminous glands or the membrane of the meatus; from disease of membrana tympani, or the middle ear, such as disease of the small ear-bones or the mastoid cells. There are certain peculiarities in the discharge which may be helpful in the diagnosis of the cause; when bone is affected the smell is very offensive, and the colour is dark.

Tinnitus, again, is but a symptom, and may result from impaction of wax, or deficient secretion; from inflammation of glands or membrane, certain conditions of the membrana tympani, diseases of middle ear, or on some nervous affection exciting the auditory nerve. It may even be a symptom of some aneurismal dilatation of some intracranial blood-vessel.

Otalgia, or ear-ache, may also be a symptom of many of the diseases already mentioned. It may, however, be rheumatic or neuralgic, there being no actual lesion of the ear in any of its parts. It is often associated with decaying teeth, and, on the removal of such, instantly vanishes; and may occur as one of the results of a sore throat.

From these considerations, it is evident how unreliable any of these symptoms are in themselves; that their existence should always stimulate a very careful examination, so as to arrive at the cause, and, when due to general conditions, the general state must be treated, or the purely local will remain.

Measles and scarlet fever are very apt to leave behind a discharge from the ears, with more or less permanent deafness, the middle ear becoming more or less disorganised, and incurable loss of hearing frequently resulting.

It must not be forgotten also that gout, rheumatism, syphilis, may all give rise to pain about the ears and deaf-

ness. In such cases the general signs of each must be sought after, and, once found, the treatment must be that proper to the general disease. Dyspeptic disturbances are apt also to give rise to tinnitus, and some impairment of hearing. Here, again, the dyspepsia must be treated. In the early months of pregnancy ear-ache may be much complained of, and is probably due to a reflex action, as in the case of sickness from the same cause.

The membrana tympani is mainly composed of fibrous tissue, lined on the outer side by the mucous membrane of the meatus, and on the inner side by that of the middle ear. When either of the two latter are affected there will be a spreading to the membrana continuous with it, so that these parts are merely affected either from inflammation of the meatus or the middle ear, and are considered with these. When the fibrous membrane is affected with inflammation we have what goes by the name of myringitis. As gout and rheumatism single out fibrous structures specially, this affection is generally met with in sufferers from either of these formidable complaints, but it may occur apart from this taint and at any age. There is great pain, felt deeply in the meatus, and radiating over the side of the head and face. Viewed with a speculum the membrane is found to be red and tumefied. After some time it looks vascular and granular. Sometimes pus may form, and then the membrane becomes perforated and discharge may issue from the meatus, giving rise to one form of otorrhœa. There is a more chronic form which is not attended by such severe pain, the membrane is sure to be opaque and granular, and there is generally a similar affection of the throat. It is frequently found in persons of weak health and in damp districts, and in such cases often improves or grows worse with changes in the weather. In the acute form hot fomentations and poultices should be applied; purgatives are also very necessary. If there be very severe pain a leech or two behind the ear will give relief. If any discharge occurs the meatus should be gently syringed out with a warm solution of carbohc acid (1-40) several times a day. It is important to bear in mind the association of this form of disease with gout and rheumatism, and when this connection is established the general state must be treated. In the more chronic form, which is often associated with a granular state of the throat, fumigation with iodine and guaiacum is useful, with blisters or iodine applied behind the ears.

The middle ear may become inflamed, leading to disease of the small bones in this cavity or of the mastoid cells, leading to a discharge externally, which, if the bones are affected, is most offensive. There is great pain on the side affected, with swelling behind the ear, fever, and headache, often delirium. After the lapse of a longer or shorter time a discharge takes place, with relief to the general symptoms. This is a dangerous form of disease, and requires most careful treatment, as once the bones are affected it may go on insidiously even for years, and finally affect the membranes of the brain, and end fatally. The inflammation of the middle ear itself may prove fatal by affecting the membranes, and ending in coma. The treatment must be active, but in such serious cases medical aid must be called in, as to treat successfully such cases must be recognised at the outset. Any offensive discharge from the ear should always lead to a suspicion of disease, and lead to a most careful examination.

M. R. C. S.

(To be continued.)

IN our last issue it was stated that Messrs. Corbyn, Stacey & Co. were no longer exclusive agents for Field's Ozokerine. This, it appears, was incorrect. Arrangements have been made between the two firms relative to the supply of Ozokerine through all wholesale druggists, but Messrs. Corbyn, Stacey & Co. are still sole agents. The information as given to us was, however, so worded as to be quite open to the construction we put upon it.

FORMULÆ OF SECRET MEDICINES.

The Formule given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the Formule are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. A gramme is equivalent to 15½ grains. The prices quoted are the nearest English equivalents to the original retail price.

MASTIC-SERBAT.—A cement, coming from France, composed of lead oxide, manganese binoxide, and linseed oil.

MATICO-SYRUP (Grimault & Co., Paris).—For diarrhœa, &c. Matieu leaves 1 part, infused in enough boiling water to make 7 parts, made into a syrup with 9 parts of sugar.—*Dorvault.*

MERRETTIG-SYRUP; SIROP DE RAIFORT COMPOSÉ, PRÉPARÉ À FROID—COMPOUND SYRUP OF HORSE RADISH, PREPARED IN THE COLD (Grimault & Co., Paris).—For scrofula, rickets, &c. Scurvy-grass in flower, buck-bean, and watercress, of each 50 parts; horseradish root, 60 parts; bitter oranges, 40 parts; all fresh, bruised small; infuse cassia, 3 parts, in white wine 50 parts; mix the infusion with the other ingredients; leave for 24 hours in a tightly-closed vessel, then strain, press, and filter, and dissolve 250 parts of lump sugar in the clear fluid.—*Hager.*

JODHALTIGER MERRETTIG SYRUP; SIROP DE RAIFORT IODÉ—IODISED SYRUP OF HORSE RADISH (Grimault & Co., Paris).—Iodine, 10 parts; potassium iodide, 5 parts; compound syrup of horseradish, 800 parts.—*Hager.*

MEHL FÜR GEFLÜGEL—POULTRY FOOD (New York).—An artificial food said to be made from ground meat biscuits, meal, lupin, and sunflower, and recommended as an egg-producing and a nourishing food for poultry. Microscopic analysis does indeed reveal the presence of dried fibrine, but with a considerable admixture of structureless hyaline, gristle, and 5.58 per cent. of chalk. 50 kilos., 24s.—*Dr. E. Kern.*

MEXIKANISCHES MEHL, FARINE MEXICAINE—MEXICAN MEAL (Dr. Benito del Rio, Mexico).—An unfailling nutriment in consumption, phthisis, and premature infirmity, &c. Maize meal. 500 grammes, 1s.—*Wetti.*

MELAGONE.—A preparation similar to Krinochrom (*see page 321* of the current volume).

MELANOGENE (Dicquemare, Rouen).—For blackening the hair. Two fluids. No. 1 is a solution of 1 part pyrogallie acid in 50 parts weak spirit. No. 2 is a solution of silver nitrate 1 part, in water 8 parts, and solution of ammonia 3 parts, with a few drops of No. 1. Two bottles, holding 50 grammes each, and two brushes, 6s.—*Wittstein.*

MELASSE DE LA COCHINCHINE (Warton, Paris).—For constipation. Common syrup.—*Chevalier.*

MENSCHENFREUND—PHILANTHROPIST—PROFESSOR STOUTON'S MAGENELIXIR—STOMACH ELIXIR, OR DR. STOUTON'S BITTERE MAGENTINCTUR, known in Saxony as **STOCKDUMM** (literally "block-headed"), was formerly a highly-esteemed stomachic remedy for strengthening the digestion, a few drops being taken on sugar. It was prepared in very different ways. Generally, it was nothing but a strong infusion of oranges in equal parts of spirit and white wine. *Hager* gives the following formula:—Wormwood, orange peel, gentian, of each 25 parts; rhubarb, 10 parts; cascarrilla bark and aloes, of each, 5 parts; digested in spirit, 500 parts, and enough water to make the product up to 1,000 parts. The original instructions were the following:—Dried wormwood buds, germander (*Teucrium Chamædris*), gentian root, bitter oranges, of each, 24 grammes; cascarrilla bark, 4 grammes; good rhubarb, 16 grammes; aloes, 4 grammes; bruised small, digested with a litre of spirit in a warm place during 12 or 15 days, and filtered or decanted.

MEXICAN HAIR RENEWER, for renewing and restoring the hair (H. C. Gallup, London).—Sugar of lead, 1 gramme; milk of sulphur, 3 grammes; glycerine, 32 grammes; water, 165 grammes, 4s. 6d.—*Hager.*

UNFEHLBARES MITTEL GEGEN MIGRÄNE—INFALLIBLE CURE FOR MIGRAIN (R. Wiprecht, gold and silver smith, Berlin).—A homœopathic nostrum. Three bottles holding 7 grammes spirit, containing a trace of dissolved sulphur in one flask, a trace of dye in the second, and a trace of vegetable extract in the third, 1s. 6d.—*Hager.*

DR. KRIEBEL'S MIGRÄNPULVER—MIGRAM POWDER.—Quinine sulphate, 1.6 gramme; rhubarb, .15 gramme; white sugar, 26 grammes. Miscet fiat pulvis, divide in partes 36 æquales. 6s.—*Hager.*

MILZBRANDMITTEL (High Bailiff Kleemann).—Three ½-lb. bottles, containing 14 per cent. of acetic acid. Bottle No. 1 is colourless, No. 2 is slightly, and No. 3 is strongly tinged with burnt sugar.—*Hager.*

MILZBRANDPULVER—CURE AND PREVENTIVE OF MILZBRAND, OR EPIDEMIC, IN SHEEP.—Roughly powdered animal charcoal, 32 parts; gypsum and calcium chloride, of each ½ part; ferrous carbonate, ½ part; Glauber's salt, ½ part.—*F. L. Bley.*

MAYEN'S MITTEL GEGEN HUSTEN, BRUSTLEIDEN, SCHWINDSUCHT—MAYEN'S CURE FOR COUGHS, CHEST DISEASES, CONSUMPTION (Mayen, Friedeberg).—A beverage made of malt, horseradish, and comfrey root.

EPILEPSIEPULVER—EPILEPSY POWDER (E. Karig, Berlin).—Eight powders, each containing zinc oxide and mugwort root, of each .25 gramme; sugar, .5 gramme. 3s.—*Schälder.*

This is again recorded under the title **MITTEL GEGEN KRÄMPFE FÜR SÄUGLINGE—CURE FOR CONVULSIONS IN INFANTS.**

MITTEL GEGEN KRAMPF UND TOBSUCHT—CURE FOR CONVULSIONS AND INSANITY (Kramnich).—Four bottles, each containing a solution of 5 grammes potassium bromide in 150 grammes water, the fluid in the fourth bottle coloured with indigo-carmin. 10s.—*Schälder.*

BIERKLÄRE (A. Sigerist [or Siegrist], Mengen, Württemberg).—For restoring sour and turbid beer. No. 1 consists of 15 kilogrammes of sodium bicarbonate, containing 45 per cent. of the monocarbonate. No. 2 is a saturated solution of tartaric acid, coloured brown with caramel. No. 3 is a whitish yellow powder—chalk with 40 per cent. of sand. No. 4 is a stiff brown mass, mixed with sand. This mass swells much when boiled with water, but colours the liquid only slightly yellow. The residue left on evaporation tastes of malt extract. When carbonised the brown mass evolves the odour of burnt animal matter. Boiled with diluted caustic soda, it forms a solution which certainly smells of glue. I believe we may safely assume that this brown mass is finely-divided leather, with part of its colouring matter extracted by treatment with soda and mixed with 25 per cent. of sand. The whole mass weighs about 2.5 kilogrammes. This quantity of Bierkläre serves for 60 ohms (an ohm is about 30 gallons) and costs 166s.—*J. in Sch.*

MISTURA STOMACHICO-HEPATICA, STÄRKUNGSTRANK—STRENGTHENING DRINK (Hofrath, Bartholomäus von Gombos, Pesth).—For cholera, diarrhœa, vomiting, bloody flux, catarrh of the stomach, chest- and stomach-ache, indigestion, jaundice, &c. White wine of very middling quality. 200 grammes, 2s.—*Hager.*

MOOSFLANZENZELTCHEN—MOSS TABLETS (From the Pharmacy "of the Mother of God," J. Seichert, Molkenkurorte, Roznau by Radhost, Moravia).—Rhombic tablets, 1.5 millimètre thick, and of different sizes. They are coloured red, with cochineal, and consist of sugar, mucilage (from Carrageen), with a trace of liquorice extract. They are soft, and pleasantly sweet, but they sink in the box into an unpleasant-looking mass. 1s.—*Hager.*

MORVEUM, MORPHEUM—FOR HEALING WOUNDS AND SKIN AFFECTIONS IN ANIMALS (Barth, veterinary surgeon, Marburg, Styria).—Water, 32 parts; spirit, 12 parts; chloride of lime, 2 parts; ultramarine, 1 part; well mixed. 45 grammes, 2s. 5d.—*Hager.*

MITTEL GEGEN HÜHNERAUGEN—CURE FOR CORNS.—In the *Pharm. Zeitschr. für Russl.*, Gozow states that a mixture of salicylic acid, 30; collodion, 240; and extract of Indian hemp, is a good preparation for the destruction of corns.

THE ANALYSIS OF POTABLE WATERS.

By A. P. LUFF.

(Read before the Chemists' Assistants' Association, November 26, 1879.)

IT is my intention in this paper which I have the honour of reading before you to-night to consider the various impurities met with in potable waters, the sources of those impurities, the decompositions they undergo, the means of detecting them, and the influence that the presence or absence of these impurities would have on the analyst's mind in forming a judgment as to the condition of the water under examination. The relative merits of the different processes of water analysis have given rise to a deal of controversy and bitter feeling, and a tyro attempting to get at the truth of the subject might well be pardoned if he fell into a state of chaotic bewilderment. I will endeavour to give you a brief *résumé* of the different processes used in water analysis, and, speaking as a chemist who has employed all of them practically, I will accompany my remarks with a few hints as to the relative merits or demerits of them. I shall not trouble you with any figures, such as the strengths of the solutions employed or the quantities of impurities rendering a water bad; for such information I must refer you to the various works on water analysis.

The primary form of natural water is rain, which in its passage through the atmosphere becomes contaminated with traces of organic matter (dust), and also with traces of ammonia and nitrate of ammonia, which exist in minute quantities in the air. This rainwater, falling on and soaking into the soil, may then dissolve various inorganic substances, such as the lime, magnesia, and other salts present in the earth, and may also become contaminated with organic matter lying on the surface of and in the soil. This organic matter may be of animal or of vegetable origin, or of both. During the percolation of the water through the soil the organic matter is always more or less destroyed; in fact, the purification of water by *irrigation* simply consists in the destruction of the organic matter of the water by passing it through a quantity of soil, the soil acting in much the same way as spongy platinum does, viz., burning up and destroying the organic matter by means of the oxygen of the air condensed in its pores. The water may then collect into a well, or it may drain into a river. If the well be a shallow one the water is almost certain to be contaminated with organic matter from the surface of the soil, and very likely with sewage from the soil itself; if the well be a deep one these impurities will be at all events to some extent destroyed by the process of filtration which the water has undergone. River water may be rendered impure by the various vegetable and animal organisms present, and also by impurities, such as sewage and other drainage which may flow into the river. Now, as the organic matter is always more or less changed by oxidation, &c., it becomes necessary to understand what are the products of its decomposition, so that their presence or absence may be determined; these will be considered individually in connection with the processes used for detecting and estimating them.

For sanitary purposes it is deemed necessary to estimate in a water the total solid matter, the chlorine, the nitrogen present in the form of ammonia, the nitrogen existing as nitrates and nitrites, the organic matter, the hardness, and suspended matter.

I. *The Total Solid Matter.*—The amount of this is determined by the evaporation to dryness over a steam-bath of a known quantity of the water in a previously-weighed dish. From a sanitary point of view the determination of the solid matter of a water, unless it should be excessive, is not of much importance, for the residue will mainly consist of the carbonates and sulphates of lime and magnesia, the presence of which in small quantities is desirable in a drinking-water. If, however, the water is to be employed in boilers, then the presence of much total solid matter would constitute an objection to its use, on account of its accumulating as an incrustation in the boiler. A cursory examination of the solid residue is of some use. If of a dark colour, the presence of organic matter may be suspected; if brown or

reddish-brown, the presence of iron salt may be inferred, and according to the amount of effervescence produced on treating the residue with a few drops of hydrochloric acid, a rough idea is obtained as to the proportion of carbonates.

Chlorine is present mainly as chloride of sodium. Its determination in a drinking-water is a point of much importance, for it is derived from animal excreta—principally urine—which have found their way into the water, so that the presence of any quantity of chlorine is indicative of sewage contamination. So that, though the chloride of sodium present in a water is in itself harmless, it is indicative of the presence of deleterious matter. The determination of the chlorine is effected by noticing the quantity of a solution of nitrate of silver of known strength that is required to completely precipitate it as chloride of silver from a known volume of the water; two or three drops of a solution of chromate of potash are previously added to the known volume of water operated on, the point at which the precipitation of the chloride of silver stops is then indicated by the development of the colour of the deep-red chromate of silver.

Ammonia may be, to a minute extent, derived from the atmosphere, which contains traces of ammonia and nitrate of ammonia, but it is mostly derived from animal contamination; organic matter of animal origin is rich in nitrogen, and when such matter decomposes, its nitrogen, as a rule, is first converted into ammonia; so that the presence of any quantity of ammonia in a potable water would condemn its use, as being indicative of animal contamination—such as sewage matter. Moreover, since ammonia readily oxidises to nitrates and nitrites, the presence of much of it indicates the absence of oxidation—which is certainly a purifying process as regards a drinking-water. The quantity of ammonia is estimated by distilling a known volume of the water with some carbonate of soda, which is used to set the ammonia free, the distillation being stopped when about two-fifths of the water has passed over, which quantity practically contains all, or nearly all, the ammonia. The ammonia is then estimated in this distillation by the process known as Nesslerising.

Nitrates and Nitrites are almost always produced from the nitrogen of organic matter, principally from the nitrogen of animal organic matter, such as that contained in sewage; so that the presence of any nitrates or nitrites would stamp a water as being bad; for although the deleterious organic matter may have changed into such harmless bodies as nitrates, &c., by the time the sample of water is received and analysed, yet this change is only a question of hours, and, when collected, the water may have contained the harmful matter. The subject of nitrification, or production of nitrates and nitrites from nitrogenous organic substances, has lately been investigated by Warrington and other workers, and a brief description of the somewhat remarkable results obtained by them will not, I think, be out of place in this paper. It was formerly supposed that the production of the nitric acid was simply due to the direct oxidation of the nitrogen of the organic matter, but they have found that nitrification is due to the action of an organised ferment; it is, in fact, a function of some low form of vegetable life, in much the same way that alcoholic fermentation is a function of the low form of fungoid life present in yeast. They found that nitrification could be started in one solution from another by seeding with soil or water containing these nitrifying germs, and that darkness is distinctly favourable to the rapidity of their action.

Several processes are in use for estimating the nitrogen existing as nitrates and nitrites in a water. Frankland and Armstrong's process consists in the conversion of the nitrogen of the nitrates and nitrites into the gas nitric oxide, the volume of which is measured. This is effected by taking the residue obtained in the determination of the total solid matter, treating it with a small quantity of boiling distilled water so as to dissolve out the nitrates and nitrites, filtering from the insoluble carbonates of the residue, and then introducing the filtrate together with rather more than its own bulk of strong sulphuric acid into a suitable tube filled with mercury, and standing in a trough of mercury. On agitating the contents of the tube, the mercury and sulphuric acid will liberate all the nitrogen existing in the

form of nitrates and nitrites as nitric oxide. This gas is then transferred to a measuring apparatus, and its volume determined; from this the amount of nitrogen present as nitrates and nitrites in the quantity of water operated on can be calculated. Until quite lately it was considered necessary before introducing the solution into the mercury-tube to precipitate any chlorides present by the addition of sulphate of silver, and then to filter from the precipitated chloride of silver, but it has recently been proved that chlorides are no hindrance to the exact determination of nitrates and nitrites by the nitric oxide method.

A second process consists in the conversion of the nitrogen of the nitrates and nitrites into ammonia, the amount of which is determined by Nessler's solution. This is effected by distilling a known quantity of the water with caustic soda and aluminium foil; the aluminium liberates hydrogen from the caustic soda. This hydrogen converts the nitrogen of the nitrates and nitrites into ammonia which passes over, and is estimated in the distillate by Nessler's solution. From the amount of ammonia obtained in this way the quantity of nitrogen existing in the water as nitrates and nitrites can be calculated.

A third method is to obtain the nitric oxide by pouring the solution of the nitrates and nitrites into a boiling solution of ferrous chloride and hydrochloric acid. In raising the ferrous salt to the ferric state, the nitrogen of the nitrates and nitrites is eliminated in the form of nitric oxide.

A fourth, but rather rough method, is based upon the property that nitric acid possesses of decolourising a solution of indigo. To a known volume of the water strong sulphuric acid is added to set free the nitric or nitrous acids, and then the quantity of a standard solution of sulphate of indigo that is decolourised by this volume of water is noted. Of these processes that of Frankland and Armstrong's—viz., the conversion of the nitrogen of the nitrates and nitrites into nitric oxide by agitation with strong sulphuric acid by mercury—is certainly the most accurate and the best.

Organic Matter.—The determination of the quantity of organic matter, and the decision as to whether it is of animal or vegetable origin, are considered to give the most important clue as to the purity of the water under examination. It is the question of superiority of the rival processes devised for this purpose, which constitutes the "bone of contention" amongst some chemists, and so bitter has become the controversy, and so fierce the strife as to render it decidedly questionable whether the scientific opponents ever read Watts' poem on the desirability of leaving barking and biting to the canine species.

I will describe the various processes for estimating the organic matter in a water as nearly as possible in their historical order.

The earliest method employed was to ascertain the loss on ignition of the total solid residue. The residue left on evaporating a water consists of the inorganic and organic constituents of the water. Of these the organic matter would burn away if the residue were heated to a sufficiently high temperature. The great objection to this process is that the organic matter is not the only substance lost on ignition of the residue; there is loss of carbonic acid gas from the carbonates, of water from the hydrated salts, and possible volatilisation of the inorganic salts present, all of which tend to show more organic matter than is actually present.

The Permanganate Process.—This consisted in estimating the organic matter in a water by noticing the quantity of a solution of permanganate of potash, of known strength, that was decolourised by a known volume of the water; the organic matter abstracting the oxygen from the permanganate of potash, and converting it into colourless salts of potash and manganese. The objection to this process is its want of delicacy, and the fact that some organic bodies treated in this way are not completely oxydised.

Frankland & Armstrong's Combustion Process.—This consists in the burning of the residue left on the evaporation of some of the water, and then collecting and measuring the quantities of carbonic acid gas and nitrogen formed by the combustion of the organic matter present in the water-residue. One great advantage claimed for it is that it gives the ratio of the carbon to the nitrogen in the organic matter,

and so distinguishes between organic matter of vegetable origin and that of animal origin; for in vegetable organic matter the ratio of the carbon to the nitrogen is very high, whereas in animal organic matter it is very low. This is a point of some importance, for *peat*—which is the form in which vegetable organic matter mostly occurs in water—is harmless, whereas, if the organic matter be of animal origin, it would indicate contamination of the water with sewage. The process is an extremely lengthy one, requiring several precautions and much manipulative skill. A litre of the water to be examined is taken; to it some sulphurous acid is added; and it is then boiled to decompose carbonates and expel carbonic acid gas; it is then evaporated to dryness in a glass dish under a glass shade (to prevent entrance of dust). During evaporation the sulphurous acid abstracts oxygen from any nitrates or nitrites present, and so destroys them. This destruction of the nitrates and nitrites is much facilitated by the previous [addition of two or three drops of ferrous chloride to the water. The sulphurous acid in this way becomes oxydised to sulphuric acid at the expense of the oxygen of the nitrates or nitrites. To prevent the sulphuric acid so formed from decomposing and charring the organic matter, some solution of acid sulphite of soda is added to the water previous to evaporation: this furnishes base for the sulphuric acid, converting it into sulphate of soda. During evaporation the water is supplied to the glass evaporating-dish by a self-acting contrivance, invented by Bischof. The residue is then mixed with black oxide of copper, and the mixture transferred to a combustion-tube, in the fore part of which a roll of copper gauze is placed; the tube is then exhausted of air by means of the Sprengel mercury pump, and raised to a red heat in a gas furnace; the oxygen of the oxide of copper then burns up the organic matter of the water-residue mixed with it, oxydising the carbon to carbonic acid gas, and the nitrogen to an oxide of nitrogen. This latter body, passing over the red-hot copper gauze placed in the fore part of the tube, becomes deoxydised, furnishing nitrogen. The carbonic acid gas and nitrogen are then pumped out by the mercury-pump; the mixture of gases so obtained is transferred to a gas-measuring apparatus, and the volume determined. The carbonic acid gas is then absorbed by means of a solution of caustic potash, and the volume of the residual nitrogen determined by measurement. A knowledge of the quantity and the quality of the organic matter present in the water is thus obtained. To this process several objections have been raised. It is manifest, if a trustworthy process can be employed, that it is far better to estimate the organic matter in the original water than in the water-residue; for during evaporation organic matter may be lost or gained, lost possibly by volatilisation or by mechanical removal in the escaping steam, gained by entrance of dust. Again, all the organic matter may not be burnt off by ignition, and the question may be asked—though it cannot be satisfactorily answered—Is nothing but organic matter lost by ignition? The expense of the requisite apparatus is an object, though not an insurmountable one, to the extended use of the process. My own experience is, that if a room be specially put apart for the work, and if the different precautions be rigidly followed, the process is a fairly trustworthy one, but that its use in the general laboratory is almost impracticable.

Albumenoid Ammonia Process.—This process, devised by Wanklyn, consists in the estimation of the nitrogen present in the form of organic matter, by converting it into ammonia and estimating the amount of ammonia so formed by Nessler's solution. It is based upon the principle, that if nitrogenous organic bodies are boiled with an alkaline solution of permanganate of potash, the nitrogen is converted into ammonia. After the estimation of the free ammonia to the residual water in the retort—which, of course, still contains the organic matter—a solution of permanganate of potash and caustic potash is added, and distillation resumed; the distillate is then Nesslerised in the ordinary manner. The chief merits of this process are its rapidity and simplicity, but it must be understood that it does not give the ratios between the organic carbon and nitrogen, hence peaty contamination would be condemned as well as animal sewage; it is true that the harmless peaty matter might be recognised by the peculiar brownish tint it communicates to the water, and also by the almost entire

absence of chlorides, whereas if the organic matter consisted of sewage contamination, chlorides would be present in abundance. A strong objection to the process is, that it is not a process for the quantitative estimation of organic nitrogen, for the alkaline permanganate seldom turns all the organic nitrogen into ammonia; if, after distilling until ammonia ceases to come over, the contents of the retort containing the alkaline permanganate are allowed to stand for some time, and the distillation resumed, more ammonia is obtained, so that it is evident that at first all the organic nitrogen is not converted into ammonia, although distillation is carried on until ammonia ceases to pass over; another objection which may be urged, and which tends to render the process fallacious, is the difficulty as regards colour-sight with the Nessler test.

The Moist Combustion Process.—This is simply a modification of the process just described; the organic matter present in a water is burnt up by boiling with an alkaline solution of permanganate of potash, and the quantity of permanganate of potash that is deoxidised is then determined. The authors of this process are Wanklyn and Cooper, who have adopted the extremely unusual plan of patenting it, so that it cannot be used without license. To a litre of the water contained in a retort, caustic potash and an excess of a solution of permanganate of potash of known strength are added; nine-tenths of the water is then distilled over, and the excess of permanganate of potash left in the retort is estimated by the addition of sulphuric acid and a standard solution of ferrous sulphate. The quantity of organic matter present in the water is proportional to the amount of permanganate of potash deoxidised.

A process that gives a good clue as to the amount of organic matter present in a water has been described by Dr. Tidy; it is simple, fairly accurate, requires little trouble, and the possession of a license is not requisite for its use. It consists in determining the amount of permanganate of potash deoxidised by a water in presence of sulphuric acid. To some of the water contained in a flask dilute sulphuric acid and a solution of permanganate of potash of known strength are added; if on standing for some time the colour of the permanganate entirely disappears, more must be added until a permanent pink tint is obtained; the amount of undecomposed permanganate is then estimated by means of iodide of potassium and a standard solution of hyposulphite of sodium. An experiment in another flask containing distilled water, dilute sulphuric acid and permanganate of potash is carried on side by side with the one containing the water under examination, the reducing effect on the permanganate of any gases or vapours present in the atmosphere can then be determined and allowed for.

The question may be asked, is there nothing that may be present in a water besides organic matter that would reduce and decolourise permanganate of potash? Yes. Ferrous salts, sulphuretted hydrogen, and nitrites will reduce it, but the two former bodies are so readily detected that their reducing action on the permanganate could not well be mistaken for that of organic matter; ferrous salts would be suspected from the colour they would communicate to the water residue, and they could then be tested, for sulphuretted hydrogen would be recognised by its smell, whilst the detection of nitrites by this process is a point in its favour, for they have been derived from the oxidation of the nitrogen of deleterious organic matter.

Of these various processes, only that of Frankland and Armstrong gives the ratio of the organic carbon to the nitrogen, and so determines whether the organic matter is of vegetable or animal origin. If of vegetable origin the ratio of the carbon to the nitrogen is very high; if of animal origin the ratio is very low. In using the other processes, if any quantity of organic matter is found in a water, the presence or absence of chlorides in that water will decide whether the organic matter is of animal or vegetable origin; if chlorides are present in quantity, contamination with deleterious sewage matter is indicated; if chlorides are almost entirely absent, but organic matter is present, then this may be known to be of vegetable origin and no doubt harmless.

Hardness.—This is due to the salts dissolved in the water; it may be either temporary or permanent, or both. Tem-

porary hardness can be removed by boiling the water; it is due to the carbonates of lime and magnesia dissolved by carbonic acid gas. On boiling the water the carbonic acid gas is expelled, the carbonates being precipitated. Permanent hardness cannot be removed by boiling, and is due to the sulphates of lime and magnesia present. The degree of hardness of a water can be estimated by noticing the quantity of a solution of soap of known strength that must be added to a known volume of the water before a permanent lather is produced on shaking. This is known as Clark's soap test. The soap solution is made by dissolving a weighed quantity of Castile soap in weak alcohol. A measured quantity of the water under examination is put in a stoppered bottle, and the soap solution is dropped into it from a burette; until after shaking the contents of the bottle a lather is produced which persists for five minutes. The soap solution will not produce a permanent lather until it has precipitated all the lime and magnesia salts present; the hardness of the water is therefore proportional to the amount of soap solution employed. In this way the degree of total hardness (both temporary and permanent) of the water is obtained. If now, another measured volume of the water be taken and boiled, so as to get rid of the temporary hardness, and then filtered from the precipitated carbonates, the degree of permanent hardness can be estimated in the filtrate by noticing the amount of soap solution required to produce a permanent lather; if this quantity of soap solution be deducted from that used in estimating the total hardness, the difference will give the amount of soap solution employed in precipitating the temporary hardness. With regard to the influence of hardness on the quality of the water, it is still a moot point as to whether a soft or hard water is best for drinking purposes, so that unless the quantity of hardness is excessive, the water should not be condemned if intended for that use; but for cleansing and manufacturing purposes, and for use in steam-boilers, a hard water is decidedly objectionable.

Suspended Matter is easily recognised by the eye; the amount of it can be estimated by collection on a weighed filter, which is then dried and re-weighed. The presence of any amount of suspended matter in a potable water would certainly condemn its use, but it is an impurity which can be readily removed by filtration. In addition to a water being injurious from the presence of organic impurity, it may also be harmful from the presence of poisonous metals, such as lead, copper, zinc, &c. These can be detected by the ordinary tests, a description of which is unnecessary in this paper.

So far I have endeavoured to be strictly orthodox: I intend now, before concluding this paper, to briefly criticise the actual value of the methods employed in water analysis. Much as I respect the vast amount of work done in connection with the subject, and much as I admire the ingenuity displayed in elaborating the different processes, I cannot but think, considering the present state of our knowledge on the matter, that the subject of water analysis is in an extremely unsatisfactory condition. It must be remembered that these processes deal with bodies unknown to us, and although they may work well with known bodies, it by no means follows that they do the same with these hidden substances. Moreover, no one can say with certainty that the presence of a small quantity of sewage matter renders a water deleterious; living in the vicinity of bad stagnant water may engender disease by the inhalation of the poisonous vapours into the lungs, but it does not follow that the absorption of that water into the stomach will produce the same effect. Carbonic acid gas when inhaled, that is, when taken into the lungs, is a poison, yet when taken into the stomach, as in soda-water, it is perfectly harmless. But allowing that the sewage matter present in a water may consist of the excreta, of a person suffering, say, from typhoid fever, the danger of which is pretty well known to be due to the infectious germs floating away from it—do the chemical processes employed in water analysis detect these poison germs, the *materies morbi* of the disease? I fancy that not even the most zealous advocate of any of the processes in use could answer that question in the affirmative. It is true that the processes detect the organic matter with which the poison germs are associated, but it does not follow that the presence of this organic matter must always indicate the presence of the disease germs. The question is, do the pro-

cesses employed in water analysis detect the matter rendering a water injurious, or is the actual poison of so subtle a nature as to escape detection by the processes in use? The answer to this question must be left, in my opinion, to physiologists, not to chemists.

The author concluded by reading the report of Dr. Emmerich's experiments with dirty water, as published in *THE CHEMIST AND DRUGGIST* of last month. He said this report had not influenced his opinions, nor did he vouch for its veracity, but if true, he asked, Of what use is water analysis?

CHEMICAL SOCIETY.

Thursday, November 20, 1879.

DR. GILBERT in the chair.

The chairman announced that a ballot for the election of Fellows would take place at the next meeting, December 4.

The following papers were read:—

"A Chemical Study of Vegetable Albinism and Transpiration of Albino Foliage," Part II., by Mr. Chureh. White foliage does not possess the power, even in sunshine, of decomposing the carbonic acid in the air. Experiments were made with leaves of the maple, holly, ivy, and aloecasia; 1,000 square centimètres of the leaves of the aloecasia evolved in 2 hours 15.06 and 38.96 parts of carbonic acid per 10,000; 1,000 square centimètres of green leaves, 1.14 part; white holly sprays placed in water gained in 2 hours five times as much in weight as green leaves, but when no water was supplied the green lost about 20 times as much as the white.

"Contributions to the History of Putrefaction," Part I., by Mr. C. T. Kingzett. The author has examined dilute solutions of albumen, beef, and fish as to their oxygen-absorbing power in different stages of putrefaction; by titrating with permanganate, he finds that such substances require less and less oxygen as the putrefactive process proceeds. He also discusses the bearing of his results on the permanganate method of estimating the organic matter in potable waters.

"Notes on Manganese Dioxide," by C. R. A. Wright and A. E. Menke. The authors have made an exhaustive study of the various methods for preparing manganese dioxide. In most cases the product contains potash, and is deficient in oxygen. The methods which yielded the purest manganese dioxide were heating manganese nitrate to 160° C., mixing a hot solution of a manganese salt with an excess of permanganate, or in the cold with the addition of zinc sulphate or ferric chloride. The volumetric process of R. Keseler and Patinson gave good results; the authors suggest some convenient modifications of these methods. The authors have verified the statements of Gorgen, Guzard, and Pickering, but have disproved those of Morawski and Stügel.

"On the Reaction between Sodium Thiosulphate and Iodine—Estimation of Manganese Oxides and Potassium Dichromate," by S. Pickering. The author has carefully worked out the influence of dilution, excess of potassium iodide, heat, and other conditions on the results obtained by Bunsen's volumetric method of estimating manganese oxide. He suggests a simplified method of procedure, and compares results obtained by the two processes.

Thursday, December 4.

MR. WARREN DE LA RUE, President, in the chair.

The following papers were read:—

"On the Comparative Value of Different Methods of Fractional Distillation," by F. D. Brown. When fractional distillation is carried out on a large scale, either or both of two well-defined processes can be used in the first "washing." The mixed vapours are passed through several layers of liquid, obtained by their own partial condensation; in the second, "cooling," the mixed vapours are partially condensed by allowing radiation to take place, or by passing them through a coil kept at a given temperature. In both processes the liquids of highest boiling-point are kept back, and a better distillate is accordingly obtained. The author concludes that there is an essential difference between washing and cooling. The best distillate is obtained by keeping the still-head at the lowest possible temperature

compatible with the passage of vapour into the condenser. He has contrived an apparatus to carry out this principle, and has obtained with it very satisfactory results.

"On the Influence Exerted upon the Course of certain Chemical Changes by Variations in the Amount of Water of Dilution," by M. M. P. Muir and C. Slater. The authors find that the amount of chemical change which ensues when solutions of calcium chloride and sodium carbonate are mixed decreases as the dilution increases, but when solutions of strontium chloride and sulphuric acid, or barium chloride and potassium oxalate are mixed, various irregularities in the amount of chemical change are noticed as the dilution increases. These irregularities the authors have studied in detail. They conclude that they are due to the entire system being brought into a state of strain, the principal forces of which this stress is compounded being the force tending to produce eryhydrates and other hydrated molecules, the force tending to split up these molecules, and the force tending to separate, and so to impart greater mobility, to the chemically active molecules of the system.

"On the Influence of Temperature upon the Decomposition of Barium Chloride by Potassium Oxalate in Aqueous Solution," by M. M. P. Muir.

"On α and β Phenanthrene Carbonic Acids," by Dr. F. R. Japp. The author, since preparing the alpha acid with D. Schultz, has obtained a purer specimen, melting at 266°; from a syrupy mother left in the preparation of the calcic phenanthrene sulphonate, the author obtained the beta acid, melting at 250°-252°; he also prepared the sodium and barium salts, and studied the oxidation products of the acid. He discusses the constitutional formula of phenanthrene, and concludes that this substance consists of three benzene nuclei, one of which shares four adjacent carbon atoms with the two others.

"On some Derivatives of Phenylacetic Acid," by P. Philippi Bedson. The author has separated para and ortho nitro phenylacetic acids, their bromo derivatives, a dibromo body, and α β bromonitro-phenylacetic acid, with its amido-derivative.

The Poison Cupboard.

POISONING BY ARSENICAL PASTE.—The *New York Times* says:—"Mr. George Arthur Gardiner, nephew by marriage of Prescott, the historian, died in Brooklyn on September 27, in great agony, after two weeks of indescribable suffering. It is said by his attending physician that his death was caused by arsenical paste, placed by a dentist in one of his teeth for the purpose of killing an aching nerve. The certificate of death, which was filed with the Department of Health of Brooklyn, by Dr. Samuel S. Guy, of 302 Clinton Street, states that the cause of death was 'gangrene of mouth and face, arising from treatment of a tooth.'"

CASE OF RECOVERY FROM CHLORAL POISONING.—Mr. F. B. Hutchinson, physician to the Insane Asylum, Honolulu, Sandwich Islands, gives in the *Lancet* an interesting account of a case of recovery after an ounce-dose of chloral hydrate. A middle-aged man had taken the night before the doctor saw him a whole ounce of hydro-chloral dissolved in water, with the direct intention of suicide. The drug was bought the day he took it of a respectable druggist of Honolulu (manufactured by Mallinckrod & Co., St. Louis). It had plenty of time to do its worst, the man having been undisturbed for some 11 hours, and none had been vomited. The doctor arrived at 9 A.M. next morning, and found the patient on his bed quite insensible; pulse extremely feeble, 100; breathing short and rapid; temperature slightly below the normal standard; conjunctivæ unaffected by light and touch; pupils natural; face slightly flushed; no smell in the breath. Treatment, hypodermic injections of strychnine (one-tenth of a grain) and inhalation of ammonia. In the course of an hour he could be slightly roused, and was able to swallow; the tone of the heart improved. A pint of strong coffee was gradually given, and later on a purge of calomel and jalap; food as he could be got to swallow it. He recovered slowly his consciousness and desire for food, and was fairly restored in four days. There is reason to believe that the patient had been a hard drinker. If so, the tolerance of the chloral may be partly accounted for.

PEARS'S SOAP AND THE DIRTY BOY.

The Dirty Boy who, with his estimable grandmamma, achieved so much fame at the Paris Exhibition of 1878 was no myth, nor was his painful experience of soapsuds and scrubbing a mere flight of fancy fashioned into solid marble by the clever artist, Giovanni Focardi.

Focardi was an Italian sculptor who, in the course of his wanderings, had found his way to Preston. There, a few years ago, he occupied a modest apartment, and exercised his skill in such work as was open to him. One day, having failed to get the attention of his landlady when he wanted something, he set out in search of her. He found her with her grandson in the back kitchen in the attitude and occupation which is now familiar to the civilised world. Focardi has a keen eye for the comic, and he at once saw his chance. He sketched the scene and noted it for the future. Circumstances soon brought him to London, and as soon as he could he had the old lady and the boy up also. The clay model was made from life, and the process was one of considerable discomfort to the more youthful hero of the group, who, while being taken, had to be kept up to the required pitch of expression by the constant threat and the occasional administration of pails of water.

A plaster of Paris cast from the clay model was sent to the Paris Exhibition, and it soon attained immense popularity. One of the partners in the firm of Messrs. A. & F. Pears, the well-known Court soap-makers, saw his chance of making a trade advertisement out of it, and telegraphed to Focardi intimating that he was prepared to deal. Focardi came to Paris, and it was arranged that Messrs. Pears should have the marble original, when finished, with the sole right of reproducing the statuette in terra cotta, for 500*l*. The plaster cast, as it stood in the Exhibition, was sold for 100 guineas.

A month after Messrs. Pears had concluded the purchase Lord Dudley saw the cast and was very anxious to secure the marble original for himself. He offered Messrs. Pears 1,500*l*. for it, which they declined, but it was agreed that a marble replica should be chiselled for Lord Dudley for 6,000 francs, and no other will be produced. Lord Dudley also bought from Focardi the originals of two of his other works—"Hush-a-bye, Baby" and the "Echo Boys." For the latter (the cast of which was exhibited for some time in the Westminster Aquarium) Lord Dudley gave 800*l*.

Focardi's fortune was now made, and he went to Florence to proceed with his work. We hope that one who has shown himself so quick to catch impressions of true English humour will not altogether abandon that style of work. Focardi says he now only desires to devote himself to the pursuit of his art, and to save himself from business troubles, we believe he offered to a member of Messrs. Pears's firm, who visited him lately in Florence, to produce for them three works annually for the round sum of 10,000*l*. a year. We presume from this that the artist possesses quite enough business talent to be able to fairly well take care of himself. Within the past few weeks Messrs. Pears have received the marble original of The Dirty Boy, an inscription appearing on the base testifying to the genuineness of their claim, and bearing the artist's engraved signature. It is a beautiful work of art, and may be seen at Messrs. Pears's establishment in Great Russell Street.



Messrs. Pears have several times distinguished themselves by the adoption of novel ideas in advertising. Not long ago our walls were decorated with capably-executed pictures representing a little nigger boy in a bath undergoing the application of their famous soap. He was beautifully white all over except his head, which had not yet been subject to its detergent influence. This lithograph was the cleverest trade painting which has adorned our thoroughfares since the appearance of the immortal Nabob munching Batty's pickles under the envious gaze of his surrounding attendants.

A cast of the statuette is now the centre of attraction at the Sydney Exhibition, Messrs. Pears's case being besieged with visitors.

Lately the same house has flooded magazine readers with a clever adaptation of the law of complementary colours. But the Dirty Boy will no doubt rank as their chief exploit. They have very skilfully associated their name with its glory, so that the sight of the statue at once recalls their manufactures. They have secured the copyright in nearly all the countries of Europe and in America, and their terracotta reproductions have now become popular in both hemispheres. The Princess of Wales was one of the first to order one, and a large number have of late been bought by chemists to make an attraction for their windows or shops. In the drawing accompanying this notice we have endeavoured to represent in print the exact colour of the figure as it appears in terra cotta.

PRICES FOR 1879. MINERAL WATERS.

7½ PER CENT. FOR CASH.

5 PER CENT. ON QUARTERLY ACCOUNTS.

E. GALLAIS & CO.,
27 MARGARET ST., REGENT ST.,
LONDON.

THE "PERFECTED" COD LIVER OIL. See page 9.

STEDMAN'S TEETHING POWDERS.

1/1½ size (containing 9 powders).....	8/6 p.r doz.	} less usual } discount.
2/9 " " 27 "	24/- " "	
11/- " " 216 "	11/- net	

A mixed parcel to value 78/- net, at 6/6, 18/-, & 120/- per doz.

Terms Cash with Order.

Manufactory—78 EAST ROAD, HOXTON.

A GOOD MARKET FOR COD LIVER OIL } See page 5.

YOUNG & POSTANS' PHOSPHORUS
PREPARATIONS.

PHOSPHORISED COD LIVER OIL (Young and Postan's).

THE ORIGINAL PREPARATION.

GENERALLY ADOPTED BY THE MEDICAL PROFESSION.

The only preparation recognised by THE LANCET, "The British Medical Journal," "London Medical Record," "Medical Times and Gazette," and "The Echo de la Presse Medicale."

PHOSPHORUS CAPSULES. PHOSPHORUS EMULSION.
35 Baker Street, Portman Square, London, W.

IMPROVED JUJUBES (PATENT). See page 9.

CHEAP AND GOOD COD LIVER OIL } See Page 5.

MUMFORD'S
PURE CRUSHED LINSEED.

PRIZE MEDALS: LONDON, 1873; PARIS, 1875.

20s., net, per cwt., Bag included; or 21s. in 1-wt Cask; in 14-lb. and 28-lb., 22s. per cwt., delivered in London. BEST QUALITY; NO OIL EXTRACTED. Carefully cleaned and ground so as to retain the natural colour of the Seed without being heated. Special quotations for Larger Quantities. Samples, Reports, and Analyses on application, post free.

NEWCASTLE GRANARY & STEAM MILLS, FARRINGDON ROAD, LONDON, E.C.

IMPORTANT TO WRITERS.—MACNIVEN & CAMERON have just invented and Patented a New PENHOLDER, which they have named the WAVERLEY QUILL-YIELDING PENHOLDER. The *Edinburgh Daily Review* says:—"It is well worthy of the Waverley fame." Sold by all Stationers, price 3d. each; and in Sterling Silver, 2s.; with name engraved, 2s. 6d. 23 BLAIR STREET, EDINBURGH, 1st October, 1879.

MACKENZIE'S COMPOUND COD LIVER OIL EMULSION

Renders Cod Liver Oil agreeable for Invalids and Children.

Recommended extensively by leading Physicians and Surgeons.

PREPARED ONLY BY

MACKENZIE & CO., Chemists, EDINBURGH

Sold in Bottles 2s., 3s. 6d., and 6s. each.

London Wholesale Agents—EDWARDS & SON, BARCLAY & SON and SANGER & SON.

HOMŒOPATHIC MEDICINES.

E. GOULD & SON,

Chemists by Appointment to the London Homœopathic Hospital,

MANUFACTURING HOMŒOPATHIC CHEMISTS,

Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.

For Particulars apply at 59 Moorgate Street, E.C.

CARRIAGE PAID COD LIVER OIL } See page 5.

FIELD'S

LIQUOR TARAXACI
TWICE THE STRENGTH OF THE SUCCUS OF THE B.P.

SEE PAGE 73.

EDITORIAL NOTES.

REPORTING THE PHARMACEUTICAL COUNCIL.

It is now more than ten years ago since the editor of this journal first made application for the admission of his reporter to the meetings of the Pharmaceutical Council. The suggestion seemed at the time so audacious as almost to deprive it of a serious character. Mr. Brady moved, and Mr. Carteighe seconded, a resolution acceding to the request, but its refusal, moved by Mr. Ince and seconded by Mr. Sandford, was carried by a large majority. Some four or five subsequent debates on the same subject have occurred in the Council, but only one of these has been occasioned by an application from ourselves. Meanwhile, the official reports themselves have been gradually extended and improved to a degree which, on comparison of a modern one with those published when we first moved in the matter, will be found quite surprising. Ideas mature rather slowly in the Bloomsbury atmosphere. Some six or seven years ago it had become evident that it was the desire of the members generally that the Council meetings should be reported as the meetings of all other legislative bodies are reported, and yet, during all this time, the Council has been fencing with the demand, adopting any sort of ingenious expedient rather than follow the plain, simple, straightforward course which lay before them of throwing their meetings open to reporters other than their own, which it has long been evident to outsiders was the method which must finally be adopted, if the demand was to be really satisfied. The step has been taken at last, almost with unanimity, and we shall be surprised if any very terrible disasters result from it.

POST FREE
WHOLESALE PRICE LIST OF
HOMŒOPATHIC MEDICINES.

Mother Tinctures, Pilules, Globules, Sugar of Milk, Medicine Chests, Bottles, Cardboard Goods, and all Sundries connected with the Homœopathic Business.

W. Butcher & Co.
WHOLESALE & EXPORT HOMŒOPATHIC CHEMISTS
BLACKHEATH, LONDON, S.E.

We shall not occupy ourselves with any lengthened comment on the debate which ended as we have stated. But we feel ourselves compelled to repeat what we have said on former occasions, that we fail to discover any present or emote benefit to ourselves in the new regulations. We are sorry to observe, however, that some members of the Council will persist in regarding the resolution lately carried as a sort of special favour to ourselves. One, for instance, specially declared that he should vote for the admission of our reporter because he had observed "a manifest improvement in the tone of the paper towards the Council and the Society." His vote was given as a reward for good conduct, in fact. Another gentleman, who "regularly reads" this journal, but does not seem to have noticed that manifest improvement in its tone and character which had struck his colleague, voted for Mr. Symes' resolution, apparently in the hope that by the introduction to such elevated society our present barbarian tendencies might be controlled and ultimately uprooted. Even Mr. Symes himself advocated his resolution on the ground that our erroneous deductions as to the Council's work were excusable considering our isolated condition.

Such arguments, we venture to think, were entirely misplaced. We will be more just to the Council than some of its members were, and declare our confidence that, as a body, it voted this resolution for the only reason that might be properly urged, namely, from a belief that the proposed system would be beneficial to the Society. It was not the business of the Councillors to consider in the matter our convenience or our interests. But, since the remarks have been made, we take the opportunity of saying that the assumption of our enmity to the Council is a perfectly incorrect one. There are generally two sides in the Council itself on every important subject that comes up for discussion, and if this very natural result of the human intellect should continue, we shall be puzzled to fulfil Mr. Atkins' hopes of coming into thorough accord with all of them. We also think it would be fairer to give instances of our false deductions and unjust criticisms, before taking it for granted that these were habitual with us.

We apologise to our readers for this too long digression on personal matters. As far as we can, we shall be guided by their wishes in regard to the reports of the Council meetings which we may in future publish. At present we are certainly inclined to doubt the expediency of filling up our space with columns of formalities, which, to many at least, would be stale news. As to the arrangements to which we shall be required to submit, it seems necessary to say that we are neither ferocious beasts nor archangelically amiable. If the Council as a body would treat us with the politeness which any one of them would exhibit individually, we do not think they would have any reason to complain of us; but we need hardly say that, in carrying out what we shall regard simply as one of the duties of our position, we shall not be willing to accede to any terms or conditions which may be inconsistent with the rights and privileges which as honourable journalists we have never forfeited.

CLASSIC DENTISTRY.

DR. XAVIER LANDERER, of Athens, sends us the following item:—It may be safely asserted that the ancients certainly cleaned their teeth and used tooth-powder. If the necessary attention were given relics would be found in the graves of the women. The word "odontotrimma," the tooth-scouring stuff or tooth-powder, is found in ancient Greek, and in the Greek Pharmacopeia is applied to tooth-powder. It is interesting to find that the ancients had made some advance

in dentistry. A friend of mine (now dead) occupied himself in collecting ancient Hellenic skulls, wishing to show that they did not differ in shape from those now carried in Greece. Among several hundreds of these skulls, some perhaps 2,000 years old, we found two with "stopped" teeth. One was filled with a mass as hard as stone, which, on analysis, proved to be hydraulic lime, made from volcanic ash, Santorin earth, and lime. Marvellous as it may seem, the hollow of one tooth in the other skull had been filled with gold-thread or gold-leaf. The metal used was pure. The skull itself, though deprived of the stopping, is now in the Archaeological Museum.

APOTHECARIES' WEIGHTS AND MEASURES.

SOME unnecessary alarm has been created by the publication of varying and discrepant statements concerning the new standards for apothecaries' weights and measures.

The Weights and Measures Act of 1878 was, as is well known, a consolidation of the various Acts previously in existence, which made provision for the examination of weights and measures used by all classes of traders. It did not create any new regulations, but it has evidently had the effect of attracting renewed attention to some which had been to a certain extent neglected. When the Act was drafted it was at first hoped that it would have been possible to have fixed avoirdupois weight and Imperial measures as the exclusive systems for all classes of commercial transactions in this kingdom. But considerable difficulties were found in the way of this approach to simplicity, and the Act consequently permits the following exceptions:—The troy ounce, or decimal parts thereof, may be used in the sale of gold, silver, platinum, precious stones, or articles manufactured with these. Drugs, when sold by retail, may be sold by apothecaries' weight, metric weight and measures may be legally used. And lastly, sales in indefinite measures are permitted if such vessels are not represented as containing any amount of Imperial measure.

Now a person is liable to a fine of 5*l.* if he use, or have in his possession, any weight or measure not duly stamped by an inspector after verification by the local standards in the charge of that inspector. This, of course, applied to all apothecaries' weights and measures as much as to others. But for all these up to the present standards have not been in existence. It is only within the last few days that the form of these standards has been finally arranged,* and it will certainly be some months before the local authorities can be generally supplied. Certain standards for measures have been for some time in existence, and it is most important that chemists and druggists should learn from their local authorities when the time for verification is to be fixed, and when the inspectors will be prepared to examine apothecaries' weights and measures.

In some quarters it has been assumed that the instructions of the Board of Trade in reference to local standards prescribe the exact form and style which apothecaries' weights and measures are to take. This view has been promulgated, it appears, by the inspector at Edinburgh, and we believe his theory is accepted as law by the local authority. There does not seem the smallest ground for such an assumption, and we are confident it is incorrect. The weights and measures figured and

* The large pipette-shaped standard to measure 40 fluid ounces has been altered in form since the publication of the instructions which were reprinted in the *Pharmaceutical Journal* of November 29. It was of broad diameter, and was, therefore, difficult to read with accuracy. It is now made with a narrow connected graduated tube by its side, so that the measurements can be read off on that.

described in those instructions are to represent the standards which will be used by the inspectors to test chemists' weights and measures. The Act does not concern itself with the form or shape of chemists' weights and measures, only with their accuracy. All the same, it is an awkward fact that there is nothing to prevent the local authorities of any place from taking a wrong-headed view, and putting some innocent chemist to the expense and trouble of defending himself before the magistrates.

When in full work all weights and measures will have to be stamped with a crown, the letters V.R., and a number to indicate the district, in the style as shown in the margin. This will only apply to such weights and measures as are capable of receiving such stamp.



We anticipate that, as soon as possible, our wholesale glass houses and weight-makers will give notice of their ability to supply weights and measures duly stamped.

THE PRICE OF CINCHONA BARKS.

At the sales of cinchona bark in London on August 26, some barks, the property of the Madras Government, realised 10s. 3d., 10s., 9s. 3d., 9s. 7d., 9s. 3d., 6s. 2d., and 6s. a pound. To aid planters in estimating the connection between price and alkaloid percentage, the analyses of the bark performed by the Government officials have been published, and are quoted in the *Ceylon Observer*. The following refer to crown bark (*Cinchona officinalis*). In the table the first three alkaloids are estimated as "crystallised sulphates," the cinchonine as alkaloid.

Price per Lb.	Price per Unit	Quinine	Quinidine	Cinchonidine	Cinchonine
s. d.	Pence				
10 3	23-56	5-22	11	1-14	23
10 0	22-75	5-25	12	1-13	13
9 9	24-90	4-70	17	1-78	50
9 7	21-63	5-27	23	1-77	15
9 3	20-03	5-54	09	1-14	42

The red barks, *C. succirubra*, which fetched the highest prices, contained alkaloids as follows:—

Price per Lb.	Price per Unit	Quinine	Quinidine	Cinchonidine	Cinchonine
s. d.	Pence				
6 2	19-1	3-87	14	2-82	2-30
	21-3	3-44	10	2-17	2-99
6 0	20-4	3-62	07	2-34	2-60
	19-05	3-78	12	2 07	3-12
	19-5	3-70	00	2-34	3-10

By "unit" is meant 1 per cent. of quinine. This standard is not adopted in the market, but we give it to reduce different barks to a uniform standard. Alkaloids other than quinine can hardly influence the price of bark, and the great differences in the price per unit seem to admit of only two possible explanations: either the cost of producing sulphate of quinine is much heavier in some cases than in others, or the bark is bought at random, purchasers being guided, not by analysis, but by the name of the plantation producing the bark, or by other outward marks. It appears that an ounce of quinine sulphate made from the barks sold on August 26 must have cost the manufacturer sums varying from 12s. 11½d. to 9s. 11d. for raw material. The selling price of quinine about that time was 13s. 6d., with a slightly unsteady market.

SPECULATIVE JUDGMENT.

THE following neat little incident is said to have occurred in the office of an eminent firm of drug brokers during the market excitement about the end of October.

Enter the agent for a "ring" of speculators.

"I want you to buy for us a hundred tons of saffron."

"A hundred tons of saffron! Why, bless the man, the earth don't produce it in 10 years."

"Oh, well, I don't know about that. Those were my instructions." Then, after a short pause, "What's that stuff you have got there?"

"That's turmeric."

"Well, can you buy us a hundred tons of that?"

"Oh, yes."

"Very well, get a hundred tons of that."

THE ADVENTURES OF A PRESCRIPTION.

A PERSON who modestly signs himself "Hippocrates" lately wrote a letter to the *North British Daily Mail* narrating some facts which he does his best to show are not very creditable to some of the druggists in Glasgow. His story, told briefly, ran somewhat as follows:—

"Hippocrates" says that a few weeks ago he wrote a prescription for a boy nine years of age who was ill with scarlet fever. The prescription was thus worded:—

P. Jacob. ver. grs. iv.
P. sacchar. " iv.
 6 such

Sig. One every four hours.

"This prescription was carried forthwith to a registered chemist and druggist in the vicinity, who found the most impassable difficulty in the terms '6 such.' Baffled by the profundity of this statement, which he at the same time protested he could not read, he, like the memorable Giant Despair, called his wife to his aid. But feminine sagacity failed too; that inscrutable phrase—'6 such'—remained still inscrutable. Nevertheless, there was one part they could read, viz., the constituents; and business is business, you know—and the long and short of it was that they determined to make up six powders containing these ingredients in some proportion or other."

The writer says that the chemist, having made inquiries of the customer as to the age and illness of the patient made up the powders as ordered, and divided the quantity intended for one dose into six. The medicine failed to do good, and the prescriber ordered a repetition. This time the prescription was taken to another druggist, and here again some questions were put. It was ascertained that the previously-dispensed powders were small. It was therefore resolved to dispense these small, but on what principle of calculation is not clear, for the writer says each of the powders as obtained from this shop weighed 4 grains. Having investigated the history and found the facts as detailed, "Hippocrates" says, "I laid the statement before the functionary whose duty it is to oversee the interests of the public and protect them from preventable evils. This gentleman found no difficulty in reading the prescription, and at once informed me that there was no case. 'No case?' said I. 'None,' said he. 'You ought to have secured several powders—given one to the individual who sold it, one to the public analyst, and kept one for yourself.' 'But, my dear sir,' said I, 'I didn't want one, the druggist didn't want one, and the public analyst didn't need one, for the men themselves who made up the powders told me clearly, in the presence of another, what they had done.' 'It does not matter,' said he, 'there is no case.'"

In the same paper for a few days afterwards "Hippocrates" got a rating from chemists, medical men, and the general public, which, it must be admitted, he had done much to deserve. The selection of the medicine for scarlet fever, the dose prescribed, an arithmetical slip which he had made in his letter, his curious expression—"6 such," and his evident all-round greenness, made him a popular butt. He had written a fairly clever letter, but the dispenser No. 1 followed with a reply which ably disposed of the sneers against himself. He asserted that by no reasonable reasoning could "Hippocrates's" scrawl be construed into "such"; he denied that feminine sagacity had been tested on the point, and he properly remarked on the unwisdom of inserting a new form of expression in dog English into an important document like a prescription, and writing it carelessly in the bargain. In short, it was proved that the chemist had taken greater care of the patient than the doctor had.

SECRET MEDICINES IN BELGIUM.

"ALMOST all the pharmaceutical associations of the country," says the *Antwerp Journal of Pharmacy*, "have petitioned the Legislative Chambers to prohibit the sale of the specialties and secret remedies with which foreign countries inundate us. We beg those of our readers who reside in towns where there is not a pharmaceutical association to sign a similar petition and forward it to the Legislature without delay." This is a piece of very tall commercial morality, no doubt, and looks rather fine in a pharmaceutical journal. It will be rather unkind, however, to English or French residents or visitors—and these make a good minority of the whole population of the country—if they are to be refused their favourite pill at the instance of a few of these fastidious pharmaceutical associations. Suppose an enterprising caterer in England should introduce for the benefit of British or Belgian palates some of the sour Flemish beers which are popular over there. We believe these would work untold mischief on our national stomach, and we should, for our own part, religiously avoid them. But we should hardly dream of asking our Legislature to prohibit the importation.

If Belgian chemists would try to be a little more useful to their customers they might find it somewhat to their own advantage as well. Last autumn a gentleman of our acquaintance tried at about half the pharmacies in Antwerp to buy a few felt bunion-plasters such as are sold in England, and none of the pharmaciens had ever heard of such things, nor took the smallest interest in the subject. He afterwards obtained some at an Anglo-Belgian pharmacy in Brussels at the rate of half-a-crown a dozen. Probably it is beneath the dignity of these high-toned druggists to look after useful novelties for their customers. They think they know and keep all that it is necessary for anyone to know and have, and they assume that it is their place not to supply, but to regulate, the requirements of the public.

THE NEW PETROLEUM TESTING APPARATUS.

ELSEWHERE we print a description of the new testing apparatus and the instructions for testing petroleum lately published by the Home Office. The apparatus is very easily described. The oil-cup is a small closed vessel, about 2 inches in diameter, fitting into a water-bath. On the top of the cup is a brass slide and a minute oil-lamp with a jet. A thermometer is also fixed with its bulb in the oil-cup. The operator watches the thermometer, and at intervals draws out the brass slide, which action causes the jet of light to dip into the oil-cup. The limit for petroleum, which by the open test was 100° Fahr., is now fixed at 73° Fahr., which is as nearly as possible equivalent.

A COMPARISON OF VARIOUS FORMS OF MINERAL-OIL LAMPS.

By BOVERTON REDWOOD, F.C.S., F.I.C., Chemist of the Petroleum Association, and T. HORNE REDWOOD.

THE increasing consumption of American petroleum oil as an illuminating agent, as well as the intelligent consideration which has recently been given to the subject of artificial light, appeared to render it desirable that a series of experiments should be conducted with some of the various forms of petroleum-oil lamps at present offered for sale. These experiments have been designed, not with a view of singling out any particular construction of burner for commendation, but simply of setting forth in a form convenient for comparison the salient features of some of the best-known lamps, and thus enabling a purchaser to select that best suited to his requirements. With this object an extensive series of determinations, occupying several months, has been made, the results of which are recorded in the tabular statements which follow. It gives the writers much pleasure to record that the leading lamp-manufacturers have rendered material aid by the loan of large numbers of lamps, and by providing in some instances skilled assistance. Steps have, however, been taken independently to ascertain that the burners selected for experiment were fair specimens of those ordinarily sold, and no results which appeared to be abnormal or dependent upon the exercise of special skill in the preparation of the lamp were included. As the quality of the oil used is well known to exercise a most important effect upon the burning of the lamp, especially as regards the permanence of the flame, it need scarcely be said that great care was taken to make a suitable selection. Many different brands were tried, and as it was considered undesirable to employ a fancy oil such as might not be within the reach of all classes of consumers, the writers selected as their standard a petroleum oil of good ordinary character, having a specific gravity slightly below 800, and a flashing-point slightly over the Parliamentary standard. In every case care was taken to employ wicks of good quality, not too tightly woven, and well dried before immersion. The photometer used was the improved form of Bunsen's, manufactured by Wright, of Westminster, and the consumption of the standard sperm candles was corrected to the second figure of decimals. In all, 18 different forms and sizes of lamps have been experimented with, viz. 13 English, 4 American, and 1 German, the English lamps comprising the chief forms in use in this country, while the American types were specially selected as embodying the most recent improvements. The following is a brief description of the lamps tested:—

1. *Hinks' Duplex*.—One compound button for raising the wicks; and

2. *Hinks' Duplex*.—Two separate buttons for raising the wicks.

Each of the foregoing has two flat wicks $1\frac{1}{16}$ inch in width, placed parallel. Each arrangement has a special construction of cone, causing the form of the flame and their photometric power to differ. Sold by Messrs. James Hinks & Son (Limited), London and Birmingham.

3. *Doty Round*.—Circular burner, with button in centre. External diameter of wick $\frac{1}{16}$ inch. Sold by Messrs. Prince & Symmons, London.

4. *Silber Round*.—Circular burner, with air tube in centre. External diameter of wick $\frac{1}{16}$ inch. Sold by Mr. Silber, London.

5. *"Miratus"*.—Single flat wick $1\frac{3}{8}$ inch in width, with feeding wick, or secondary wick to increase the supply of oil. Sold by Mr. Silber, London.

6. *Wright & Butler's Duplex*.—Two flat wicks, $1\frac{1}{16}$ inch in width, placed parallel, with feeding wick. Sold by Messrs. Wright & Butler, London and Birmingham.

7. *"Paragon"*.—Single flat wick, $1\frac{1}{2}$ inch in width. Sold by Messrs. Dietz & Co., London and Birmingham.

8. *"Anucapnic" "Split" Wick*.—Single wick tube carrying two flat wicks, $1\frac{1}{2}$ inch in width, and

9. *"Anucapnic"*.—Two flat wicks, $1\frac{1}{16}$ inch in width, placed parallel. Both these burners have spherical globes in place of chimneys. Sold by Messrs. T. Rowatt & Sons, London.

10. *Duplex*.—Two flat wicks, 1 inch in width, placed parallel. Cheap form of duplex burner, and

11. Single wick, 1 inch in width, and

12. Single wick, $\frac{3}{4}$ inch in width, both cheap forms of burner. All three sold by Messrs. Prince and Symmons, London.

13. "*Bonanza*."—Single flat wick, $\frac{15}{16}$ inch in width, with contracted chimney. American.

14. "*Sun*" *Hinge*.—Single flat *thick* wick, 1 inch in width. American.

15. "*Sun*" *Hinge*.—Single flat *thin* wick, 1 inch in width. American.

16. "*Sun-rise*."—Single flat wick, $\frac{15}{16}$ inch in width. Remarkable for lightness, the burner only weighing 632 grains as compared with 5,131 grains for Hinks' Duplex, 3,244 grains for Silber round, and 3,306 grains for Doty round. American.

17. *Reading Lamp (Silber)*.—Circular wick, $\frac{15}{16}$ inch in diameter (external). Oil reservoir level with burner. Sold by Mr. Silber, London.

18. *Reading Lamp (Stobnesser)*.—Circular wick, $\frac{11}{16}$ inch in diameter (external). German. Sold by Messrs. Boseck & Timme, London.

The following statement exhibits in a tabular form the results obtained, each lamp being distinguished by the number given in the preceding description. A period of six hours was taken as affording a fair test of the permanence of the flame, and the second column gives the amount of oil in grains consumed during this time, each set of figures being the average of several determinations. The third column gives the maximum illuminating power obtained at any time during the six hours, not including, however, as before explained, any apparently unusual results; and the fourth column gives the average illuminating power during the whole period, deduced from a number of determinations made at regular intervals. The difference between these results exhibits the permanence of the flame, and, as already stated, great care was taken in the selection of the oil with a view to this point. As far as possible also the oil reservoirs were so chosen, with regard to the consumption of the oil, as that in each case the fall of the oil surface should be the same. The action of the feeding-wick in neutralising the effect of the increasing distance between the flame and the surface of the oil in the reservoir is shown in the case of No. 6, and less markedly in No. 5, the consumption of oil for the whole period being correspondingly increased, and the burners provided with this contrivance are not fairly comparable with the rest. The same remark applies in the case of the reading-lamps (17 and 18), where the arrangement for insuring a uniform flow of oil to the wick results in the maintenance of a flame practically unvarying during six hours. The fifth column gives the calculated number of grains of oil consumed per candle-light per hour; and the sixth the calculated number of "candle-hours," or hours of one-candle light, for each pint of oil.

No. of Burner	Grains of Oil Consumed in 1 Hour	Maximum Illuminating Power	Average Illuminating Power	Grains of Oil Consumed per Candle-light per Hour	"Candle Hours" for each Pint of Oil
1	970	24.5	21.4	45.3	154
2	1,128	25.4	22.0	51.2	136
3	745	19.0	16.5	45.1	155
4	736	16.8	15.5	47.4	147
5	1,042	22.0	20.25	51.4	136
6	1,253	25.2	24.5	51.0	137
7	904.5	16.7	16.1	56.1	124
8	1,087	18.6	16.6	65.4	107
9	1,421	29.4	23.3	60.9	114
10	1,004	23.25	16.1	62.3	112
11	602	11.5	9.1	65.1	106
12	517	9.6	8.5	60.8	115
13	742	15.9	12.5	59.3	118
14	740	16.7	14.2	52.1	134
15	565	14.2	9.6	58.8	119
16	491.5	8.8	8.5	57.8	121
17	714	14.0	14.0	51.0	137
18	658	14.5	14.0	47.0	149

NOTE.—In comparing the performance of a flat-wick burner with that of a circular-wick burner in the above table, it should be borne in mind that the illuminating power recorded for the former is that of the broad side of the flame, and that the edge of the flame emits only about half the amount of light.

In addition to determining the illuminating power and consumption of oil, it seemed desirable to apply other tests to certain of the lamps more commonly used in the rooms of the wealthy. Thus, unusual heating power, however desirable, it may be in some cases, cannot but be regarded as an evil in a lamp employed where efficient appliances for warming already exist. The writers accordingly determined with burners numbered 2, 3, and 4, the relative amounts of heat radiated horizontally and vertically in both directions. The former was arrived at by suspending a thermometer with blackened bulb at a given distance from the flame, and noting the maximum temperature registered; the heat passing upwards by determining the increase in temperature of a given quantity of water suspended for a given length of time in a metallic vessel with blackened bottom at a given height directly over the flame; and the heat passing downwards by ascertaining the maximum increase in the temperature of the oil in the reservoir of the lamp over that of the external air during a period of six hours. The results are given in the following table, but in reference to the heat of the oil in the reservoir it should be pointed out that much of the increase in temperature is due to conduction from the burner, and No. 2, being provided with a non-conducting ring of cork, the result in this case is not strictly comparable with the others. Chiefly for the sake of comparison the results given with burner No. 5 are added, this burner, as well as the oil, becoming more heated than is desirable. In comparing the actual results obtained it must be borne in mind that the consumption of oil and illuminating power are not the same in each case, and, accordingly, to facilitate comparison the fifth and sixth columns give the relative amounts of heat passing horizontally and upwards, corrected to the average illuminating power of the four burners.

It is probably desirable that as large a proportion as possible of the heat developed should pass away vertically, as this would appear to be indicative of the satisfactory cooling of the burner by a properly-adjusted flow of air, but burners 2, 3, and 4 do not exhibit any very important difference in respect to their heating effect.

No. of Burner	Black-bulb Thermometer	Water Raised in Temperature	Oil Raised in Temperature	Black-bulb Thermometer Readings Corrected to Average Illuminating Power of the four Burners	Increase in Heat of Water Corrected to Average Illuminating Power of the four Burners
2	113.5°	18.6°	7.0°	95.4°	15.1°
3	93.0°	15.5°	8.5°	104.2°	17.6°
4	95.5°	11.5°	10.0°	113.9°	13.7°
5	121.0°	14.5°	18.0°	115.7°	13.2°

There are other features of a good burner, such as perfection of combustion (freedom from smell), non-susceptibility to draughts, colour of the flame (in reference to the distinguishing of colours by its light), facility of trimming, and excellence of mechanical construction; but several of these are matters rather of judgment or opinion than fact, and the writers accordingly confine themselves to stating that burner No. 3 emits a whiter light than 2 or 4, and is not liable to smoke when the wick is unduly raised, while burner No. 4 is of the three the most influenced by draughts, and in all three burners, as well as those numbered 5, 6, 7, 8, and 9, the reading-lamps and others, the combustion is so perfect that, with care in trimming, absolutely no odour can be detected in the apartments in which they are burned.

With a view of comparing the relative cost of petroleum and colza oil, experiments were made with an improved moderator-lamp and a reading-lamp of the "Queen's" pattern, lent by Mr. Silber. It was found that the maximum and average illuminating power in the former case were 16.7 candles, and in the latter case 15.5 candles; the consumption of colza oil per hour being 818 grains, or 49 grains per candle-light per hour, in the case of the moderator, and 1,001 grains per hour, or 64.5 grains per candle-light per hour, in that of the reading-lamp.

In instituting a similar comparison in the case of coal-gas it is not easy to decide upon a fair standard of illuminating power. Consumed under favourable circumstances, in an

gand burner, at the rate of 5 cubic feet per hour, ordinary gas gives a light of 16 candles, but having regard to the very effective character of the majority of the burners in domestic use, probably 12 candles is about the average luminating power.

The following table, showing the comparative cost of a given amount of light from petroleum oil, colza oil, and coal gas at the prices given, is based upon the foregoing results, the most favourable examples being taken in the case of the first and second named illuminating agents, and an luminating power of 12 candles for a consumption of cubic feet per hour in the case of the third.

Cost of 1,000 "Candle Hours."

From Petroleum Oil at			From Colza Oil at			From Coal Gas at Per		
Per Gallon			Per Gallon			1,000 Cubic Feet		
1s.	1s. 3d.	1s. 6d.	2s.	3s. 6d.	4s.	3s.	3s. 6d.	4s.
9½d.	11¼d.	1s. 3d.	2s. 4d.	2s. 8d.	3s. 0½d.	1s. 3d.	1s. 5½d.	1s. 8d.

It will thus be seen that taking petroleum oil at 1s. per gallon, and colza oil at 3s. 6d. per gallon, the cost of a given amount of light is more than three times greater in the latter case than in the former.

Again, taking petroleum oil at 1s. per gallon, and coal gas at 3s. 6d. per 1,000 cubic feet, a given amount of light costs about half when obtained from the former as compared with the latter, while there is the additional advantage that sulphur compounds are not among the products of combustion.

THE SYDNEY EXHIBITION.

OUR correspondent writes:—"Although the exhibits were not half unpacked, and the place was in a perfect chaos two days before the opening, yet on September 17, when the ceremony took place, all the packing-cases were cleared away, and the place was made presentable. In the course of the day 18,000 persons visited the building. Since then unpacking and building up show-cases has been going on with unabated vigour, and it will be another month before everything is in its place.

Among the British exhibitors in the chemist and druggist line, whose displays are now complete, T. & H. Smith show two very fine samples of caffeine and a large assortment of quintessences. Thomas Whiffen has a magnificent show of the salts of quinine and salts of strychnine. John Mackay, Edinburgh, and W. J. Bush, both exhibit essences. I see signs of a case being erected for Messrs. Southall, Sons & Barclay, of Birmingham, but cannot at present see any of the contents.

Perfumery and soaps are well represented by Messrs. Rimmel, Piesse & Lubin, Richardson, Gosnell, and the Crown Perfumery Company. A very handsome case of surgical instruments, manufactured by the celebrated firm of S. Maw, Son & Thompson, is exhibited by W. Tayler & Co., wholesale druggists, of this city. Mayer & Metzler also show surgical instruments.

Evans & Wormull have a very fine collection of surgical instruments, which are all highly finished.

Lynch & Co. exhibit druggists' sundries and one of their patent tincture presses. This latter article is no doubt of great use in a laboratory, but it is a great nuisance in this exhibition, for it is so placed that nine persons out of every ten in passing the case knock their legs against the press, and then use had language.

Laxora lozenges, Lefèvre's poultice, Vin de Chassaing & Rigolot's mustard leaves form a nice little party of their own in the British section.

There is but one exhibitor of infants' food in this section, and that is Henri Nestlé, who exhibits his milk food for infants, and also his new preparation "condensed milk."

The following well-known firms also exhibit their different articles, G. B. Kent, brushes and sponges; Walton, annatto; Spratt, biscuits for dogs; Nelson, gelatine; Menier, J. S. Fry & Sons, and Dunn & Hewitt, cocoa and chocolates.

The show-cases are all in the same style, viz., black and gold.

THE PETROLEUM ACT, 1879.

THE Home Office has just issued the following instructions as to the mode of testing petroleum so as to ascertain the temperature at which it will give off inflammable vapour:—

The oil cup consists of a cylindrical vessel 2 inches diameter, $2\frac{2}{10}$ inches height (internal), with outward projecting rim $\frac{5}{10}$ inch wide, $\frac{3}{8}$ inch from the top, and $1\frac{7}{8}$ inch from the bottom of the cup. It is made of gun metal or brass (17 B.W.G.), tinned inside. A bracket, consisting of a short stout piece of wire bent upwards and terminating in a point, is fixed to the inside of the cup to serve as a gauge. The distance of the point from the bottom of the cup is $1\frac{1}{2}$ inch. The cup is provided with a close-fitting overlapping cover made of brass (22 B.W.G.), which carries the thermometer and test-lamp. The latter is suspended from two supports from the side by means of trunnions, upon which it may be made to oscillate; it is provided with a spout, the mouth of which is $\frac{1}{16}$ inch in diameter. The socket which is to hold the thermometer is fixed at such an angle and its length is so adjusted that the bulb of the thermometer when inserted to its full depth shall be $1\frac{1}{2}$ inch below the centre of the lid. The cover is provided with three square holes, one in the centre, $\frac{5}{10}$ inch by $\frac{4}{10}$ inch, and two smaller ones, $\frac{3}{10}$ inch by $\frac{2}{10}$ inch, close to the sides and opposite each other. These three holes may be closed and uncovered by means of a slide moving in grooves, and having perforations corresponding to those on the lid. In moving the slide so as to uncover the holes, the oscillating lamp is caught by a pin fixed in the slide, and tilted in such a way as to bring the end of the spout just below the surface of the lid. Upon the slide being pushed back so as to cover the holes, the lamp returns to its original position. Upon the cover in front of, and in line with, the mouth of the lamp, is fixed a white bead, the dimensions of which represent the size of the test flame to be used. The bath or heated vessel consists of two flat-bottomed copper cylinders (24 B.W.G.), an inner one of 3 inches diameter and $2\frac{1}{2}$ inches height, and an outer one of $5\frac{1}{2}$ inches diameter and $5\frac{3}{4}$ inches height; they are soldered to a circular copper plate (20 B.W.G.) perforated in the centre, which forms the top of the bath, in such a manner as to enclose the space between the two cylinders, but leaving access to the inner cylinder. The top of the bath projects both outwards and inwards about $\frac{3}{8}$ inch; that is, its diameter is about $\frac{9}{16}$ inch greater than that of the body of the bath, while the diameter of the circular opening in the centre is about the same amount less than that of the inner copper cylinder. To the inner projection of the top is fastened, by six small screws, a flat ring of ebonite, the screws being sunk below the surface of the ebonite, to avoid metallic contact between the bath and the oil cup. The exact distance between the sides and bottom of the bath and of the oil lamp is $\frac{1}{2}$ inch. [This statement relates to the distance between the sides and bottom of the cup and the walls of the inner cylinder which forms the air-chamber.] A split socket similar to that on the cover of the oil cup, but set at a right angle, allows a thermometer to be inserted into the space between the two cylinders. The bath is further provided with a funnel, an overflow pipe, and two loop handles. The bath rests upon a cast-iron tripod-stand, to the ring of which is attached a copper cylinder or jacket (24 B.W.G.) flanged at the top, and of such dimensions that the bath, while firmly resting on the iron ring, just touches with its projecting top the inward-turned flange. The diameter of this outer jacket is $6\frac{1}{2}$ inches. One of the three legs of the stand serves as support for the spirit lamp attached to it by means of a small swing bracket. The distance of the wick-holder from the bottom of the bath is 1 inch. The lamp is filled through the funnel. In both thermometers the capillary-tube is widened at the top to prevent breakage through over-heating. The line on the scale of the long-hulk thermometer indicating 130° , is rendered conspicuous by being drawn across the whole width of the ivory hack. In a similar manner the line indicating 73° is specially marked on the round bulb thermometer. Two thermometers are provided with the apparatus, the one for ascertaining the temperature of the bath, the other for determining the flashing point. The thermometer for ascertaining the temperature of the

water has a long bulb and a space at the top. Its range is from about 90° to 190° Fahr. The scale (in degrees of Fahrenheit) is marked on an ivory back fastened to the tube in the usual way. It is fitted with a metal collar, fitting the socket, and the part of the tube below the scale should have a length of about 3½ inches, measured from the lower end of the scale to the end of the bulb. The thermometer for ascertaining the temperature of the oil is fitted with collar and ivory scale in a similar manner to the one described. It has a round bulb, a space at the top, and ranges from about 55° to 150° Fahr.; it measures from end of ivory back to bulb 2¼ inches.

A model apparatus is deposited at the Weights and Measures Department of the Board of Trade.

Directions for Applying the Flashing Test.

1. The test apparatus is to be placed for use in a position where it is not exposed to currents of air or draughts.

2. The heating vessel or water-bath is filled by pouring water into the funnel until it begins to flow out at the spout of the vessel. The temperature of the water at the commencement of the test is to be 130° Fahrenheit, and this is attained in the first instance either by mixing hot and cold water in the bath, or in a vessel from which the bath is filled, until the thermometer which is provided for testing the temperature of the water gives the proper indication; or by heating the water with the spirit lamp (which is attached to the stand of the apparatus) until the required temperature is indicated. If the water has been heated too highly, it is easily reduced to 130° by pouring in cold water little by little (to replace a portion of the warm water) until the thermometer gives the proper reading. When a test has been completed, this water-bath is again raised to 130° by placing the lamp underneath, and the result is readily obtained while the petroleum cup is being emptied, cooled, and refilled with a fresh sample to be tested. The lamp is then turned on its swivel from under the apparatus, and the next test is proceeded with.

3. The test-lamp is prepared for use by fitting it with a piece of flat plaited candle-wick, and filling it with colza or rape oil up to the lower edge of the opening of the spout or wick-tube. The lamp is trimmed so that when lighted it gives a flame of about 0.15 of an inch diameter, and this size of flame, which is represented by the projecting white bead on the cover of the oil-cup, is readily maintained by simple manipulation from time to time with a small wire-trimmer. When gas is available it may be conveniently used in place of the little oil-lamp, and for this purpose a test-flame arrangement for use with gas may be substituted for the lamp.

4. The bath having been raised to the proper temperature, the oil to be tested is introduced into the petroleum-cup, being poured in slowly. In pouring in the oil to be tested, great care should be taken not to splash it against the sides of the cup until the level of the liquid just reaches the point of the gauge which is fixed in the cup. In warm weather the temperature of the room in which the samples to be tested have been kept should be observed in the first instance, and if it exceeds 65° the samples to be tested should be cooled down (to about 60°) by immersing the bottles containing them in cold water, or by any other convenient method. The lid of the cup, with the slide closed, is then put on, and the cup is placed into the bath or heating vessel. The thermometer in the lid of the cup has been adjusted so as to have its bulb just immersed in the liquid, and its position is not under any circumstances to be altered. When the cup has been placed in the proper position, the scale of the thermometer faces the operator.

5. The test-lamp is then placed in position upon the lid of the cup, the lead line or pendulum, which has been fixed in a convenient position in front of the operator, is set in motion, and the rise of the thermometer in the petroleum-cup is watched. When the thermometer has reached about 66° the operation of testing is to be commenced, the test-flame being applied once for every rise of one degree, in the following manner:—The slide is slowly drawn open while the pendulum performs three oscillations, and is closed during the fourth oscillation.

If it is desired to employ the test apparatus to determine the flashing points of oils of very low volatility, the mode of proceeding is to be modified as follows:—The air-chamber

which surrounds the cup is filled with cold water, to a depth of 1½ inches, and the heating vessel or water-bath is filled as usual, but also with cold water. The lamp is then placed under the apparatus and kept there during the entire operation. If a very heavy oil is being dealt with the operation may be commenced with water previously heated to 120°, instead of with cold water.

THE CALIFORNIAN DRUG TRADE.

WE give an abstract of a report on the drug market of California, contributed to the twenty-seventh annual meeting of the American Pharmaceutical Association, held at Indianapolis in September, 1879, from facts furnished to by us, the author, James G. Steele, of San Francisco:—

The author alluded to the favourable position for commerce of San Francisco, which is fast becoming one of the great world-centres. He said there were four wholesale drug houses in San Francisco, besides one devoted exclusively to the sale of California medicinal plants; and the amount of business in drugs, chemicals, &c., done in San Francisco in 1878 was upwards of \$5,000,000. There are 120 retail drug stores in San Francisco, employing 240 assistants, all duly registered under the San Francisco Pharmacy Act of 1872. The total number of drug stores in the Pacific States and Territories (California, Oregon, Nevada, Utah, Idaho, New Mexico, Montana, Arizona, and Washington Territory) is 900.

After giving many details respecting the imports of drugs and chemicals for several years past, the author proceeded to give accounts of the natural products of the State of California. These include, among metals and minerals, antimony, arsenic, asbestos, barium, borax, bromine, coal, copper, diatomaceous earth, gold, graphite, iodine, iron, iron pyrites, iron chrome, lead, limestone, magnesium, manganese, marble, mercury, petroleum, phosphorus, platinum, salt, silver, sulphur, tin, and zinc.

Among vegetable products he named, as native trees, acacias, alders, cedars, eucalypti, firs, laurels, madroñas, manzanitas, nutmegs, oaks, pines, redwoods, and sequoias. Grasses, the more important being *avena*, *alfillerilla*, *atropis*, *arrhenatherum*, bitter weed, *bryzopyrum*, *festuca*, *lolium*, and *miliun*. Plants and shrubs:—Barberry, buckthorn, baneberry, canchalagua, clover, damiana, *el gobernador*, durango plant, flaxwort, fleabane, fly plant, *grindelia*, kidney root, life everlasting, loco weed, quinine bush, rattle weed, pitcher plant, poison oak, spikenard, soap plant, tarweeds, wild sunflower, yarron, yerba mana, yerba buena, yerba santa, and yerba reuma.

The mineral springs of California are numerous in the Coast Range and Sierra Nevada in every variety of combination. These are classified as alkaline springs, chalybeate and thermal springs, and sulphur springs.

Among the thermal springs of California might also be included its great geysers.

The following particulars were also given of the chemical manufactures of San Francisco:—Six acid and chemical establishments in San Francisco: Annual value of products \$700,000. Nitric, muriatic, and sulphuric acids made sufficient to supply the demands of the Pacific States. Cream of tartar ground and put up for sale by five establishments in San Francisco. The extensive alkali deposits of California and Nevada utilised, and large quantities of bicarbonate and crystals of soda manufactured and thrown on the market by the Pacific Soda Company. Alcohol no longer distilled in San Francisco, owing to eastern competition. In 1875 over 1,000,000 gallons were produced; in 1878 over 15,000 barrels of spirits imported from the East. Antimony smelted from native ores and exported to the value of \$25,000 annually. Over 25,000,000 lbs. of borax received in San Francisco in five years, all being the products of manufactures from Pacific coast deposits. Candles largely made in San Francisco in six manufactories, employing 175 men, and producing over 200,000 boxes annually, valued at \$570,000. Glassware produced in great variety in San Francisco. The Pacific glassworks employ 125 men, and turn out ware valued at over \$300,000 annually. Glue made in San Francisco by one factory. Thirty men employed,

and 260 tons of glue made annually; as also 4,000 gallons of neatsfoot oil, and 18,000 lbs. of curled hair. Honey, an article of large production in California. Receipts of native honey in San Francisco for the past three years over 6,000,000 lbs. Hops grown in the state to a large extent. Receipts of California hops in San Francisco for 1876 over 14,000 bales. Matches made in eight factories in San Francisco to the value of \$29,000,000 annually. Oils produced and refined in San Francisco for the market by several establishments, among which may be enumerated—

Abietine	Mustard seed oil.
Alaska cod-liver oil.	Oolacoon oil
Castor oil.	Olive oil.
Kerosinc.	Sperm oil.
Linseed oil.	Whale oil.

The castor-oil plant, cultivated to some extent in California. Annual consumption on the Pacific coast over 25,000 gallons. Olive oil, produced in California from the native olives. Whale oil received at this port amounting to 10,000 barrels annually. Oranges and lemons grown extensively in the southern part of the state. Paints made extensively in San Francisco from native materials. Soap made in San Francisco by 18 works, employing 305 men, turning out in 1877 over 17,000,000 lbs. of goods, valued at over \$1,000,000. Soda and mineral waters made and sold largely in San Francisco. Sulphur refined in three establishments from native deposits in California and Nevada; 5,000 tons annually consumed in the Pacific States. Vinegar manufactured to the extent of over 1,000,000 gallons annually, valued at \$250,000. Yeast powders manufactured by five firms in San Francisco. California also produced in 1878 over 6,000,000 gallons of various wines, while 150 breweries in the state turned out over 250,000 barrels of beer. Lead, paper, macaroni, leather, bags, barrels, and refined sugar are also largely produced in San Francisco.

The city of San Francisco was founded by the Franciscan Fathers on October 9, 1776. Its development into a great city, however, only dates from 1848, consequent upon the discovery of gold. It possesses a total sailing fleet of 704 vessels of 100,829 tons.

The products of California for 1878, consisting of cereals, metals, wines, wool, lumber, fruit, cattle, and coal, amounted in value to \$152,900,000. Of quicksilver 41,918 flasks were exported in 1878, valued at \$1,420,129. Of borax 2,686,424 lbs. were exported in 1878, and nearly twice the quantity in 1877.



AND

Literary Notes.

Chemical Mechanics.

THE presentation of an elaborate new work by M. Berthelot to the Paris Academy of Science will mark an era in chemistry. It is entitled an "Essay on Chemical Mechanics founded upon Thermo-Chemistry," and the author has bestowed sixteen years upon the composition of his book. The scope of the essay is to collect, review, and classify what is already known respecting the present state and the future of thermo-chemistry. The writer mentions with satisfaction that the subject first of all received attention in France, and that a century ago Laplace and Lavoisier entered upon its consideration. Subsequently the great law of specific heat, discovered by Dulong and Petit, and the numerical calculations of Regnault, which extended over a period of thirty years, aided the further development of this important branch of research. Many savants in other countries have continuously been engaged in studying the physical conditions of heat and their chemical relations: while no less than three hundred memoirs elucidating the same matter have been presented to the French Academy alone.

The design, therefore, of M. Berthelot is to gather up all

these scattered results, either practical or theoretical, and to work them into one harmonious whole. The first volume treats of calorimetry, that is to say, the measurement of the quantities of heat set in action in chemical processes: these quantities being the exact measure of work accomplished by molecular forces.

This volume is divided into three principal sections or books. 1. Theoretical rules of calorimetry. 2. Experimental methods. 3. Numerical data on heat of combination, physical change (fusion, volatilisation, and solution), specific heat of gases, liquids and solids; amounting to ten thousand references. It is hoped by the author that such a collected series of facts and data will prove of service both to the chemist and the physician. These figures constitute the base necessary for the introduction of the new theories contained and detailed in the second volume. This comprises the general study of chemical composition and decomposition, especially that of systems in equilibrium between two contrary tendencies, such as dis-associated bodies, compound ethers; salts dissolved in strong or weak acids; strong and weak bases, acid salts and double salts. The fundamental object of the book is an examination of the reciprocal action of bodies, based on a knowledge of the quantity of heat set in action in transformations, joined to a knowledge of the special conditions of existence, and of the stability of each of those bodies which may be produced, separately considered.

M. Berthelot now considers himself in a position to study resulting phenomena, and devotes the remainder of his essay to chemical statics. He commends the bearing of his investigations specially to young explorers, and invites them to enter upon a path which not only they will find fertile in results, but which will lead them to recognise that chemical and physical science may be united in one same system of rigorous laws based upon the unity of universal mechanics.

A Formulary of Selected Remedies, with Therapeutic Annotations and a copious Index of Diseases and Remedies, Diet Tables, &c.: A Hand-book for Prescribers. By E. A. Kirby. Fourth Edition. London: Lewis. 1879. 8 vo., pp. 8 + 240.

PHYSICIANS and surgeons in public practice find that their hospital pharmacopœias save much time in writing prescriptions, and dispensers are enabled to keep ready for use all the medicines commonly ordered in the hospital. The object of this book is to extend this economy to private practice, and it is plainly, but not obtrusively, hinted in the preface that Messrs. H. & T. Kirby & Co. are prepared to act as private dispensers to any number of practitioners, and to keep them supplied with medicines, ready prepared, in the most elegant and potent condition. Still, the book is certainly not a "puff direct." A very large number of formulæ from the hospital pharmacopœias are here collected. Occasional notes are given as to the best way of applying such things as collyria. Formulæ for unofficial preparations are given. Diet tables and recipes are appended. The table of diseases and remedies refers from the name of the disease, not only to that of the remedy, but to specific formulæ which have been found useful. Accounts of recently-introduced medicines find a place here. Both for prescriber and dispenser it is certainly a handy companion.

Annals of Chemical Medicine. Edited by J. L. W. Thudichum, M.D., vol. 1. London: Longmans, Green & Co., 1879, 8vo., p. 12 and 313. Indexes of authors and subjects. 14s.

THIS is to be a periodical: we are not told at what intervals it will be published. The title is attractive, but somewhat vague, and although explained by the author as including "the application of chemistry to physiology, pathology, therapeutics, pharmacy, toxicology, and hygiene," it appears that even that interpretation is scarcely wide enough to cover the whole scheme of the work. One of the longest articles is on the life and philosophy of Robert Julius Mayer, the discoverer of the mechanical equivalent of heat. He himself was a physician, and his father a pharmacist; his researches seem to have been confined to pure physics, and his right to a place here is hardly sufficiently obvious. Most of the articles are on the chemistry of the body in

health. Doubtless, the chemistry of disease must be found on the chemistry of health, but without this explanation the title of the periodical seems inappropriate. Articles 14 to 18 on cholera, and on infection in general, seem to be the only ones bearing directly on medicine. Article 22 is a review of the third edition of Ritter von Nussbaum's "Guide to the Antiseptic Treatment of Wounds," which Thudichum prefers to call chemical rather than antiseptic surgery. Copious extracts give the formulae employed. The 13th article is an exhaustive survey of the history of albumin, containing much that is interesting and little known.

The last article, an historical retrospect on earlier and critical consideration of contemporaneous researches on biliary pigments, deals chiefly with the statements and theories of Städeler, Maly, and Hoppe-Seyler. The retrospect reveals an ugly amount of loose statement, faulty argument, slovenly work, and bad feeling among medical chemists. It is a protest by the author against plagiarism and mutilation of his researches.

The application of exact methods to medicine must proceed rapidly, and this periodical ought to accompany the advance with equal step. The dialect adopted by the author in some places goes almost beyond peculiarity of style. We scarcely see the advantage of "shapeless" in place of amorphous, "repugnant" for repulsive, "progress" for advance, "fell" for the verb precipitate. Quantitation and qualification are convenient terms for quantitative and qualitative examination, but they are not very ear-tickling terms, and, as a rule, the use of new words or of old words in new senses can only be justified by an appropriateness which is instantly recognisable.

MESSRS. BARRETT & ELLERS have published a sixteen-page pamphlet, which, without indulging in any extravagant claims, fairly refutes the absurd statements which have been published by interested parties as to the poisonous nature of the vulcanite used in the patent stoppered bottles.

THE "Waverley Quill-yielding Penholder" is the latest boon and blessing which Messrs. Macniven & Cameron have conferred on scribblers. Anything which makes writing easier in these days ought to be a punishable offence, and our Edinburgh friends have much to answer for in this direction, their latest invention being a very flagrant felony of the kind we have described.

MESSRS. EYRE & SPOTTISWOODE have prepared for the Christmas season a large number of new designs for Christmas and New Year's cards. The pictures represented on these are rather in the direction of popular art, such as blindman's buff and bringing in the plum pudding, than the symbolic fooleries which were formerly the favourites. They are excellently produced.

WE HAVE received parts 8 and 9 of Spon's Encyclopedia of the Industrial Arts, Manufacturers, and Commercial Products, to which work we have previously made reference. These contain articles descriptive and illustrated, on black, bleaching powder, bleaching, bones, borax, bromine, brushes, and camphor. In the last-named article the Indian, English, and Dutch methods of refining are described. It will be observed that the Encyclopedia deals very largely with manufactures interesting to chemists.

WE SHALL notice more fully next month the following works which have been received:—"Electroplating: A Practical Handbook, including the Practice of Electrotyping." By J. W. Urquhart, C.E. (London: Crosby Lockwood & Co.) "The Art of Perfumery." Fourth Edition. By G. W. Septimus Piesse, Ph.D. (London: Longmans); and "Moderu Household Medicine." By Charles Robert Fleury, M.D. (London: E. Gould & Son).

GREEK PHARMACY.—A Pharmaceutical Society has been formed at Athens which proposes to publish a journal to represent Greek and Oriental pharmacy generally.

Bankruptcies and Liquidations.

HENRY BRETT & COMPANY.

THE debtors carry on business as distillers, liqueur manufacturers, and wine merchants, in High Holborn. Their liabilities amount to 42,000*l.*, and their assets to 20,000*l.* Mr. W. Edwards was appointed receiver and manager upon a nomination of creditors to the amount of 29,000*l.*—On December 10 Mr. Robertson Griffiths applied, on behalf of the manager and the debtors, for injunctions against judgment and execution creditors, who, if not restrained, might prevent the completion of numerous Christmas orders which had been received. The Judge granted the desired injunctions.

G. E. GODDARD, Chemist and Druggist, 37 Chapel Street, Belgrave Square, and South Kensington.

THE debtor, George Edward Goddard, has presented a petition for liquidation, returning his liabilities at 438*l.*, and assets 547*l.* 15*s.*; and at the meeting of creditors recently held it was resolved that his affairs should be liquidated by arrangement, Mr. E. Goddard, of West Chapel Street, Mayfair, and Mr. E. Cogswell, of St. Thomas's Buildings, Southwark, being appointed trustees, together with the following committee of inspection:—Mr. H. Loatherdale, of 14 Old Jewry Chambers; Mr. C. G. Cudby, of 47 Lincoln's Inn Fields; and Mr. J. Holdaway, of Hill House, Upper Norwood. The following were in the schedule of creditors:—

	£	s.	d.
Goddard, E., West Chapel Street, Mayfair	60	0	0
Barron, Squire & Co., Bush Lane	41	13	1
Norman, —, Phipps Street, Shoreditch	28	13	9
Hearon, Squire & Co., Coleman Street	25	3	4
Burpitt, W., Market Street, Leicester	25	0	0
Tidington, S., Ross Road, South Norwood	16	0	0
Acton & Borman, Shoe Lane	15	16	0
Maw & Co., Aldersgate Street	15	6	9
Weekes, —, 9 Russell Gardens, Kensington	13	12	2
Hoedy, H., 35 Chapel Street, Belgrave Square	12	8	6
Holdaway, J., Upper Norwood	12	0	0
Cogswell, E., St. Thomas's Buildings, Southwark	10	10	0
Duke, Brockwell & Co., Gipsy Hill	10	0	0
Haig, Dr., Chapel Street, Belgrave Square	10	0	0
Meggeson & Co., Miles Lane	10	0	0

F. J. LIGHTFOOT, 57 Gracechurch, E.C.

THE debtor, described also as of Mülheim-on-the-Rhine, Dietz-on-the-Lahn, and elsewhere in Germany, manufacturer of chemical products, mill and mine owner, trading as "Lightfoot & Sharp," "Lightfoot & Co.," and also under the title of "Lightfoot Chemische Fabrik Colombia," filed his petition for liquidation on October 16, and at the meeting of creditors held last month the following statement of affairs was presented:—*Dr.* To English trade creditors, 4,763*l.* 1*s.* 7*d.*; German trade creditors, 2,347*l.* 1*s.*; cash creditors, 45,747*l.* 13*s.* 2*d.*; creditors fully secured, 34,200*l.* (securities valued at 71,400*l.*); other liabilities, 4,000*l.*; and liabilities on bills discounted, 2,729*l.* 7*s.* 7*d.*, of which it is expected that 2,492*l.* 3*s.* 11*d.* will rank against the estate, making the unsecured total 59,349*l.* 19*s.* 8*d.* *Cr.* By stock-in-trade at chemical works, Mülheim-on-Rhine, 2,300*l.*; book debts, 2,223*l.* 18*s.*, estimated to produce 1,939*l.* 7*s.* 8*d.*; cash in hand, 365*l.* 2*s.* 2*d.*; furniture, fixtures, and fittings at Mülheim-on-Rhine, and at Dietz Mills, 300*l.*; property, 11,400*l.*; surplus from securities in the hands of creditors fully secured, 37,200*l.*; total (after deducting 557*l.* 6*s.* for preferential payments), 52,947*l.* 3*s.* 10*d.* It was resolved that the estate should be liquidated by arrangement, Mr. H. J. Leslie, accountant, 1 Frederick's Place, Old Jewry, being appointed trustee, together with a committee of inspection consisting of Mr. R. J. McCabe, 32 Cornhill; Mr. Wm. Stephenson, of Ness House, Ealing; and Mr. W. C. Cutler, of 25 St. James's Street. The case was brought before Mr. Registrar Murray on November 18, and there being no opposition, his Honour registered the resolutions.

A. MANBRÉ, Brewers' Chemist, Goulston Street, Whitechapel.

THIS case has already been noticed in THE CHEMIST AND DRUGGIST, and the meeting for the bankrupt's public exa-

ination took place on November 21 before Mr. Registrar Hazlitt. The accounts showed unsecured debts 2,629*l.* 10*s.*, debts fully secured 5,900*l.*, and debts partly secured 400*l.* Assets: Surplus from securities held by creditors 21,000*l.* Mr. W. Williams, accountant, King Street, Cheapside, said that he was the trustee in the case, and he had no objection to the bankrupt passing his examination. In reply to the registrar, Mr. Williams said that the assets consisted of some patents which the bankrupt had in America. He believed there would be something coming from the patents, but nothing like the amount stated in the accounts. His honour allowed the bankrupt to pass his examination.

McCULLOCH & PERRIN, Chemical Merchants, 9 Mincing Lane.

THE adjudication in this case was made in August, 1876, the bankrupts trading under the firm of McCulloch & Company, and the estate having been realised, Mr. Rae applied to the Court on November 14 for an order closing the bankruptcy in pursuance of section 47. The receipts had amounted to 457*l.* 11*s.* 5*d.*, and the disbursements included in item of 158*l.* 7*s.* for solicitor's costs, also 201*l.* 2*s.* 5*d.* for trustee's remuneration, the sum of 34*l.* 13*s.* 2*d.* being applied in payment of a dividend of 1*l.* in the pound, which is all the creditors have received. No objection was raised, and Mr. Registrar Hazlitt ordered the bankruptcy to be closed.

J. B. PAYNE, Manchester.

A PETITION for liquidation has been filed at the Manchester County Court by John Buxton Payne, Piccadilly, Manchester, chemist and druggist, and residing at Brunswick Street, Chorlton-upon-Medlock, Manchester. Liabilities 2,501*l.*

C. SCANLAN, Droylsden.

THE first statutory meeting of the creditors of C. Scanlan, of Droylsden, chemist, was held on November 12 at the King's Arms Hotel, Manchester. The statement of affairs showed liabilities 334*l.*, and net assets 165*l.* A composition of 7*s.* 6*d.* in the pound, secured, was accepted. Creditors were represented by Mr. Eckersley and others.

HERBERT SUMPTER, Chemical Manufacturer, Homerton.

THE debtor, trading under the firm of "Russell & Co.," has filed a petition for liquidation, and on the case being recently brought before the Court an order was made for the appointment of Mr. E. L. Ernest, accountant, 4 Queen Street Place, as receiver of the estate, an injunction being also granted restraining further proceedings in thirteen actions. The liabilities were estimated at 3,500*l.*, and assets 1,000*l.* and upwards. The following were in the schedule of creditors (secured and unsecured):—

	£	s.	d.
Rooney, R. A., jun., 27 Bishopsgate Street Without ..	600	0	0
Reekes, E. B., & Co., Pinner's Court, E.C. ..	400	0	0
Moloney & Co., 16 Walbrook	220	0	0
Mackinlay & Co., Leith	213	17	0
Looner, F., & Son, Dyer's Buildings, Holborn ..	200	0	0
Rodgers, C., Stourbridge	193	7	0
Sumpter, John, Whetstone	160	0	0
Campbell & Co., St. Mary Axe	120	0	0
Wright, S. J., Walbrook	100	0	0
Sherwood & Co., Birmingham	90	19	9
Holste, C., 21 Great St. Helens	77	10	0
Davis, W. H., & Co., Birmingham	73	18	0
The Clyde Bottle Company, Glasgow	71	5	0
Campbell, J., & Son, Glasgow	65	0	0
Johnson, F., & Co., 59 Great Tower Street ..	61	10	0
Brown & McMahon, Fenchurch Street	60	0	0
Williams & Co., George Yard, E.C.	52	0	0
Fraser & Co., Lime Street Chambers, E.C. ..	45	0	0
Mitchell, Robertson & Co., Glasgow	41	0	0
Westwood & Moore, Brierley Hill	42	17	0
Thomson, M. C., Great Clyde Street, Glasgow ..	42	2	0
D. Cox, Blue Works, Bristol	41	19	2
J. N. Gerrish & Co., Bonan Road, Barnsbury ..	40	0	0
Mote, J., Walbrook, E.C.	41	0	0
Lingard, G., Snow Hill, Birmingham	39	1	2
London Trading Bank	38	0	0
Stim-on, E., 2 New Kent Road	32	0	0
Wipperman, G., 19 Water Lane	30	15	6
Stokes, W. B., Charlton Road, Birmingham ..	29	0	0
Child, W. H., 45 Worship Street	24	5	0
Leaoyd & Co., Moorgate Street	22	0	0
Booth, J., jun., & Co., Forfar	21	1	9

Wolf & Crump, 70 Queen Street, E.C.	20	15	0
Naylor, G., & Co., Reliance Works, Sheffield ..	20	0	0
Hayward, J. W., Pilkington Road, Peckham ..	20	0	0
Kerswell, N. J., Columbia Road, Hackney Road ..	20	0	0
Feltham & Co., Little Britain	20	0	0
Fleming, C. B., & Co., Queen Victoria Street ..	17	0	0
The Midland Banking Company	15	0	0
Pullen, T. J., 1 Basinghall Street, E.C.	11	10	0
The Artistic Colour Company, Barbican	10	18	0
Buckler, T. W., 4 Queen Street Place, E.C. ..	10	0	0
Buchan, A., & Co., Edinburgh	10	0	0

WOODMAN & MAHONEY, Chemical Manufacturers, &c., Bermondsey.

THIS case was noticed in our last issue. The debtors, trading as "T. J. Woodman," had petitioned for the liquidation of their affairs, and Mr. G. H. Finch applied on the 5th inst. for registration of the resolutions passed by the creditors. The joint liabilities were returned in the accounts at 2,622*l.* 5*s.* 3*d.*, and assets 2,022*l.* 15*s.* The separate debts of Woodman were 43*l.* 12*s.* 5*d.*, assets 876*l.* 17*s.* 11*d.*; and those of Mahoney 874*l.* 17*s.* 11*d.*, assets 124*l.* 16*s.* 6*d.* It was resolved that the estate should be liquidated by arrangement, Mr. Boyes, accountant, Poultry, being appointed trustee, together with the following committee of inspection:—Mr. J. W. O. Neile, of 162 Palmerston Buildings, gentleman; Mr. Edwin Hunt, of Wednesbury, manufacturer; and Mr. W. E. Kenworthy, of Leeds. The discharge was also granted. Registration of the resolutions was allowed.



ELLIS v. RUTHIN SODA-WATER COMPANY (LIMITED).

THE above action was tried on November 21 in the Chancery Division of the High Court of Justice. Plaintiffs and defendants are both manufacturers of soda water, and the action was brought to restrain the defendants from using labels or bottles having marks upon them in imitation of plaintiffs' marks. Plaintiffs claimed to have used their marks for over 20 years, and defendants had used their marks since 1869, and produced a local newspaper in which their marks had been then advertised. The Master of the Rolls refused the application. He said no doubt there was some similarity between the marks, and there might have been grounds for an injunction if the plaintiffs had taken proceedings when the marks were first used. As, however, the defendants had admittedly used their marks since 1869, and such user had been acquiesced in by the plaintiffs, there was no ground at the present time for an injunction.

THORLEY'S FOOD.

VICE-CHANCELLOR MALINS was occupied for nine days last month in hearing two actions concerning the right to manufacture Thorley's food. Two firms at present claim the right to manufacture that food—the executors of the late Joseph Thorley, and the Thorley's Food for Cattle Company (Limited) formed by Josiah Thorley, a brother of the late Joseph.

On November 22 the Vice-Chancellor gave judgment, occupying two hours and a quarter in delivery. The late Joseph Thorley, a trader carrying on business at Hull, learnt from a Mr. Fawcett a recipe for manufacturing cattle food. In 1857 he commenced the manufacture of "Thorley's Cattle Food," paying Fawcett 4*l.* per ton by way of royalty. The business was managed by Josiah Thorley, who became acquainted with the trade secret. After the death of Joseph, Josiah formed a small company, with a capital of 200*l.* in

1s. shares, for the manufacture and sale of Thorley's food. The executors of the late Joseph Thorley, therefore, moved the Court to restrain the company from carrying on the business, but the Court, in June, 1877, held that Josiah Thorley, knowing the trade secret, had the right to manufacture and sell—or to form a company for that purpose—Thorley's food for cattle, provided that he did not hold out to the world that he was carrying on his brother's business as his successor. This decision of the Court was not appealed against. On June 30, 1877, Mr. Massam and his co-executors issued an advertisement cautioning the public against purchasing any cattle food from any other than their firm, and in the centre were these words—"The proprietors of which are alone possessed of the secret for compounding that famous condiment." Thorley's Cattle Food Company then commenced an action against Mr. Massam and his co-executors, to restrain them from advertising a libel calculated to injure the business of the company; thereupon Mr. Massam and his co-executors commenced a cross action to restrain the plaintiff company in the first action from using labels, &c., likely to deceive the public. In the first action his Lordship now held that Josiah Thorley having a right to form a company to manufacture and sell Thorley's food for cattle, and it not being true that Mr. Massam and his co-executors alone possessed the secret for compounding the condiment, the plaintiff company were entitled to restrain the publication of advertisements containing statements calculated to injure the business. Judgment for the plaintiff company with costs accordingly. In the second action his Lordship, after going through a mass of evidence, found that the wrappers, boxes, &c., used by the company were not in imitation of, or only colourably differing from, those used by Massam and his co-executors, and that the company had not sought to deceive the public by passing off their goods as of some others' manufacture. The second action was, therefore, dismissed with costs.

Judgment for Thorley's Food for Cattle Company in both actions accordingly.

CO-OPERATIVE AUDACITY.

SIR RICHARD MALINS read a sharp lesson to the directors of the Civil Service Supply Association at the close of an action brought by them in the Chancery Court last month. It appears that a bootmaker near their stores in Tavistock Street had letters on his shop-windows indicating his establishment as the Civil Service Boot Supply. It was proved that this legend was in existence nearly a year before the Association began to sell boots at all, and now they asked for an injunction to remove those words. The Vice-Chancellor said any one had the right to the term "Civil Service," and the Association had wasted the time of the Court with a trumpety case which had no merits whatever, and he refused their application with costs.

RE THE NATIONAL TEMPERANCE BEVERAGE COMPANY AND COMPANIES ACTS.

ON November 21 a petition was presented before Vice-Chancellor Hall by Mr. Armitage, of Leeds, to wind-up the above-named company compulsorily. The petitioner is a creditor for 1,600*l.* and a guarantor for 200*l.* The company, of which the petitioner was one of the first directors, was formed in 1877 for the purpose of working a patent for manufacturing non-intoxicating beverages. The company was unable to pay its debts, and had gone into voluntary liquidation. The other debts of the company amounted to 345*l.* The Vice-Chancellor made the order asked for.

BRAND'S ESSENCES.

THE case of Dence *v.* Mason, which has been on several occasions reported in our pages, came before Lords Justices James, Baggallay, and Thesiger, in the Court of Appeal, on November 17, in the form of an appeal from a decision of Vice-Chancellor Malins. The action was brought by Thomas Dence and John James Mason, carrying on business as provision dealers in Little Stanhope Street, Mayfair, under the title of Brand & Co., to restrain the defendant, Frank Mason, from selling any essence of beef, concentrated

beef-tea, meat lozenges, or other meat essences in tins, or otherwise having thereon labels or wrappers in imitation of the labels or wrappers used by the plaintiffs, and from using the name of Brand, either alone or in combination with Mason or any other name, in the manufacture of these articles in such a manner as to represent or lead to the belief that the articles made by the defendant had been manufactured by the plaintiffs. The plaintiffs' firm was established about 45 years ago by Mr. Henderson William Brand. In 1835 the business was acquired by Mr. Withall, who, four years ago, sold it to Thomas Dence for 5,000*l.* It had always been carried on under the name of Brand & Co. The plaintiff, John Mason, was for fifteen years employed as the manager of the business; and the defendant, who is his brother, was for about fourteen years prior to March, 1874, when he left the plaintiffs' service, employed as an assistant in the business. After leaving the firm he entered into partnership with a grocer in Sloane Street named Brand, and commenced the sale of essence of beef and other articles of a similar nature under the style of Brand & Mason. This he was constrained by a consent order from doing, and he then called the firm Mason & Brand till the partnership was dissolved at the end of 1874. After that he continued the use of the word Brand in one form or another upon his labels, and this action was commenced in December, 1876. In February, 1878, the Vice-Chancellor granted a perpetual injunction against the defendant, with costs. Afterwards the defendant became a bankrupt. He appealed from the judgment, but the trustee in his bankruptcy was not made a party.

Their Lordships, after some discussion, decided that defendant could appeal from the injunction, notwithstanding the bankruptcy, on the ground that it was a personal order against him. But, on the merits, their Lordships agreed with the Vice-Chancellor, and affirmed his order with this exception, that they thought it went too far in restraining the defendant from using the names of Mason & Brand, and that it ought to be qualified by inserting a provision that the injunction was not to restrain the defendant from using the name of Mason & Brand *bonâ fide*, if and when there should be a real partnership properly designated by that name. But this alteration was not to affect the costs of the appeal, which must be paid by the defendant.

THE HISTORY OF FAMILY SALVE.

SPALDING *v.* REINHARDT & SON.

THIS was an action brought in the Chancery Division of the High Court of Justice, and heard on Dec. 9 by Vice-Chancellor Sir C. Hall for the purpose of preventing the defendants sending letters to the plaintiff's agents with respect to a salve known under the name of "Spalding's Family Salve."

Mr. Muggleston, who appeared for the plaintiff, said [his client was a chemist carrying on business at Leyton, in Essex, and the defendants were chemists carrying on business in Leeds, in the county of York. He did not claim for slander, though the defendants admitted they wrote the letters of the respective dates about which complaint was made.

The Vice-Chancellor: But you have not set out the letters.

Mr. Muggleston: Then I should ask for leave to amend.

The Vice-Chancellor: I should not give leave to amend in a case of this kind.

Mr. Muggleston: They say that in 1860 we were the inventors of a certain salve, and that Mr. Spalding, who was an assistant with us, has imitated it, and we shall hold him liable. I hold that letter shows an action for slander in the title, and I set that out.

The Vice-Chancellor: I do not think it does; it merely says he is offering an imitation and endeavouring to damage their property.

Mr. Muggleston: But they go on to say we shall take proceedings unless your client undertakes to cease imitating our preparation.

The Vice-Chancellor: You do not aver you have any right or title to the name.

Mr. Muggleston: We say we have registered the title.

The Vice-Chancellor: In Stationers' Hall, and that is nothing.

Mr. Muggleston said his client sued for damages sustained by reason of the defendants representing to plaintiff's agents that the plaintiff was selling an article that was in imitation of theirs. He contended the plaintiff had a right to sell the same as he had done since 1868, and he should be able to prove the defendants had written to the agents, in consequence of which the agents had discontinued the sale. For that reason it was a great hardship that the plaintiff was not allowed to amend his claim, whilst there was no hardship upon the part of the defendants, therefore he submitted that his lordship should allow the amendment of the claim.

The Vice-Chancellor: I shall not allow leave to amend in this case. It appears to me in the statement of claim there is no case made under which the plaintiff is entitled to any relief at all, and I hold, therefore, there is no case.

Mr. Pearson, Q.C., who represented the defendants, applied for costs.

The Vice-Chancellor then gave judgment for the defendants with costs, including the costs of witnesses.

REINHARDT & SON v. SPALDING.

Mr. Pearson, Q.C., said this was an action for an injunction to restrain the defendant from imitating the plaintiffs' trade mark. The plaintiffs, who were pharmaceutical chemists, had carried on business in Leeds—the plaintiffs and their predecessors—for more than a century, and they had registered the trade mark under the Trade Marks Regulation Act of 1875-76, under the name of "Family Salve." That was largely sold in the trade under that name. The defendant was formerly in their employment as apprentice and assistant, and shortly after leaving he commenced in business for himself as a chemist, and had since then sold the salve with the name claimed as the plaintiffs' property. The defendant, in his statement of defence, said for the last ten years and upwards he had manufactured and sold a salve under the title of "Spalding's Universal Family Salve," which was registered at Stationers' Hall in 1868. That salve was understood to be a salve for ordinary family use, and did not designate a salve made or used by the public or their predecessors. He should prove the registration of the plaintiffs' salve under the Trade Marks Act, and also that it had been in use for upwards of ten years before that. He submitted it was a good trade mark, and that the defendant could not use it by merely putting his name before it.

The Vice-Chancellor: It is for the defendant to show that it is not yours, and that he is justified in using it.

Mr. Muggleston submitted if he could prove it was in use prior to the registration the defendant had a right to use it in combination, and that the plaintiffs had no right to register it. His first proposition was that the term "Family Salve" was in use prior to plaintiffs' registration, and the second was that it was not a trade mark at all. If he proved that, the onus was removed from him to the plaintiffs to prove their exclusive right to the words.

William Richard Spalding, the defendant, was then examined, and said he carried on his business at Leyton. On August 25, 1878, he registered, under the title "Spalding's Universal Family Salve," his mark. (The entry was put in.) He had sold salve under that name. Sold it first in 1868, and had continued so to sell it up to the present time. Knew of other salves sold under the name of "Family Salve." Did not know of many that were advertised. Knew of "Austin's Celebrated Family Salve." Had seen handbills relating to that salve. (Handbill put in.)

(Witness produced a handbill which he used since 1868 relating to his salve). Employed agents in various parts of the country to sell his "Family Salve." Sent to his agents the handbills with the salve relating to the packets of salve, and encased the packets with them, leaving outside for the public to see the words "Celebrated Family Salve," and the Government stamp across it. (Packet and salve put in.) The words "Family Salve" were always exhibited, and sometimes the words "Celebrated Family Salve." Had about a dozen agents in Hull. Lofthouse and Saltner were among them. Employed them first in 1868. They continued to sell his salve down to October 1878. They discontinued selling it on account of receiving a letter from Messrs. Reinhardt, of Leeds. (Letter produced). Did not know in whose handwriting it was. Lofthouse and Saltner wrote to him

saying why they discontinued selling his salve. In consequence of what they wrote he consulted his solicitor, who, by witness's instruction, wrote to Reinhardt & Son, on November 22, 1878, and November 26, 1878. A reply was returned on November 27. Had continued to sell his salve without interruption to the present time. (Certificate of registration of same produced). Had searched at Stationers' Hall to see if there were any other "Family Salves" registered, but could not find one besides his own.

Cross-examined: Had resided at Leyton and carried on business there for over seven years. Was formerly in plaintiffs' employ at Leeds, having been apprenticed to them at Hull. When they went to Leeds, he was turned over to Mr. F. Earle, with whom he remained about two and a half years, till February 1865. Went then to plaintiffs at Leeds, where he was their assistant. Remained with them till September 1867. They were selling Reinhardt's Family Salve, in packets, labelled. In 1867 went as assistant to Lofthouse & Saltner at Hull. Was there about eighteen months. Did not recollect how long, but was there about one winter and one summer. Went from there as assistant to Messrs. Hooper, in Pall Mall, London, for six months; and then to Pollock & Pridd, Fenchurch Street. Was there between three and four years. Went then as manager of the drug department of the Professional and General Co-operative Stores. Was there five or six months. From there went to Leyton. Could not tell the date. Lofthouse & Saltner became his agents in 1868, when he was in their employ. They had a gross of the salve at a time from him. Did not know the quantity they sold during the whole time they were his agents. Kept an account of the quantities while he was there, but not after he went into business for himself. They bought and paid for them, but did not sell on commission. In October 1878 they sent back some salve which they had bought and paid for. Gave them credit for it. Sold them no other goods than salve, and they were not his agents for anything else but salve.

In re-examination witness said he had never sold the salve under the name of "Family Salve;" it always bore his own name and the word "Universal."

William T. Reinhardt, examined, said he was one of the plaintiffs in the action. His brother wrote to Messrs. Lofthouse & Saltner, of Hull, calling attention to their selling a "Family Salve" which was not of their manufacture. The salve alluded to was the defendants', he believed. With his father and brother he had been connected with the business for upwards of fifteen years, and during the whole of that time the firm sold the salve under the name of "Family Salve." He heard that the defendant was selling a similar salve in 1878, and in December of that year he called upon him for the purpose of giving the defendant a chance to withdraw from a false position, if he chose, without expense. All he said was without prejudice to that action, and he never said he would give a bill of sale upon his furniture if the action was not stayed.

In cross-examination witness said that, during the whole time the salve had been sold by the firm, the words "Family Salve" were printed in a conspicuous manner upon the envelope. He knew of no other "family salve" being sold, and had not seen any advertised.

Theophilus Mathews, of Cambridge Road, E., stated he had been in business for over thirty years as a chemist, and had sold "Family Salve" made by Austin, but he had known the salve for forty years. If he had been asked for "Family Salve" he should have supplied Austin's. He did not believe there was any exclusive right to the words "Family Salve."

In cross-examination witness said he had known that the defendant sold a "Family Salve" for about four or five years.

James Richardson, chemist and druggist, of Kingsland Road, gave similar evidence, and in cross-examination said he could not swear that the word "family" was upon any of the salves he sold except the defendant's.

The further hearing of the case was then adjourned.

On being resumed on Wednesday morning,

The Vice-Chancellor said he should like to hear Mr. Muggleston sum up his case as it stood at present.

Mr. Muggleston submitted he had proved by the evidence that the words "Family Salve" were in use prior to the registration by the plaintiffs of those words in 1876, and

that it was immaterial for the purpose whether those words were used by the defendant or by a third party. Provided the words were used at all, he contended he had made out a case in which the onus was thrown upon the plaintiff to prove his exclusive right. There could be no exclusive right, it was clear, in either the word "salve" or the word "family" separately, and the question therefore was whether anyone could by uniting the two words create such an exclusive right as would entitle him to prevent others from using the combination. No such exclusive right, he submitted, could be maintained by anyone, and, even if it could, the plaintiffs were not entitled to oust anyone else from their use, because his contention of exclusive use had been rebutted by the evidence.

The Vice-Chancellor, in delivering judgment, said Mr. Muggleston had argued the case extremely well; no counsel could have done more justice to his clients than he had done, but they must consider the way in which the case came before the Court. It came in this way. The plaintiffs said they were the registered proprietors of that trade mark, that they had complied with the provisions of the statute—the Trade Mark Act of 1875 & 76—that they had been registered as the first proprietors of the trade mark, and, being so, they were by the statute *prima facie* the owners of, and had a right to, the exclusive use of that trade mark. On the other hand, the defendant contended it was not a trade mark at all, and therefore was not a thing that could be put upon the register as a trade mark. As to its being a distinctive heading they must answer that by saying it was. He should say the two words "Family Salve" were distinctive, and would sufficiently describe the salve as a distinctive article. He did not mean to say that the word "family," combined with every substantive, would be distinctive, but he did say it with regard to that particular thing. Then it was contended that before the use of the name "Family Salve" by the plaintiffs there was a salve known and sold in the market under that name; and, therefore, when the plaintiffs or their predecessors in title first made use of that description, there was somebody else using it, and using it so as to prevent the acquisition by the plaintiffs of that term. That had been pressed very strongly, and was the main contention and principal ground for resisting the plaintiffs' claim, but he was bound to say the principal ground of the contention was based on the evidence of Mr. Mathews, and he did not hesitate to say that Mr. Mathews' evidence was not worthy of credit at all. As to Austin's user of the word, he considered that was out of the consideration; and that being so, the case stood in this way—that for the last fifteen years the plaintiffs had been using the name "Family Salve;" and it appeared to him that the plaintiffs, or their predecessors in title, were the possessors of a trade-mark, and had their title fortified by registration. He considered also that the defendant's evidence had fortified the title; therefore, he said, the plaintiffs had a *prima facie* title, and were entitled to be substantially relieved.

Mr. Muggleston submitted that the costs should be the costs the plaintiffs would be entitled to if they had set up that action by way of counter claim.

The Vice-Chancellor said he should not give any direction as to that. He should not be lenient to Mr. Spalding, as he thought he should have submitted when the complaint was made. He was not at all pleased with the defendant's conduct, and was not therefore disposed to go out of the way to relieve him from any costs.

Judgment was accordingly given for the plaintiffs, with costs.

HASSELBY V. ATKINSON.—A SWEET THING IN PARTNERS.

In the Chancery Division, before Vice-Chancellor Sir C. Hall, on December 4, Mr. Graham Hastings, Q.C., moved for a receiver and injunction in a partnership action. The learned counsel said this was a partnership action, and the business carried on was that of chemists and druggists, at No. 1 Baxtergate, Doncaster, under the style of Atkinson and Hasselby. The co-partnership had existed for six years. The defendant had, unfortunately, taken to drink, and the result was that at least on two occasions the defendant had mixed deadly poisons with medicines which were to be taken internally. On one occasion the defendant mixed chromate of lead with the medicine, and on another verdigris. The

learned counsel pointed out the danger of going on with a business of this kind in partnership with the defendant. If any unfortunate patient died, it would be absolute ruin to the plaintiff. The partnership commenced on January 1, 1874, and there was a clause in the partnership deed that the defendant was not to devote the whole of his time to the business. The defendant had placed an extremely liberal construction upon that clause, and from November 1, 1878, to December 1 last—a period of thirteen months—had not attended to the business for more than three months. He did not think that any reasonable construction of the clause in the deed would justify such neglect of the business as that. The defendant had further got into a very unfortunate habit of taking the cash and spending it without accounting for it. The result had been that at the beginning of the present year the plaintiff issued a writ for the purpose of having the partnership dissolved, but on the promises of the defendant to amend his conduct the writ was abandoned and the action not proceeded with. The defendant, however, had got worse, and on November 1 last went out collecting accounts and kept the money. The result was that the accounts were sent in a second time. He understood that the defendant did not intend to appear. He therefore asked for an injunction restraining the defendant from receiving any money belonging to the partnership, or from interfering in any way with the business, and that a receiver might be appointed. The plaintiff had been carrying on the business, and he asked that the plaintiff might be appointed receiver and manager without security and without salary.

His lordship made the order as prayed.



CREASOTE SOAP.

THIS is the registered title of a new soap, manufactured by Messrs. Low, Son & Haydon. It is distinctly, but not disagreeably, impregnated with creasote, and leaves a fresh and pure odour. So far as antiseptics can with medical advantage be combined with soap, this should be one of the best. It is got up like the firm's well-known brown Windsor, but is carefully protected by three wrappings, one of which is tinfoil.

NEW DISPENSING SOLUTIONS.

We have received samples of liquor ferri et ammoniæ citratis, and liquor ferri et quiniæ citratis, made by Messrs. Fletcher & Fleteher, of Holloway. These offer a decided convenience to dispensers, as they seem to be perfect solutions of the salts in a more concentrated form than can be obtained by directly dissolving the scales. As we understand, these solutions are made from the liquors previous to sealing, their strength being carefully calculated so that each fluid drachm represents half a scruple of the scales. They yield a perfectly bright liquid.

THE medals awarded and recommended by the Council of the Royal Society for the present year are: The Copley medal to Professor Rudolph J. E. Clausius, of Bonn, for his researches upon heat; the Davy medal to Mr. P. E. Lecoq de Boisbaudran, for his discovery of gallium; a Royal medal to Mr. William Henry Perkins, F.R.S., for his synthetical and other researches in organic chemistry; and a Royal medal to Professor Andrew Crombie Ramsay, F.R.S., for his long-continued and successful labours in geology and physical geography.

Clippings and Pickings.

ON November 23, at the Mansion House, the Lord Mayor acknowledged a donation of ten guineas to the poor-box from Messrs. S. Maw, Son & Thompson.—*Daily Chronicle*.

A NEW RUSSIAN PHARMACOPŒIA is announced to appear towards the close of the current year. The medicine tariff will be revised at the same time.

CHEMICAL SOCIETY RESEARCH FUND.—Dr. Warren de La Rue, F.R.S., as sent to the above-named fund a third donation of 100*l.*, the whole amount to be devoted to a single research.

THE *Echo* says:—"Among the charges for the Embassy extraordinary of Lord Beaconsfeld to Berlin, is one of 735*l.* for Dr. Kidd's medical attendance on his lordship whilst here."

KEROSENE OIL has been found efficacious in Madras in removing deafness. A Rutnagherry vernacular paper says that a native doctor in Miraj entirely cured in a fortnight a man suffering from complete acquired deafness by placing two drops of oil in each ear every night. Another man deaf in his left ear was cured in the same lapse of time.

THE NORWEGIAN PHARMACOPŒIA.—A new pharmacopœia has been published in Norway, but it is little more than a new edition of the Pharmacopœia of 1870 with a few modifications. A Pharmacopœia Scandinavica is in course of preparation, which will be used throughout Denmark, Norway, and Sweden.

OSMANLI CUCUMBER POMADE.—The Sultan's chancuns—the ladies of the seraglio—like other Osmanli ladies, to preserve and enhance the beauty of their skins prepare a pomade from fresh gherkins, called "Anguria." The chancuns anoint every part of their body with freshly-expressed cucumber juice as well as with this pomade, and their example is followed by the Greek ladies.—*Dr. Xavier Landerer, Athens*.

THE FROG CURE.—In *De Tydschrift*, a Dutch journal published at the Cape, an old lady recapitulates a list of remedies with which she tried to cure some affection of the lungs. "I began," writes she, "with ordinary plasters, then horn plasters, then tar plasters, then Holloway's ointment, then Poor Man's Friend, pipe oil, Haarlem oil, and the lights of a young kid." Failing to receive the least benefit, she next tried in succession wild dagga, blue gum, buchu, leeches, wild aloe, kruidje-roer-mij-niet, and they failed. Then I tried one-half of everything in a big Huis Apotheek, and still failed to get cured. An old woman advised me to boil the entrails of a sheep and drink the water. I did so but received no benefit. A 'Kanny Schot,' who said he was a doctor, tried carbolic acid and linseed meal, but it was the ight frogs in a muslin handkerchief that cured me."

"DAGONET" in the *Referee* thus burlesques a legal case, he report of which will be found in another part of this journal:—

AN ECCENTRIC CHEMIST.

THERE came to the High Court of Justice one day
A chemist, who seemed in a dudge of a way,
And he said, "O your lordship, my partner is queer,
And he makes up prescriptions—O gracious! O dear!

"He's putting up poisons in boxes of pills,
He purveys prussic acid as syrup of squills;
And old ladies who come for a wash for the eye
He advises a lotion of vitriol to try.

"He made up a mixture with chromate of lead—
It's a wonder my customers are not all dead—
And verdigris, too, to a lady he sent;
With strychnine he physicked an elderly gent.

"He plays with the leeches, and flings them about,
And he gives little babies strong pills for the gout;
Castor-oil down the throats of mere strangers he pops,
And pelts the police with the peppermint drops."

His lordship looked grave, said "Indeed! is it true?
I'm glad my prescriptions are not sent to you;
If your partner behaves in this singular way,
I think we will grant you the order you pray."

Personalities.

MR. T. T. CUSSONS has disposed of his business at Stocks Hill, Holbeck, Leeds, and has taken one at Louth.

MR. RICHARDSON, Mayor of Bolton, is a solicitor, and is not Mr. Richardson, chemist, of the same town, as we stated last month.

MR. JOHN WAIN, Ripley, Derby, has taken into partnership Mr. T. B. Illsley. The firm will be carried on under the style of Wain & Illsley.

MR. T. S. DAY has sold his business at Beckenham to Mr. M. J. Deacon, of Penge. Mr. Day retains his appointment as manager of the London and Provincial Bank.

MESSRS. H. TEBB & Co. have succeeded to the business of chemists and aerated-water manufacturers, Graaff-Reinet, lately carried on by Messrs. Eckley & Tebb.

THE PICTURES OF THE LATE MR. CHARLES HEATH WARNER, of Fore Street, City, were sold by Messrs. Christy on November 28 and 29, and realised the sum of 2,035*l.*

MR. C. E. WADDINGTON has taken over the business of the late Mrs. J. Teasdale, homœopathic, chemist, Bradford, and intends to carry it on in future at more commodious premises—viz., at 31 Darley Street, Bradford.

MR. D. GODDARD NICHOLSON has disposed of his business and premises in Mere Street, Diss, to Mr. W. K. Cooke, of Birkenhead. Mr. Nicholson has opened extensive premises in All Saints' Street, Norwich.

MR. JOSEPH WILD, of Clayton-le-Moors, near Accrington, has purchased the business heretofore conducted by Mr. Frederick Wharton, at 110 Lees Road, Oldham, and will carry it on in addition to his own.

WE observe that the name of Captain J. G. F. Richardson has been added by the Lord Chancellor to the list of magistrates for the borough of Leicester. Captain Richardson is the leading partner in the well-known firm of John Richardson & Co., manufacturing chemists, Leicester, and is also a member of the Pharmaceutical Council.

TESTIMONIALS TO MESSRS. 'LUFF AND' WOODLAND.—The students of the Central School of Chemistry and Pharmacy met on November 29, to the number of over 40, by the invitation of Messrs. Luff and Woodland, to enjoy a "social evening" and a capital supper. During the evening the students presented to Mr. Luff a handsome marble time-piece, and to Mr. Woodland a liqueur-stand, together with an illuminated address, speaking highly of "their appreciation of the interest and kindness they (Messrs. Luff and Woodland) had exercised on their behalf." A most enjoyable evening was spent, a capital programme being provided.

AN Act of Parliament was passed last session which provides that in future persons shall not be nominated as collectors of Queen's taxes by the assessors as heretofore, but that they shall be nominated and appointed by the Commissioners of the several taxes only. Further, the Act provides that no person shall be compelled to accept the office, nor liable to any fine if he refuse. We believe we are correct in crediting Mr. Thomas Barclay, of Birmingham, with the honour of having forced this piece of justice from the Government. He was appointed collector for the parish of Moseley North in 1875, and paid a 10*l.* penalty rather than serve. After that he took the matter up vigorously, and with the assistance in the House of Commons of Mr. Sampson Lloyd, M.P., he at last succeeded in getting the law altered.

ONE OF THE OLD SCHOOL.—Frank Buckland, in *Land and Water*, gives the following item:—"The oldest surgeon in Norfolk is Mr. Samuel Taylor Huke, who until lately practised in the midst of the Broad district, i.e., at Ludham, on the River Ant, and who has now retired to end his days in Old Yarmouth. I mention Mr. Huke because I heard he was always so kind to the poor, who have, since he left Ludham, added their pence together and presented him with a testimonial of their gratitude, the subscription being limited to a very trifling sum, but as many hundreds gave their mite, a very handsome sum was raised. Night or day,

in the most bitter weather, this good old gentleman was ever ready to turn out to the poorest cottager requiring his aid. It was, however, then no joke to make a journey of several miles in this wild district during a dark night, with the roads sometimes under water, and, perhaps, involving a row across some of the great Broads, covering several hundred acres. Locomotion is rather different now to what it was when Mr. Huke commenced practice at Ludham more than half-a-century ago. Splendid fields of corn are seen where the snipe and wild fowl formerly were found, and a railroad from Yarmouth will, in a few days, run by Ludham and Catfield into the midst of the Broads. The old doctor's two sons were not brought up to physic, but have got together an excellent business in Yarmouth as booksellers, and also a capital library. They are most enterprising and obliging young men, much respected in Bloaters Land. *Probatum est.*" Dr. Huke's eldest son was brought up to the medical profession, and is now a chemist and druggist in Chester.

Obituary.

BARNES.—On October 26, 1879, Mr. James Barnes, pharmaceutical chemist, Fishergate, Preston.

BOWES.—On December 3, Mr. John Sidney Bowes, Chemist and Druggist, Camp Road, Leeds. Aged 32 years.

GRIFFITH.—On November 13, Mr. Robert Griffith, Chemist and Druggist, Llanbedr. Aged 66 years.

HORNBY.—On November 18, Mr. Edward Preston Hornby, Pharmaceutical Chemist, Lower Hillgate, Stockport. Aged 53 years.

JUDSON.—On November 23, Mr. William Judson, Pharmaceutical Chemist, High Wycombe. Aged 46 years.

LINGARD.—On November 23, Mr. William Smith Lingard, Chemist and Druggist, Stockport. Aged 63 years.

SIMCOCK.—On November 25, 1879, at Manchester, Mr. Thomas Simcock, for 40 years in business as a chemist and druggist at Manchester and Liverpool, aged 79 years.

SNAPE.—On December 6, 1879, after protracted suffering, Edward Snape, pharmaceutical chemist, 13 Great Hampton Street, Birmingham, in his 71st year.

STEWART.—On November 22, Mr. Charles Samuel Dale Stewart, Great Yarmouth. Aged 78 years.

WILLIAMS.—On November 29, Mr. Ebenezer Vaughan Williams, Chemist and Druggist, St. Thomas Street, Weymouth. Aged 46 years.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine-moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Applications for Letters Patent:—

Bottles.—No. 4550.—C. J. Wade & J. W. Dobson, both of Barnsley, Yorkshire. Improvements in tools or apparatus employed in the manufacture of bottles. Dated November 8, 1879.

Bottle-opener.—No. 4630.—T. C. Wilkinson, of Ashford, Kent, engineer. Improvements in the construction of apparatus for opening bottles closed by internal stoppers. Dated November 18, 1879.

Bottle-stoppers.—No. 4860.—J. F. Hayne, of 7 Water Lane, Queen Victoria Street, London, merchant. An improved method of stoppering bottles. Dated November 27, 1879.

Bottle-stoppers.—No. 4886.—H. Cochrane, of Belfast. Improvements in corks and stoppers for bottles containing effervescing drinks, and in the means of attaching same. Dated November 28, 1879.

Cases for Packing Bottles.—No. 4538.—T. Cockcroft & H. B. Fox, of Birkenhead, Cheshire. Improvements in the mode of and in cases for packing bottles and other like articles, and in machinery employed in grooving.

Cases for Packing Bottles.—No. 4729.—T. Cockcroft, of Birkenhead, Cheshire. Improvements in the mode of and in cases for packing bottles and other like articles, and in machinery employed in grooving the sides of said cases. Dated November 20, 1879.

Cask and Barrel Tilter.—No. 4760.—T. Forster, of Earlestown Newton-le-Willows, Lancashire, hotel-keeper. Improvements in apparatus for tilting casks and barrels. Dated November 22, 1879.

Chloride of Lime.—No. 4896.—T. Wirth.—A communication from F. Kopf, Doctor of Philosophy, of Mannheim, Germany. Improvements in the method of and apparatus for the manufacture of chloride of lime. Dated November 29, 1879.

Corking Bottles.—No. 4442.—W. Oliver & J. C. Arrol, both of Edinburgh, North Britain, engineers. Improvements in machinery or apparatus for corking bottles. Dated October 31, 1879.

Extracting Vegetable Oils.—No. 4776.—A. Sauvée, of 22 Parliament Street, Westminster, civil engineer. An improved process of, extracting vegetable oils, essential or volatile oils, fatty matters and perfumes from substances of vegetable or animal origin. Dated November 24, 1879.

Filters.—No. 4775.—J. F. Crease, of Wade Court, Havant, Hampshire. Improvements in filtering apparatus. Dated November 24, 1879.

Filters.—No. 4461.—G. V. Alsing, of Bradford, civil engineer. Improvements in filter presses. Dated November 1, 1879.

Furnaces for Chemical Purposes.—No. 4870.—J. Mactear, of Glasgow, chemist. Improvements in furnaces for chemical processes. Dated November 28, 1879.

Hydro-oxide of Carbon.—No. 4611.—W. A. Barlow.—A communication from G. Dehaynin, of Paris. Improvements in apparatus for the manufacture of hydro-oxide of carbon for commercial purposes by the direct introduction of liquid protoxide of hydrogen. Dated November 12, 1879.

Medicating the Atmosphere.—No. 4859.—A. Bell, of Newcastle-on-Tyne, physician and surgeon. Improvements in the mode and means employed for rendering an atmosphere antiseptic, and charging it in determinate proportions with dry medicaments for the purposes of respiration, as a curative or palliative agent in pulmonary or other affection; part of which invention is also applicable for the purpose of rendering air in a room antiseptic. Dated November 27, 1879.

Medical Confection.—No. 4195.—A. Ferguson, of Edinburgh, North Britain, confectioner. A new medical confection. Dated November 4, 1879.

Mixing Pharmaceutical Substances.—No. 4646.—J. L. Hancock, of Cottrill Road, Dalston Lane, London, engineer and domestic appliances manufacturer. Improvements in apparatus for mixing triturating, amalgamating, or otherwise operating upon meal and flour ingredients.

Pans for Concentrating Caustic Alkalies.—No. 4750.—J. Mactear of Glasgow, North Britain, chemist. Improvements in pans for concentrating caustic alkalies. Dated November 21, 1879.

Ferro Phosphorus.—No. 4490.—F. C. Glaser.—A communication from the Hoerder Bergwerks und Huetten-Verein, of Hörde, Germany. Improvements in the production and application of ferro phosphorus. Dated November 4, 1879.

Saccharine Syrups.—No. 4761.—D. MacEachran, of Greenock, North Britain, sugar refiner. Improvements in the manufacture of sugar and saccharine syrups, and in the apparatus to be employed therein. Dated November 22, 1879.

Soap.—No. 4740.—W. Jeyes, of Catherine Street, Aston Cross, Birmingham, chemist. Improvements in the manufacture of soap. Dated November 1, 1879.

Sulphate of Lime.—No. 4637.—W. M. Brown.—A communication from Z. C. Warren, of New York, United States. Improvements in the manufacture of sulphate of lime, in the apparatus employed therein and in the article of manufacture produced thereby.

Treating Saccharine Substances.—No. 4831.—J. H. Johnson.—A communication from M. Weinrich, of Vienna, Austria. Improvements in the preparation and treatment of saccharine substances and compounds, and in the apparatus employed therein. Dated November 26, 1879.

Trusses.—No. 4469.—C. Thornton, of Bradford, plasterer. Improvements in trusses and other surgical supporters. Dated November 1, 1879.

Letters Patent have been issued for the following:—

Bottle-stoppers.—No. 1818.—L. Vallet, of Liverpool. Improvements in and relating to stoppers and bottles for aerated or gaseous liquids. Dated May 7, 1879.

nthrachinon.—No. 3182.—J. A. Dixon.—A communication from W. Mcister, Dr. E. Lucius, and Dr. A. Brining, of Hoechst-am-Main, Germany. Improvements in the manufacture of anthrachinon, and in the regeneration of chromic acid in the said manufacture and in other manufactures. Dated August 7, 1879.

ottle-stoppers.—No. 1895.—H. Barrett, of Hampton, Middlesex, and J. Bailey, of Silvertown, Essex. Improvements in the manufacture of stoppers for bottles for containing aerated or gaseous liquids. Dated May 13, 1879.

ottle-stoppers.—No. 1966.—W. Battershy, of Ardwick, near Manchester. Improvements in stoppering bottles to contain aerated or fermented liquids. Dated May 16, 1879.

ottle-stoppers.—No. 3598.—N. Thompson, of Brooklyn, N.Y., United States. Improvements in means for closing or stoppering bottles, jars, and other similar vessels. Dated September 6, 1879.

olouring Matters.—No. 2515.—F. Wirth.—A communication from W. Meister, and E. Lucius, Doctor of Philosophy, and A. Brining, all of Hoechst-on-the-Maine, Germany. The production of new colouring matters from the secondary and tertiary monamins of the aromatic compounds by the action of chlorquinones, such as tri- and tetra-chlorquinone and their homologues, upon the said monamins. Dated June 23, 1879.

ental Tools.—No. 1917.—W. P. Thompson.—A communication from H. D. Justi, of Philadelphia. Improvements in handles or holders for dental and other small tools or instruments. Dated May 14, 1879.

ental Engines.—No. 3262.—G. Pitt.—A communication from S. S. White, of Philadelphia, Penn., United States. Improvements in dental engines. Dated August 13, 1879.

alvanic Batteries.—No. 3436.—R. C. Anderson, of Wood Green Middlesex, civil engineer. Improvements in galvanic batteries. Dated August 26, 1879.

reating Metallic Sulphides.—No. 1855.—J. B. Spence, of Lombard Street, merchant. Improvements in the treatment of metallic sulphides, and the products derivable therefrom. Dated May 9, 1879.

reating Metallic Sulphides.—No. 2006.—J. B. Spence, of Lombard Street, merchant. Improvements in the treatment of metallic compounds. Dated May 20, 1879.]

Specifications published during the month:—
Postage 1d. each extra.
1879.

219. L. Vallet. Syphons for aerated beverages. 6d.
266. J. H. Johnson. Manufacture of saccharate of lime. 6d.
282. C. Thomas, W. J. Fuller & S. A. King. Recovering glycerine from soap leys. 2d.
286. J. Wilson. Stoppers for bottles, &c. 2d.
293. T. Atkinson. Apparatus for the manufacture of oil-cakes, &c. 6d.
306. J. Allmann. Separating sulphur from alkaline solutions. 2d.
359. H. E. Newton. Manufacture of sulpho-cyanides and ferro-cyanides. 6d.
412. J. Shanks. Fastenings for securing the corks or stoppers of bottles. 6d.
434. D. Cartner. Machine for covering pills. 2d.
437. L. Rose. Opener for bottles containing aerated water. 2d.
444. W. L. Wise. Producing preparations of alumina, &c. 6d.
484. M. Gill. Evaporating saccharic and other liquids or juices. 6d.
494. G. G. Emson. Manufacture of glass-bottles, &c. 6d.
518. W. E. Gardiner. Stoppers for bottles, &c. 6d.
577. F. T. Reade. Eliminating phosphorus from phosphoretic pig-iron. 2d.
582. J. Grant. Filters. 6d.
592. W. Müller & E. Geisenberger. Manufacture of ammonia from the nitrogen of atmospheric air and hydrogen. 6d.
605. H. Codd. Stopping the mouths of jars and bottles. 6d.
661. J. C. Mewburn. Preparation of starch, fecula, and dextrine. 4d.
667. J. Wilkinson & J. T. Andrews. Drying or concentrating sewage, &c. 2d.
673. J. J. Sacks. Extraction of fatty matters. 2d.
703. J. Townsend. Obtaining soda and potash, &c. 4d.
718. W. Greaves. Apparatus for stoppering bottles. 2d.

ABSTRACTS OF SPECIFICATIONS.

FOR permission to print the following we are indebted to the courtesy of the *Engineer*:—

361. PRODUCING COPIES OF LETTERS, &C., A. Kissam.—Dated March 4, 1879.—(A communication.)—(Not proceeded with.) 2d.

This consists of a transfer slab composed of the following:—Leipsic printers' roller composition (hard), 145 grammes; Leipsic printers' roller composition (soft), 380 grammes; glycerine, 250 grammes; zinc white, 30.5 grammes; spirit (alcohol), 20 grammes; Mirbani oil (nitrobenzol), 2 grammes.

909. SPLINTS FOR SURGICAL PURPOSES, H. Guillery.—Dated March 7, 1879.—(Not proceeded with.) 2d.

Supposing splints are required for a broken leg, the surgeon will trace on opposite sides of a plaster model of the limb the form of splint required to embrace the injured part. Casts in iron are made of such parts, and form matrices into which molten lead is poured, and when cool form suitable counter dies. Thin zinc plates are then pressed in these metal moulds and form the splints of the required shape.

913. LIQUID COMPOSITION FOR PREVENTING THE SWEATING OF GLASS C. Kerby.—Dated March 7, 1879.—(Not proceeded with.) 2d.

A liquid composition consisting of methylated spirit at about 63 per cent., glycerine and any of the essential oils, and in some cases amber dissolved in spirit, is applied to the surface of the glass, and as the moisture forms it is absorbed by the liquid.

919. MANUFACTURE OF ANHYDROUS SULPHURIC ACID, C. S. Gorman.—Dated March 8, 1879.—(Not proceeded with.) 2d.

This consists in the employment or use of sulphate of alumina or alum cake, or potash alum or ammonia alum, and rendering them anhydrous by heating them first at a low temperature and then submitting them to a red heat in an ordinary retort to drive off the anhydrous sulphuric acid.

673. EXTRACTING MUCILAGE FROM SEAWEED, &C., T. J. Smith.—Dated February 19, 1879.—(A communication.) 6d.

The plants comprised in the "Chondrus" and Gymnochondrus tribes of the "Gigartina" species, and in the "Lomentariæ" and "Bonnemaisonia" tribes of the "Chondrus" species, are macerated in cold water and filtered, the liquid left being subjected to evaporation or concentration. Waters for toilet purposes may be made with this vegetable powder in a liquid state; syrups may be made from it when in a viscous state. It may be used in the manufacture of alimentary products for "sizing" fabrics, or in paper pulp when in the form of a jelly. In its natural state it may be used for the destruction of phylloxera, or introduced into soap tablets.

718. PRODUCTION AND APPLICATION OF SUBSTITUTES FOR COLLODION W. F. Jack and F. Greening.—Dated February 22, 1879. 4d.

This consists in the employment of fibre dissolved in alcohol and hydrocarbon oils, either alone or in any combination of them as a solution, either alone or in combination with gums and other substances for hermetically sealing bottles and other vessels, as well as rendering other articles and materials waterproof, and the using of the same materials in the form of sheets, tissues, or capsules for covering bottles and other vessels.



PARTNERSHIP DISSOLVED.

BOWEN, JOHN LLEWELYN, & Co., Cilfrw, near Neath, manufacturing chemists; November 26. Debts by J. L. Bowen and another.

DIVIDENDS.

CLOSE & LEGG, 28 Jewry Street, and 91 Leadenhall Street, London, druggists. Of 4d., at E. Moore's, 3 Crosby Square, London.
KERSHAW, JOHN HUGH, Brighouse, Halifax, chemist. First and final of 10d., at C. T. Rhodes's, Ward's End, Southgate, Halifax.

LIQUIDATIONS.

PAYNE, JOHN BUXTON, 63 Piccadilly, Manchester, and 54 Brunswick Street, Chorlton-on-Medlock, chemist. November 24.
WILLIAMS, JOHN, High Street, Raahon, chemist and druggist. November 19.
SHARP, THOMAS ROBERT, Whitby, chemist. November 20.
TEBB, JOHN, 154 Porter Street, Hull, and Newington, chemist. December 2.

SCOTCH SEQUESTRATION.

GORDON, CHARLES, Glasgow, portioner, some time chemist, Whitevale Chemical Works, Glasgow. December 1.
YUILLE, ANDREW, 132 Trongate, Glasgow, chemist and oil merchant. November 25.
CARRICK, ANDREW, 30 Gordon Street, Glasgow, chemical, metal, and produce broker. December 2.

Exchange Column.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

Deposit of Money.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We shall acknowledge receipt to both parties by post-cards, and shall only pay it away on the advice of the remitter. Whether returned to him or paid to the seller, we shall charge a commission of 2½ per cent. on any money thus passing through our hands, and not less than 6d. on any single transaction. This arrangement should entirely prevent any cause of complaint or dissatisfaction arising out of this section of THE CHEMIST AND DRUGGIST.

FOR DISPOSAL.

Dental and Surgical.

Six Moccasin trusses and two ladies' abdominal belts. Orchard, Salisbury.

Spinal supporter, new, cost 6l. 6s., what offers in drugs or bottles? F. Van, Dispensary Barking.

Indiarubber water-mattress, 44 by 33, weight 13½ lbs., in use four days, otherwise equal to new; offer wanted. Address, Jessop, Chemist, Corn Market, Halifax.

Trusses.—15 right and left, from 16 to 26 inches 7 double, 20 to 26 inches; 1, 11 inches; Dr. Ross's pills; 4 Hooper's female pills. Jones, Chemist, Tielherbert, Glamorgan.

Dr. Richardson's ether apparatus for producing local anaesthesia, in box complete, quite new, cost 34s., would take 28s., or offers. Walter Dalton, Dental Surgeon, Acton, W.

Small case pocket instruments, unused, cost 2l. 12s. 6d., price 2l. Russia; also five pair wisdom and molar forceps, not used, cost 7s. 6d. each, price 5s. 6d. each, or offers. W. Goodwill, Broadway Temperance Hotel, Scarborough.

Drugs and Chemicals.

New English honey, guaranteed genuine, 8½d.; good, 7d. Langman Haddenham, Cambs.

What offers for 2 lbs. potass. iodid. and 30 oz. quinia sulph. 6l/2l.

P. curcumæ, gran. parad., aloes (Cape), fine gum siftings, gum thus., button lac, aloes (Cape); nest of 120 drawers; 8 reams emery cloth. Mr. Riley, 25 Withy Grove, Manchester.

Four lbs. of potass iodide, 20 lbs. of good fair liver aloe bark, 7 lbs. of bals. toln., a Bnshby's patent pill-machine, with press, rollers, and other improvements, good as new, the owner having no further use for it; a sample of the drugs sent for 1d. stamp. What offers, separate or the lot. 6s/2s.

For sale at extremely moderate prices, a numerous assortment of first-rate drugs and patent medicines, in good condition, supplied by Barron & Harvey and Barron & Squire; also a good stock of dispensing bottles, gold lettered, and sundries; suitable for a chemist commencing business. Apply to J. C., 11 Alma Road, East Hill, Wandsworth.

Educational.

Siebold's Herbarium and aquarium for 50 leeches, exchange for 3 dozen assorted 1s. 1½d. patents. Saunders, West Gorton, Manchester. Southall's materia medica case, as good as new; price 1l. Apply, W. Bevan, Chemist, Harwich, Essex.

Minor questions for 1879: 30 for 1s., 60 for 1s. 6d.; Muter's "Chemistry," 5s.; Smith's "Guide," 3s.; Rhind's "Vegetable Kingdom," 10s. 6d. 6s/11.

Nice Christmas present. A beautiful "Herbarium," containing the official plants and all the leading indigenous ones; 120 specimens, splendidly mounted, classed and named; only 10s. 6d. Higginson, Newferry, Birkenhead.

Fifty questions asked of a successful student at last Minor, 2s.; 30 prescriptions (catch and difficult) given to dispense at Minor during past session, 2s.; reagent labels for Minor students, showing formulæ, equations, and other useful knowledge, 1s. 6d.; lot of cheap books for students; send stamp for list. Saunders, Tutor, 79 Gaisford Street, N.W.

Shop Fittings.

1 Maw's No. 73 and 1 Maw's No. 52 glass show-cases, both in excellent condition; offers required. 6d/20.

The entire fittings of 6 chemists' shops for disposal, price 37l. 10s., 45l., 54l., 60l., 65l., 75l. Lloyd Rayner, 333 Kingsland Road, London, N.

Whole druggist's fixtures, specie jars, globes, gold-labelled bottles, scales, utensils, &c., to be sold cheap. Address, Thomas Johnson, Chemist, 77 Infirmary Road, Sheffield.

Two handsome cases as fig. 40, mottled mahogany, very cheap; six-hole case for cigars, unsoiled, 16s.; three dozen 20 oz. shop rounds, 18s.; brass beam counter scales, 16s. Giles, chemist, Leeds.

To be sold (bargains), large dental show cases, size 3 feet 6 inches by 2 feet 9 inches; also a vulcaniser (iron) to hold 2 flasks. Apply, F. Buck, 6 Hanover Place, Upper Baker Street, N.W.

Pair of chemists' red lamps, diameter of lamp 14 inches, height of pedestal 7 feet, to be sold very cheap; will take saleable patents in exchange. T. Tomlinson, Chemist, 2 Lower Seymour Street, Portman Square, W.

A mahogany wall-case, as Maw's fig. 190 12l. 10s.; a do. do., 8 feet long, as Maw's fig. 200, 14l.; a 15-foot nest fittings, drawers, &c., &c., as fig. 197, with glass knobs and gold labels, 20l., a bargain; sponge-case, equal to new, fig. 90 Maw's, 70s. E. Natali, 207 Old Street, City Road, almost opposite Great Eastern Street.

A 6-ft. dispensing-screen, as 164, with tablet on top, 7l.; several very handsome dispensing-screens, as Maw's fig. 78; from 4-ft. to 6-ft. 6-in. counter-cases, as Maw's fig. 16, 40s.; Maw's fig. 105, 7l.; fig. 100, 60s.; fig. 101, 80s.; fig. 41, 80s.; fig. 95, 4l.; fig. 99, 7l.; fig. 98, 8l. 10s.; fig. 52, tooth-brush-case, 30s. (most of the above cases in several sizes, very cheap); a number of nests of mahogany-fronted drawers in various sizes at 1s. 6d. and 2s. per drawer; 20 mahogany-top counters, from 6 ft. to 12 ft. long, fitted with drawers, very cheap; 30 dozen shop bottles, 8s. quantity of blue ointment jars, new, 25 per cent. under list price; carboys, specie jars, pill machines; scales, fig. 922, 25s.; fig. 1, 20s.; fig. 7, 16s. 6d. E. Natali, 207 Old Street, City Road, almost opposite Great Eastern Street.

Nest drawers, newly gold-labelled store and other bottles and jars, all sizes, show-bottles, specie jars, desks, counter cases, pill machines; handsome dispensing screen, 5 feet high, 5 feet 9 long; large handsome lamp and scroll, iron mortars, shelving, cupboards, &c.; handsome cigar counter-case, 12 divisions gold-labelled, others not labelled; tobacco jars; sheet of plate-glass, in mahogany frame, 5 feet 10½ high, 4 feet 10½ wide; 2 mahogany doors, glazed with embossed glass; scales, mahogany show-stands, medical books, &c., all cheap. Lists sent. 846 Old Kent Road.

14-ft. 6-in. Spanish mahogany counter, very massive, fitted with drawers and cupboards, a bargain; a 14-ft. 6-in. plate-glass cupboard, Spanish mahogany frame, in very good condition, very cheap, suitable for the under-part of wall case; one each dispensing screens, 7 ft. and 6 ft. long, with glass case at each side and silvered plate-glass centre, with marble slab in front, the cases have silvered-glass backs and shifting shelves, with tablets over cases "Dispensing Department," 8l. 10s. each, worth double; sponge case, as Maw's fig. 92, 5l.; desks and cases, fig. 21, 65s.; fig. 39, 45s.; 8-ft. dispensing screen, fig. 165 Maw's, with silvered-glass back and tablet on top, 9l., a bargain. E. Natali, 207 Old Street, almost opposite Great Eastern Street.

30 nests mahogany-fronted gold-labelled shop drawers, from 2 to 20 ft. long; mahogany wall cases 2½ ft. long, 2 ft. 9 long, 3 ft. long, 6 ft. long, 8 ft. 6 long, 14 ft. 6 long, 17 ft. long, 20 ft. long, 25 ft. 6 long, 34 ft. long; 15 mahogany-top counters, from 3 to 24 ft. long; 6 mahogany window-enclosures; 35 nests warehouse and counter drawers; complete shop fittings, from 3 to 20 ft. long, as 187, 190, and 196 Maw's; mahogany dispensing screens, 3 ft. long, 3½ ft. long, 4 ft. long, 4 ft. 6 long, 5 ft. long, 6 ft. long 6 ft. 3 long, 7 ft. 3 long, as 40, 163, 164 Maw's, and 136 Treble's; handsome sponge and tooth-brush cases, as 90, 92, 52, 72 Maw's; soda-water stands, as 63 Maw's; upright mahogany cases, with and without desks, as figs. 21, 37, 38 Maw's; show-stands, as 19, 85 Maw's; bent-glass counter cases, as fig. 16, 100, 101, 105, 97 Maw's, all sizes; 300 gold-labelled stock bottles, block glass; 800 gold-labelled shop bottles; 600 gold-labelled ointment and ext. jars; quantity pear-shaped carboys and specie jars, shop lamps, tincture presses, pill and pastille machines, mortars and pestles, &c. Lloyd Rayner, 333 Kingsland Road, London, N.

Literature.

Chemist and Druggist, 1866 to 1878, bound in 7 vols, cloth; cash offers. Sage, Chemist, Frome.

Pharmaceutical Journal from January, 1875, to December, 1878, inclusive, six missing; what offers? Illsley, Ripley, Derby.

The Chemist and Druggist from January, 1874, to January, 1879, inclusive, will be forwarded, carriage paid, for first P.O.O. for 1l. R. Flint, Market Place, Loughborough.

Royle's "Materia Medica," quite new, last edition, 1876, 7s. 6d. (15s.); Rosecoe's "Chemistry," last edition, 1878, quite new, 3s. R. Gaudin, 88 Church Street, Croydon. Bentley's "Botany," 7s. 6d.; Fowne's "Chemistry," 5s.; Duckmaster's do., 2s.; Quekett "On Microscope," 4s. 6d.; "Caesar," 1s. 6d. Hollick, Chemist, Lozells, Birmingham.

Chemist and Druggist from July, 1875, to November, 1879, eight missing; *Pharmaceutical Journal* from November, 1875, to November, 1879, eight missing; what cash offers? Hambridge, West Street, Reading.

Will exchange 1878 *Chemist and Druggist*, good condition, for three or four lectures on any element, or sugar, bread, coal, &c., with simple experiments in each. A. Foster, Queen Street, Norwich.

Chemists' books: British Pharmacopœia, Garrod's "Materia Medica," Thomson's "London Dispensatory," Paris's "Pharmacologia," "Physicians' Vade Mecum," "Practice of Physic," and four others, with all faults; the first order for 10s. has the 10 volumes; no post-cards. J. Brunton, 13 Dean Street, Soho, W.

Pereira's "Materia Medica" (last edition), 15s.; Muter's "Materia Medica," 2s. 6d.; Roscoe's "Chemistry," 2s. 6d.; Semple's "Aids to Chemistry also Botany," 1s.; Tilden's "Chemical Philosophy," 2s. 6d.; Wills' "Preliminary Exercises," 1s.; "Cæsar," First Book, with translation, 2s.; "Cæsar," complete, 1s., all quite new; exchange *Pharmaceutical Journal for Chemist and Druggist*. Offers to A. D. Brown, M.P.S., Halstead, Essex.

86 numbers "Casell's Popular Natural History;" 24 monthly numbers "Casell's Technical Educator;" 22 monthly numbers "Casell's Popular Educator," nearly all uncut; 1 Duncan's Ainsworth's Latin Dictionary, new, cost 9s.; 1 "Lexicon Manuale Græco Latinum and Latino Græcum;" 1 "Julii Casarii Commentarii De Bello Gallico," in leather, large size, with many notes; 1 "Valpy's Latin Delectus," by White, new; 1 "Vita di Benvenuto Cellini," what offers? W. H. Baldwin, Bridge Street, New Swindon.

Webster's "Encyclopædia Domestic Economy," as new, 15s., cost 50s.; Mohr and Redwood's "Practical Pharmacy," 6s.; Graham's "Domestic Medicine," (16s.) 5s.; a folio volume containing about 80 nature-printed British plants in colours, 12s. 6d.; "Hortus Seccus," containing 50 mounted British flowering plants, named, 5s.; Garrod's "Materia Medica," 7th impression, 7s. 6d.; Brande's "Materia Medica and Pharmacy" (14s.) 4s. 6d.; Faraday's "Chemical Manipulation," scarce, 7s. 6d.; Fowne's "Chemistry," (12s. 6d.) 3s. 6d.; Hunt's "Manual Photography," (6s. 6d.) 3s. 6d.; Muller's "Physiology," with supplement, 3 vols. (2l. 5s. 6d.) 12s.; Quain's "Anatomy," fine steel plates and engravings (22s.) 8s. 6d.; "Gradus ad Parnassum," (7s. 6d.) 2s. 6d.; Gooch's "Diseases Women" (12s.) 4s. 6d.; "Paris Pharmacologia," 2 vols. nicely bound (20s.) 5s. A. Davis, 161 Seven Sisters Road, London, N.

Formule.

Process and apparatus for making indiarubber stamps, invaluable to amateur printers, 40s. Orchard, Salisbury.

Nubian blacking.—Recipe for preparation similar in appearance, smell, and effect to above, with directions, 2s. 6d. Wittstien, Lower Broughton, Manchester.

Two hundred formule, valuable and effectual remedies (medical, veterinary, and proprietary), all genuine; bear good profits and command an extensive sale; copied neatly in book for 1l.; a rare chance. Medicus, 43 Tontine Street, Folkestone.

Soluble essence of ginger (elegant preparation), excellent blue-black ink (perfectly fluid, no deposit), white cherry tooth-paste (delicately perfumed, never ferments), powder for cleaning sponges, hair-brushes, &c. (resembles Hassell's), effervescent saline (like Lamplough's). These are genuine and reliable, 5s. each (guinea the lot). Herbert Hebblewhite, Cumberland Market, Regent's Park, N.W.

Full instructions for making copying apparatus inexpensive and equal to any, 50 to 80 good copies taken from one impression: receipt for making same, post free, 10 stamps. Receipt for making first-rate violet ink for using with above, and most copying apparatus now advertised, easily made, costing only 2s. per pint, free 6 stamps. T. Jones, Mr. Carpenter, 9 Barnes Row, Carmarthen.

Fragrant foaming dentifrice (similar to Floriline); glycerine jelly (perfectly transparent); cherry tooth paste (never ferments); brilliantine (inseparable); lime-juice and glycerine (inseparable and perfectly white); splendid black ink (never corrodes steel-pens); marking ink (black or red); effervescent fruit saline (resembles Eno's); pill-coating (pearly white, no mucilage or mastic used); magic neuralgic drops (never-failing remedy); quinine and iron tonic (resembles Pepper's); excellent chilblain paint; cough mixture (clear red, effective, and agreeable); with many others; send stamp for list. The toilet articles are identical with those prepared by a renowned West End perfumer; the others are equally good; all inexpensive to prepare; 5s. each (five for 1l.); inquiry letters must be prepaid. "Analyst," care of Mr. Warnes, 79 Gaisford Street, N.W.

Miscellaneous.

Several waterproof cart-covers, various sizes, from 7s. 6d. King, Chemist, Soham.

Offers wanted for Cocking's 10l. pill machine; cash or goods. Jones, 69 Essex Road, London, N.

Pulvermacher's chain battery, new, cost 5l. 5s.; no further use for it; will take half. G. K. Brooks, Eastcott Road, Swindon.

Full compass fine-toned flutina, in case, in perfect order; cost, 2l. 2s., will take half. G. K. Brooks, Eastcott Road, Swindon.

One Musgrave's patent slow-combustion stove, been very little used, cost 3l. 12s.; what offers? P. Hayton, Chemist, Wigton.

Twenty-five 1l. shares in the Chemist's Aerated and Mineral Waters Association (Limited), price 15s. each. Mark Cooper, Church, near Acerrington.

Photographic Lens, Squire's, half-plate with camera and set of stops, very little used, cost 11l. 14s., price 5l. 5s. J. Floyd, Bury St. Edmunds.

Pure mushroom ketchup, good condition and flavour, 4s. gallon; will take patents or drugs in exchange. J. B. Blades, Chemist, Leek.

Goode's honeydew cigarettes, Scott's Arabian cigarettes, two half gallons one quart Butler's liquid annatto. What offers? William Longfleet, Poole.

Two 100-gall. petroleum cisterns, galvanisep iron, with taps complete; not been used much, no use for them. Thomas Kenny, Chemist, Steyney, Hull.

Two Francis' No. 4 printing presses, extra type, cost 6l. 10s., sell for 4l. paid to Manchester, never used; Cartner's pill-coater, cost 25s., sell 15s. C. Scanlan, Market Street, Droydsden.

Three 1l. bottles Dr. Laville's gout liquid, 7s. each; few dozen Fenning's cooling powders. 1s. 1½d. and 2s. 9d.; bandage roller, male urinal, new, unused; large marble mortar, no pestle, holds nearly three gallons. What offers? 6s. 3s.

Splendid black and tan terrier dog, pure bred, beautifully pencilled, and good condition; capital sharp house dog, and at vermin; age about two years; price 3l. 3s., or exchange a good musical-box; offers. Medicus, 43 Tontine Street, Folkestone.

Enamelled iron cullenders, suitable for straining tinctures, infusions, &c., where metal must be avoided, measured across top, handle each side, 10 in., 2s. 3d.; 11 in., 2s. 9d.; 12 in., 3s.; 12½ in., 3s. 3d. Also enamelled dishes, 8 in., 1s. 6d.; 11 in., 2s.; 12 in., 2s. 3d.; 14 in., 2s. 6d. Sent on receipt of stamps. T. Spencer, 95 Farrington Street, London.

A first-class violin, perfect condition, rich mellow tone; new case and bow, price only 26s., approval with pleasure. Robert Noar, 1 Broad Street, Pendleton.

Saleable and unsoiled homeopathic remedies: 9 doz. Leath & Ross's and Ashton & Parsons' 1s. tinctures, 3s. 6d. per doz.; ¾ doz.; Leath & Ross's 9d. pills, 2s. 9d. per doz.; 2 doz. Ashton & Parsons' 6d. do., 2s. per doz.; 3 doz. Crawshaw's 6d. dyes, 7s.; good 6-grain pill machine for 12, 6s. 6d. R. Hollick, Chemist, Lozells, Birmingham.

Samples on application: harrel Stettin hair oil, 3s. 4d. gall.; ½ dozen Winchester's pale Norwegian cod-liver oil, 6s. gall.; one Winchester's ess. lemon, 6s. 1b.; 12 half-gross cards 1d. dyes, assorted colours, 5s. gross; 6 half-gross cards 1d. starch glazine, 5s. gross; part payment taken in surplus stock of drugs, sundries, patent medicines, &c. Banner, Drysalter, 24 Bourne Street, Liverpool.

A quantity of mixed hemp and lin seed, rad. calumb., ol. citronell, 6d. oz., starch ozs., 3 doz. 3d. Robinson's barley, 2 2s. Worcestershire sauce, 1 Johnson's American soothing syrup, 1 1s. Wansbro's nipple shields, 1 Daloy's carminative, 4 2s. 9d. Fenning's adult powders, Garrod's "Materia Medica." B. P., 1864, offers for whole, or part, or exchange. M. J. Todd, 9 Alexandra Terrace, Sunderland.

Model boiler, 15 inches by 6 inches, new; gas, fire, or spirit furnaces, glass gauge, taps; force-pump, valves, &c., cost 5l. 10s.; price 3l. 19s., or offers; perfect model of beam-engine, large, with governors and pump, new, price 3l. or offers; horizontal sluiceway engine, 1½-inch stroke, offers; watch-makers' screw plate and taps, small nuts and 1 bolts, model circular saw, all new; offers. W. Goodwill, Broadway Temperance Hotel, Scarborough.

WANTED.

Acton's "Reproductive Organs," cheap. 62/27. Offers for next year's *Chemist and Druggist*, seven days old. Holmes, Brill.

Old carved oak furniture. Send full particulars and lowest price, Woodson, Sheffield.

Liquid gas apparatus, must be in good condition. Walter Dalton, Dental Surgeon, Acton, W. Surplus stocks of every description bought for prompt cash. Apply, Mr. Riley, 26 Withy Grove, Manchester.

Three-grain pill machine, must be in good condition and cheap. K. G., 125 Hyde Road, Manchester.

Two 8-gallon show carboys, with stands; price and particulars to J. H. Richardson, Airedale, Hants.

Ointment jars for cash, or would exchange Pfeleider's mixer. 251 Gray's Inn Road, London.

To exchange the *Pharmaceutical Journal for the Chemist and Druggist* to commence January, 1880. Address, T. C. Maggs & Son, Yeovil.

Atfield's "Chemistry" sixth. Bentley's "Botany," third editions, condition; lowest price. George Morris, 11 High Street, Merthyr.

Good dispensing screen, large show carboys; also 40-oz. and 32-oz. gold-labelled bottles. Send particulars to Davenport, Chemist, Wolverhampton.

Bentley and Redwood's "Materia Medica." Fowne's "Chemistry," late editions; state. price. Knight, Wellington Villas, Park Side, Nottingham.

Hanbury's "Pharmacographia," Bentley's "Botany," Barber's "Companion," latest editions, price and particulars to G. Fringite, Pathhead, Kirkcaldy.

Twelve foot mahogany-top counter, with drawers. 24 drawers in two lengths of 12, with fitting suited to grocer's shop. Cheap for cash. B., 11 Bridge Street, Goolse.

Mr. C. F. Smart (Littlehampton) writes: "I had five sales from my advertisements in last exchange column."

Mr. T. B. Fletcher (Nottingham) writes:—I am pleased to say the advertisement in your last number of the *Chemist and Druggist* was successful. I had 10 or 12 applicants, the third purchased. The *Chemist and Druggist* is the finest medium of advertising I ever experienced. I cannot speak too highly of the book, it is what every member of the trade should have.



THE feverish excitement of last month has given place to a tone of quiet firmness. The higher prices established by the sudden speculative movement which took the market by storm towards the end of October have been very fairly maintained, though in scarcely any instance have they been improved upon. Speculation does not seem to have continued; and though the demand seems to be very satisfactory, there is not likely to occur other than exceptional opportunities for realising at a profit. Those, therefore, who entered the drug markets merely for the sake of gambling will have little chance, we expect, of making better terms by holding; and as that class of buyers is always impatient,* we shall not be surprised to see a moderate decline in prices within the next month or two consequent on the realisation of second-hand stocks.

The apparent improvement in the national trade which has been exhibited by the Board of Trade returns for the past three months is still more marked in those for November. We find a general increase of nearly nine millions in the value of our imports, and of more than one million in the value of our exports, as compared with the November of 1878. This indicates at least a considerable increase in the volume of trade transactions. It must be borne in mind, however, that our own bad harvest has considerably affected the importations, while an analysis of the figures also shows that prices of imported goods, especially of those to be consumed as food, are generally higher. It is, however, a fact that the raw materials for our manufacturers are being bought more freely, notwithstanding enhanced prices, and therefore it is clear that notwithstanding a certainty of a higher cost for the necessaries of life there is a fair degree of promise of better trade in our great staples. The report of our exports is encouraging in the same sense, namely, that while prices have in some degree advanced for many of them, this does not seem to have checked a still further increase in the sales.

Chemicals have been generally well supported by both foreign and home demand, but in most cases the present prices are not the highest touched. A further advance has taken place in bleaching powder, which is now quoted in London at 7s. 9d. to 8s. Such a price is indicative of good times for makers of heavy chemicals, and is strong evidence of a favourable turn in other branches of manufacture. Oxalic acid is also another $\frac{1}{2}$ d. per lb. higher, at 5 $\frac{1}{2}$ d. Cream of tartar is still firm, and can hardly be bought at previous prices. Soda has varied but little, except that crystals in second hands have been of late somewhat pressed for sale, and have thus weakened the market. They are now sold at 75s., though they have touched 90s. Chlorate of potash sells fairly at 7 $\frac{3}{4}$ d. to 8d., bichromate is quiet at 7d., tartaric acid is firm at last prices, but citric is now offered at 1s. 11d. There is no change in the quotation for borax, but prompt delivery is not now attainable. Carbonate and sulphate of ammonia are in good demand at previous rates. Saltpetre was handled very freely by speculators in the latter part of November, and rose 3s. to 4s., but holders have rather given way since, though an advance over last month is still marked.

The last public sales of drugs for the year have been held, and the quantities brought forward have been very large. There has been a fairly strong demand, but changes have not been important. At the last bark auctions the supply was evidently in excess of the demand, and though the best Ceylon brands were taken at fair prices, all inferior qualities, and most of the South American stocks, were sold at falling

rates. A reduction has taken place in the price of quinine. No advance in opium is yet to be noted, but the stock of last crop is becoming scarce. The price has been kept down by the somewhat abundant supply of old stock which has been held by dealers. Californian honey of fine quality on the market bought in at 68s., French yellowish at 60s., fair Chilian sold at 63s., and Jamaica at 49s. and downwards. Rhubarb has been freely bought at higher rates, and holders of jalap only part with it at a good advance. Buchu leaves bought in at 1s. 6d., jaborandi leaves at 2s., and coca at 1s. Castor oil has been in active demand on speculation, but this has now quieted. Camphor seems to be in strong hands, and is only let go at a handsome profit. Refiners now get 1s. 6d. for their product. Cod liver oil has been bought to a large extent, and the price is now rather higher. Glycerine is strong at its recent advance, and it is expected that a further rise may occur during the winter. The iodine ring is expected to speak this month; and though there seems a general anticipation that they will renew their combination, it is quite on the cards that these calculations may be disturbed, and that the price may suddenly drop.

A great scarcity will be evident in some seeds. Russian aniseeds are higher. Fenugreek, cinnamon, and coriander are also held firmly, and a great advance has occurred in croton seeds.

Prices have scarcely been supported in the oil markets. Linseed, with slight fluctuations, has declined from 30l. to 28l. 5s. since last month, and rapeseed oil has also been depressed, though not quite to so great an extent. Olive oils have moved somewhat irregularly, but in all kinds an advance has been established, Spanish having been especially active, as the supply from thence is likely to be deficient. Sperm, seal, whale, and cod oils are all higher. Turpentine has kept fairly steady at the higher quotations, though it is now to be bought rather below the price of last month. Petroleum, which seems to be abundant here, has fractionally advanced, but not so much as it has done in America.

Shellac has been held with a good deal of firmness, but it has slightly receded from the extraordinary price attained last month. The advance in cochineal, due to reports of the injury to the crop in Teneriffe, was not well supported; but further confirmatory advices have caused the product to turn again upwards. Indigo is advancing both here and in Calcutta. The quality of the new crop is reported to be above the average.

We append our usual statement of stocks in the Port of London on November 30:—

	1879	1878		1879	1878
Aloes	1,458	2,036	Gum (Cont)—		
"	11	12	Guaiacum.. "	65	12
"	813	395	Kino	32	11
Aniseed, Star chts	590	643	Kowrick	456	892
Arrowroot	11,364	14,875	Mastic	117	163
" bxs & tins	14,963	6,652	Myrrh, E.I. "	94	137
Balsam	17	111	Olibanum.. "	1,413	1,174
Bark, Medicinal			Sandarac.. "	444	942
cks, &c.	463	777	Sengal	28	19
" srns, &c.	18,325	8,646	Tragacanth pks	2,240	940.
Borax	576	1,067	Ipecac.	170	276
Bees' Wax			Jalap	312	460
"	737	703	Nux Vomica pks	1,372	4,123
" cks & cs	2,663	1,797	Oil—		
" cakes	11	44	Castor	—	35
Wax, Jap. veg. pks	2,460	4,816	"	4,626	3,441
Camphor	5,278	1,075	Palm	214	1452
Cardamoms	296	284	Cocoanut	2,920	1,065
Coc. Ind. bgs, &c.	1,339	1,741	Olive	1,169	522
Colombo root pks	493	508	Aniseed	15	35
Cream Tartar	83	78	Cassia	247	566
Cubebes	98	170	Opium	1,069	1,243
Dragonsblood chts	61	109	Rhubarb	1,260	1,140
Galls, E.I. cks & cs	1,397	6,192	Sarsaparilla	483	795
M'terranean sks	425	955	Sena	1,424	1,570
Gum—			Shellac—		
Ammoniac pks	433	478	Orange	21,083	28,037
Animi & Coral			Garnet	11,799	11,531
"	3,690	6,496	Button	2,281	3,981
Arabic, Barbary			Undescribd "	—	—
"	1,356	1,272	Terra Japonica—		
Turkey .. "	2,573	501	Gambier	2,028	3,273
E.I. "	1,285	1,696	Cutch	984	3,463
Assafetida pks	372	326	Turmeric—		
Benjamin .. "	96	1,065	Bungal	1,828	884
Damar	1,254	1,496	Madras, &c. "	431	335
Galbanum .. "	12	19	Undescribd "	—	—
Gamboge .. "	93	197	Vermilion	115	29

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.	1879.		1878.	
	s. d.	s. d.	s. d.	s. d.
ACIDS—				
Acetic .....per lb.	0 2½ to	0 3½	0 2½ to	0 0
pur	0 4 ..	0 7	0 0 ..	0 0
glaciale ..	0 9½ ..	0 10	0 0 ..	0 0
Benzoic Sublimate				
.....	7 0 ..	0 0	0 0 ..	0 0
Citric	1 11 ..	0 0	2 0 ..	2 1
Gallic	3 6 ..	3 10	0 0 ..	0 0
Hydrochlor. ....per cwt.	5 0 ..	7 0	4 0 ..	7 0
Nitric	0 4½ ..	0 0	0 4½ ..	0 0
Oxalic	0 5½ ..	0 0	0 4½ ..	0 4½
Sulphuric	0 0½ ..	0 1	0 0½ ..	0 1
Salicylic	8 6 ..	9 0	0 9 ..	0 0
Tannic	1 8 ..	2 8	0 0 ..	0 0
Tartaric crystal. ..	1 6½ ..	1 7	1 5 ..	0 0
powdered ..	1 6½ ..	1 7	1 5 ..	0 0
ANTIMONY ore.....per ton	0 0 ..	0 0	240 0 ..	300 0
crude .. per cwt.	0 0 ..	0 0	32 6 ..	0 0
star	0 0 ..	0 0	49 0 ..	51 0
ARSENIC , lump	23 6 ..	0 0	0 0 ..	0 0
powder	10 6 ..	0 0	9 0 ..	0 0
BRIMSTONE , rough ..per ton	105 0 ..	0 0	110 0 ..	115 0
roll .. per cwt.	8 9 ..	9 9	9 6 ..	10 0
flour	11 0 ..	12 6	12 6 ..	13 6
GLYCERINE , German				
refined	43 0 ..	56 0	0 0 ..	0 0
crude brown	26 0 ..	28 0	0 0 ..	0 0
IODINE , dry	1 2 ..	0 0	1 1 ..	0 0
MAGNESIA , calcined ..per lb.	1 10 ..	0 0	1 10 ..	0 0
MERCURY	145 0 ..	0 0	130 0 ..	0 0
MINIUM , red	6 0 ..	0 0	16 9 ..	17 0
orange ..	0 0 ..	0 0	28 6 ..	0 0
PRECIPITATE , red .. per lb.	3 6 ..	0 0	3 5 ..	0 0
white ..	3 5 ..	0 0	3 4 ..	0 0
PRUSSIAN BLUE ..	0 0 ..	0 0	0 0 ..	0 0
SANTONINE	22 6 ..	25 0	0 0 ..	0 0
SALICINE	14 0 ..	0 0	0 0 ..	0 0
THYMOL	26 0 ..	27 0	0 0 ..	0 0
SALTS—				
Alum	135 0 ..	140 0	120 0 ..	125 0
powder	150 0 ..	155 0	142 6 ..	0 0
Ammonia :				
Carbonate	0 6½ ..	0 6½	0 6½ ..	0 6½
Hydrochlorate, crude,				
white	600 0 ..	760 0	600 0 ..	720 0
British (see Sal Am.)				
Sulphate	395 0 ..	410 0	390 0 ..	395 0
Argol, Cape	77 0 ..	86 0	75 0 ..	82 0
Red	50 0 ..	75 0	52 0 ..	70 0
Opotro, red ..	34 0 ..	0 0	32 6 ..	33 0
Sicily ..	60 0 ..	65 0	69 0 ..	65 0
Ashes (see Potash and Soda)				
Bleaching powd. ....per cwt.	7 9 ..	8 0	5 9 ..	0 0
Borax, British refined. ..	38 0 ..	49 0	35 0 ..	37 0
Calomel	3 1 ..	0 0	3 0 ..	0 0
Chloral hydrate ..	4 8 ..	0 0	0 0 ..	0 0
Liebreich's ..	5 10 ..	6 0	0 0 ..	0 0
Copper :				
Sulphate	21 0 ..	21 6	18 3 ..	18 6
Copperas, green. ....per ton	50 0 ..	55 0	59 0 ..	55 0
Corrosive Sublimate p. lb.	2 6 ..	0 0	2 5 ..	0 0
Cr. Tartar , French, p. cwt.	115 0 ..	115 6	104 0 ..	0 0
brown ..	92 6 ..	93 6	80 0 ..	82 6
Epsom Salts	4 3 ..	6 0	4 3 ..	6 0
Glauber Salts	3 0 ..	4 6	3 0 ..	4 6
Magnesia : Carbonate ..	42 6 ..	0 0	47 6 ..	0 0
Morphia Murias ..	8 0 ..	0 0	0 0 ..	0 0
Potash :				
Bichromate	0 7 ..	0 0	0 4½ ..	0 5
Carbonate :				
Potashes, Canada, 1st				
sort	27 0 ..	0 0	23 0 ..	0 0
Pearlashes, Canada, 1st				
sort	33 0 ..	33 6	35 6 ..	0 0
Chlorate	0 7½ ..	0 8	0 6½ ..	0 6½
Prussiate	0 11½ ..	0 11½	0 11 ..	0 11½
red	1 8 ..	1 10½	1 7½ ..	1 8
Tartarate (see Argol and Cream of Tartar)				
Potassium :				
Bromide	1 6 ..	1 7	1 8 ..	0 0
Chloride	0 0 ..	0 0	6 6 ..	0 0
Iodide	17 6 ..	18 0	16 0 ..	0 0
Quinine :				
Sulphate, British, in				
bottles	11 0 ..	0 0	13 0 ..	0 0
Sulphate, French ..	11 3 ..	11 6	12 9 ..	0 0
Sulphate, German ..	9 6 ..	10 0	0 0 ..	0 0
Sal Acetos	0 7 ..	0 7½	0 6½ ..	0 7
Sal Ammoniac, Brit. cwt.	44 0 ..	45 0	44 0 ..	45

	1879.		1878.	
	s. d.	s. d.	s. d.	s. d.
Salt-petre :				
Bengal, 6 per cent. or				
under	22 6 to	23 0	19 0 to	19 6
Bengal, over 6 per cent.				
per cwt.	20 6 ..	22 0	18 0 ..	18 9
British, refined ..	26 0 ..	27 6	23 9 ..	25 0
Soda : Bicarbonate ..	11 0 ..	0 0	9 0 ..	9 3
Carbonate :				
Soda Ash ..per deg.	0 1½ ..	0 0	0 1½ ..	0 0
Soda Crystals per ton	75 0 ..	0 0	65 0 ..	0 0
Carstic	11 9 ..	12 6	10 3 ..	10 9
Hyposulphite, per cwt.	0 0 ..	0 0	0 0 ..	0 0
Nitrate	18 9 ..	19 0	13 6 ..	0 0
Zinc Sulphate ..	9 0 ..	9 3	0 0 ..	0 0
SUGAR OF LEAD, White cwt.	38 0 ..	0 0	38 0 ..	0 0
Brown, cwt.	26 6 ..	0 0	26 6 ..	0 0
VERDIGRIS	0 0 ..	0 0	1 1 ..	1 5
VERMILION, English ..	2 8 ..	0 0	2 6 ..	2 8
China ..	0 0 ..	2 0	2 6 ..	0 0
DRUGS.				
ALOES , Hepatic	60 0 ..	150 0	80 0 ..	160 0
Socotrine ..	60 0 ..	190 0	75 0 ..	200 0
Cape, good ..	43 0 ..	44 6	44 0 ..	46 0
Inferior	35 0 ..	42 0	37 0 ..	43 6
Burbadoes ..	52 6 ..	210 0	67 0 ..	190 0
AMBERGRIS , grey	45 0 ..	72 0	80 0 ..	85 0
BALSAM—				
Canada	0 11 ..	1 1	0 8 ..	0 8½
Capiwi	2 3 ..	2 9	1 3 ..	1 10
Peru	0 0 ..	0 0	0 0 ..	0 0
Tolu	3 3 ..	4 0	3 0 ..	3 6
BARKS—				
Canella alba	15 0 ..	20 0	24 0 ..	30 0
Cascarilla	17 0 ..	23 0	17 0 ..	24 0
CINCHONA—				
Calsaya, good and fine per lb.	5 6 ..	7 0	4 6 ..	6 6
medium	3 9 ..	5 0	3 6 ..	5 0
N. Graual, fair to fine ..	6 6 ..	7 0	0 0 ..	0 0
ord. to mid. ..	3 0 ..	6 0	0 0 ..	0 0
Columbian, fine	3 6 ..	4 6	4 0 ..	6 4
ord. to fair ..	1 6 ..	3 0	1 6 ..	3 6
Carthagena, fair	2 9 ..	3 3	2 8 ..	4 6
good medium ..	2 0 ..	2 8	2 2 ..	2 6
Ceylon, crown	3 6 ..	5 6	4 0 ..	7 0
red	1 9 ..	3 0	0 0 ..	0 0
twigs and clips ..	0 8½ ..	1 0	1 0 ..	2 2
Darjeling, red	2 6 ..	3 3	3 0 ..	3 9
Buena Leaves	0 1½ ..	1 0	0 2½ ..	1 3
CAMPHOR , China ..per cwt.	107 6 ..	0 0	0 0 ..	0 0
Japan ..	119 0 ..	0 0	0 0 ..	0 0
Refin. Eng. per lb.	1 6 ..	1 6½	1 5 ..	0 0
CANTHARIDES	1 8 ..	4 6	1 8 ..	4 5
CHAMOMILE FLOWERS p. cwt.	49 0 ..	100 0	49 0 ..	80 0
CASTOREUM	16 0 ..	28 0	0 0 ..	0 0
DRAGON'S BLOOD , lp. p. cwt.	199 0 ..	229 0	199 0 ..	229 0
FRUITS AND SEEDS (see also Seeds and Spices).				
Anise, China Star per cwt.	95 0 ..	100 0	80 0 ..	85 0
Spanish, &c. ..	0 0 ..	0 0	28 0 ..	35 0
Beans, Tonquin ..per lb.	4 6 ..	6 0	4 6 ..	7 6
Cardamoms, Malabar				
good	8 0 ..	9 6	6 0 ..	7 0
inferior	3 9 ..	7 6	2 0 ..	5 10
Alepoy	3 6 ..	9 6	2 0 ..	6 6
Madras	1 6 ..	7 0	2 8 ..	4 6
Ceylon	3 0 ..	4 0	3 6 ..	4 9
Cassia Fistula ..per cwt.	38 0 ..	49 0	55 0 ..	57 0
Cocculus Indicus ..	8 0 ..	8 3	7 3 ..	8 3
Crocynth, apple ..per lb.	0 10 ..	1 8	0 8 ..	1 0
Croton Seeds	40 0 ..	52 6	31 0 ..	33 0
Cubebs	70 0 ..	75 0	37 0 ..	49 0
Cummin	40 0 ..	47 6	45 0 ..	50 0
Fenugreek	9 0 ..	13 0	0 0 ..	0 0
Guinea Grains ..	42 0 ..	44 0	0 0 ..	0 0
Juniper Berries ..	0 0 ..	0 0	3 6 ..	6 0
Nux Vomica	9 0 ..	10 0	7 6 ..	11 0
Tamarinds, East India, ..	11 0 ..	17 0	12 0 ..	19 0
West India ..	11 0 ..	18 0	22 0 ..	30 0
Vanilla, large ..per lb.	30 0 ..	49 0	23 0 ..	26 0
inferior ..	12 0 ..	30 0	12 0 ..	19 6
GINGER , Preserved ..	0 5 ..	0 7	0 5½ ..	0 6
HONEY , Chili .. per cwt.	43 0 ..	68 0	30 0 ..	36 0
Jamaica ..	28 0 ..	39 0	35 0 ..	41 0
IPECACUANHA .. per lb.	4 10 ..	5 6	4 3 ..	4 6
ISINGLASS , Brazil ..	2 6 ..	5 2	2 6 ..	5 7
Tongue sort ..	2 9 ..	5 4	3 6 ..	5 5
East India ..	0 9 ..	4 8	1 6 ..	4 10
West India ..	2 10 ..	5 0	4 0 ..	4 10
Russ, long staple ..	6 0 ..	10 6	6 0 ..	12 0
inferior ..	0 0 ..	0 0	0 0 ..	0 0
Simovia ..	1 6 ..	2 6	1 6 ..	3 0
JALAP, good	1 1 ..	1 6	0 11 ..	1 2
infer. & stems ..	0 11 ..	1 0	0 9½ ..	0 10½
LEMON JUICE ..per degree	0 0½ ..	0 1½	0 0½ ..	0 1½
LIME JUICE	1 3 ..	1 7	1 3 ..	1 8
LIQUORICE, Spanish per cwt.	3 0 ..	36 0	0 0 ..	0 0
Liquorice Root ..	29 0 ..	39 0	0 0 ..	0 0
MANNA, flaky	0 0 ..	0 0	3 6 ..	4 0
small	0 0 ..	0 0	1 4 ..	1 6
MUSK, Pod	18 0 ..	55 6	13 0 ..	50 9
Grain	40 0 ..	68 6	47 0 ..	55 0
OILS (see also separate list)				
Almond, expressed per lb.	2 0 ..	0 0	1 10 ..	0 0
Castor, 1st pale	0 4½ ..	0 5½	0 4½ ..	0 5
second	0 4½ ..	0 4½	0 4½ ..	0 4½
Cod Liver	3 0 ..	4 0	2 9 ..	5 0
Croton	0 0 ..	0 0	0 2½ ..	0 0

	1879.		1878.	
	s. d.	s. d.	s. d.	s. d.
Essential Oils:				
Almond per lb.	24 0	to 0 0	20 0	to 0 0
Anise-seed	9 6	0 0	11 0	0 0
Bergamot	6 0	9 0	0 0	0 0
Cajeput.....per bottle	4 0	4 6	3 6	4 0
Caraway.....per lb.	0 0	0 0	0 0	0 0
Cassia	4 5	0 0	2 9	0 0
Cinnamon.....per oz.	3 0	5 0	4 0	5 6
Cinnamon-leaf ..	0 1½	0 1½	0 1½	0 0
Citronelle	0 5	0 5½	0 3	0 0
Clove	10 0	0 0	8 9	0 0
Ginger Grass	0 3½	0 0	0 2½	0 3
Lavender Exot. per lb.	1 4	7 3	1 8	7 0
Mitcham	120 0	0 0	0 0	0 0
Lemon.....	3 0	5 6	4 0	8 0
Lemongrass per oz.	0 4	0 5	0 2½	0 3
Neroli	0 0	0 0	3 0	6 6
Nutmeg	0 2½	0 2½	0 3	0 4
Orange.....per lb.	0 0	0 0	5 0	7 0
Otto of Roses.....per oz.	15 0	25 0	21 0	35 0
Patchouli	0 0	0 0	1 6	3 0
Peppermint:				
American per lb.	13 0	14 0	10 0	12 6
(H. G. Hotchkiss),	14 6	0 0	0 0	0 0
English	36 0	0 0	24 0	25 0
Japan	7 0	0 0	0 0	0 0
Rosemary	1 3	2 5	2 0	2 6
Sassafras	2 3	0 0	1 9	2 0
Spearmint	13 0	0 0	0 0	0 0
Thyme.....	1 6	4 2	0 0	0 0
Mace, expressed ..per oz.	0 0	0 0	0 6	0 7
OPIMUM, Turkey per lb.	18 0	19 0	15 0	17 0
inferior	12 6	15 0	13 0	14 6
QUASSIA (bitter wood)per ton	100 0	130 0	100 0	130 0
RHUBARB, China, good and fine per lb.	2 6	4 0	1 6	3 0
Mid. to ord.....	0 9	2 0	0 9	1 4
Dutch Trimmed ..	0 0	0 0	0 0	0 0
ROOTS—Calumba.....per cwt.	44 0	50 0	35 0	60 0
China	28 0	30 0	0 0	0 0
Chiretta	0 2½	0 4	0 0	0 0
Galangal	23 0	24 0	22 0	24 0
Gentian	16 0	20 0	18 0	20 0
Orris	15 0	25 0	22 0	45 0
Pellitory	0 0	0 0	70 0	76 0
Pink	0 8	1 3	0 0	0 0
Rhatany	0 2	0 3	0 2	0 5
Seneka	2 1	2 3	2 4	2 8
Snake	0 0	0 0	0 10	1 0
SAFFRON, Spanish ..	20 0	44 0	20 0	40 0
SALF per cwt.	120 0	140 0	140 0	200 0
SARSAPARILLA, Lima per lb.	0 5	0 6½	0 4	0 7
Guayaquil	1 1	1 4	1 3	1 5
Honduras	1 2	2 0	1 0	1 4
Jamaica	1 7	1 10	1 0	1 7
SASSAFRAS.....per cwt.	0 0	0 0	9 0	11 0
SCAMMONY, Virgin .. per lb.	30 0	36 0	0 0	0 0
second & ordinary ..	10 0	25 0	0 0	0 0
SENA, Bombay	0 1½	0 9	0 0	0 0
Tinnivelly	0 2	0 10	0 2	1 7
Alexandria	0 3½	1 4	0 4	1 6
SPIRACETI, refined ..	1 3	0 0	1 4	0 0
American	1 1	1 2	1 0	1 2
SQUILLS	0 1	0 3	0 3	0 0
GUMS.				
AMMONIACI drop .. per cwt.	1 10	2 0	2 0	2 2
ANIMI, fine washed ..	18 10	21 0	13 10	15 0
sorts	13 0	16 15	9 0	12 0
ARABIC, pale picked ..	3 0	3 10	2 15	3 5
sorts, md. to fin. ..	2 0	2 18	2 2	2 12½
TURKEY, pick. gd. to fin.	7 0	10 0	5 10	9 0
second & inf.	3 10	5 10	3 5	5 15
sorts	2 10	3 2/6	2 5	2 10
ABSAFETIDA, cm. to fin	0 12	3 12	1 8	3 0
BENJAMIN, 1st & 2nd ..	15 0	45 0	20 0	70 0
COPAL, Sierra Leone , per lb.	0 0	0 0	0 7½	0 10
Manilla.....per cwt.	35 0	50 0	16 0	25 6
DAMMAR, pale	100 0	165 0	72 6	0 0
EUPHORBIIUM	0 0	0 0	9 10	15 0
GALBANUM per lb.	0 6	1 2	0 0	0 0
GAMBOGE, pckd. pipe per cwt.	300 0	400 0	210 0	275 0
GUAIAACUM.....per lb.	1 9	1 9	1 0	2 0
KINO.....per cwt.	60 0	100 0	65 0	99 0
KOWRIE, sorts	50 0	80 0	20 0	48 0
selected	125 0	210 0	120 0	170 0
MASTIC, picked .. per lb.	3 6	4 6	3 0	3 6
MYRRH, gd. & fine per cwt.	180 0	210 0	150 0	170 0
ord. to fair	100 0	170 0	60 0	150 0
OLIBANUM, p. drop ..	84 5	80 0	56 0	66 0
amber & ylw.	60 0	82 0	40 0	53 0
SENEGAL	57 6	60 0	0 0	0 0
SANDARAC	70 0	110 0	60 0	112 6
SHELLAC, Orange ..	165 0	209 0	65 0	87 0
Liver	150 0	170 0	63 0	65 0
THUS	0 0	0 0	20 0	21 6
TRAGACANTH, leaf ..	200 0	560 0	240 0	400 0
in sorts	40 0	180 0	65 0	175 0
OILS.				
SEAL, pale per tun	£ 0	£ 31 0	£ 20 0	£ 0 0
yellow to tinged ..	27 0	28 19	25 0	28 0
brown	25 0	0 0	24 0	26 0
SPERM	70 0	0 0	60 0	0 0

	1879.		1878.	
	£ s.	£ s.	£ s.	£ s.
Oils, continued:—				
BODY per tun	0 0	to 0 0	0 0	to 0 0
Coconut	27 10	28 0	29 0	0 0
WHALE, South Sea, pale ..	27 0	0 0	29 0	0 0
yellow	26 0	0 0	27 0	28 0
brown	20 0	21 0	25 0	26 0
East India, Fish	0 0	0 0	0 0	0 0
OLIVE, Galipoli.....per ton	0 0	0 0	0 0	0 0
Gioja	0 0	0 0	0 0	0 0
Levant	45 10	46 0	45 0	0 0
Mogador	0 0	0 0	0 0	0 0
Spanish	49 0	0 0	46 0	0 0
Sicily	46 0	46 13	0 0	0 0
COCONUT, Coch. ..	39 0	41 0	50 0	0 0
Ceylon	37 0	0 0	47 0	0 0
Mauritius	37 15	0 0	46 0	0 0
GROUND NUT AND GINGELLY:				
Bombay	0 0	0 0	0 0	0 0
Madras	0 0	0 0	0 0	0 0
PALM, fine	36 0	0 0	37 0	0 0
LINSEED	28 2/6	24 5	24 2/6	24 5
RAPESEED, English, pale ..	31 15	32 0	31 15	0 0
brown	29 15	30 0	29 15	0 0
Foreign, pale	0 0	0 0	0 0	0 0
brown	0 0	0 0	0 0	0 0
COTTONSEED	29 0	30 0	28 0	0 0
LARD	42 10	45 0	38 0	39 0
TALLOW	0 0	0 0	31 0	35 0
TURPENTINE, American, cks.	s. d.	s. d.	s. d.	s. d.
French	29 9	30 0	21 3	21 6
PETROLEUM, Crude	0 0	0 0	0 0	0 0
refined, per gall.	0 7½	0 0	0 9½	0 9½
Spirit	0 6½	0 7½	0 9½	0 10
SEEDS.				
CANARY.....per qr.	55 0	65 0	47 0	57 0
CARAWAY, English per cwt.	0 0	0 0	0 0	0 0
German, &c.....	32 0	38 0	32 0	36 0
CORIANDER	14 0	22 0	16 0	20 0
HEMP.....per qr.	30 0	44 0	35 0	40 0
LINSEED	60 0	68 0	60 0	68 0
Black Sea & Azof ..	55 0	0 0	47 0	0 0
Calcutta	57 0	58 0	46 6	47 6
Bombay	59 0	0 0	48 0	0 0
St. Petersburg	53 6	54 6	45 0	46 6
Mustard, brown.....per bsbl.	12 0	16 0	14 0	17 0
white	5 0	10 0	9 0	12 6
POPPY, East India , per qr.	55 6	56 6	48 0	49 6
SPICES.				
CASSIA LIGNEA ..per cwt.	55 0	60 0	39 0	50 0
Vera	30 0	43 0	22 0	36 0
Buds	72 0	0 0	56 0	53 0
CINNAMON, Ceylon:				
1st quality per lb.	1 6	3 5	1 4	3 3
2nd do.	1 4	2 2	1 4	2 4
3rd do.	1 3	1 9	1 1	1 8
Tellicherry	0 0	0 0	1 6	2 4
Coups	0 4	0 6	0 3	0 6
CLOVES, Penang	1 10	2 0	1 8	1 10
Amboyna	1 6	1 7	1 4	1 6
Zanzibar	1 6	1 7	1 3	1 4
GINGER, Jam. , fine per cwt.	110 0	200 0	90 0	200 0
Ord. to good	60 0	165 0	52 0	80 0
African	24 0	25 0	21 0	22 6
Bengal	22 0	0 0	16 0	18 6
Malabar	0 0	0 0	0 0	0 0
Cochin	30 0	12 0	46 0	125 0
PEPPER, Bk. Malabar , per lb.	0 4½	0 4½	0 4	0 4½
Singapore	0 4½	0 4½	0 3½	0 3½
White Tellicherry ..	0 0	0 0	0 10	1 4
Cayenne	0 8	2 6	1 4	3 1
MACE, 1st quality ..	1 9	3 0	1 8	2 6
2nd and inferior ..	1 2	1 8	1 0	1 7
NUTMEGS, 78 to 60 to lb.	3 8	4 9	3 9	5 0
90 to 80	3 0	3 7	2 10	3 7
132 to 95	2 3	2 11	1 10	2 9
PIMENTA	0 5	0 5½	0 5	0 0
VARIOUS PRODUCTS.				
COCHINEAL—				
Honduras, black ..per lb.	0 0	0 0	2 0	2 5
silver	0 0	0 0	2 0	2 3
pasty	0 0	0 0	0 0	0 0
Mexican, black	0 0	0 0	2 1	0 0
silver	3 0	0 0	1 10	1 11
Teneriffe, black	3 1	3 8	2 0	2 10
silver	3 1½	3 2	2 0	2 1
SOAP, Castile.....per cwt.	30 0	0 0	33 0	34 10
SOY, China per gal.	2 8	3 0	2 5	2 5½
TERRA JAPONICA—				
Gambier	18 6	13 9	17 6	0 0
Free cubes	25 0	27 0	25 0	27 0
Cutch	31 6	36 0	21 0	25 0
WAX, BEES, English ..	£0 0	£0 0	£0 0	£0 0
Jamaica	5 10	7 0	6 10	7 15
East India	5 0	6 0	6 0	6 10
VEGETABLE, Japan ..	3 12/6	4 0	3 0	3 5
WOOD, DYE, Bar. per ton	4 0	4 5	3 10	3 15
Brazil	12 0	45 0	0 0	0 0
Cam	20 0	29 0	16 0	28 0
Fustic, Cuba	0 0	0 0	8 0	8 10
Jamaica	5 10	6 0	6 10	7 10
LOGWOOD, Campeachy, ..	7 15	8 10	8 5	8 10
Jamaica	6 0	6 10	5 10	5 15
LIMA, first pile	14 0	15 0	9 0	11 0
RED SANDERS	0 0	0 5	6 10	7 0



THE PATENT MEDICINE QUESTION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—If you have space for discussing the above subject, allow me to state the views of a vendor of patents, using the term "patent" to include all secret remedies, stamped or otherwise.

I fail to see the fairness or advantage of the method recommended in your November issue by "Nostrum," even if it were practicable to carry it out; and, as to the utility of an analysis, am afraid it is a myth, and consider it unfair to the makers to pursue such a course. Even if the analysis proved correct, it is not worth much, as it is not the composition of the articles that commands the sale, but the pretensions of cure set forth in the handbills, pamphlets, and advertisements issued.

Whatever we may think of the virtue or remedial value of patents, it is not our policy to give up the sale of them to miscellaneous dealers; and I do not see that in our position as vendors we are called upon to endorse the maker's opinion of them any more than the proprietor of a newspaper is supposed to recommend all the medicines advertised in his journal. I do not attempt to offer a radical cure for the prevailing state of things in our business, but beg to propose for the consideration of my brother druggists two methods of dealing with the much-vexed question. First. Where chemists do a good dispensing business, let them discourage the sale of the cure-all class of medicines, and publish little books similar to the homœopathic ones, giving a description and use and dose of some of the Pharmacopœia preparations, and useful information for the sick room, and distribute them freely to customers. When proprietary medicines are recommended, preference should be given to those of known composition and prepared by respectable makers, who look upon druggists as their proper agents.

Second plan. Where competition is keen or the demand for patents is considerable, let the chemists still maintain the full price for everything; even if they sell less, it pays better, and if we once begin to give way we cannot tell where it will end.

Let the chemists join together, as many as possible in a large district, and form a company, to a certain extent, and agree to the formulæ of four or five medicines to be introduced—say, cough mixture, worm lozenges, fever powders, chilblain liniment, liver pills, or anything in demand, and agree to advertise them thoroughly by handbills and in newspapers, styling themselves as agents for "The Universal Medicine Company." Each one could prepare his own stock, and the only thing necessary to ensure uniformity in size, and price, and style of package would be to have a large supply of bills with all the agents' names on, and these, together with the bottles, boxes, and labels, could be divided as required. By these means every chemist could put up the medicines and stamp for his own sale, and would pay his share of the expenses of advertising, &c. If such a scheme were holdly carried out, it is my belief that success would be certain after a reasonable time, and that the trade in other patents now sold would diminish. In these days of American enterprise, when books and pamphlets are issued by hundreds of thousands, and columns of advertisements appear daily to meet the eye of the public, it is quite useless for any chemist to attempt to compete single-handed with these large capitalists, and the course now pursued by many English and foreign specialists of introducing and pushing the sale of their articles renders an effort on our part necessary if we mean to continue the agency for patents. Apologising for the length of my epistle,

Yours faithfully,

UNITY IS STRENGTH.

PROPRIETARY ARTICLES AND THEIR PRICES.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—The vein of genuine wit and humour which runs through the letter by "Nostrum" in your November number afforded me, and doubtless many others, much amusement, and, moreover, marks the writer as unmistakably a genius in his way.

Nevertheless, with all due deference, I will beg leave to differ from him on one or two points. The whole gist of his argument seems to be that instead of patent medicine makers calling the retail price 1s. 1½d., for instance, and making the wholesale price to retailers 10s. 6d. per dozen, with certain discounts off for cash, and an extra discount to wholesale dealers as heretofore, they should make the wholesale price 13s. 6d. per dozen, the same as the retail price, and allow a certain discount off to retailers, with an extra allowance to wholesale warehouses, and so on.

And this, "Nostrum" seems to think, would floor the co-operative stores and cutting traders. Now it may be owing to my great stupidity, but I can't for the life of me see any practical difference between the old system and the proposed new one.

Does it not amount to the same thing whether I charge my "early rising pills" to the retailers at 13s. 6d. per dozen, and then knock off, say, 3s. per dozen discount or whether I charge them 10s. 6d. per dozen net?

There may be a distinction, but I can't perceive the difference.

I suppose I may call myself one of "Nostrum's" typical "hackwoodsmen," as I am nearly six miles from a co-operative store, still I feel sometimes almost constrained to go in for the "lamb-in-the-wilderness business," and shall, therefore, be delighted if "Nostrum" will enlighten me if I have mistaken the drift of his argument. "Never too late to learn" is my motto, and if "Nostrum" will only show us any means whereby we can individually or collectively "hust up" the enemy he will be entitled to our eternal gratitude.

November 21, 1879.

I am sir, yours,
J. C. N.

PROFITS IN THE DRUG TRADE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In your memoir of Mr. F. J. Clarke, of Lincoln, either your dates are wrong, or Mr. Clarke must have been fortunate almost beyond belief.

You state that Mr. Clarke was born in 1842, that he commenced business at 19—i.e., in 1861, that he bought Bracebridge Hall some six years ago—i.e., 1873, so that between 1861 and 1873 he made a fortune—"that is, in 12 years."

Mr. Clarke had no fortune to start with, and would risk no one's money but his own. Now, suppose you deduct five years from the 12, that would show that in seven years Mr. Clarke, as a retail druggist in a country town, was able to spend 15,000*l.* in one year, out of which he absolutely sank 7,000*l.*, and borrowed of no one. Mr. Clarke must have made some 2,000*l.* a year clear profit, evidently! If your dates are correct and the facts as above, I can but hope that the general public will not see the memoir, for if the public does, it will cry out more loudly at druggists' profits, and still more try and justify its use of the country's curse, the "co-operative stores."

Yours obediently,

AN OLD DRUGGIST.

November 17.

["An Old Druggist" draws conclusions too rashly. The money sunk in advertising in one year was not *absolutely* lost; it was invested in creating a business. We do not know whether Mr. Clarke had made his original fortune by his retail business, or whether it reached him by other means.—Ed. C. & D.]

WEIGHTS AND MEASURES.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In accordance with the suggestion contained in the *Pharmaceutical Journal* for November 29, I called on the Chief Inspector of Weights, &c., for Liverpool.

I find he has been supplied with copies of the standards for 1, 2, and 4 fluid ounces, and 1, 2, and 4 fluid drachms, also with a 30-minim tube, graduated to show each minim.

He has not received, as yet, any other of the appliances described in the recent Board of Trade minute, nor has he yet received any instructions from the Corporation to put the provisions of the new regulations into actual practice.

For the present, chemists in this district need apprehend no interference. I will make it my business to report when any further steps are taken.

I am, yours faithfully,

T. PELL ABRAHAM,

Local Secretary, Liverpool.

87 Bold Street, Liverpool,

December 9.

[The standards named by Mr. Abraham are those ordered in the 2nd Schedule of the Act itself, and have been in existence since the Act was passed. The whole set of apothecaries' standards (weights and measures) the form and style of which have only lately been decided upon, is not yet ready for delivery to the inspectors. When the latter are supplied (which which will only be the case if application be made) it will then become the duty of the local authorities to fix a time for the examination of the weights and measures of their district. They can, of course, do so now, to the extent of the standards in their possession, if they think fit, but it is hardly likely that they will commence with apothecaries' weights and measures until they get the complete apparatus necessary.—Ed. C. & D.]

A FRENCH DOSE OF CALOMEL.

Mr. L. Brau, 140 Grande Rue, Dieppe, writes:—"I find in THE CHEMIST AND DRUGGIST for October that a man died at Brompton, Leeds, from taking 6 grains of calomel. This must be a mistake. We give calomel daily to adults and even to children, and 1 graume (about 17 English grains) is considered an ordinary dose for a man, when the calomel is to be taken as a purgative."

DR. D'UNGER ON LOXA BARK.

In a letter from Dr. D'Unger, of Chicago, dated November 18, that gentleman notices the letter in our October issue signed by "D. H." He says:—

The opening paragraph in 'D. H.'s communication precludes my replying to the same." But he further adds—

"Whilst it may be an impossibility to get pure Loxa bark in Europe, it is not an impossibility to me. If 'D. H.' would go to the expense of paying a man 500*l.* per year, as I do, and send to Loxa, he would probably be able to secure some of it; but he must not expect to get it at a couple of shillings per lb. It costs me \$3.66 per lb., and can only be had in limited quantities at that or any other figure. True Loxa quill bark contains from 7½ to 12½ per cent. of combined alkaloids.

"I quoted Pereira from Dr. Wood, editor of the United States 'Dispensatory,' who gives Pereira's words from edition of 1853. It may be that Wood added to what Pereira said; but there is certainly no wish on my part to misrepresent even a live man, much less a dead one."

THE PATENT MEDICINE DIFFICULTY.

R. G. C. B. complains that proprietors of patent medicines give a larger allowance to co-operative stores, and suchlike large buyers, than they do to chemists and druggists, "who have been their backbone for so many years. The druggists should demand the goods at a price that would enable them to compete or, failing this, should expose the component parts of the patent medicine, whose proprietor refuses." In other words, halves in the swag, or we peach.

THE CHEMISTS AND DRUGGISTS' DIARY FOR 1880.

Mr. Smart (Littlehampton) writes:—"The Diary was received yesterday, and contains, as usual, much useful and interesting matter. May I offer a suggestion for next year's issue: that recipes and instructive matter be printed on one side of the leaf only, the other side to be advertisements. I, in common with many other chemists, keep a book wherein to paste scraps of information, various formulæ, &c. I cut them out of the Diary at the end of the year, when the book is filled up, and paste in scrap-book. As at present arranged, many have to be sacrificed through being on the opposite side, and are lost unless written out previously."

[If anyone else has an opinion on this point, *pro* or *con.*, we shall be glad to hear it.—ED. C. & D.]

NOTES FROM CEYLON.

A *Roving Correspondent* favours us with the following:—

Since my last from Egypt we have experienced "some" heat on the Red Sea and Indian Ocean, which has prepared the epidermis a little for the temperature of this island: at the present cold season about 85° in the shade.

With regard to THE CHEMIST AND DRUGGIST I have only satisfactory information to impart. Your journal is most highly appreciated by all the European pharmacists here, and universally subscribed to by them. They look upon it as the essential authority for all practical business purposes. These pharmacists very generally deal in stationery, fancy goods, &c.; indeed, one has a millinery business attached to his pharmacy.

You will perceive by the enclosed long list of new subscribers that I have succeeded in what the Yankees call "striking oil." I have, in fact, discovered a large class of buyers of drugs to whom our pharmaceutical literature was unknown. Most of these gentlemen are Burghers, *i.e.*, descendants from the former possessors of Ceylon, the Dutch, and the natives. They keep open dispensaries, are called licentiates, and undergo an education and examination which is described further on. They do a great deal of dispensing, conducting indeed the entire native business, and they buy their preparations direct from London, Messrs. — and — seeming to have the bulk of the trade.

In travelling through Ceylon one cannot fail to be struck with the luxuriance of the foliage, and it is not difficult to believe it to have been the *locale* of Paradise, and the footstep of our common ancestor which is shown (on Adam's Peak) to be a veritable reality. To the botanist—whom, unfortunately, the present writer is not—the island must be immensely interesting. Everything seems to grow here—coffee, coconuts, tea, rice, cinchona, nutmeg, cinnamon, citronelle, lemon grass, &c., &c. Near Galle we spent a day on the estate of Mr. Bowman, the proprietor of the well-known Winter's citronelle. Here was to be seen, in addition to this crop, lemon grass and sugar cane growing and being prepared for market; we also witnessed the operations of a plumbago mine. Through the kindness of other friends we also visited the cinnamon garden of Mr. Du Mel, near Colombo, and a coffee plantation in the vicinity of Kandy, and were duly initiated into all the mysteries of these productions. We also witnessed the final stage through which the coffee-berry passes at the mills in Colombo previous to shipment, and learnt among other things that coffee was generally used too fresh, and that it ought to rest at least a year before being drunk.

The railroad from Colombo, the capital of this island, to Kandy, whence this is written, is exceedingly picturesque, and we were afforded exceptional means of seeing the country it traverses through the kindness of Mr.

E. Brown, Assistant Locomotive Superintendent, who kindly permitted us

to ride on the engine through the most interesting part, including the Pass of Sensor Rock, where the road is cut on the side of solid rock, over a descent—quite perpendicular—of 1,100 feet. This road, which is Government property, is remarkably profitable, although costly to make. It is largely used by the planters, and still more so by the natives, who re very fond of travelling. It also conveys large freights of rice and manure—the former to feed the coolies, the latter to feed the land—and brings down immense quantities of coffee.

Coffee and coconut oil are the staples of the island. Millions of coconut trees are met with in the plains, and certainly this tree deserves all the encomiums lavished on it by the Cingalese. They extract arrack—a spirit—from it; they make fibre from the outside, and oil from the inside, of the nut; and use the branches for the roofs of their houses. It also furnishes them with bass, eart-covers, and coverings, and, finally, the shell furnishes charcoal for their sad-irons. The oil is largely used here for lurning purposes; in Europe soap and candles seem to be its ultimatum. Although castor oil, and nux vomica, and other medicinal trees are to be seen, I could not learn that these were turned to account otherwise than locally.

There is great excitement at present here anent the einchona tree. The soil and climate are found so admirably adapted for its growth, that millions of plants are being set, and the production in a few years promises to be sufficiently large to revolutionise the bark market.

They have also just commenced the growth of the cacao tree, and this, too, bids fair to be a success. On the other hand, the coffee plant has been subject to disease, and that, combined with the low prices ruling until quite lately, has considerably depressed this industry, the enormous proportions of which may be exemplified by two facts, which came under my notice—in the principal district the plantations extend without a break for 40 miles, and one planter employs as many as 60 Europeans as superintendents, and upwards of 6,000 coolie labourers!

Nearly every town has its mineral-water and ice manufactories, which seem generally very prosperous. We noticed that Codd's bottle seemed to be in considerable favour.

The natives, and many Europeans, place great faith in the rind of the pomegranate and the wood apple as cures for dysentery, which is rather prevalent in the island.

As is well known, Ceylon abounds in snakes of all kinds—from the harmless rat variety, which is the cat of the island, to the deadly cobra. The natives claim to be able to cure the bites of these reptiles, and, if faith can be placed in evidence, they have saved many lives which would have been otherwise lost. They apply a sort of porous stone or prepared lime to the wound, which possibly acts by absorbing the poison.

The jungles are infested with leeches about the size of a pin, which attack every living thing within reach, penetrating clothes and boots, and even climbing up horses' legs—covered with their companions—to get at their victims. There is no escaping these voracious parasites, and people have been known to die from the inflammation caused by them.

Now to return to the subject of the native medical men. These are of two classes—the licentiates, and those who possess a certificate of capacity to act as dispensers, hospital assistants, and vaccinators. The latter undergo a two years' course, with lectures on *Materia Medica* and a modified examination. The licentiates receive a complete medical education in four years, very similar to that at home. The professors are all natives, and the examining board seem to be a highly competent body. The students have to qualify in all the subjects required of first-class medical men.

The Ceylon Medical School was established by Sir H. Robinson nine years ago, and the clinical instruction is obtained at the General Hospital close to it. Dr. Vanderstraeten, the principal, very kindly showed me over the school, where at present there are about 60 native youths prosecuting their studies. The Government built and subsidised both the school and the hospital. Many wealthy natives take a great interest in them, and subscribe to their fund. Indeed, the ground on which the school is built was the gift of Mr. Sampson Rajapakse, who also presents annually a gift of 10*l.* to the student who obtains the largest number of marks in the important subject of midwifery; and another wealthy native, Mr. Charles de Soyza, has just built a lying-in home close to the school. This medical school seems to be doing a very useful work, and although no diploma is necessary for practice here, its certificate evidently carries very great weight.

60/72. *Perplexed Prescriber.*—A medical authority gives us the following reply to your inquiry:—Phimosis is where the foreskin projects beyond the end of the penis, and being swollen and tightly constricted, cannot be drawn back so as to expose the organ it covers; when, on the other hand, it is rolled back so as to expose the glans penis, and becomes so swollen and tight that it cannot be drawn forwards to cover the organ, the condition is termed "paraphimosis." Both may result from gonorrhoea. Circumcision is the only true cure for phimosis. Should the patient object to this, the blades of a fine pair of dressing forceps, closed, should be well introduced, and then rapidly and violently separated so as to tear the parts, warm lead lotion being constantly applied afterwards. A merely palliative measure is to forcibly inject warm water in sufficient quantity to well distend the parts. A sponge-tent may also be passed in and left to slowly dilate. In cases of paraphimosis the swollen foreskin should be gently syringed to drive out the blood, and then, taken between the index and middle fingers of either hand, should be drawn forwards, whilst the thumbs press back

the penis; if the constriction is too tight to admit of this, it must be freed with the knife. Druitt's "Surgeons' Vade Mecum" (Renshaw) gives useful and practical information on these subjects.

PATENT MEDICINES.

Sir,—Is the following advertisement by the proprietor of Stedman's Teething Powders * meant to cast a slur on chemists and druggists, or does he kindly wish the public to infer that the "effectual soother" is the original, harmless, and only genuine *Stedman's* soothing powders, of Waltham, Surrey?

A SHOCKING MISTAKE.—A poor mother went into a shop and asked for a packet of Stedman's Teething Powders, and had given to her some soothing medicine instead. The consequence was that the opium in the remedy soothed her child effectually, for it never woke again. Parents, take warning. Dr. Hassall certifies that Stedman's Teething Powders contain neither opium nor morphia, and they are best distinguished by their proper trade-mark of a gum lancet. Exercise your own discretion, and don't be talked into having others.—Manufacturer, Hoxton, London.—(Advertisement.)

If the former, it will be well for the proprietor to remember that it is chiefly through the medium of chemists that such medicines as his have any sale at all, and that certainly if such advertisements are continued they will not tend to increase their sale by chemists.

If the latter, I believe that Stedman's Soothing Powders are justly celebrated enough to quash such advertisements.

I am, sir, yours truly,
SCUM CUIQUE.

This is how one of our correspondents exploded when his Diary reached him:—

WHAT comes to cheer me 'neath the gloom
Of dull December's sable plume,
O'ershadowing the old year's tomb?
My Diary!

What hook will make its owner glad
With writing-case and blotting-pad,
And Map of London too, egad?
My Diary!

What almanac of violet hue
Tells me what dividends are due,
What taxes I must pay anew?
My Diary!

What calendar will save a search
For Lessons when I'm late at church,
Nor leave me sadly in the lurch?
My Diary!

What text-book teems with maxims wise—
Proverbs,—those truths in witty guise
Which none but fools e'er criticise?
My Diary!

When caught within the toils of law,
What helps me through the net to gnaw
And saves me from the lawyer's paw?
My Diary!

When friends for information tease
On weaning "kids" or catching fleas,
What book is crammed with recipes?
My Diary!

And when in some "dispensing" fix
With things prescribed that will not mix,
To put me straight there's nothing lacks
My Diary!

Do pills explode or bottles fly,
And plasters all my skin defy,
At once you show the reason why,
My Diary!

Whate'er my wants thy page supplies,
For only goods which no one buys
Themselves forget to advertise.
My Diary!

E'en while I pen this brief burlesque
Thou'rt smiling on me from my desk,
Amidst all sorts of shapes grotesque,
My Diary!

And when I'm feeble, old, and gray,
And sit and puff my yard of clay,
My love for thee shall ne'er decay,
My Diary!

67/72. Warburg's Fever Tincture.—E. B. (Jamaica).—For 20 years, at least, this preparation has been considered important both here and in

India. It seems to have been first introduced into India on a large scale by Lieut-Gen. Sir Mark Cubbon, K.C.E., Commissioner of the Mysore province. He had used the remedy himself with success. He placed first 500 and then 1,000 bottles at the disposal of Dr. C. J. Smith, the surgeon to the Mysore Commission. Major-General Cottin, R.E., gave some remarkable evidence before the Royal Commission for inquiry into the health of the army in India, to the effect that many great engineering works carried on in "deadly jungles" were brought to a successful issue mainly by the protection afforded to the workmen by this medicine. Buchner in 1844, Fuchs and two others in 1848, and Ragsky later, pointed out that the active ingredient was quinine sulphate, 9½ grains of which are contained in each ounce. Professor W. C. Maclean, Inspector-General of the Army, states that he has treated remittent fevers of every degree of severity contracted in India, China, and the Gold Coast, and has never seen quinine when given alone act in the manner characteristic of this tincture, nor has he ever seen a single dose of it given alone, to the extent of 9½ grains, suffice to arrest an exacerbation of remittent fever, much less prevent its recurrence, while nothing is more common than to see the same quantity of the alkaloid in Warburg's tincture bring about both results. In 1875 Dr. Warburg, acting under the advice of his friends, confided the formula to Professor Maclean, and on November 13 the latter published in the *Lancet* an article describing the preparation, and giving its formula. Three years later Professor Maclean wrote to the *Times* stating that Dr. Carl Warburg was then living in England in poverty. The large fortune made by the sale of the tincture had disappeared, and the publication of the formula had resulted in personal loss to him. It had been thought that the Indian Government would make some provision for him in return for the publication of the valuable secret. The following is Dr. Warburg's own formula:—

℞ Aloes socotrinae, libram
Rad. rhei, E.I.
Sem. angelicæ
Confect. damocratis ana uncias quatuor
Rad. enule
Croci sativi
Sem. fœniculi
Crete preparatæ, ana uncias duas
Rad. gentianæ
Rad. zedoariæ
Cubebæ
Myrrhæ electæ
Camphoræ
Boleti laricis ana unciam

These ingredients are to be digested with 500 oz. of proof spirit in a water-bath for 12 hours, then expressed and 10 oz. of quinine sulphate added; the mixture to be replaced in the water-bath till all quinine is dissolved. The liquor when cool is to be filtered, and is then fit for use.

64/23. R.—Finlay Dunn's "Veterinary Medicine," 5th edition (Edinburgh: Douglas, 1878), 14s., is one of the best on the subject. Culpeper's "Herbal" is a standard book on botanic medicine. Dr. Coffin's "Botanic Guide to Health" gives information on his own system. A useful prescribers' book on homœopathy is Ruddock's "Vade Mecum," 19s. 6d., or abridged 5s. (Homœopathic Publishing Company, Finsbury Circus.)

71/67. W. R. E.—Ammonium Nitrate.—The Pharmaceutical Society have published no directions for the granulation of ammonium nitrate. If crystallised by rapid concentration and sudden cooling it forms long, flexible, elastic threads; but by careful evaporation and slow refrigeration it may be obtained in well-defined crystals. If it is intended for the preparation of nitrous oxide for dental use, special care should be taken to exclude every trace of ammonium chloride.

69/57. W. R. C. asks, What is Unguentum Diachyli (sic)? In the German Pharmacopœia we find unguentum diachylon Hebrae, Hebra's ointment of lead, "Hebra'schebleisalbe," made by mixing equal parts of lead plaster and linseed oil at a gentle heat; it must be prepared only when required for dispensing. We shall be glad to hear of other formulae.

229/28. Flavours for Tobacco.—*Chemicus* would be obliged if any reader could tell him what is used by the packet-tobacco makers, for scenting and flavouring tobacco.

71/7. Indiarubber Stamps.—A. H. will feel obliged if any one can tell him how indiarubber is dissolved for making stamps. Carbon bisulphide, and chloroform have been tried without success.

76/62. Ink for Copying.—W. R. asks "If any chemist would oblige with a recipe for the aniline ink used on the circular or letter copier." A formula will be found in our October edition, page 468, col. 2, and the correspondent to whom we gave it has written to express his satisfaction with it.

3/70. Mr. G. V. Bell, Banbury, would be glad if any reader would, from his own experience, recommend a light green paint for the inside of bottle-shelves that will retain its purity of colour in spite of the deleterious influence of gas.

* Taken from a London daily paper.

Amateur Photographer.—The subjoined formulæ will, perhaps, give you what you want. They are issued by the makers of what is known as the "Crossed Swords" paper:—

Nitrate of silver	12 oz.
Water	80 oz.

Add to this bath five drops glacial acetic acid. Floating time, three minutes.

This paper produces a brighter surface when dried in a room heated at 70° or 80°. After having removed, by frequent washing, all free nitrate of silver, tone in the following solution, which must be prepared three days beforehand:—

Gold	15 grains
Acetate of soda	5 drachms
Carbonate of soda	4 grains
Water	80 oz.

This bath improves greatly after three or four days' using.

When you find this bath exhausting itself add to it a required amount of the following solution, which must be prepared three days beforehand:—

Gold	15 grains
Acetate of soda	5 drachms
Carbonate of soda	4 grains
Water	20 oz.

After toning, wash the prints once or twice, and fix in the following bath:—

Hyposulphite of soda	16 oz.
Water	160 oz.

Fixing time, 12 to 15 minutes; this should produce the most brilliant results.

Should blisters appear, then add a small lump of ammonia to the fixing bath, as well as common salt to the first water, which is being used for the prints that have left the fixing bath.

27/73. W. A. T.—The medicament of which you send us the label, &c. is liable to medicine stamp duty on three grounds:—It is recommended for ailments of the human body, it claims a special right of preparation for its makers (by prefacing it with their names), and, lastly, it is a medicine of foreign origin. On either of these grounds it is subject to the medicine duty. The fact that the medicine is sold for 1d. per box makes no legal difference to the position.

73/29. Nil Desperandum.—The copygraph and ink are mere modifications of the chromograph, a formula for which will be found on page 287 of our July issue, and a formula for a cheap black ink will be found on page 23 of our edition of last January. The name Stömer there given should be Störmer.

73/4. B. H. O., Oporto.—**Soluble Prussian Blue.**—It is never soluble in water containing the ordinary earthy impurities. The purest distilled water must be used. We believe also that the blue cannot be dried without losing its solubility. Its preparation requires considerable care. One of the simplest methods is to dissolve 80 parts of potassium ferricyanide in water, and add to it a solution containing three parts of ferrous sulphate free from ferric sulphate. The resulting precipitate must be washed by decantation, first with water containing potassium chloride in solution, and then with pure water. It dissolves in water with a pure blue colour and by boiling water it is completely decomposed. Ordinary Prussian blue can be dissolved in water with the aid of oxalic acid.

British Wines.—In 1865, Messrs. Chapman & Hall published at 7s. 6d. a book entitled "The Art and Mystery of Making British Wines," which seems to be a practical work.

Gazogene Charges naturally vary with the size of the gazogene.

TWO-PINT CHARGES.

Crystallised tartaric acid	3lv. 9ii.
Sodium bicarbonate	3v. 9ii.

THREE-PINT CHARGES.

Crystallised tartaric acid	3vi.
Sodium bicarbonate	3vij. 9j.

FIVE-PINT CHARGES.

Crystallised tartaric acid	3j. 9ij.
Sodium bicarbonate	3x. 9ij.

The acid should be broken to uniform lumps about the size of a pea, but should not be powdered. The acid and bicarbonate for one charge should be wrapped in separate papers and tied together.

15/69. Colourless Tincture of Iodine.—Referring to note in our last Dr. John Evans, of 49 Dawson Street, Dublin, suggests a caution against the combination of ammonia with iodine as a dangerous explosive compound: iodide of nitrogen is thereby formed. He himself makes a colourless tincture of iodine without alkali, and will send a circular concerning it on application.

72/69.—Statin wishes for a formula for a preparation similar to Eno's fruit salt.

62/71.—Brilliantine.—A. II.—A solution of castor oil in eau-de-cologne, 1 iu 4.

Or:—

Glycerine and eau-de-cologne, of each	Parts.
Honey	1
Rectified spirit	2
	4

9/98.—J. S. B.—A Notice to Quit unless the terms of the lease or agreement require it—need not be in writing; but for better proof it is always advisable to give notice in writing, and to have it served by some other person than the one who gives it.

51/72. Peppermint.—Any legally-qualified medical practitioner is entitled to keep open shop for the sale of drugs, poisons, &c., and for the compounding of prescriptions. In the sale of poisons he is subject to just the same provisions as affect a chemist and druggist. He is not bound to have a qualified chemist to manage his business, and we do not think he is bound to exhibit his name over the door. If he choose to call his shop "Medical Hall," he can do so, even though a registered chemist and druggist in the same place has for years so described his pharmacy. Neither could have a copyright in such a designation, and, if anything, the doctor would have the best right to the title.

65/65. Ignoramus.—You have not complied with our rule that correspondents should give us their names and addresses, but had you done so your question would have been too vague for us to answer.

Silver-plating Solution.—Perhaps the following formula will meet your requirements:—

Nitrate of silver	11 drachms.
Water of ammonia	1½ oz.
Hyposulphite of soda	2½ oz.
Precipitated chalk	2½ oz.
Distilled water	25 oz.

See also under "Inventions" on another page.

Corks or Patent Stoppers for Aerated Waters.—Referring to Mr. Ellis's letter in our last, stating that the anticipation that a scientific chemist would attend the annual meeting of the Mineral Water Trade Association to explain the manufacture of vulcanised indiarubber was not fulfilled, and intimating that he could not have proved its freedom from deleterious constituents, the Secretary of the Association writes to inform Mr. Ellis that no chemist appeared on the occasion referred to to discourse on the subject because it was felt to be a waste of time to do so, with the probability of opening up a discussion on a subject that had been already disposed of by an overwhelming mass of evidence which appeared in the *Lancet*, &c., in favour of the harmlessness and purity of the specially-prepared rubber used with patent stoppers for aerated-water bottles.

Gregory's Powder.—Mr. William Pickup (13/71) writes:—In making Gregory's powder I find if I use calcined magnesia it does not give satisfaction to my customers: they bring it back and say it will not mix with water. I have generally to sell it in paper parcels, and it is often kept in them some time before it is used, but when I make it with the common carbonate (magnesia carb. lev.) I find it to give satisfaction. Will you please to let me know in your next journal what is the reason. It seems to me that the Pharmacopœia intends light calcined magnesia to be used.

Gregory's powder under no circumstances is very miscible with water, but occasionally (more frequently of late) this non-miscibility has been met with in an aggravated form, in which the powder seems to possess a peculiar resisting action to the water, and in which state it seems next to impossible to get it to mix. This property has been imparted by some to the use of a ginger rich in resin, by others to a rhubarb faced with oil in the process of grinding, by others to the magnesia, and others still to the kind of sieve through which the powder has passed in mixing. We even heard of one case from Sheffield in which it was ascribed to the bad quality of water in use in that district. We think it probable that from some cause, which possibly the makers could explain, the magnesia has much to do with it. At least we have never met with a case where the slightest difficulty has been experienced if the magnesia, previous to mixing into Gregory, had in any way been exposed to the atmosphere. We think, however, the subject requires further investigation.

DOSING A FIG.—Professor McBride says:—"You are sure to choke him if you try to make him drink while squealing. Halter him as you would for execution, and tie the rope-end to a stake. He will pull back until the rope is tightly strained. When he has ceased his uproar and begins to reflect, approach him, and between the back part of his jaws insert an old shoe from which you have cut the toe leather. This he will at once begin to suck and chew. Through it pour medicine, and he will swallow any quantity you please."

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VITAL ENERGY, it is well known, depends upon the normal functions of the *nervo-electric fluid* governing the whole economy; any deficiency thereof in the system manifests itself, according to the locality, by a variety of troublesome ailments, such as

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|------------------|--------------|----------------------|
| Indigestion | Asthma | Local Debility |
| Liver Complaints | Bronchitis | General Debility |
| Neuralgia | Paralysis | Female Complaints |
| Sciatica | Epilepsy | Mental and |
| Deafness | Rheumatism | Physical Weakness |
| Writer's Cramp | Gout | Functional Disorders |
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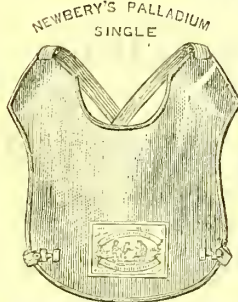
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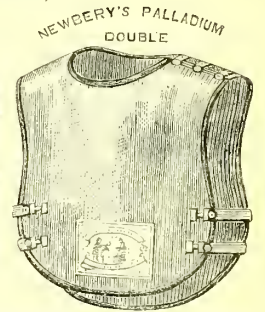


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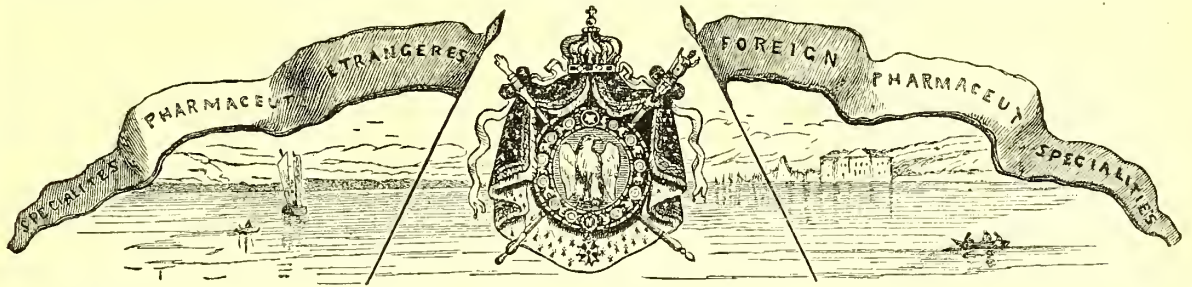
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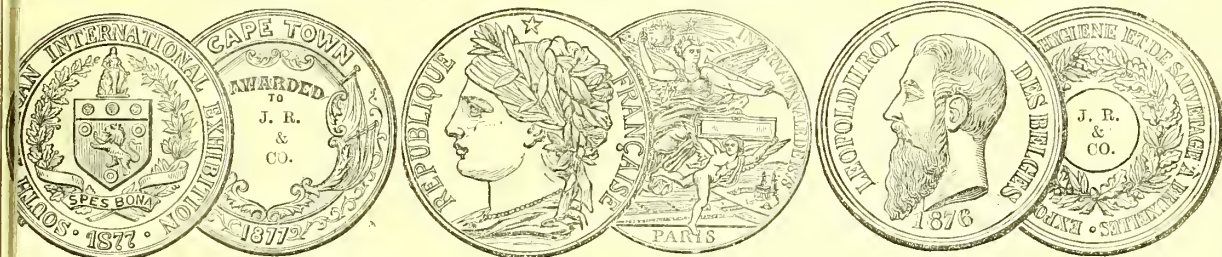
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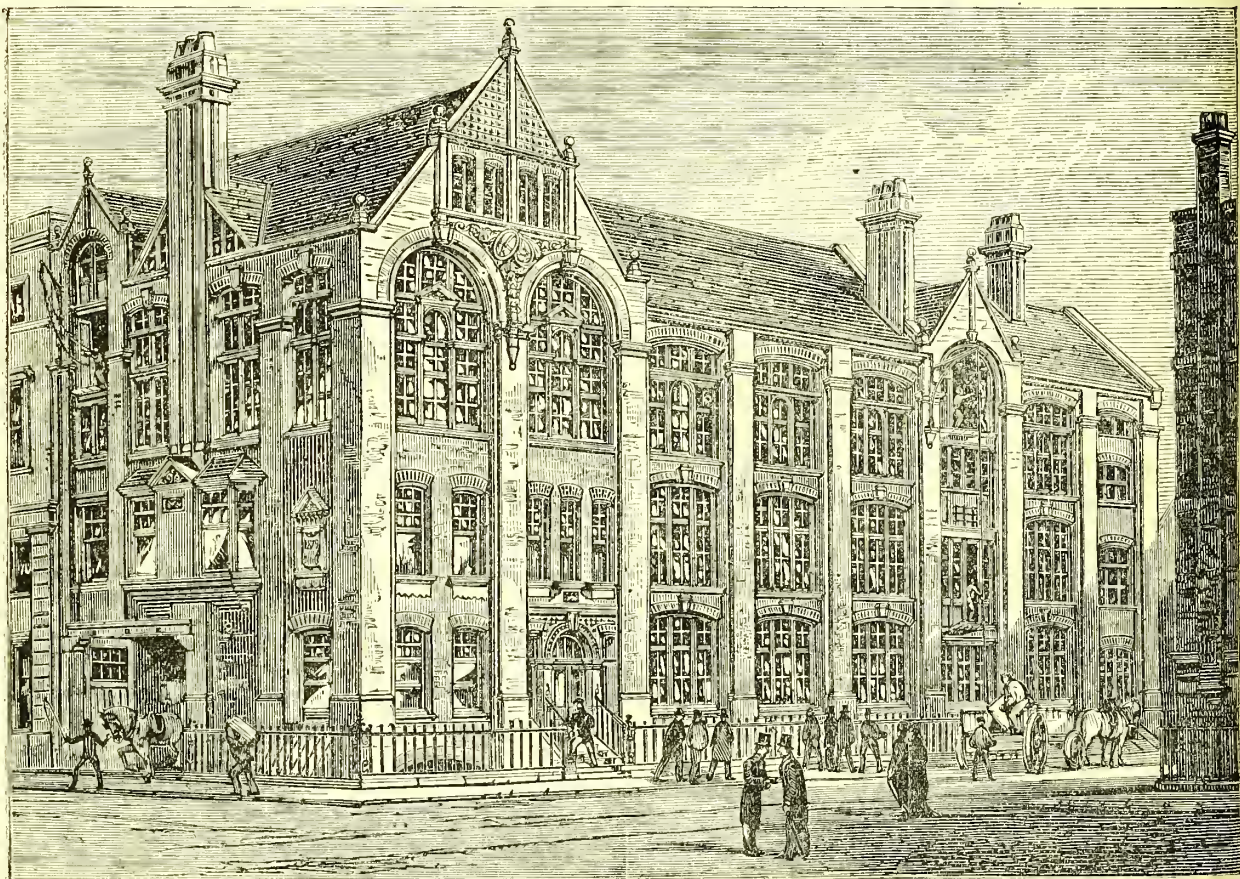
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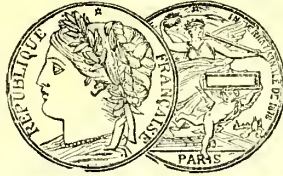
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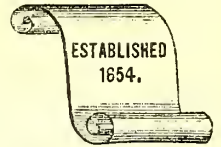
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The following Paper by HENRY DEANE, F.R.S., and HENRY B. BRADY, F.R.S., was read, amongst others, at the Bath Meeting of the British Pharmaceutical Conference, September 1884:—

LIQUOR OPII SEDATIVUS.

The striking appearance resulting from the evaporation of Battle's Sedative (Plate III., Fig. 1) first drew our attention to the mode of investigation now described. We have examined it frequently and always have met with the same characters. The slides present an almost opaque mass of crystals of morphine salts and codeine, with a very small portion of narcotine (and meconic acid?), and so far as we have observed, complete absence of resinous matter and narcotine. *Anyone who has studied the microscopic characters of this preparation will readily understand how it has kept its place with the profession in spite of the cheap imitations which have been so largely peddled as substitutes for it.* Though we have experimented much with a view to preparing a similar liquor, we have not yet arrived at an identical result. Of three makes which we have examined, one (Plate III., Fig. 5) is largely charged with resinous matter, and the proportion of crystalline constituents is so minute that we are satisfied its activity must be very small; another (Plate III., Fig. 4) gives a few morphine crystals, a good deal of narcotine, and more narcotine; a third (Plate III., Fig. 6) is chiefly remarkable for its lack of everything crystalline.

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From Dr. GARROD, Physician to King's College Hospital. 63 Harley Street, March 30, 1850.
 DEAR SIR.—I have delayed writing to you, not having had until lately an opportunity of testing your preparations of Senna and Rhubarb. From what I have now seen of their action, and also of their taste, etc., I consider them very valuable preparations of the Drugs, and well worthy the attention of the Medical Profession. The Essence of Senna appears admirably adapted for children. I am, dear Sir, yours very truly,
 Mr. H. A. THOMPSON. A. B. GARROD, M.D.

From the late Dr. GOLDING BIRD, F.R.S., Professor of Materia Medica, and Assistant Physician to Guy's Hospital.

DEAR SIR.—I have tried your preparations of Rhubarb and Senna, and do not hesitate to say that they appear to act very efficiently, and to possess (in a small bulk) all the active properties of the respective drugs. I am accustomed to recommend the preparation of Senna for use in the nurseries of very patients, as a most efficient and valuable laxative for children. Myddelton Square, February 17, 1850.
 Mr. H. A. THOMPSON. Truly yours, GOLDING BIRD.

From Dr. SEMPLE, Member of the Court of Examiners of the Society of Apothecaries.

With regard to your Essences of Senna and Rhubarb, I am most happy to say that I have tried them both upon several occasions, especially with children, and with the best effects; they form most agreeable and efficient preparations, and I shall be most happy to recommend them whenever I have an opportunity. Torrington Square, February 13, 1850.
 Mr. H. A. THOMPSON. Believe me to remain, dear Sir, yours truly,
 R. H. SEMPLE.

LIQUOR SECALIS CORNUT. AMMON.

This Combination of Ergot with Ammonia has been found a very valuable one. It is most safe and reliable in its effects. PRICE 8s. per lb.

From THOS. H. JACKSON, Esq., M.D., Darlington.

SIR,—In reply to a portion of the query in "Provincial's" letter, I may be allowed to say, that for some time past I have been in the habit of using with the most happy effect a Liq. Secale Cornut., prepared by Mr. Henry Ayscough Thompson, Worship Street, Finsbury Square, a most elegant and efficacious preparation, one minim of which contains the active principles of one grain of secale. Should I be called on to attend a patient in parturition, who has been previously subject to hæmorrhage "post expulsione[m] facti," or should I suspect hæmorrhage from a tonic contraction of the uterus, I variably give one drachm of the liq. secale in a little cold water, about ten minutes before I think the fœtus will be expelled. Uterine contraction is produced; the placenta is expelled, and all hæmorrhage checked. I am, etc.,
 Darlington, November 30, 1854. THOS. H. JACKSON, M.D.

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„ Aloes „ „	4/6 „	Succ. Taraxaci, B.P.	2/- „
Inf. Sennæ, warranted very active	1/6 „	Liq. Sennæ Dulc.	2/6 „

Special attention is called to these preparations of Senna which are made entirely from Alexandrian Senna.

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ELLOIDINE (Patent)	Gelatine plates	Purest Pyroxylin; in explosive.
HLORAL HYDRATE	White cake and crystals	See Liebreich's, below.
HLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age, as the ordinary product will do, to the danger of the patient.
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LYCERINE	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
ODINE	Resublimed, fine scales	Purest.
ODOFORM	Dry yellow scales	Purest, by medical reports.
POTASS, BROMIDE	Fine white dry regular crystals ...	Perfectly free from iodide, and the most free from chloride.
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" IODIDE	Fine white dry regular crystals ...	Apply Barytic and other tests. This will never change colour.
SILVER, NITRATE	Fine large crystals	63 to 63½% pure silver.
SODA, CAUSTIC	Lump and stick, white	Chemically pure, and pure by alcohol.
SODA SALICYLATE, and other Salicylates	White powder and crystals	Freely soluble in water and alcohol.

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ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
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PEPSIN PORCI (100%)	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

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POTASS, BICARBONATE ...	White powder and crystals	Dissolves bright in water.
SODA, BICARBONATE	Purest white powder, taste neutral, speciality for Soda powder	See tests P.B.
SODA, CARB. (purest)	Dry, for pure Soda Salts	Indifferent to Nitrate of Silver and Chloride of Barium.

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THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

Apothecaries' Hall,	London.	Gale & Co.,	London.	Newbery & Sons,	London.
Allen, Hanbury & Co.,	"	Giles & Son,	Clifton.	Oldham, G. & Co.,	Dublin.
Baiss Brothers,	"	Goulding, Messrs.	Cork.	Parsons & Richardson,	Leicester.
Banks & Richards,	Birmingham.	Gratton & Co.,	Belfast.	Peake, Allen & Co.,	Dublin.
Barron, Harvey & Co.,	London.	Grimwade, Ridley,	London.	Raimes & Co.,	Liverpool.
Bell, John, & Co.,	"	Grindley & Son,	Chester.	Raimes & Co.,	York.
Bourne & Taylor,	"	Hearon, Squire & Francis,	London.	Raimes, Blanshards & Co.,	Edinburgh.
Corbyn & Co.,	"	Hodgkinson, Tonge & Stead,	"	Sang & Barker,	"
Cox & Gould,	"	Hopkins & Williams	"	Sanger, J., & Sons,	London.
Curling & Co.,	"	Hunt & Co.,	Exeter.	Sim, James, & Co.,	Aberdeen.
Curtis & Co.,	"	Hunt, A., & Co.,	"	Smeeton, W.,	Leeds.
Davy, M'Murdo & Co.,	"	Johnson, J. H. & S.,	Liverpool.	Southall & Co.,	Birmingham.
Drew, Barron & Co.,	"	Langton, W., & Co.,	London.	Sutton, W., & Co.,	London.
Drew, B., & Alexander,	"	Lynch & Co.,	"	Tomlinson, Hayward & Co.,	Lincoln.
Dunn & Company,	"	Mander, Weaver,	Wolverhampton.	Treacher, Hodgkinson & Co.,	"
Edwards, W.,	"	Marsden & Sons,	London.	Westrup, J. B.,	Kensington.
Evans, Gadd & Co.,	Exeter.	Maw & Son,	"	Westwood & Hopkins,	Lincoln.
Evans, Lescher & Evans,	London.	Meggeson & Co.	"	Woolley, James,	Manchester.
Ferris & Co.,	Bristol.	Mackay, John,	Edinburgh.	Wyleys & Brown,	Coventry.
Foulger, S., & Son,	London.	Morson, T., & Son,	London.	Yates & Co.,	London.
Frazer & Green,	Glasgow.				

After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

Sold in Bottles—1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Usual Discount to the Profession.

SOLE MANUFACTURER,

J. T. DAVENPORT, Pharmacist,
33 GREAT RUSSELL STREET, BLOOMSBURY SQUARE, LONDON.

DUNCAN, FLOCKHART & CO.,

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Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles corked and luted (stoppers attached) and in hermetically sealed flasks when required.

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OR HEALING POWDER, for Burns, Ulcers, Eruptions, Abrasions of Tender and Irritable Skins.

A preparation which has for years stood the test of Medical experience, as possessing healing Properties of the most marked and rapid character.

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A CERTAIN CURE FOR DEAFNESS.

By this valuable "Specific" hundreds have been cured of this distressing malady. For Cold in the Head, with Noises in the Ear, it is most efficacious. The highest testimonials are enclosed, with directions for use with each bottle

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Extract from "*Brief*."—"GOLDEN DROPS FOR DEAFNESS.—E. M. Osborne has produced a valuable specific for this distressing complaint. We have tested its efficacy, and can, with confidence, recommend it to the public as an excellent remedy. It is perfectly harmless, and the directions for use are plain and simple. It is secured by a registered trade mark, 'Human Ear,' by which the genuine article may be recognised."

TESTIMONIALS.

"EDGEASTON, MAY 4, 1877.—Sir,—My niece, who came to stay at my house, was suffering from Deafness and difficulty of breathing, owing to weakness of the tonsils caused by Quinsy. She tried your wonderful 'Specific,' and after applying it a little more than a week her hearing and breathing were quite restored. I am glad to communicate this as the medium of personal thanks and for the good of others,—Yours truly, C. L."

"CLAPHAM, SEPT. 5, 1877.—Sir,—Be so good as to send me six bottles of your 'Cure for Deafness,' and you will oblige. I am much better. Shall I go on with it? Be so good as to let me know. It has done me more good than physicians to whom I have paid twenty guineas; they cannot do me any good.—Yours, &c., J. P."

"CRYSTAL PALACE ROAD, EAST DULWICH, JUNE 10, 1878.—Sir,—During the last few weeks my little girl has been quite deaf, and suffering considerable pain in her left ear. I was recommended to use your 'Golden Drops for Deafness,' and I am delighted to say that, after applying them three times, they brought away two large secretions of foul matter. The child can now hear distinctly the faintest sounds, and is free from pain. I send you this testimonial unasked, in the hope that its publication may increase the sale of your truly valuable 'Golden Drops.'—Yours respectfully, I. H. S. N.B.—If you will send me some testimonial sheets I will distribute them amongst my friends."

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WHAT IS GOUT? WHAT IS RHEUMATISM? WHAT IS RHEUMATIC GOUT?

Those who suffer from these distressing maladies care little what the theoretical reply to the above questions may be, nor do we care to further afflict them with scientific supposition. The question is, **WHAT WILL REMOVE THEM?** what will allay the agonising pain, remove the cause from the system, and restore the afflicted one to a normal state of health and wonted agility? The question has been asked for years, but no satisfactory reply has been given, no *certain* cure recommended, until the discovery of Lindley's celebrated Gout and Rheumatic Pills. Since their introduction thousands have taken them, and there has never been one instance wherein they have been taken in vain!

Unfortunately there are so many so-called "remedies" recommended by so many well-meaning but irresponsible and often misinformed or ignorant people, as well as so many nostrums, introduced by charlatans into the market, that frequently enough the patient, after having tried a dozen or so different compounds without avail, comes to the conclusion that all specifics are alike—that nothing can be of any use, and that the ills from which he so constantly and so severely suffers are absolutely incurable. The wonder is, that after having been drenched with such a variety of compounds, he remains as well as he is. Let this be as it may, we have no hesitation in asserting (and it is confirmed by a multitude of testimonials) that **LINDLEY'S GOUT and RHEUMATIC PILLS** are the undoubted antidotes for **GOUT, RHEUMATIC GOUT, RHEUMATISM, SCIATICA, LUMBAGO, TIC-DOULOUREUX**, &c., more particularly and specially if used in connection with **LINDLEY'S RHEUMATIC EMBROCATION**. Words are of course valueless unless they convey truths; but we defy any statement to be impugned which conveys this fact, that the above remedies have not only no equal, but are fallible.

LINDLEY'S RHEUMATIC EMBROCATION is the most effective external remedy known, as it instantly removes all excruciating pain, from whatever cause, including rheumatic gout, lumbago, sciatica, tic-douloureux, &c. By merely spreading over the affected parts on the ends of the fingers, or on spongy pline, the pain, no matter how severe, is instantaneously removed.

Mr. Inspector **STRAW**, of the Sheffield Borough Police Force, wrote on January 3, 1879:—

"When I called at your shop two days ago I was quite unable to walk about without a stick, and then with difficulty. I took six of your pills at three times, which were given to me by Wm. Bauly, of 52 Earl Street, Sheffield, and on the following morning I was, I am happy to say, as sound as ever. I feel now able almost to challenge Weston at a mile."

WILM. SCHELLER, of Giessen, Germany, wrote on June 15, 1879:—

"I received a box of your rheumatic pills and a bottle of the liniment from a friend, a few days ago, which I have proved to be the best remedies and specifics I have ever used for sciatic pains, and I am thankful to have found such."

On May 19, 1879, Dr. **FRANCIS XAVIER and DON ALFREDO AGOSTINHO CORREA**, of Lishon, Portugal, say:—

"We have tried your gout and rheumatic pills and embrocation, and find them the best we have ever used. You will greatly oblige by sending at earliest convenience one dozen boxes pills and one dozen bottles embrocation, each 2s. 9d. size."

Mr. **WILLIAM ROWAN**, 139 Cedar Street, New York, U.S. America, wrote on May 19, 1879:—

"Mr. Lindley. Dear Sir,—The gout having come upon me very bad, I had to take to your pills—the old remedy. I got completely rid of it again after three doses. Having contracted it by carelessly exposing myself to the severe damp and cold weather. A friend of mine out here, who has suffered very severely of late from rheumatic gout, asked me for a remedy; I gave him six of your never-failing pills, which very promptly made him a sound man again. As my stock of your pills is running very low I am very anxious to get a fresh supply; please forward by return mail 1 (one) large box (11s. size), to the above address, and believe me, yours truly,
WILLIAM ROWAN."

The above Pills and Embrocation are prepared solely by the Proprietor,

HENRY LINDLEY, Chemist, 57 South Street Moor, Sheffield

(Five years Principal Assistant to Robert Lathbury, Liverpool, Chemist by Special Appointment to the Queen).

Sold retail in boxes, 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. each; and the Embrocation in bottles at 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. each.

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The Original Preparation, as approved by the Medical Profession on account of its known composition and uniform strength.

Retail at 13½d., 2s. 9d., and 4s. 6d. Dispensing, 4 ozs., 4s. 6d., and 10 ozs., 11s., stamped.

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As originally introduced by A. P. Towle, and free from stamp duty for dispensing.

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In 1, 2, and 4 lb. Bottles, at 3s. per lb., and 6d. and 1s. Boxes.

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Bills with name on application with instructions for forwarding.



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Are admitted by all who use them to be the best for safe, easy, and quick teething. These powders have been used a great many years for children when cutting their teeth, or affected with convulsions, fevers, thrush, colds, eruptions, or almost any ailment whatever. They have saved thousands from their graves. Give them a trial. In boxes, at 1s. 1½d. and 2s. 9d. A great saving in the 2s. 9d. boxes.

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NUTTALL'S PATENT VEGETABLE PILLS.

Are acknowledged to be the best family medicine known. This fine medicine is a direct purifier of the blood, good for indigestion, pain in the stomach, as fullness after meals; faintness, heartburn, stomach, liver, and kidney complaints; blotches of the skin, coughs, colds, bronchitis, and influenza, lowness of spirits, &c. They are wonderfully adapted for females of all ages. A gentle but effective tonic made genial to the taste. These pills are of great advantage to emigrants in preventing sea-sickness.

Sold by all Chemists and Patent Medicine Dealers, in boxes, 9½d., 1s. 1½d., and 2s. 9d. each, or from the Proprietors, C. NUTTALL & SONS, Baeup, near Manchester.



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Surgeons and Chemists supplied with an excellent Aperient Pill (the formula for which will be forwarded), covered with a thin non-metallic film, rendering each pill perfectly tasteless, at 1s. a gross, postage free. They present an elegant, pearl-like appearance, and may be kept in the mouth several minutes without taste, yet readily dissolving, even in cold water, in an hour. Any formula dispensed and covered, and samples, with a list of pills from 500 different forms, which are kept in stock, will be forwarded free on application.

Twenty years' success, as proved by unsolicited Testimonials from Medical Men in almost every town and village in the kingdom, has produced imitations likely to bring a useful invention into disrepute, as a large percentage of the Varnished Pills made to imitate ours pass through the stomach unaltered.

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Chemists and other Gentlemen who are obliged to lead sedentary lives will find a good and comfortable corrective

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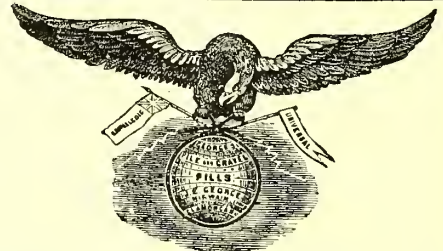
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A Safe, Certain, and Speedy Cure for P and GRAVEL. This Remedy may be had in the following forms:

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Worthy of trade notice. Reliable, and rapidly increasing in public acceptance.

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Truth is a solid fact, more solid than the granite rock: it is the richest coin of the purest metal, free from alloy of any description. The shaft of envy will not face it, neither will the shots of prejudice enter. It is surrounded on all sides by a thousand foes, but each and all, without exception, are mute beneath its piercing glance.

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which have been before the public for Thirty Years, have now become one of the leading Patent Medicines of the present day. From north to south, and from east to west, they are to be found in the homes of both the rich and the poor. All classes of Society use them, and they are by thousands declared to be

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For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like "MAGIC," and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long-lost complexion, bring back the keen edge of appetite, and arouse into action, with the ROSE-BUD of health, the whole physical energy of the human frame. These are "FACTS" admitted by thousands, embracing all classes of Society, and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS have the LARGEST SALE of any Patent Medicine in England.

All Patent Medicine Dealers abroad will find BEECHAM'S PILLS one of the most profitable and one of the best selling articles in the Market. The demand for them is regular, and all Foreign Houses who are desirous of getting a First-class Patent Medicine are respectfully requested to get BEECHAM'S PILLS from the leading Wholesale Houses in England (as no business will be done with any Foreign House by the Proprietor direct).

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N.B.—FULL DIRECTIONS ARE GIVEN WITH EACH BOX.

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COMMON PRINCIPLE TRUSSES, Basil and Chamois	£0 16 0	SALMON & ODY'S EXPIRED PATENT, <i>Single</i> , White or Red Roan	£1 7 0
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Plain, <i>Single</i>	1 12 0	Ditto Sunk Springs, ditto—	as White's, £5 8s.	Double 10 16 0
Best Covered, <i>Single</i>	2 5 0			
Plain, <i>Double</i>	2 2 0			
Best Covered, <i>Double</i>	2 16 0			
SALMON & ODY'S EXPIRED PATENT, <i>Single</i> , Basil and Chamois	1 4 0			

LINDSEY & SONS' Trusses have long maintained a high reputation for quality, and they will be happy to send their full descriptive price list on receipt of address, post free.

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Size.		Height.		FLINT GLASS.		BLUE GLASS.		N.M.		W.M.	
				N.M.		W.M.		N.M.		W.M.	
16 ounce	8 inches	16/6	18/6	20/	22/	22/	26/6	20/	22/	22/	26/6
20 "	9 "	17/6	20/	21/	23/	22/	26/6	20/	22/	22/	26/6

per dozen.

A SHEET OF FACSIMILE LABELS SENT ON RECEIPT OF TWO STAMPS.

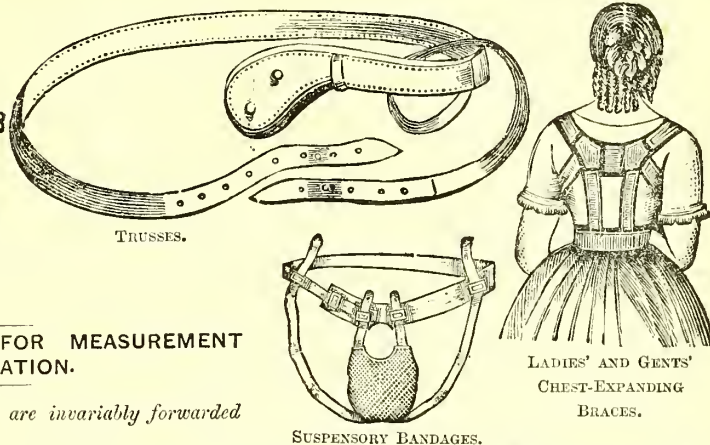
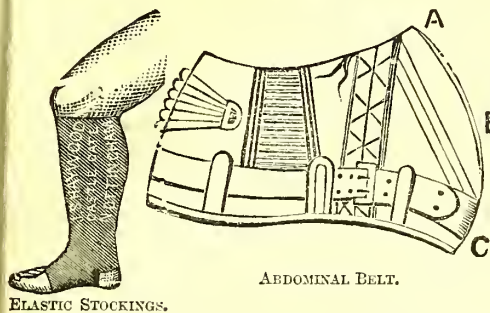
Prices of other Shop Bottles, Pots, &c., on application. Sample Bottle sent on receipt of 1/7 in stamps.

Mr. W. BRAY, Chemist, Glasgow, writes—"They are everything that can be desired, and are greatly admired by all who see them."
 Mr. D. D. DEANS, Chemist, Melrose, writes—"Am immensely pleased with these new hand bottles; they are really magnificent; there is no comparison between them and the old shop rounds as regards either price or appearance, and then they will never change, as the labels are literally indestructible."
 "Messrs. FRAZER & GREEN, Glasgow, have much pleasure in testifying to the satisfaction they have had in the use of these bottles, which have been in their Charing Cross Branch for fully two years. The facility with which they can be kept thoroughly clean without possibly injuring the labels can only be appreciated by practical experience."
 Mr. ALEX. KINNINMONT, F.C.S., Pharmaceutical Chemist, Glasgow, writes—"I have had these bottles in constant use for over four years and can confidently recommend them for their clean and brilliant appearance and durability. They are also safer to use than the ordinary labelled bottles, as, from having the name of the contents all in front in two lines, there is much less danger of mistake."

SOLE CONSIGNEES FOR GREAT BRITAIN AND IRELAND—

GLASGOW APOTHECARIES' COMPANY, 32 & 34 Virginia Street.

HAYWOOD'S SURGICAL APPLIANCES.



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Greatest attention paid to Special Orders, which are invariably forwarded per return of post.

J. S. HAYWOOD, Castle Gate, NOTTINGHAM.

GENERAL DENTAL DEPOT.

Established 1818.

SMALE BROTHERS,

Established 1818.

OPERATING CHAIRS, CABINETS, SPITTOONS, LATHES, VULCANIZERS, FLATTING MILLS. FORCEPS, STOPPING INSTRUMENTS, EXCAVATORS, SCALERS, MOUTH MIRRORS, &c., &c.

Mineral Teeth for Plate, Vulcanite, Celluloid, or Gum Work.

GOLD, TIN, AMALGAM, AND GUTTA PERCHA PREPARATIONS FOR STOPPINGS. Every appliance for Surgery and Work-room.

19 GREAT MARLBOROUGH STREET, LONDON, W.

MR. M. E. TOOMEY, Surgeon-Dentist, begs to direct attention to his recent invention in Dentistry, patented in England, France, Belgium, Germany, and America, whereby a perfect model of the mouth can be taken, together with the correct bite, in one simple operation, even by the patients themselves. To Invalids and persons residing at a distance requiring ARTIFICIAL TEETH this invention must prove of great value. The apparatus or Tray is of Metal, shaped to fit the inside of the mouth. It is made in three sizes, one of which in practice is found to suit every variety of mouth. Placed inside the Tray is composition of such a nature that in less than a minute after being bitten into it becomes sufficiently hard to prevent binding or sucking, in withdrawing from the mouth. All that is required is that the Tray be steeped in hot water for seven minutes, then insert in the mouth, and bite firmly. The following woodcuts will show the simplicity of the apparatus.

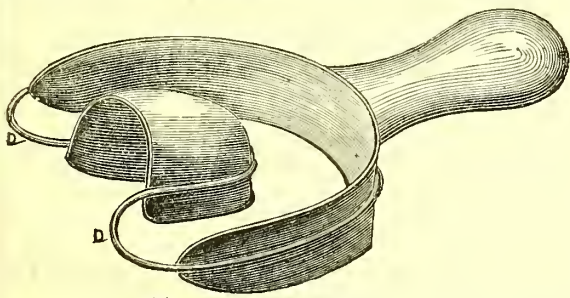


Fig. 1. The Tray empty.

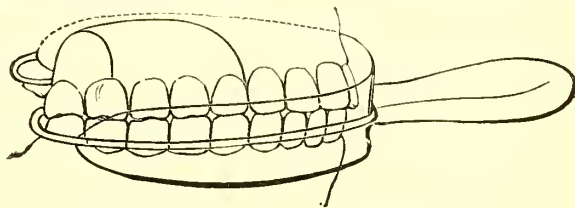
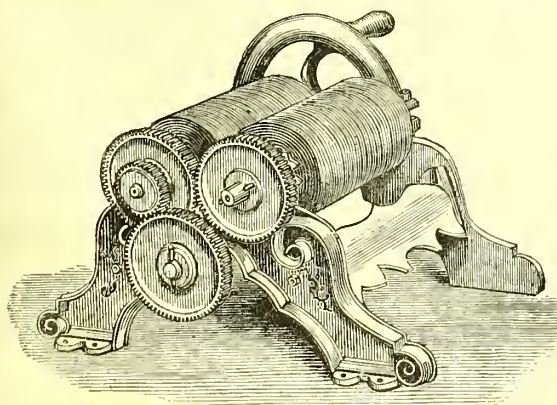


Fig. 2. The Tray in use.

54 RATHBONE PLACE, OXFORD STREET, W.



PILL MACHINE

(COCKING'S PATENT DOUBLE-ACTION),

Used extensively in Great Britain, India, Australia, America, and the Continent.

PRICE £10.

"Nov. 19, 1879.—Sir,—The Pill Machine answers perfectly, we therefore send cheque which please acknowledge.—Yours faithfully, H. THORBURN & SON, Bishop Auckland."

COCKING'S CYLINDRICAL PIPER,

Turns out One Pound of Pill Mass in perfect Pipes in 3 Minutes.

PRICE 50/-

This little Machine is worked with the ordinary Counter Pill Machine, and as no weighing or rolling out of the Mass is required, the saving of time is very great and manifest. It may be inspected, and its practical working shown, at Mr. CASSIE'S, 49 Newgate Street, London.

"Dec. 9, 1879.—Sir,—Herewith I remit you cheque, 50/-, for Piping Machine. It is quite a success, and saves a considerable deal of time.—W. J. PALMER, Pharmaceutical Chemist, King's Lynn."

SPECIAL TERMS TO CASH BUYERS FROM THE INVENTOR,

T. S. COCKING, Chemist,
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TRADE MARK.—SANCTIONED BY HER MAJESTY'S GOVERNMENT

HEALTH,
STRENGTH,

DR. LALOR'S
PHOSPHODYNE
TRADE PHOSPHODYNE MARK.

AND
ENERGY.

Protected under the Trade Marks Act (38 & 39 Vict., chap. 91. Enacted by the "Queen's Most Excellent Majesty," 20th August, 1875.

PLEASANT to the Taste. The only Safe, Prompt, and Reliable PHOSPHORIC REMEDY for Overworked Brain, Worry, Anxiety, Excitement, Late Hours, Business Pressure, Nervous Prostration, Wasting Diseases, Asthmatic, Consumptive, Stomach, and Liver Complaints, Impaired Nutrition, Impoverished Blood, Premature Decline, and all Morbid Conditions of the System dependent upon the deficiency of Vital Force.

PHOSPHODYNE

Purifies and Enriches the Blood; Clears the Skin; Thoroughly Invigorates the Brain, Nerves, and Muscles; Re-energises the Failing Functions of Life, and thus Imparts Energy and Fresh Vitality to the Exhausted Nervo-Electric Force; and Rapidly Cures every form of Nervous Debility, Paralysis, Nervous, Mind, and Heart Diseases, from whatever cause.

IMPORTANT TO EUROPEANS VISITING OR RESIDING IN HOT CLIMATES.

DR. LALOR'S PHOSPHODYNE has an enormous Sale in India, China, Africa, and other Hot Climates, from its possessing in the most perfectly assimilable form the essential Vitilising properties of **PHOSPHORUS**, which re-animates the Exhausted Functions of Life when impaired by Heat or other causes. A very large number of Testimonials, from all parts of the World, freely offered from private persons, Naval, Military, Scientific, and Professional Men who are well known, speak of its marvellous powers in Nervous Debility, **WANT OF STAMINA, FEVERS, MALARIOUS DISEASES**, and as a **LIVER TONIC**.

SOLD IN BOTTLES, AT 4/6 AND 11/-,

BY ALL EXPORT, WHOLESALE, AND RETAIL MEDICINE VENDORS THROUGHOUT THE WORLD.

CAUTION.—The name, DR. LALOR'S PHOSPHODYNE, is blown in the glass of each bottle, and the GENUINE PHOSPHODYNE is manufactured only at DR. LALOR'S Laboratory, London, England. *Medicine Vendors are hereby warned that Legal Proceedings will be taken against all Persons selling the Fraudulent Imitation after this Notice.*

IMPORTANT NOTICE.—Every Bottle bears the British Government Stamp, with the words, **Dr. Lalor's Phosphodyne**, London, England, by Order of Her Majesty's Honourable Commissioners. **If not, it is a Forgery.**

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The Sole Proprietor and Originator of **PHOSPHODYNE**,

Is prepared to Prove the following Facts in any Court of Law in London, England, and he respectfully requests Medicine Vendors and the Public to assist the cause of Truth and Right, against Falsehood and Fraud:

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PHOSPHODYNE was discovered and so named by **DR. R. D. LALOR**, in the year 1862, and the Title and Prospectus was duly Registered at Stationers' Hall, London, in the year 1864. This Title and Prospectus, and four of Dr. Lalor's Testimonials (the dates of which have been fraudulently altered from 1865, 1866, and 1867, as in the Original Letters, to 1870), have been Basely Pirated by the parties Advertising the False Phosphodyne. Copies of Original Letters, with Prospectus, sent post free.

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THE ORIGINAL TAYLOR'S PATENT SUPER A1 FLAX LINT

(INVENTED 1850).

This LINT, unequalled by any other, has been before the Public for about Thirty Years, during which time it has been most extensively used in the British Army and Navy, in a large number of British and Foreign Hospitals, and by the Medical Profession generally.

Its Advantages are, that being made from fine Flax Fibre it is perfectly free from all impurities, and, for Surgical purposes especially, is infinitely superior to Lint made from any other material.

Manufactured by W. G. TAYLOR, Charford Mill, BROMSGROVE.

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Taylor's Super A1 Flax Lint,
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SPINNERS AND MANUFACTURERS OF
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 AND ROLL BANDAGES,
 WHEAT BRIDGE MILLS, NEAR CHESTERFIELD;
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R. & SONS respectfully call attention to their No. 1 FLAX LINT, made from PURE LINE Yarn, making a beautifully soft, fine Lint. Their No. 3, 0, and 00 COTTON LINTS are used in the largest Hospitals of the United Kingdom. No. 0 SURGEON'S LINT is a medium quality, and well adapted for Export. No. 1 SURGEON'S LINT is a beautiful Lint for private practice, and always gives satisfaction.

Our LINTS TEAR EASILY, but Nos. 00, 0, and 1 Surgeons' more readily across the Fabric.

PARIS EXHIBITION, 1878.

The "LANCET," August 24, 1878, says:—

"Messrs. ROBINSON & SONS, of New Brampton, near Chesterfield, have exhibited some beautiful specimens of Lint, which attract the attention of French and foreign surgeons. They look very soft and silky. Their flax and cotton samples are equally good. These exhibitors especially draw the attention of French medical men (who employ the thready French lint) to their cheap cotton lint, which is employed in the majority of English hospitals, and which is cheap and easy to apply. They lay great stress on the care they take to rid the lint of chlorine, acids, or other irritating substances. They have also a collection of bandages very remarkable for their flexibility and facility of application. They look comfortable to wear, and ventilation must take place better with them than through a more closely-woven tissue."

DR. H. A. MARTIN'S

PURE RUBBER BANDAGES (GENUINE)

For Ulcers and other Diseases of the Legs, and certain Diseases and Injuries, and Result of Disease and Injury of Joints.

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Subject to 25 per cent. Discount to the Trade, Monthly account.

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See "SURGICAL USES OTHER THAN HÆMOSTATIC OF THE STRONG ELASTIC BANDAGE," by H. A. MARTIN, M.D. Boston. Post free, 7d.

Each Bandage bears the signature of Dr. H. A. MARTIN, without which none is genuine, and can only be had from

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After a successful use of these Capsules since 1862, during which time they have been recommended, we can confidently pronounce them to be the most effective remedy known. The Peruvian Capsules are a combination of Balsam of Peru with the most effective and active agents, to replace with advantage the Copaiba, Cubeb, &c. We solicit from our brother Chemists their co-operation, by taking from those who supply them NONE BUT WELL-KNOWN PURE ARTICLES. We also call their attention to the profits we allow, always more than half, and, most often, two-thirds or more; for we know, having ourselves been Chemists, that there must always be a good profit for Chemists, as their sales are in general small; thus onr—

	Trade. Retail.		Trade. Retail.
Large Peruvian Mixture Capsules	1/- box 3/-	Cubeb Oil and Copaiba	-/8 box 2/0
Do. French Cop. Capsules,		No. 6 best ordinary size	-/6 " 1/6
cost the Chemists	.. -/9 " 2/6	Cop. Cubeb and Rha-	
Denoval's Injection, to ensure a radical cure in two days (see directions).		tany	.. -/6 " 2/-
Trade Price, 18/- per dozen, to be retailed at 2s. 9d. stamped.			
Copaiba No. 0 Green Labels, best 6/- per doz.; No. 1, 5/6; No. 2, 5/-.			
Ditto ditto loose	9/6		8/6 7/6.
Santal Oil Capsules, 25/- per doz., 36 in each box; 5/6 per 100.			

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SHAPED PLASTERS.

Emp. Belladonna, Opium, &c.

Spread on White Leather, with

ADHESIVE MARGIN.

Shape	Size	Shape	Size
Square	.. .. 4½ x 5½	Oblong	.. .. 6½ x 11
Oval	.. .. 5 x 7	"	.. .. 7 x 13½
Saddle	.. .. 4½ x 9½	Heart	.. .. 5 x 7
Oblong	.. .. 4½ x 7	"	.. .. 6½ x 8½
"	.. .. 5½ x 9½	For Breast	.. .. 7 diameter
"	.. .. 6 x 8½		

Terms on application to the Sole Manufacturers,

GOOSEY & ROGERS, Chemists,
 Stepney, London, E.

Can be ordered through any Wholesale House.

THE CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION, LIMITED.

CAPITAL, £50,000,

In 5,000 Shares of £1 each, and 4,500 Shares of £10 each.

Of the latter, £1 to be paid on application and £9 on allotment. The remainder of the £1 shares are being allotted at a premium of 5s. per share.

Incorporated with Limited Liability, under the Companies Acts of 1862, 1867, and 1877, whereby the liability of Shareholders is strictly limited to the actual amount of their respective shares.

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 WALTER BELSEY EDWARDS, Chemist, Wood Green, N.
 GEORGE GOLDFINCH, Chemist, Hendon, N.W.
 W. T. BURNS, Esq., The Hall, Stonefall, Knaresborough.

Managing Director.—THEODORE ROBERT ANCELL, Chemist.

Solicitor.—WILLIAM HORSLEY, 11 Bull and Mouth Street, E.C.

Bankers.—LONDON AND SOUTH-WESTERN BANK, HOLLOWAY BRANCH.

Secretary.—H. T. BUTLER.

Offices and Factory.—45 GIFFORD STREET, CALEDONIAN ROAD, LONDON, N.

ABRIDGED PROSPECTUS.

The objects of this Association are—First, to manufacture and supply only to Shareholders who are Chemists, and to Hospitals, Aerated and Mineral Waters of specified formulæ and guaranteed quality.

Secondly, to deal generally in the Waters of the various mineral springs in Great Britain.

The only contract which has been entered into is a contract between the Company and Mr. T. R. Anell, dated on or about the 6th August, 1878, which may be seen in the 46th Article of Association, which may be had at the Office of the Company.

At a Special Meeting held at Cannon Street Hotel, on October 23, 1879, it was resolved to increase the capital to £50,000 by the issue of 4,500 shares of £10 each at par, £1 to be paid on application and the remainder on allotment. The purchase of the Montpellier Estate at Harrogate, upon which is situated the famous Kissengen and Sulphur Springs, has been completed, and preparations are now being made for supplying generally the waters of these springs.

The Directors hope soon to open a branch manufactory of Mineral Waters at Harrogate, as the water is eminently suitable, being of great purity. This will prove advantageous to Chemists in the North, saving carriage, &c.

The Estate comprises 8,600 square yards, with frontage on three sides, and being situated in the heart of Harrogate, a rapidly-increasing town, is every day becoming of more value. Preference is given to these springs, especially the Kissengen, which is the only aperient saline chalybeate spring in England. The buildings on the Estate are of massive stone, and consist of Pump Room, Assembly Room, and Bath Rooms, which by a small outlay can be considerably increased in number, to meet the demand, which is yearly increasing.

It being found necessary to considerably enlarge the factory owing to the increasing business, the 70 years' lease of the adjoining property has been purchased on very advantageous terms. The greatest care has been taken in fitting up the Factory with the most improved machines, fitted with glass plungers and silver-lined cylinders, in order to entirely prevent metallic contamination.

A perfect system of filtration has also been adopted.

The Association is conducted strictly on co-operative principles—terms, cash.

Present Price List of Manufactured Waters.

ORDINARY BOTTLES.		Per Doz.	SYPHONS.		Per Doz.
		s. d.			s. d.
Carbonated Water	.. .. .	0 10	Carbonated Water	.. .. .	1 3
Soda ditto, 5 grains	.. .. .	0 10	Soda ditto, 10 grains to the pint	.. .. .	1 3
Soda ditto, B.P. 15 grains	.. .. .	0 10	Soda ditto, B.P. .. .. .	.. .. .	1 3
Potash ditto, B.P. 15 grains	.. .. .	0 10	Potash ditto, B.P. .. .. .	.. .. .	1 3
Potash ditto, 5 grains	.. .. .	0 10	Potash ditto, 5 grains	.. .. .	1 3
Seltzer ditto	.. .. .	1 0	Seltzer ditto	.. .. .	2 0
Lithia ditto, B.P. 5 grains	.. .. .	1 9	Lithia ditto, B.P. .. .. .	.. .. .	2 6
Lithia and Potash Water	.. .. .	1 9	Lithia and Potash Water	.. .. .	2 6
Magnesia ditto	.. .. .	1 9	Magnesia ditto	.. .. .	2 6
Quinine ditto	.. .. .	1 9	Quinine ditto	.. .. .	2 6
Iron and Quinine Water	.. .. .	1 9	Iron and Quinine ditto	.. .. .	2 6
Mineral Acid ditto	.. .. .	1 9	Mineral Acid ditto	.. .. .	2 6
Lemonade	.. .. .	1 0	Lemonade ditto	.. .. .	2 0
Lime Fruit Juice	.. .. .	1 3	Ginger Beer.. .. .	.. .. .	2 0
Ginger Ale	.. .. .	1 3	Ginger Beer, stone	.. .. .	2 0
Nectar	.. .. .	1 0	Ginger Beer, glass	.. .. .	1 0
Bark Beer	.. .. .	2 0			
Ginger Beer, stone	.. .. .	0 10			
Ginger Beer, glass	.. .. .	1 0			

The Waters are supplied at 1s. per gross less in Codd's Patent Bottles. Splits are charged 6d. and 8d. per dozen.

Bottles are charged at the rate of 18s. per gross; Codd's patent ditto at 36s. per gross; and Syphon at 24s. per dozen.

All goods are packed in Bin Cases. Members can have the Waters supplied in plain bottles and with plain labels if desired.

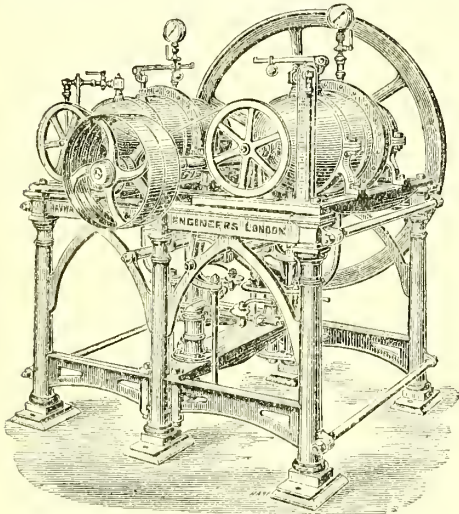
Arrangements have been made for the present with Messrs. Carter, Paterson & Co. to deliver in London and the Suburbs, at the rate of 3d. per dozen, Splits 2d. per dozen, Syphons 6d. per dozen; but when business justifies them, the Directors will make arrangements to deliver in the Company's own vans. Country goods are forwarded by Messrs. Pickford & Co.

A Prospectus will be forwarded upon application.

SODA WATER MACHINERY,

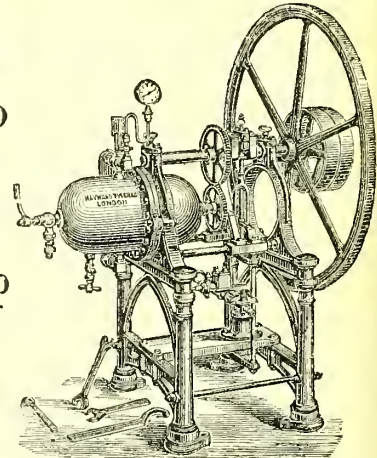
With all its Newest Features and Improvements.

Show Rooms: 84, 85 WHITECROSS STREET, LONDON.



STRONG DOUBLE CYLINDER AND PUMP SODA WATER MACHINE.

GOLD MEDAL
AWARDED
FOR
EXCELLENCE OF
WORKMANSHIP
AND FINISH,
PARIS, 1878.



CONTINUOUS PROCESS BRAMAH SODA WATER MACHINE.

HAYWARD TYLER & CO.

E. S. HINDLEY,
BOURTON, DORSET.

SMALL STEAM ENGINES

(Economical in Fuel and in First Cost).

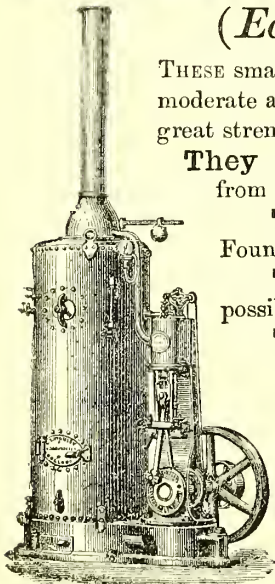
THESE small Engines are specially adapted for driving Soda Water Machinery wherever a moderate amount of cheap power is required. They combine simplicity, compactness, and great strength, are easily managed, occupy very little space, and require no fixing.

They are available at any time, as steam can be got up in half an hour from cold water.

They require no fixing, being erected on a Cast-Iron Water Tank Foundation.

They are simple in construction, and, having as few working parts as possible, are not likely to get out of repair.

They can be driven by a boy. Can be made to burn GAS instead of Coal.



Nominal horse power...	1	1½	2	3	4	5	6	8	10
Engine and Boiler combined ..£	39	47	55	70	88	100	115	135	157
Engine and Boiler on three Wheels, with Handle.....£	41	49	57	75	95	110	125	145	167

ALL SIZES IN STOCK—DELIVERED FREE TO ANY STATION

Illustrated Catalogues with full particulars on application.

PATENT SODA WATER BOTTLES.



BARRETT & ELMERS,

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We are bringing out some

By Royal Letters Patent, Dated June 2, 1874, No. 1923.

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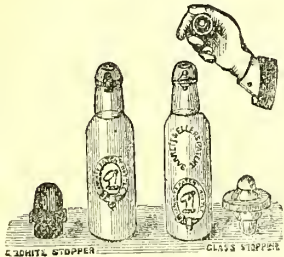
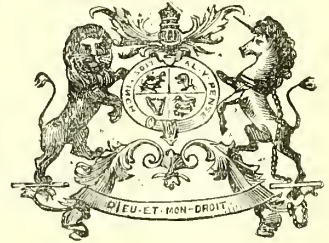
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STOPPERS

FOR THE APPROACHING SEASON,
MUCH CHEAPER,

And with great Improvements on existing Patents.

Before giving your orders, please write for samples.



BARRETT & ELMERS' FILLING MACHINES & SYRUP PUMP COMBINED

Have been proved to be

The Best and Cheapest in the Market, of which now upwards of 1,000 have been Sold.

IMPORTANT NOTICE.

Should the Bottles break, the Stoppers may be newly fitted up and used again in fresh Bottles, thereby being a great saving and advantage over some other Patents.

TO THE MINERAL WATER TRADE.

DISCS FOR ALL PATENT BOTTLES.

These are a great convenience, strengthening the Cap Labels, and keeping the lips of the Bottles free from dirt. The following sorts are kept in stock:—

"PLAIN" DISCS,

Size of this Circle, on Stout Boards, no Printing.

Price—5,000, 8d.; 10,000, 7d.; 25,000, 6d.; 50,000, 5d.; 100,000, 4d. per 1,000.

"GROTESQUE" DISCS,

Printed on good Cardboard in Blue Ink; they consist of a great variety of Amusing Figures.

Price—5,000, 1s.; 10,000, 11d.; 25,000, 10d.; 50,000, 9d.; 100,000, 8d. per 1,000.



"MOTTO" DISCS,

Printed on Stout Boards in Black Ink; they consist of an immense variety of Mottoes and Well-known Sayings.

Price—5,000, 9d.; 10,000, 8d.; 25,000, 7d.; 50,000, 6d.; 100,000, 5d. per 1,000.

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Printed on good Cardboard, Lake Ink; they consist of an immense number of Quotations from Shakespeare, Byron, Milton, Burns, &c., &c.

Price—5,000, 1s.; 10,000, 11d.; 25,000, 10d.; 50,000, 9d.; 100,000, 8d. per 1,000.



All the above are assorted in Boxes of 5,000, each Box containing an immense assortment.

Prices and Samples submitted for all kinds of Labels, and also for Show Cards, Circulars, Price Lists, and all printed matter required in the business.

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**RANDALL, SLOPER & CO.,
SODA WATER MANUFACTURERS,
SOUTHAMPTON.**

GOODS FORWARDED CARRIAGE PAID WITHIN 80 MILES OF SOUTHAMPTON, ON ORDERS OF 2 GROSS AND UPWARDS.

Soda, Seltzer, Potash & Aerated Waters supplied in Syphon Bottles.

Importers of Hunyadi János, Friedrichshall, Vichy, Pullna, Carlsbad, and other Foreign Mineral Waters, supplied at Prices which will bear comparison with London Rates.

PRICE LISTS FORWARDED ON APPLICATION.

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FREDERICKSHALL (5 Cases, 6d. per Case less)	24/6 Case, 30 Bot.	34/ Case, 60 1/2-bot
APOLLINARIS (20 Hprs., 1/- per Hpr. less)	25/ Hpr., 50 "	39/ Hpr., 100 "
Hampers free, carriage paid; Empty Bottles, 6d. per dozen.		
HUNYADI JANOS (10 Cases, 1/2-bts., 5/- less)	10 Cases, 1/2-bts., 5/- each less	
SELTZER	30/- Case, 25 bts. ...	50/- Case, 50 1/2-bts.
PULLNA	11/6 Hpr., 25 "	15/6 Hpr., 50 "
VICHY	18/- Case, 20 "	30/- Case, 50 "
CARLSBAD	31/- " 50 "	27/- " 50 "
KISSENGEN	37/6 " 50 "	
SCHWALLBACH	45/- " 50 "	
HOMBURG	27/6 " 50 "	
WILDUNGEN	37/6 " 50 "	
CARLSBAD SALTS, 1/2-Bots., 21/- per doz.; 1-Bots., 41/- per doz.; Bots., 80/- per doz.	40/- " 50 "	

FINE NORWEGIAN BLOCK ICE.

ORIGINAL BLOCKS, 2 to 3 cwt. each 2/6 per cwt.
 1/2 cwt. to 2 cwt. 4d. per lb. 1 Under 1 cwt. 1d. per lb.
 Packing and Mats for Original Blocks free; 3d. each allowed for Mats if returned in good condition.

PRINTED DIRECTIONS for STORING ICE sent free on application.

**W. B. HARRISON,
Importer of Ice & Mineral Waters,
6 BRIDGE STREET, SUNDERLAND.**

**J. H. CUFF'S
MINERAL WATERS,**

Atkinson St., Deansgate,
MANCHESTER.

**SODA WATER
SELTZER WATER
POTASS WATER**
15 grs.

**LEMONADE
GINGER ALE
LITHIA WATER**
5 grs.

**LITHIA WATER WITH POTASS.
QUININE TONIC WATER, &c., &c.**

SENT IN BIN CASES. NO PACKING REQUIRED.

Carriage paid on 12 Doz. assorted, or 6 Doz. of one kind.

Priced Lists free on application.

DISCOUNT ACCORDING TO QUANTITY.

SPECIAL TERMS FOR EXPORT ORDERS.

Attention is directed to Cuff's Soda, Seltzer, and Potass Waters, and Ginger Ale (the latter a speciality), all of which command a very extensive and ready sale.

Cuff's Waters are prepared expressly for a High-class Family Trade.

LAMPLOUGH'S EFFERVESCING PYRETIC SALINE.

HAVE IT IN YOUR HOUSES AND TRAVELS, USING NO OTHER SALINE: It gives instant relief in Headaches, Sea or Bilious Sickness, and quickly cures the worst form of Eruptive or Skin Complaints. The various diseases arising from Constipation, the Liver, or Blood Impurities, Inoculation, the results of breathing air infected with Fevers, Measles, or Smallpox, are frequently prevented and certainly cured by its use.

The sale of these Saline Salts having greatly increased during the past few years, I beg most cordially to thank those who sell and recommend the same, and also to inform intending dealers that they will find Messrs. BARCLAY, EDWARDS, MAW, NEWBERRY, SANGER, SETTON, and the Wholesale Houses generally, ready to supply their wants. This Advertisement is found useful in consequence of the trouble, cost, and inconvenience in the keeping and collection of numerous small accounts. *Note.*—The Name, Trade Mark, Labels, Wrappers, &c., are all Registered and Entered at Stationers' Hall. **113 HOLBORN HILL, LONDON, E.C.**

SPECIAL NOTICE.—Medical Gentlemen having fever cases, and desirous of trying the Saline, can have a single bottle at wholesale prices by sending their cards.



PARNELL'S CHALYBEATE SALINE.

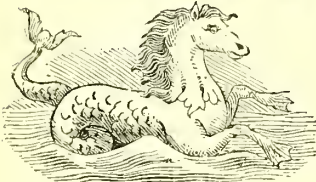
An Agreeable Cooling Febrifuge and Tonic Aperient Effervescent Salt, being a Chalybeate Water in a solid form.

ANALYTICAL REPORT BY DR. T. REDWOOD.

As the result of a careful analysis I am enabled to state that Parnell's Chalybeate Saline is what it purports to be, a mild Chalybeate and tonic, possessing aperient and alterative properties to a sufficient extent to render it an efficient, and as I believe, a valuable medicine. The ingredients are judiciously combined so as to yield, when mixed with water, an agreeable effervescent draught. **T. REDWOOD, Ph.D., F.I.C., F.C.S.,** Professor of Chemistry and Pharmacy to the Pharmaceutical Society of Great Britain.

To be obtained in Bottles, 2s. 6d., from SANGER & CO., NEWBERRY & SON, and all Wholesale and Retail Chemists, and from

26 BUCKINGHAM PALACE ROAD, S.W.
Show Cards and Handbills sent free on application. Paris Agent—**M. SWANN, Rue Castiglione.**



REGISTERED TRADE MARK.

INDEX TO ADVERTISEMENTS,

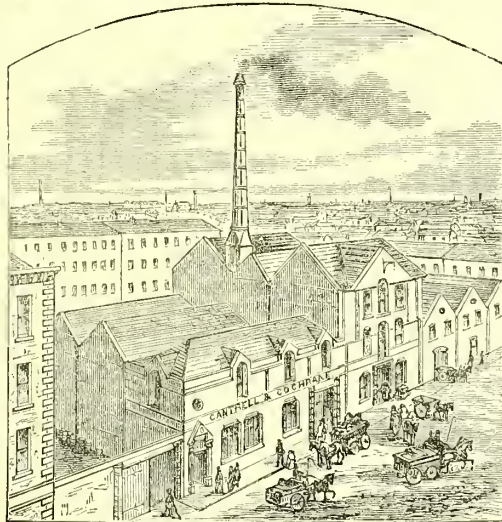
See pages 35, 36.

CANTRELL & COCHRANE,

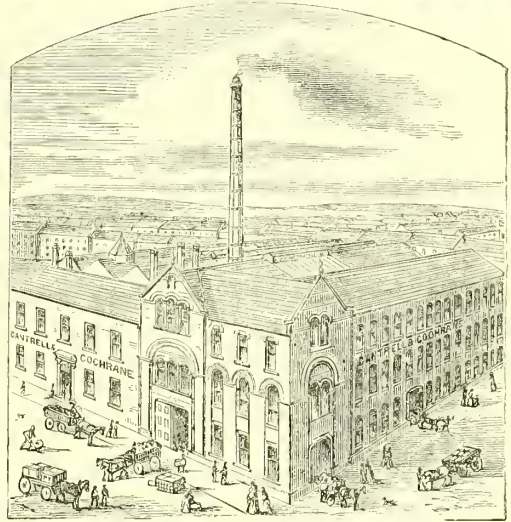
ORIGINAL MAKERS OF THE JUSTLY CELEBRATED

AROMATIC GINGER ALE.

ALL OUR DRINKS ARE NON-ALCOHOLIC.



WORKS, NASSAU PLACE, DUBLIN.



WORKS, CROMAC BUILDING, BELFAST.

ALL OUR DRINKS ARE NON-ALCOHOLIC.

MAKERS BY APPOINTMENT TO HIS EXCELLENCY THE LORD LIEUTENANT OF IRELAND.

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Inman Steam Ship Company.
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The following List of their preparations is worthy of the attention of Chemists:—

AROMATIC GINGER ALE.

Kali, or Potass Water.
Soda Water.
Seltzer Water.
Lithia Water.

Lemonade.
Summer Beverage.
Lime Juice.
Lime Juice Syrup.

Aerated Sarsaparilla.
„ Dandelion.
„ Quinine.
Carrara Water.

“MONTSERRAT” LIME JUICE CHAMPAGNE (Aerated).

The Machinery and Appliances used in the Laboratory and Factory for their production are of the most approved construction; the Water and all the Materials used are of the highest degree of purity; and as the greatest care is exercised in their manufacture, they may be relied on as absolutely free from organic and mineral contamination.

Testimonials from the MEDICAL PROFESSION, from accomplished ANALYSTS, and from PUBLIC MEN eminent in Literature, Science, and Art, at once give an assurance of the excellence of these Beverages, and show the universal esteem in which they are held.

INTERNATIONAL RECOGNITION has been given to their merits at various Exhibitions all over the World. Eight Gold and Prize Medals have been awarded.

All Goods ordered for Export are specially prepared and packed for their respective destinations, and are guaranteed to retain their qualities unimpaired. Terms and Prices may be obtained on application to—

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PURVEYORS TO HER MAJESTY'S IMPERIAL HOUSES OF PARLIAMENT.

Established 1857.]

BISHOP'S

GRANULAR

EFFERVESCENT CITRATE OF MAGNESIA

This perfectly white and delicately clean Preparation,

Prepared with Salts obtained from Pure Fruit Juices of Lemons and Grapes,



Is the most delicious of all the effervescent drinks which have been offered to the public since Mr. ALFRED BISHOP first invented this combination in 1857. It may be taken with perfect safety all the year round, and, besides being a most refreshing beverage, it cools the blood and acts as a mild aperient. It is now prescribed by thousands of physicians as the pleasantest and most efficient aid to **PERFECT HEALTH**; and an imitation of the product has been introduced into the British Pharmacopoeia by the General Medical Council.

It is the best and purest draught which can be taken as a morning restorative, while for delicate persons and young children it is invaluable as an alternative. It ensures a regular action of the skin and of all the organs of the body, and thus invigorates the system instead of exhausting it, as is the case with more violent medicines. It keeps better than other effervescent.

The best chymists in Great Britain and the Colonies keep no other "Granular Effervescent Citrate of Magnesia" than "Bishop's." The reason for this universal preference is that, since its introduction in 1857, it has been found that none of the imitations of this preparation, originally introduced by Mr. Bishop, have been able to compare with it in reliability as a medicine, or in purity and freshness of flavour as a cooling drink. Full directions on each bottle.

Dr. REDWOOD, Professor of Chymistry at the Pharmaceutical Society of Great Britain, thus writes:—"I have examined a great many samples of Mr. Bishop's granulated preparations, obtained at various times and from different sources, and have found them to be very uniform in character, fully charged with Carbonic Acid, and obviously made with great care and accuracy."

An old Correspondent writes:—"I have never found your Citrate of Magnesia injurious to health; on the contrary, I should be sorry to be without it. I have used it now for nearly twenty years, and take a teaspoonful every morning in a glass of cold water. I require no other medicine."

Sold by all Chymists, in Bottles, at 1s. and 2s. 6d.

Established 1857.]

BISHOP'S

[Established 1857.]

GRANULAR EFFERVESCENT CITRATE OF POTASH.

Contains eight grains of this admirable anti-febrile salt in each drachm, keeps well, and yields a delicious effervescent draught. It is more efficient more economical, and more convenient than the ordinary alkaline waters, and much superior to the various mixed powders, which consist mainly of Tartrate of Soda.

A customer writes:—"It is the nicest effervescent preparation I have ever tasted, and is infinitely pleasanter than the bottled waters."

Dr. G. O. DREWRY, in his "Common Sense Management of the Stomach," recommends for Indigestion, Constipation, &c., the "GRANULAR EFFERVESCENT CITRATE OF POTASH" as a very agreeable, mild, and cooling laxative, when taken in doses of one dessert spoonful in half-a-pint of water before breakfast.

Observe that the Name, Trade Mark, and Address of the Maker is on each Bottle.

ALFRED BISHOP, Chymical Factory, Speck's Fields, Mile End New Town, LONDON.

BISHOP'S EFFERVESCENT PORTABLE MINERAL WATER SALTS, of Carlsbad, Seltzer, Pullna, Vichy, Lithia, &c. Far more convenient, and much more economical, than the bottled waters. With directions for use.

Sold by all Chymists, in Bottles, at 1s., 1s. 6d., and 2s. 6d.

MILLS & CO.

BOURNE WATER,

THE PUREST IN ENGLAND.

MILLS & CO., Manufacturers of the Original BOURNE ARTESIAN AERATED WATERS.

BOURNE SODA WATER, unequalled for its natural Alkalinity.

BOURNE POTASH WATER—a Special Remedy for Rheumatism and Gout.

BOURNE LEMONADE—Superior Quality, made from the Fruit.

BOURNE AROMATIC GINGER ALE—a Fine Tonic.

BOURNE LITHIA WATER—Specific for the Gout. Guaranteed to contain a fixed quantity of Lithia.

BOURNE SELTZER WATER—The natural Alkalinity of the Bourne Artesian Well Water, combined with Artificial Salts, produces one of the best articles made. This Seltzer Water is well adapted for invalids for its purity.

When taken at dinner-time, it promotes digestion. Early in the morning, slightly aperient.

R. M. MILLS & CO., MANUFACTURERS, BOURNE. Messrs. Padgett & Son, Wine Merchants, 27 Motcombe Street, and Messrs. Hardy & Co., Chemists, 42 Fenchurch St., corner of Mincing Lane, Wholesale Agents, London. And their appointed Agents throughout the Kingdom.

NEW AND IMPORTANT DISCOVERY.

GINGER ALE,

From Pure Jamaica Ginger.

The difficulty of using Ginger in the manufacture of "Ginger Ale," and at the same time having a CLEAR and SPARKLING DRINK, has, after much labour and expense, been thoroughly overcome by

Messrs. HARSTON & CO., of LEEDS,

And they are now able to place before the public a BRIGHT and SPARKLING DRINK, made purely from genuine Ginger Root.

TRADE MARK.



TRADE MARK.

Registered Label.]

[Registered Label.

HARSTON & CO'S **Ginger Ale,** from Pure Jamaica Ginger. Carries a beautiful creamy head.

HARSTON & CO'S **Ginger Ale,** from Pure Jamaica Ginger. Wholesome and Refreshing.

HARSTON & CO'S **Ginger Ale,** from Pure Jamaica Ginger. A safe Drink for Ball-room or Cricket-field.

HARSTON & CO'S **Ginger Ale,** from Pure Jamaica Ginger. For railway travelling, driving or exposure to cold.

HARSTON & CO'S **Ginger Ale,** from Pure Jamaica Ginger. Has wonderful nourishing properties.

HARSTON & CO'S **Ginger Ale,** from Pure Jamaica Ginger. Restores Circulation; is Warming and Comforting.

HARSTON & CO'S **Ginger Ale,** from Pure Jamaica Ginger. Is Non-Intoxicating.

HARSTON & CO'S **Ginger Ale,** from Pure Jamaica Ginger.

Recommended by the Medical Profession for Consumptive Patients.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER

(GUARANTEED PURE AND FREE FROM CAPSICUM).

This highly concentrated Essence has the purest Jamaica Ginger flavour and aroma, is highly adapted for the manufacture of Aërated Waters, and for all dietetic, medicinal, and pharmaceutical purposes.



THE COST of this Essence in the manufacture of Ginger Beer, &c., is a little under 2½d. per dozen bottles. Dose (when used medicinally), 10 or 15 drops to half-a-teaspoonful in water.

Trade Price, 5s. per lb.

THE COMPOUND ESSENCE

(GUARANTEED PURE AND FREE FROM CAPSICUM).

Trade Price, 5s. 6d. per lb.

This Essence, which is an addition of *Vanilla, Lemon, and other flavours* to the above, is strongly recommended for the manufacture of Ginger Beer, Wines, &c., to which it imparts with the GINGER a PECULIARLY FINE FRUITY FLAVOUR and AROMA. THE COST of this Essence in the manufacture of Ginger Beer, &c., is a little under 3d. per dozen bottles.

Directions for the use of this and the preceding Essence.

For GINGER BEER, CORDIALS, &c., 8 fluid ounces will be required to make inclusively one gallon of Syrup, or 1 in 20. For WINES, one pint of Essence will flavour 5 gallons, or 1 in 40.

THE COMPOUND FORTIFIED ESSENCE Specially adapted for the Manufacture of GINGER ALE.

Trade Price, 5s. 6d. per lb.

THIS ESSENCE, besides its special adaptation as above, is strongly recommended for the manufacture of GINGER BEER and other kinds of Aërated Beverages, especially in those cases where it is desired to impart to those drinks at a SMALL COST the FULLEST amount of PUNGENCY with the FINE GINGER AROMA and FRUITY FLAVOURS of the LAST-MENTIONED ESSENCE.

DIRECTIONS.—For the manufacture of GINGER ALE, one pint will be required inclusively for four gallons of Syrup, or five fluid ounces in each gallon. For GINGER BEER or GINGERADE, one pint in five gallons Syrup, or four fluid ounces in each gallon. THE COST of this Essence in the manufacture of GINGER ALE is 1½d. per dozen bottles, and for GINGER BEER or GINGERADE a little under 1½d. per dozen bottles.

MEDICAL AND OTHER OPINIONS ON THE SOLUBLE ESSENCE:—

“Singularly free from resin.”—*The Lancet*, London, July 13th, 1878.

“It is a pure, elegant preparation, and is free from resinous matter. Ginger Beer made with it is clear and transparent, has the aroma and flavour of the Ginger, and is very pleasing to the palate.”—*Medical Times and Gazette*, London, March 16th, 1878.

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“It is a Pharmaceutical Desideratum. Ginger Beer manufactured from this ESSENCE has the purest Jamaica Ginger Aroma, distinguishable as soon as poured out. It is a beverage fit for any gentleman's table, and ought to attain great popularity.”—*The Chemist and Druggist*, London, November 15th, 1877.

GINGER ALE EXTRACT

Supplies all Colouring and Flavouring. 4/- per lb.

PREPARED BY

W. HAY, Manufacturing Chemist,
4 REGENT'S TERRACE, ANLABY ROAD, HULL.

MONDOLLOT & CO., Limited.

BEFORE PURCHASING YOUR

SODA WATER MACHINERY

Write for Mondolot's CATALOGUE, which will be sent post free on application.

13 LITTLE JAMES STREET, BEDFORD ROW, LONDON, W.C.

Natural Mineral Waters of "Apollinaris," "Hunyadi Janos," Vals,
Vichy, Carlsbad, Seltzer, Kissingen, Homburg, Pullna, Friedrichshall, &c., direct from the Springs.

Also the **ARTIFICIAL MINERAL WATERS** prepared by Dr. STRUVE & CO., at the Royal German Spa, Brighton, and R. ELLIS & SON, Ruthin.

Appointed Agents for the celebrated "APOLLINARIS WATER."

W. BEST & SONS, Foreign Wine, Spirit, and Mineral Water Merchants, 22 Henrietta Street, Cavendish Square, London, W.



LONDON, 1862.



LONDON, 1873-74.



PARIS, 1867-78.



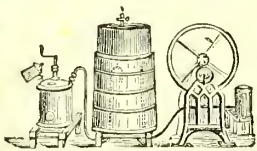
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SODA WATER MACHINERY,

And all accessories connected with the business.

HANDSOME MARBLE COUNTER FOUNTAINS,

For dispensing Iced Fruit Drinks.

MACHINES FROM 30 POUNDS.

Sole Agents for Codd's Patent Globe-Stoppered Soda Water Bottles.

In use by over 500 established Soda Water Makers in England alone.

SOLE MAKERS OF THE IMPROVED LONDON-MADE SYPHON, 2s. each in quantities.



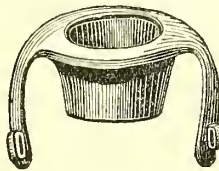
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CATALOGUE FORWARDED FREE.

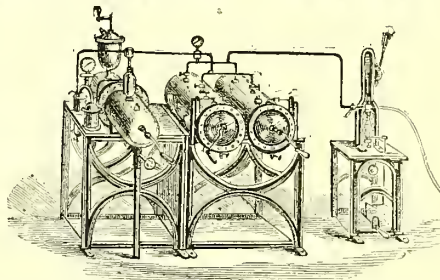
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SODA-WATER MACHINERY.

PATENT NOZZLE



FITS ANY BOTTLE.



SODA WATER MACHINE COMPLETE, WITH RACK.

CONE STOPPER.



BALL STOPPER.



DAVENPORT'S NOZZLE AND STOPPER is the best Patent for utilising old Bottles, and converting them into Patents. No Corks or Wire, and saving entire cost in one season. The New Nickel-plated Nozzle makes this the most attractive Patent in use. Trial allowed. Prices lowered. Send for Samples. New Bottles ready fitted for use now supplied.

Catalogues of Soda-Water Machines, Ice-Making Machines, Engines, Boilers, Copper Cylinders, Syphons, Seltzogenes, Filters, &c., and all accessories to the Soda-Water Trade.

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" " **BARRETT & ELLERS' Patent Stoppers in Lamont's Bottles.**

Illustrated Catalogues, of sixty-four pages, post free to all parts of the World.

DAVENPORT & CO., Soda-Water Machinists and General Machinery Agents,
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ZOEDONE

*A Delicious, Sparkling, Phosphated Iron Beverage.—Non-Alcoholic.—
A Brain and Nerve Tonic, and Nutrient Tonic Beverage.*

RECOMMENDED BY THE FACULTY.

From "The British Medical Journal," August 30, 1879.

Among the various medicinal and other exhibits at the recent meeting of the British Medical Association at Cork, to some of which we shall hereafter direct attention, there was one which, to our own judgment, bore away the palm. We refer to the aerated and phosphated iron beverage which Messrs. Evans & Co. of Wrexham manufacture for David Johnson, Esq., F.C.S., the patentee.

We had ample opportunities of testing its refreshing and invigorating qualities during our sojourn in the fair city of the extreme south-west; and we can confidently recommend it to the attention of physicians and others who are occasionally at a loss what to direct their patients to take when parched by feverish thirst or depressed by exhausting ailments—notably in cases where alcoholic stimulants would be prejudicial. We feel that it would be found exceedingly useful in mitigating the discomfort oftentimes experienced by those suffering from the thirst, loss of appetite, and general *malaise* connected with the last stage of phthisis and chronic bronchitis.

We would also, from our observations and experience, advise its introduction into clubs, taverns, and places of public amusement, where it would judiciously supersede vinous and alcoholic stimulants, seeing that it contains, as its name implies, life-giving ingredients in a form easily assimilated.

Every Chemist that has introduced ZOEDONE has found a large and regularly increasing sale for it. It is put up in Champagne Bottles, and there is no trouble with empties, as the bottles are included in the price. Customers supplied with Pamphlets for distribution; also a special Circular for medical men stating the formulæ.

Orders should be anticipated by one week.

Report on the ZOEDONE of Messrs. Richard Evans & Co., of Wrexham.

The Analytical Sanitary Institution, 54 Holborn Viaduct, London, E.C., Sept. 21, 1878.

I have carefully examined the new Aerated Mineral Water manufactured by Messrs. R. Evans & Co., and to which they have given the name of "ZOEDONE." I find the statements made respecting its composition to be fully borne out by the analysis. The "ZOEDONE" is a bright, sparkling, and very pleasant beverage, quite free from medicinal taste; indeed, it forms a most agreeable and elegant vehicle for the administration of the Phosphates of Lime and Iron which it contains, and which are in a complete state of solution.

ARTHUR HILL HASSALL, M.D., London,

Author of "Food, its Adulterations, and the Methods of their Detection."

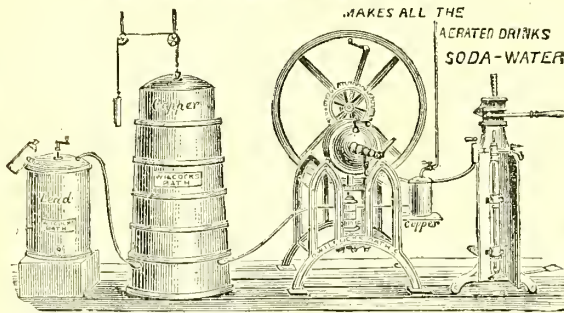
ZOEDONE is supplied direct by us and our Agents on the following Terms, Cash Prices, including bottles and package, free on Rails at Wrexham—6/6 per dozen in half Champagne Bottles (in 6 dozen cases). 12/- per dozen in large Champagne Bottles (in 3 dozen cases). 6d. per dozen extra on small, and 1/- per dozen on large, for export, packed in casks or cases. Trade Terms on application.

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PATENTEE—DAVID JOHNSON, F.C.S.

Manufacturers, RICHARD EVANS & CO., Wrexham, North Wales.

COMPARE**WITH OTHER MAKERS.****N. G. WILCOCKS**
B.**ESTABLISHED****N. G. WILCOCKS'**
SODA WATER & LEMONADE MACHINES.

THE Opinions and Testimonials which have been published must convince everyone that Wilcocks' Machinery is quite satisfactory. Hundreds of factories are fitted or supplied with these Machines, and testimonials extending over many years are so numerous that though several hundreds have been printed, a very much larger number has been received.

N. G. WILCOCKS has had a long practical experience, and gives his undivided attention to this branch of his business. Every portion of the Machines he makes has had his most diligent study for years past, and his inventions and designs have been approved and used by some of the most eminent Aërated Water Makers in the kingdom. All his customers, British or foreign, may be assured of his personal attention to their orders.

All Wilcocks' Machines are made on the continuous process direct-action Bramah principle; the solid plunger works through the bottom of the pump in a ring or collar of cupped leather; the valve body is at the top of the pump. Constant and energetic endeavours have been given to make these Machines the most perfect in existence, and these endeavours have been successful. Mr. Wilcocks can introduce his customers to factories where they can see his Machines in full and profitable operation, and so have an opportunity of judging for themselves.

Wilcocks' "Favourite" Machine is really the favourite among makers; most intending manufacturers purchase one of the four sizes in which it is made. The full-sized Machine, with dial and water gauges, and gas work, as exhibited at the recent Mineral Water Trade Exhibition, Agricultural Hall, London, sells at £42 10s. Hundreds of these have been sold during the last few years, and they are generally esteemed first-class moderate priced Machines.

Wilcocks' Bottling Apparatus is the result of prolonged study; it is the simplest in use, and is consequently the most

easily repaired, while it is quite as efficient as the most expensive.

The "Eclipse Filling Machine," at £4 10s., can be so confidently recommended that the money will be returned in any case where it fails to give satisfaction. It is hoped that its very low price will not raise a prejudice against it.

A simple contrivance for Syruping has just been perfected by Mr. Wilcocks, and particulars will appear in future announcements.

His Soda Water Machine makes 200 dozen bottles a day with hand power; more can be turned out if a small motor, such as a steam, air, or water engine, be employed. Any filling apparatus, patent or not, for patent or corked bottles can be attached to this machine.

Mr. Wilcocks has very complete plant, tools, and stock, and employs a staff of highly skilled and experienced workmen. Every part of his machines is made by his own workmen from the best materials. The copper gun-metal and English tin are of the best obtainable quality; sound, well-seasoned oak is used for the cooperage.

By thus making even the earliest stages of the machines, all intermediate profits are avoided, and the quality of the material and the soundness, accuracy, and finish of the workmanship can be guaranteed. Every machine is carefully tested by actual use before it is sent out. Although Wilcocks' Machinery is low in price, it is confidently claimed that it will be found equal in every respect to the best in the market.

Every process of manufacture can be seen in active operation at Bath.

Mr. Wilcocks has had long experience, not only in machines, but in every other requirement of the Aërated Water Trade, and he is prepared to supply formulæ for bottled drinks, full directions for manufacture, plans and estimates for complete factories, and all information necessary to ensure success in this lucrative business.

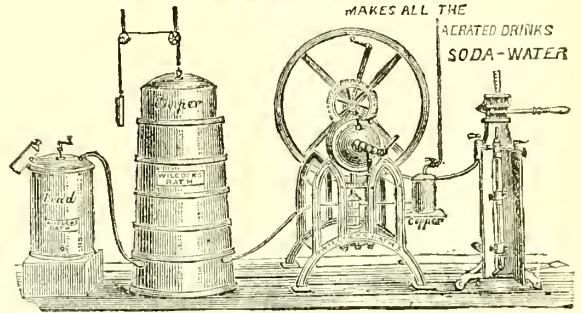
ALL ORDERS ARE PROMPTLY EXECUTED.

Address,

N. G. WILCOCKS, SODA WATER MACHINIST, BATH.

WILCOCKS

COMPARE



WITH OTHER MAKERS.

THE ECLIPSE FILLING MACHINE,

TO FILL PATENT BOTTLES.

£4:10:0.

Will fill Codd's, Lamont's, Barrett & Elers',
AND OTHER PATENT STOPPER BOTTLES.

All the Patent Bottles brought to Wilcocks' Stand at the MINERAL WATER TRADES SHOW, in October last, were filled with this Machine, in the presence of the Mineral Water Makers.

COMPARE

The following Prices with those of other Makers.

A full-size Machine, to make 200 dozen per day by hand power	{ Dial Pressure and Water Gauge and Bottling Rack are included with each.	£50	0	0
A small Machine, to make 100 dozen per day by hand power		£40	0	0
A smaller Machine, to make 60 dozen per day by hand power		£30	0	0
Wiring Stand or Tying Stool		£1	10	0
Bottle-Washing Apparatus for Power		£1	5	0

A printed Book of Testimonials and opinions from buyers and users of N. G. W.'s make Soda Water Machine Engines and Boilers, also new Illustrated Descriptive Catalogue, sent post free to any part of the globe upon application.

A number of the above Machines can be seen in different stages of progress at this Manufactory. Inspection, and a visit from an intending purchaser, is invited to examine the weight, strength, size, capacity, quality, finish, and price in this Machine, and the testimonials from large numbers to whom this Machine has been supplied in years past. If required, a written guarantee is given to a purchaser with each Machine.

A complete Machine, with Vertical Boiler and Horizontal Steam Engine, to make 300 dozen per day, with all Mountings	£91	10	0
A complete Machine, with Vertical Boiler and Horizontal Steam Engine, to make 2,000 dozen per day, with all Mountings, ready for work	£150	10	0

NATHANIEL GEORGE WILCOCKS, ENGINEER, BATH.

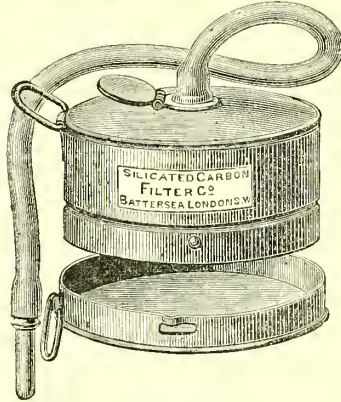
NOVELTY.

SILICATED CARBON POCKET FILTER,

IN GERMAN SILVER, NICKEL-PLATED.

Retailed at **FIVE SHILLINGS** each.

Designed by
MAJOR FRASER,
 of the
ROYAL ENGINEERS,
 especially
 for Officers' Kits.
 Weighs only 8 ounces.



It has been approved
 by the
 Authorities at the
 Horse Guards, and has
 been largely
 used in the Afghan and
 Zulu Expeditions.

No. 20 H.

Sample sent free by Post on receipt of **FOUR SHILLINGS.**

DOMESTIC FILTER, NO. 27.



Made in cream-coloured Stoneware, fitted with the Silicated Carbon Media, complete with Cover and Silver-plated Tap.
 All sizes of this pattern can now be had with Patent Ice Compartment, which renders this Filter the most perfect of Refrigerators.

		PRICES.	With Ice Compartment.
No. 0, capacity	1/2 gall.	10s. 6d.	—
No. A, "	1 "	14s. 6d.	17s. 6d.
No. B, "	2 "	21s. 0d.	25s. 0d.
No. C, "	4 "	32s. 0d.	36s. 0d.
No. D, "	6 "	42s. 0d.	48s. 0d.
No. E, "	8 "	52s. 0d.	60s. 0d.
No. F, "	12 "	70s. 0d.	80s. 0d.

UNIQUE STONEWARE FILTER, NO. 28.

No House should be considered as thoroughly furnished until it is supplied with one or more good Filters.

No Water should be used for Drinking or Cooking without being Filtered.

This Filter is made of a New Ornamental Stoneware, similar in shape to the Domestic Filter, and of two-gallon capacity. When arranged in a Hall or Conservatory, side by side with evergreens, the effect is very pleasing.

Price, with Silver-plated Tap, 30s.



MAIN SUPPLY FILTER, NO. 40.

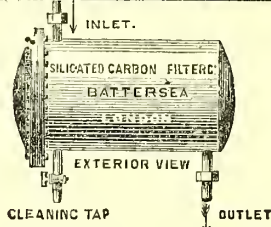
SPECIALLY ADAPTED FOR
 Mansions, Schools, Hospitals, Public
 Institutions, Breweries, Distilleries,
 Soda Water Manufactories,
 Dye Works,
 And all other Establishments where large quantities of

PURE WATER

Are required.

The ordinary Sizes kept in Stock are as follows:—

A, 1/2-inch or 3/4-inch pipe	£6 6s.
B 1-inch pipe	£9 9s.
C, 1 1/2-inch, 1 3/4-inch pipe	£15 15s.
D, 2-inch pipe	£26 6s.



This Filter is extremely simple in construction, and can be either connected with a Cistern or attached to the Main Service Pipe. It requires no attention beyond an occasional opening of the Cleansing Tap, and will deliver a supply of purified water at a rate of 50 to 1,000 gallons per hour, according to size.

Special Contracts entered into
 for Large Works, Institutions,
 &c., &c.,

FOR PURIFYING THE WHOLE OF THE WATER SUPPLY OF A BUILDING BEFORE USE.
Ensuring Rapid and Perfect Filtration, at either High or Low Pressure.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

PARIS: 131 Boulevard Sebastopol.

NEW YORK: 194 William Street (H. R. Mensing, Agent).

HAMBURG: 9 Deichstrasse (Joseph Schmutzer & Co., Agents).

SILICATED CARBON FILTERS.

SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

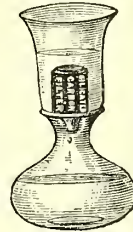
used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

They are readily cleaned from sedimentary matter by merely blowing through the tube, and brushing the surface of the filtering medium.

- | | | |
|--|----|---|
| A.—Pocket Filter, 2½ inches diameter, in porcelain, with glass mouthpiece, in decorated metal box | 2 | 6 |
| B.—Ditto, 3½ inches diameter, in best stoneware | 5 | 0 |
| Ditto, " " with silver-plated tap | 7 | 0 |
| C.—Emigrant's, 5 inches diameter, with silver-plated tap | 12 | 0 |
| G.—Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and in Zululand, and to the Ashantee Expedition | 3 | 6 |
| H.—Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits | 5 | 0 |

TABLE FILTER, NO. 24.

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.

- O, 2s. 6d.; A, 4s.; B, 5s. 6d.
Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

POROUS TERRA COTTA FILTER, NO. 29.

Shape of this Filter as Fig. No. 24.

- O, 2s. 6d.; A, 4s.; B, 5s. 6d.

SILICATED CARBON BLOCKS.

- 2 in., 1s. 6d.; 2½ in., 2s. 6d.; 3¼ in., 3s.; 3½ in., 4s.; 4¾ in., 5s. 6d. ea.
SPECIAL QUOTATIONS FOR QUANTITIES.

PRIZE FILTER,

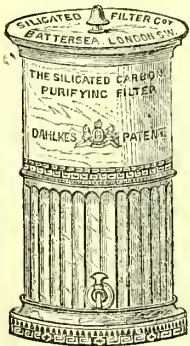
This Filter is constructed in the form and colour of an Etruscan Vase, having inside it a movable pan, into which the Silicated Carbon filtering medium is fitted.



PATTERN NO. 23.

The exterior is made of Porous Ware, which acts with remarkable power as a Refrigerator, keeping the water deliciously cool. Capacity, about Two Gallons.

PRICE, WITH SILVER-PLATED TAP, £3 10s.



DINING-ROOM FILTER, No. 22.

MADE IN MARBLED CHINA.

Size A holds about two gallons; size B, five gallons.

PRICES.

- | | |
|---|-------|
| A | 35s. |
| B | 80s. |
| A, with Ice Compartment (New Patent.) | 42s. |
| B, with Ice Compartment (New Patent.) | 100s. |

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

REFRIGERATOR FILTER, NO. 25.

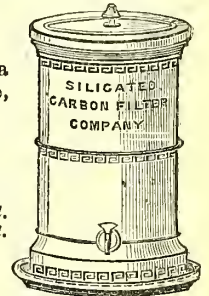
Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A COOL DRAUGHT OF PURE WATER.

- | | |
|--|----------|
| Price, with Silver-plated Tap | 31s. 6d. |
| Ditto, ditto, with Ice Compartment | 42s. 0d. |
- Capacity, Two Gallons.

Specially adapted for Tropical Climates.



PORTABLE FILTER, No. 34, for Travellers at Hotels, Families at the Seaside, Pic-nics, &c. Made in Marbled Porcelain, with Cover. Can be placed in a jug, decanter, or other vessel. Price 7s. 6d. each.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

HONOURABLE MENTION, INTERNATIONAL EXHIBITION, 1862.

ISINGLASS

Of every description, suitable for CHEMISTS, GROCERS, BREWERS,
WINE COOPERS, &c., imported and cut by

J. W. HART, 5 St. Mary Axe, LONDON.

Orders accompanied by a remittance executed as under—

RUSSIAN.		BRAZIL.	
No. 1, 13/- per lb.;	No. 2, 11/6 per lb.;	No. 1, 5/9 per lb.;	No. 2, 4/9 per lb.;
No. 3, 9/6 per lb.		No. 3, 3/6 per lb.	

PACKED IN SMALL BOXES. 1s. per lb. EXTRA.

BEER IN BOTTLE.

WHITBREAD & CO.'S
LONDON COOPER, STOUTS, AND ALES.

For Prices and full Particulars apply to

ROBERT BAKER, SOLE AGENT,
277 GRAY'S INN ROAD, KING'S CROSS, W.C.

Observe.—All Corks Branded "Whitbread & Co." Labels—Chocolate Letters on Orange Ground.
N.B.—It is very desirable that all orders should be sent on or before Saturday, 20th December, to lessen as much as possible the pressure of business that takes place previous to a General Holiday.

G. COLE,




MANUFACTURER OF BOXES FOR CODD'S PATENT BOTTLES,
AND MAKER OF
ALL KINDS OF PACKING CASES
FOR THE SODA WATER TRADE.

N.B.—Orders executed with dispatch, and on the most reasonable terms.

STEAM WORKS:—

48 and 50 TRINITY STREET. ROTHERHITHE, S.E.

IMPORTANT DESIDERATA ARE SUPPLIED IN

	<p>LIME JUICE</p> <p>N.B.— Exceedingly hand- some Show-Cards, together with Handbills of a most ex- ceptionally respectable character, are supplied to purchasers of these professionally recommended preparations.</p> <p>LIME JUICE</p>	<p>WENHAM'S</p>  <p>WENHAM'S</p>	<p>CHALYBEATE</p> <p>The only Effervescent Salines which do not exert a physiological action upon the blood; the converse of Lime Juice, or fruit of any kind whatsoever.</p> <p>SALINE.</p>	
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In BOTTLES, 2s. 6d. and 4s. 6d. each; CASES, 21s.

SOLE MANUFACTURERS (REGISTERED).

WHEELER & CO., LONDON, and SOUTHBEND-ON-SEA.

"Messrs. WHEELER & Co. have produced a REMARKABLY HANDSOME SHOW-CARD, representing a package of WENHAM'S LIME-JUICE SALINE, on a gold ground, with a border of lime fruit and blossoms."—CHEMIST AND DRUGGIST, Trade Notes, July, 1879.

SPECIAL NOTICE TO DRUGGISTS.

Increase your Business by Selling the ORIENTAL COMPANY'S TEA.

IN SUBMITTING THEIR TEAS to Agents, the above-named Company desire to offer the following remarks:—

THE PROPRIETORS have been long connected with the EAST, as IMPORT and EXPORT MERCHANTS, and, with the means at their command, are enabled to avail themselves of their experience in purchasing at the proper season, from the best markets, and direct from the TEA PLANTERS, thereby securing the choicest pickings, and saving all intermediate profits between producer and consumer.

THE TEAS being thus bought are carefully cut, sifted, and mixed by the most improved machinery, under the superintendence of a PRACTICAL TEAMAN, whose whole study has been devoted to the ART OF BLENDING TEAS to suit the Tastes of the general public; and it may be added that it is greatly due to judicious blending that the COMPANY'S TEAS have acquired the position they now hold.

INDIAN TEAS have within the last few years obtained such favour with connoisseurs for Strength, Aroma, and Delicacy of Flavour, that THE ORIENTAL COMPANY have introduced, as a SPECIALTY, a blend of these fine Teas, the sale of which has attained such proportions as to warrant the assertion that it produces the most delicious beverage ever offered to the public.

THE TEAS are packed in specially-prepared wrappers, with TINFOIL LINING, in $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Packets; 5-lb., 10-lb., and 20-lb. Tins; 20-lb. Boxes, Half-chests, and Chests; and retailed as under.

Fine China Blended Tea, Magenta Label	...	...	...	...	Retail at	2/0	per lb.
Finest " " " Blue	"	...	...	...	"	3/0	"
Fine Indian " " Green	"	...	...	...	"	2/6	"
Finest " " " Yellow	"	...	...	...	"	4/0	"

For Terms of Agency and other particulars apply at the Office—

418 OXFORD STREET, LONDON, W.

NESTLE'S MILK FOOD,

For Infants, Children, and Invalids.

London Depot—7 BARBICAN, E.C.

NESTLE'S MILK FOOD is prepared at Vevey, Switzerland, from the pure milk of Alpine fed cows, the finest wheaten flour and sugar, combined in exact proportions to imitate closely the natural food for infants. It is thoroughly cooked, and reduced to a fine powder, perfectly soluble in water, requires only the simple addition of water to prepare it for use—in this respect having the advantage over all other foods.

NESTLE'S MILK FOOD is highly recommended by the best medical authorities in all parts of the globe as a perfect diet.

Nestle's is the original and genuine Milk Food or Powder. The extensive demand for this Food, its well known superiority and universal recognition by the medical profession, have produced the inevitable imitations. The trade and the public are hereby cautioned. Nestle's Milk Food has stood the test of years. Take no other under any pretence whatever.

NESTLE'S MILK FOOD is put up in tins, packed in lined cases specially for the export trade. Is highly concentrated and in a perfectly dry state. Will keep good in any climate.

Our Wholesale Agents at any port will pack and ship the Food to or for any part of the world.

Wholesale Depot: HENRI NESTLE, 7 BARBICAN, LONDON.

WHOLESALE AGENTS AND SHIPPERS:

Barelay & Sons, London
Jno. Sanger & Sons, London
F. Newbery & Sons, London
S. Maw, Son & Thompson, London
Jno. Thompson, London
R. H. Millard & Sons, London
Lynch & Co., London
Corbyn & Co., London
Grimwade, Ridley & Co., London
R. Hovenden & Sons, London
Evans, Lescher & Evans, London
G. Rosenthal, London

W. Sutton, London
Hodgkinson, Stead & Treacher,
London
W. Edwards & Son, London
J. P. Werner, London
W. Mather, London
Peacock Bros. & Co., London
Bargoyne, Burbidges & Co., London
Tidman & Son, London
Robt. Brooks & Co., London
Horner & Sons, London
W. B. Cranwell & Co., London

Wyleys & Co., Coventry
Raines & Co., Liverpool
John Thompson, Liverpool
Evans, Sons & Co., Liverpool
J. Hallawell & Co., Liverpool
Thompson & Capper, Liverpool
James Woolley, Sons & Co., Manchester
Jewsbury & Brown, Manchester
Southall Bros. & Barelay, Birmingham
Godall, Backhouse & Co., Leeds
Lifshouse & Saltmer, Hull

Evans, Gadd & Co., Exeter
Raines & Co., York
Raines, Blanchards & Co., Edinburgh
Duncan, Flockhart & Co., Edinburgh
John Mackay, Edinburgh
Apothearies' Co., Glasgow
W. & R. Hatrick & Co., Glasgow
McMaster, Hodgson & Co., Dublin
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Details of In-
junction granted
by V.-C. MALINS
will be found in
"Chemist and
Druggist," Feb-
ruary 15, 1877,
page 76.



Wholesale Price
Lists, Opinions
of the Press, and
full information
will at all times
be given direct,
or through the
Patent Medicine
Houses.



MAWER'S TARAXACUM OR DANDELION COFFEE

Prepared from the Fresh Root.

Notwithstanding the many attempts to imitate this incomparable preparation, Mawer's manufacture continues to rise rapidly in public estimation, and the sales have of late immensely increased. Wherever it is introduced it meets with increasing appreciation and continuous sales, for beyond doubt it excels all in quality, strength, aroma, and cheapness.

Chemists everywhere find this the most saleable article of the name. It is neatly packed in air-tight tins, and is spoken well of throughout Great Britain and several of our Colonies. To be had from all London Patent Medicine and Sundry Houses, and direct from the Maker in Tins, 6d., 9d., 1s., 1s. 6d., and 2s. Write for terms to

EDWARD MAWER,

Chemist,
HIGH WYCOMBE, BUCKS.

Handbills and Show Cards supplied gratis.

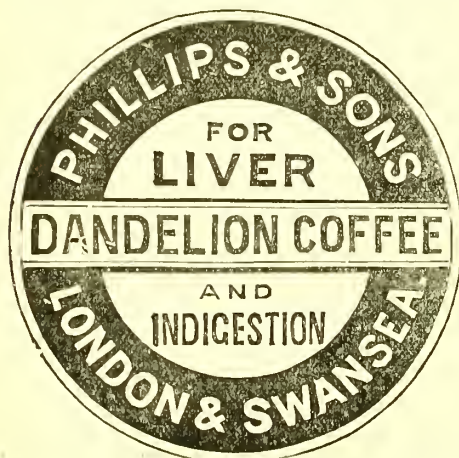
Sold by Chemists everywhere.

BROOK & CO'S DANDELION COFFEE

IS the Best and the Cheapest, containing three times the strength of ordinary Coffee. The above is highly recommended by the Medical Faculty as an Agreeable, Palatable, and Medicinal BEVERAGE. See Reports from Dr. Hassall, M.D., Author of "Food and its Adulterations," &c.; also, Otto Hehner, F.C.S., Analyst. Sold in Tins, 6d., 1s., 1s. 9d., by most respectable Chemists. Wholesale Agents: Goodall, Backhouse & Co., Leeds; Wm. Mather, London; Jas. Woolley, Son & Co. and W. Mather, Manchester; H. Glover, Son & Co., Bradford; and all Wholesale Houses.

Caution—See you get BROOK'S, as inferior qualities are often substituted.

MAKERS—BROOK & COMPANY, 76 HANOVER STREET, MANCHESTER.



ESTABLISHED 1760.

Contains three times the strength of ordinary Breakfast Beverages.

ONCE TRIED ALWAYS USED.

The valuable properties of the Dandelion Root, recognised by eminent Physicians for many centuries, has now become an article of daily use.

Sold by all Chemists throughout the Kingdom in Tins at 1s. 6d., 1s., 9d., and 6d.—Price Lists on application to the Manufacturers.

PHILLIPS & SON,

CASTLE SQUARE, SWANSEA,
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JAS. WOOLLEY, SON & CO., Manchester. EVANS, SONS & CO., Liverpool, &c.
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SPECIAL TERMS TO MERCHANTS AND SHIPPERS.

THE WANT OF THE DAY.

Registered.



1d., 3d., & 6d.

MAKES STARCH LINEN AS NEW.

Starched Linen is made to Iron Easier, and is unequalled for Stiffness and Gloss. Sold by most starch sellers, at 1d., 3d., and 6d. each. Wholesale by the Proprietor,

T. CRITCHLEY,
CHEMIST & WHOLESALE DRUGGIST
BLACKBURN.

CAUTION!—Makers and Sellers of imitations will be prosecuted.

Gold Medal, Paris Exhibition.

FRY'S COCOA EXTRACT,

IN PACKETS AND TINS.

Pure Cocoa only, with the superfluous oil extracted.

It is strongly recommended to all who appreciate the full flavour and fine aroma of Cocoa.

"It is strictly pure, and well manufactured in every way."—W. W. STODDART, F.I.C., F.C.S., *City Analyst, Bristol.*

"If properly prepared, there is no nicer or more wholesome preparation of Cocoa."—*Food, Water, and Air*, Edited by Dr. HASSALL.

J. S. FRY & SONS, BRISTOL & LONDON.

TRY ALSO

FRY'S CARACAS COCOA.—*"A delicious preparation."*

MUSTARD.

FINCH, RICKMAN & CO.'S

Genuine Qualities

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

Undertake not to supply Co-operative Stores.

6 Broken Wharf, Upper Thames St., London.

E. LAZENBY & SON'S PICKLES,

Sauces, and Condiments.—E. LAZENBY & SON (6 Edwards Street, Portman Square), Sole Proprietors of the Celebrated Receipts, and Manufacturers of the Pickles, Sauces, and Condiments so long and favourably distinguished by their name, beg to remind the Public that every article prepared by them is guaranteed as entirely unadulterated. Manufactory, 18 Trinity Street, London, S.E.

HARVEY'S SAUCE.—CAUTION—The

admirers of this Celebrated Sauce are particularly requested to observe that each bottle prepared by E. LAZENBY & SON bears the label used so many years, signed "ELIZABETH LAZENBY."

SEVEN PRIZE MEDALS AWARDED.

GOODALL'S
HOUSEHOLD SPECIALITIES.



THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s., and 2s. each.

Over **FOUR MILLION (4,000,000) Bottles Sold Annually.**

LARGEST SALE OF ANY SAUCE IN THE WORLD.

CAUTION.—On each Yorkshire Relish Label is our Trade Mark, Willow Pattern Plate, and name, GOODALL, BACKHOUSE & CO., No other is genuine.



THE BEST IN THE WORLD.

The cheapest, because the best, and indispensable to every household, and an inestimable boon to housewives. Makes delicious Puddings without eggs. Pastry without butter, and beautiful light Bread without yeast. Sold by Grocers, Oilmen, Chemists, &c., in 1d. Packets; 6d., 1s., 2s., and 5s. Tins.



The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Debility, &c. Restores delicate individuals to health and vigour. Sold by Chemists, Grocers, &c., at 1s., 1s. 1/4d., 2s., and 2s. 3d. each bottle.



For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction, if the instructions given are implicitly followed. The Proprietors entertain the greatest confidence in the article, and can recommend it to Housekeepers generally as a useful agent in the preparation of a good Custard. Delicious to Plum Pudding. Delicious to Stewed Rice. Delicious to Jam Tarts. Delicious to all kinds of Fruit. Delicious to all kinds of Puddings. Delicious to everything. Delicious to all kinds of Fruit Pies. Delicious alone.

Sold in Boxes, 6d. and 1s. each, by Grocers, Chemists, Italian Warehousemen, &c.



Makes Three Gallons of the Best Ginger Beer in the World for 3d.

Is a delicious and invigorating beverage, possessing valuable medicinal properties. It is cooling in its nature, and a most wholesome beverage for both winter and summer. It is easily made, and is by far the cheapest and best Ginger Beer Powder ever offered to the public. Sold in Packets, 3d. and 6d. each, by all Grocers, Chemists, and Italian Warehousemen.



FOR PAINTING STOVES, GRATES, IRON, TIN, &c.

This invaluable composition is superior to any yet offered to the public, possessing great brilliancy, and thoroughly protecting the article it is applied to. Sold in Bottles at 6d. and 1s. each.

SOLE MANUFACTURERS,

GOODALL, BACKHOUSE & CO., White Horse St., Leeds.

A Monthly Price List of Drugs, Chemicals, Druggists' Sundries, Patent Medicines, &c., can be had post free on application.

ESTABLISHED 1843.

M. A. CRAVEN,

Wholesale & Export Confectioner,

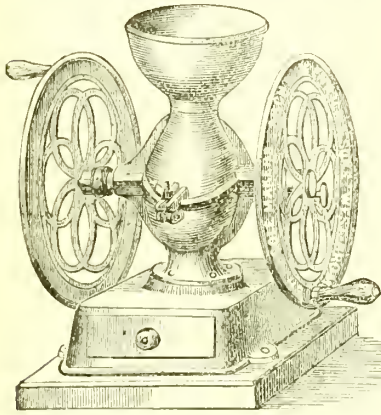
AND MANUFACTURER OF

MEDICATED LOZENGES, REFINED LIQUORICE, JUJUBES, &c.

PAVEMENT, CONEY ST., & COPPERGATE, YORK.

Lozenges of all descriptions made from Customers' private formula (or ingredients) and stamped with name if required.

PRICE LIST ON APPLICATION.



AMERICAN DRUG & SPICE MILL.

Advantages—

The cutters or grinders never wear out. Cutters or Grinders can be cleaned and refixed in one minute, thus any quantity of different articles can be ground without fear of intermixture.

Price No. 4a Mill, 70/-

Price No. 2a Mill, 26/-

" " 3a " 50/-

" " 1a " 17/-

American Tincture Presses, 8/-, 12/-

Larger size if required.

See PHARMACEUTICAL JOURNAL, November 17, 1877, page 399.

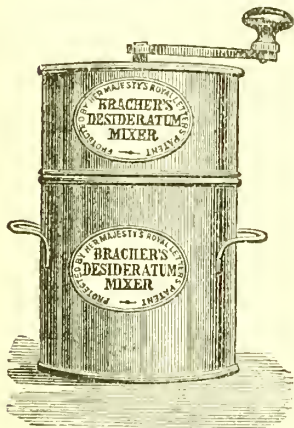
SOLE AGENT,

GEO. BURTON,

221, 223, 226, 232 St. John Street, Clerkenwell.

THE "DESIDERATUM" MIXING MACHINE.

BRACHER'S PATENT.



Nos. I. and II.

These Machines are admirably adapted for mixing all kinds of powders, heavy or light, in the shortest possible time, thereby superseding to a great extent the use of the Pestle and Mortar, and supply a long-felt want amongst Chemists and Druggists, Grocers, Confectioners, Drysalters, Colour Merchants, and Manufacturers.

They are durable, easily cleaned, portable, require no fixing (except in the case of large sizes), can be worked either *with* or *without* the cover, and are, without doubt, the best and cheapest Mixing Machines ever invented.

Every Retail Chemist and Druggist, Grocer and Confectioner, should possess one of these little Machines, as the small outlay would be soon repaid in the saving of time and trouble, indeed it would scarcely be thought possible that the articles could be so thoroughly blended in such an incredibly short time.

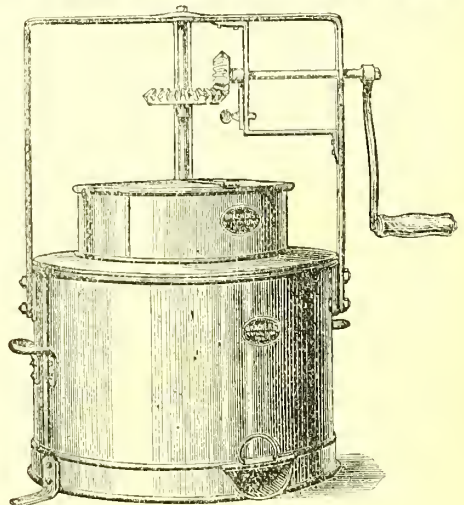
The Nos. 3, 4, and 4a are for mixing Baking Powder, Coffee and Chicory, Sherbet, Lemon Kali, &c., &c., and will blend from 1 lb. to 500 lbs. per hour. The large sizes are used by Wholesale Druggists, Confectioners, Drysalters, Sherbet and Lemon Kali Manufacturers, and all who have large quantities to mix.

See the CHEMIST AND DRUGGIST of March 15, 1879; also the GROCER AND OIL TRADE REVIEW of April 12, 1879.

Further particulars on application to the Manufacturer,

P. H. BRACHER, 77 HIGH STREET, WINCANTON.

FOR
MIXING
ALL
Descriptions
OF
POWDERS.



Nos. V. and VI.

THE BEST PACKET TEAS

ARE SUPPLIED BY THE

Tea Supply Association,

54 HIGH STREET, BOROUGH, LONDON, S.E.

THE WATCH TEA.—Bonuses consist of Ladies' and Gentlemen's Watches with 14 and 28 pounds of Tea; also Clocks and Timepieces with 4, 6, 8, 10, 12, 18, and 24 pounds of Tea.

BOOK TEA.—Bonuses consist of Books, ranging in value from 2/6 to 10/6, given with 3 pounds of Tea.

THE T.S.A. GENERAL BONUS TEA.—Bonuses consist of a selection of nearly 500 Useful Articles, INCLUDING WATCHES, CLOCKS, and BOOKS, given with quantities of Tea varying from a Quarter-pound upwards.

Also **SURPRISE TEA**, containing a useful Bonus in every packet.

Also **THE IMPERIAL BLEND**, being a Non-Bonus Tea of first-class value, retailing at 2/-, 2/6, 2/8, 3/-, and 3/6 per pound.

AGENTS WANTED where none are already appointed. For particulars apply to G. BEAUMONT, Manager.

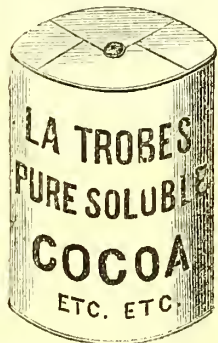
CHEMISTS' TEA AGENCY.

BROKEN-LEAF TEA, 1s. 8d. per lb.

A Money-saving Tea, absolutely pure, in half-pound packets 10d. The small leaf from fine India and China Teas, stronger, richer, and cheaper than any whole-leaf tea. Wholesale to Dealers and Sellers and Agents. 40 lbs. sent free to any railway station in the kingdom.—**WALKER & DALRYMPLE**, Warchouses—154 and 155 Whitechapel Road, London. P.O.O. payable at Head Office. Bankers—The National Provincial Bank of England. N.B.—Samples posted free.

ASTHMA and other Maladies of the Respiratory ORGANS. — SLADE'S ANTI-ASTHMATIC CIGARETTES are carefully prepared from Soothing and Antispasmodic Medicinal Plants, camphorated and aromatised. Being safe, efficient, and agreeable, they can be used by the most delicate Invalid Ladies. Are prescribed at the Brompton and Victoria Park Hospitals, and by many eminent Physicians in the United Kingdom, the Colonies, and on the Continent. In sealed bottles only, whereby their virtues remain unimpaired by time or climate. Price 2/9, 4/6, and 11/. Liberal terms to Wholesale and Export. Samples free. "Relief from the urgent symptoms of a paroxysmal attack may often be obtained by these cigarettes."—*Lancet*, Jan. 8th, 1876. Prepared only by the Inventor and Proprietor, **THOMAS SLADE, PHARMACIAN, 118 LONG ACRE, LONDON.**

LA TROBE'S PURE SOLUBLE COCOA.



Supplied to Chemists only, all other Trades refused.

H. L. T.'s production stands entirely upon its own merits, as the Purest Cocoa manufactured.

That the Trade may have an opportunity of testing, H. L. T. sends samples for gratuitous distribution amongst the medical profession upon receiving from Agents a list of same.

La Trobe's
Pure Soluble Cocoa.

Also Manufacturer of

La Trobe's Highbury Bouquet,
La Trobe's Constitution Powder,
La Trobe's Cough Lozenges,
La Trobe's Plate Powder.

Price List, with Terms, on application to

H. LA TROBE,
COTHAM, BRISTOL

Retailed in Canisters,
1s. and 2s.

JOHNSON, JOHNSON & CO.'S PACKET TEA AGENCY,

Established nearly Quarter of a Century.

Pure Broken-Leaf Tea, 1s. 8d. per lb., in Half-Pound Packets.

Other prices, 2s., 2s. 6d., 2s. 8d., 3s., 3s. 4d., 3s. 8d., 4s.

Agents wanted where none are already appointed.

A Liberal Commission allowed.

APPLY TO

JOHNSON, JOHNSON & CO.,
WHOLESALE TEA DEALERS,
50 Southwark Bridge Road, London.

PURE AERATED WATERS.

MANUFACTURED BY

T. & F. J. TAYLOR, NEWPORT PAGNELL.

ESTABLISHED 1835.

Purity and Excellence of the Water certified by Analysis by PROFESSOR ATTFIELD, Ph.D., F.C.S.

NEWPORT PAGNELL SODA WATER, containing 10 grains of Bicarbonate of Soda in each bottle.

AERATED WATER, without Alkali.

POTASH WATER, containing 10 grains or 20 grains of Bicarbonate of Potash in each bottle.

LITHIA AND POTASH WATER.

SELTZER WATER, prepared according to Analysis of the Natural Water.

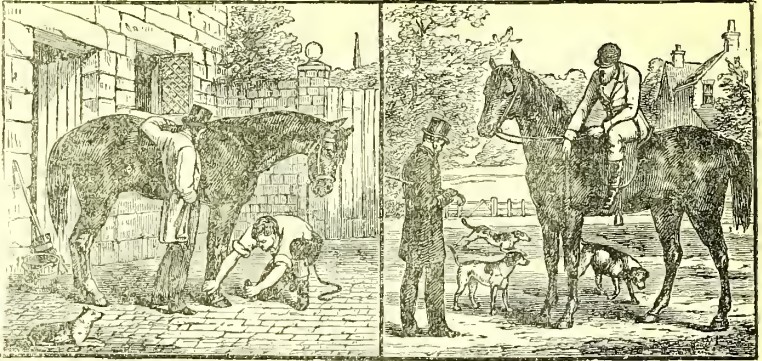
EFFERVESCING LEMONADE, superior in flavour colourless, and warranted to retain its brilliancy.

Each Bottle is protected by a Label bearing the Signature of the Firm.

ELLIMAN'S ROYAL EMBROCATION
 IN BOTTLES 2s 2/6 & 3s 6d EACH

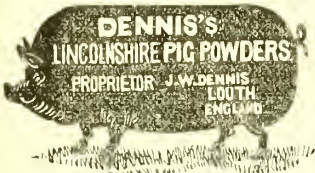
A CERTAIN CURE FOR
 Sprains, Cuts, Splints, Broken Knees,
 Sprung Sinews, Overreaches, Sore Backs, Sore Shoulders,
 Chapped Heels, Bruises, Sore Throats,
 Windgalls, Lameness, Influenza.

PREPARED BY ELLIMAN, SONS & CO., SLOUGH.
 is used next to Sticks and in the Stables of the Masters of Stag and Fox Hounds; among others, by Major Roddis, of Newmore, near Leighton Buzzard; Earl of Macclesfield; The Marquis of Huntly; Hon. R. B. Hall, of Hamilton, M.P.; Lord Middleton; Duke of Devonshire; Earl of Scarborough; Earl of Shannon; Earl of Eglington and Whitton; J. A. D. Deweely, Esq.; A. Brussey, Esq.; J. B. Booth, Esq.; G. Morrell, Esq.; Capt. R. Tomson Rye; Lieut.-Col. Everett.



Lame Hunter. (Trade Mark.) The Royal Hunter Cured.
ELLIMAN'S ROYAL EMBROCATION.

DENNIS'S CELEBRATED LINCOLNSHIRE PIG POWDERS



TRADE MARK. NO. 14389.

THESE Powders have now been before the Public for Ten Years. The large and increasing sale, together with the numerous testimonials constantly being received, prove that the public are fully alive to the fact that they are the **BEST MEDICINE** for **DISEASES** to which **PIGS** are subject and are also the best **CONDIMENT** known. They have an immense sale wherever introduced, and the Proprietor is desirous to assist all who will undertake to keep them in stock by supplying them with Show Cards, Posters, and Counter Bills with name and address thereon. They are put up in Penny Powders, each Powder a full dose; but are almost invariably sold in Packets containing Six and Twelve Powders to Retail at Fivepence and Tenpence. Retailers will be charged 40/- per Gross for Fivepenny, and 80/- per Gross for Tenpenny Packets, less usual discount, by

Hovenden & Son, W. Mather, Newbery & Son, and W. Edwards & Son, London; Lofthouse & Co., Hull; Raimes & Co., York; or from the Proprietor,
JOHN W. DENNIS, CHEMIST, LOUTH, LINCOLNSHIRE, ENGLAND.

HUNTER'S "INFALLIBLE" VERMIN DESTROYER.

1d., 2d., 3d., 6d., and 1s.

OF ALL THE WHOLESALE HOUSES

Depot:—**DEWSBURY.**

TESTIMONIALS.

From Mr. Jas. Thompson, Low Heskett, near Carlisle, to Mr. R. T. Pattinson, Chemist, Carlisle:—"Sir,—You can with confidence recommend 'Hunter's Vermin Destroyer.' It is the best thing I ever used, having often cleared stack-yards of both rats and mice in a day or two."

From Mr. Edward Thornton, Chemist, Lyme Regis:—"I can bear testimony to the efficacy of your 'Killer.' Parties who have purchased it of me say that it is the best they have tried. Mice are rapidly destroyed by it, and it quite answers the description you have given of it."

From Mr. Smith, Chemist, Glasgow:—"I have not kept any other 'Vermin Killer' than yours for the last four years. It is the best I ever sold."



1d., 2d., 3d., 6d., and 1s.

THROUGHOUT THE UNITED KINGDOM.

Established 1846.

TESTIMONIALS.

From Mr. A. Billington, Chemist, Wakefield: August 28, 1878:—"Dear Sir,—Please send me a few of your Vermin Killer Registers. I can bear testimony to the deadly effect of your 'Killer,' having one night laid in my warehouse the contents of a 2d. packet, and found in the morning no fewer than forty dead mice."

From Mr. Geo. Eagle, Merrickville, Sydney, Australia, to Mr. Mitchell, Druggist, Pitt Street, Sydney:—"Sir,—I promised to let you know how 'Hunter's Vermin Destroyer' acted. Its effect was wonderful; in one night it destroyed all the rats and mice about my house, which was swarmed with them."

From Mr. James Froud, Chemist, Dorchester:—"Your poison succeeds to admiration. It is as effective as an 'infernal machine.'"

BY ROYAL



LETTERS PATENT.

SPOROKTON

(TUSON'S PATENT),

The best combined Volatile and Non-Volatile

DISINFECTANT,

DEODORISER AND ANTISEPTIC. Manufactured by

SUTTON & PHILLIPS, STOWMARKET, SUFFOLK.

LONDON DEPOT—WHITE HORSE YARD, 100 HIGH HOLBORN.

CIRCULARS FREE BY POST ON APPLICATION.

HORSE, CATTLE, AND SHEEP MEDICINES.



BY ROYAL APPOINTMENT.



DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE

"ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS,

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

Patronised for over 40 years by Royalty, and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

- "CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.
- "GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.
- "RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.
- "RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.
- "BRONCHOLINE," for Husk or Hoose in Sheep, Lambs, and Calves.
- "GASEODYNE," for Heaving and Paining, "CARMINATIVE CHALK," &c.

Price of Chest, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6s. 6s. Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed.

Patronised by Royalty and the leading Agriculturists of the British Empire, and awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, Spring Exhibition, 1871; President's Medal at the Spalding Show, July, 1872; Silver Medal, Manchester and Salford Show, November, 1874; Silver Medal, Preston Agricultural Show, June, 1875; Silver Medal, Northamptonshire Agricultural Society, Stamford Show, September, 1875; Silver Medal, Cheshire Agricultural Society, Crewe Show, September, 1875; Special Prize, National Agricultural Society of Victoria, Australia, Spring Exhibition, November, 1875; Medal, Cheshire Agricultural Society, Cheshire Show, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, Northumberland Agricultural Society, Newcastle-on-Tyne Show, August, 1877; Silver Medal, Kuatsford Show, July, 1878; Medal, North Berwick Show, July, 1878; and Medal, Dairy Show, London, October, 1878.

CAUTION.—Beware of low-priced Imitations, and see that the name of DAY, SON & HEWITT is on all Bottles and Packets.

Prepared only by DAY, SON & HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W.

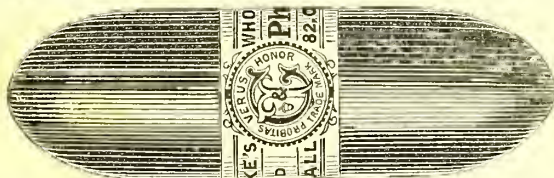
And sold by Messrs. Burgoyne, Burbidges & Co., Barclay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, and all Wholesale Druggists, in London; Hood & Co., Meiorne; Kempton, Prosser & Co., Dunedin and Auckland; Fairthorne & Co., Launceston.

DRUGS, CHEMICALS, PHARMACEUTICAL PREPARATIONS.

GABRIEL & TROKE,

Wholesale and Export Druggists and Manufacturing Chemists,
82 CITY ROAD, LONDON.

GABRIEL & TROKE'S REGISTERED CAPSULED HORSE BALLS,



Manufactured solely by GABRIEL & TROKE,
WHOLESALE DRUGGISTS, 82 CITY ROAD,
LONDON.

MANUFACTURERS OF ALL VETERINARY PREPARATIONS, EVERY KIND OF
VETERINARY INSTRUMENTS AND SUNDRIES.

The superior advantages of these Balls are obvious. The mass is confined in an hermetically sealed gelatinous Capsule, perfectly harmless, and immediately dissolved in the stomach. The Capsule will not only prevent the Ball from getting dry and hard, but will preserve its purity and power for any reasonable time, and ensure the effectiveness of the medicine—especially when such drugs as Camphor, Ammonia, or Essential Oils are prescribed. These Capsuled Balls are most convenient and safe and well adapted for export, keeping good in any climate. They are put up in Boxes of 1 dozen each. Capsuled Balls of the most approved formula on hand, and private recipes faithfully and accurately dispensed. Shipping orders promptly and carefully executed, and at lowest market prices. Price Lists of a very extensive character in the most handy referable style on application.

SAMPLES AND SPECIAL QUOTATIONS FOR LARGE BUYERS.

CHEMISTS V. CO-OPERATIVE STORES.

As the returns of the majority of Chemists have been considerably lessened by the large business done in Drugs, &c., by the Co-operative Stores, it is necessary that the Chemists should obtain a larger gross profit than has hitherto been the case. At the following **REDUCED PRICES** R. Condy & Co. have determined to supply Chemists with their genuine Condy's Fluid:—

Condy's Fluid Crimson, 1/- size, 4/- per dozen, nett.	
" " 2/- " 8/- " "	
Condy's Ozonised Water, 2/- " 8/- " "	
" " 3/6 " 16/- " "	
Condy's Fluid in Bulk, Green, 4/- per gallon	} Bottles charged 8d. each.
" " Red, 6/8 " "	
<i>Condy's Fluid, Green, at usual prices and discounts.</i>	

The above prices will be found, on comparison, one-third less than those of our competitors. Chemists wishing to obtain the benefit of our Reduced Prices should order R. CONDY & CO.'S articles from their Wholesale House, and insist upon their being invoiced at the above prices.

ADDRESS FOR ORDERS—

R. CONDY & CO., 8 Stationers' Hall Court, LONDON, E.C.



THE SANITARY FLUID



ANTISEPTIC DISINFECTANT for Preventing Epidemics and Destroying Infectious Diseases, as supplied to the Royal Arsenal, Woolwich. This Fluid is a powerful Antiseptic, Disinfectant, and Deodoriser, and from its harmlessness may be applied in any direction without any ill effects, and with the best possible results. THE "PRINCESS ALICE" CALAMITY.—The Sanitary Fluid was used at the Woolwich Dockyard for Disinfecting over 600 Bodies. The Clothing taken from the Bodies and over 500 Sheets were also Disinfected in large Caudrons, also the Building, Yards, &c., giving the greatest satisfaction to the Dockyard and Parish Authorities. The work was carried out under the superintendence of Mr. HARMER.

TESTIMONIAL.—"H.M. Dockyard, Woolwich, September 23, 1878. Sir,—I beg to inform you that I consider your Disinfectant, as applied in the Dockyard both to buildings and clothing after the removal of the dead from the premises, very efficacious, and, from its cleanliness and absence of smell, very superior to the Disinfectants in the form of powder generally used.—Faithfully yours, J. T. BARRINGTON, Assistant Commissary General. Mr. Harmer, Stratford, E." For Asylums, Schools, Sanitary Authorities, Railway and Dock Companies, Workhouses, Shipping, Stables, Cowhouses, Cattle in transport, &c. Price 1/ per bottle; 3/6 per gallon; large quantities at a cheaper rate, of the Solo Manufacturer, W. J. HARMER, West Ham Lane, Stratford, E., or through Agents.

The MAGIC FLUID for General Household Purposes, price 1/6 per gallon. Write for Pamphlet, with Testimonials, &c. NON-POISONOUS.

HORSE AND CATTLE CONDIMENT.

WANTED, Chemists and Druggists with a trade amongst Farmers, as AGENTS for one of the best and cheapest CONDIMENTS made. Wherever introduced it is largely sold, and the demand for it steadily increases.

Apply to SLATER BROS., CARLISLE.

DR. BILLING'S

INSTANTANEOUS DISINFECTANT & DEODORIZER

IS THE MOST RELIABLE AND THE CHEAPEST IN THE WORLD.

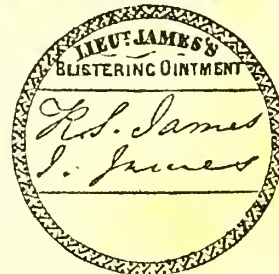
Harmless to furniture and linen. **Does not stain.** Harmless, colourless, and **Odourless, but powerful!** It **instantly** deodorises and disinfects any material it is applied to, no matter how fetid or offensive! **Destroys and neutralises** instantly all poisonous gases, arrests decomposition, and prevents contagion. Reliable and safe in the sick chamber, the hospital, and for all sanitary purposes.

ONLY ONE QUALITY—THE BEST!"

In 1s. and 2s. bottles, sufficient to make **two gallons** of the **best and cheapest disinfectant in the world.** Special prices by the gallon or quantity.

OFFICES AND DEPOT: 77 CANNON STREET, E.C.

ESTABLISHED 1833. HORSES.—LIEUT. JAMES'S BLISTER.



CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barelay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, Liverpool, and York, are now and have been Agents 45 years.

AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son, 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoyne, Burbidges & Co., 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; W. Mather, Farringdon Road, London, and Manchester; Tidman & Son, Wilson Street; Sanger & Son, 150 Oxford Street; Millard & Sons, 40 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries' Company, Virginia Street, Glasgow; Boileau & Co., Bride Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Hunt & Co., 17 Westland Row, Dublin; Clarke & McMillen, Victoria Street, Belfast; D. Galbraith, Londonderry. *And by all Chemists, in Pots, 1/6, 2/9, and 5/.*

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Feltors, Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; DUNDEE and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanistreet & Co.

R. S. JAMES, 31 Years Sole Manufacturer, STANFORD, FARRINGDON, BERKS.—Advertised in "Bell's Life" 45 years. Beware of a Spurious Imitation.

TRADE MARK.



JOSEPH IZOD,

IMPORTER & WHOLESALE DEALER IN MEERSCHAUM & BRIAR PIPES,

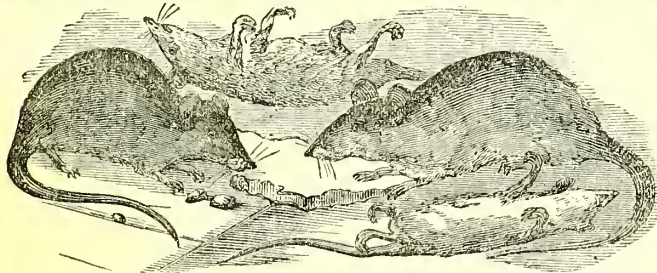
And every Requisite for Tobacconists,

FARRINGDON ROAD, LONDON, E.C.



TRADE MARK.

BATTLE'S VERMIN KILLER. { Mice eat it readily, and Die on the spot.



Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—*Thousands might be published.*
From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy; to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1857.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply.

RANDALL'S BLACK CURRANT LOZENGES.

	Net Cash.	To Acct.
	s. d.	s. d.
Plain Black Currant, old square	2 6	2 8
" " " rough oval	2 6	2 8
Black Currant and Ipecacuanha	2 6	2 8
Black Currant and Tannin.	3 0	3 3
Black Currant Voice (warm astringent) ..	3 0	3 3
Black Currant Cough Lozenges	3 6	3 10

(Ipecac. and Morph., strength as "B. P.")

In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size. From EDWARDS, London; through any Wholesale House; and from the Manufacturers.

RANDALL & SON, Southampton,

Who will forward Samples by post on application.

Also, BROWN COUGH LOZENGES, 2s., 2s. 2d.; 7 lbs. stamped with name free.

N.B.—Medical Lozenges of every kind,

Including those of the Pharmacopœia of the Hospital for Diseases of the Throat, London.

GENUINE BRIGHTON SELTZER

AND

OTHER AERATED WATERS,

Prepared with scrupulous care as to chemical accuracy, and with the Natural Spring Water of Brighton, the Purest in the Kingdom.

JOHN CHALLONER & SONS,

MINERAL WATER MANUFACTURERS,

PROVIDENCE PLACE,

BRIGHTON.

See our Advertisement, May Edition.

"ABSOLUTELY PURE."

SEE ANALYSES. Sent post free on application.

ELLIS'S



REGISTERED.

CORKS BRANDED "R. ELLIS & SON, RUTHIN," and every label bears their Trade Mark. Sold everywhere, and wholesale of

R. ELLIS & SON, RUTHIN, NORTH WALES.

London Agents: W. BEST & SONS, Henrietta St., Cavendish Square.

RUTHIN

WATERS.

Soda, Potass, Seltzer, Lemonade, also Water without Alkali. For GOUT, Lithia Water, & Lithia & Potass Water.

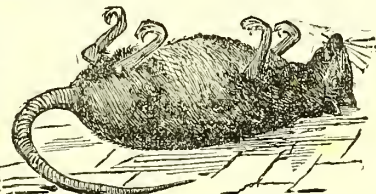
100 Rats destroyed for a Shilling by BARBER'S PHOSPHOR PASTE.

WRAPPED NEATLY FOR THE COUNTER.

You would never sell any other if you were desirous of pleasing your Customers.

CATS AND DOGS WON'T EAT IT.

Kills Rats, Beetles, &c. THE DEAD VERMIN DRY UP WITHOUT SMELL.



Guaranteed the best destroying Paste in the world.

3d., 6d., 1s., 2s. 6d., and 5s. Tins. Also

BARBER'S VERMIN KILLER.

Kills Mice upon the spot. In packets, 3d., 6d., and 1s.

Testimonial from Her Majesty's Ratcatcher.

"Hampton, Middlesex, May 25th, 1870.—I have been more than forty years employed at Hampton Court Palace, the Royal Stables, and other buildings in and around the Royal Parks, for the destruction of rats, mice, and other vermin, and after trying all the rat poisons which I have heard of, I now use BARBER'S PHOSPHOR PASTE and VERMIN KILLER, with which alone I am able to keep these ancient palaces and national works free from vermin. (Signed) CHARLES SHONES."

WORKS, SALISBURY: ESTABLISHED 1848.

Special Quotations to Shippers. Supplied by all the London Wholesale Houses.

READ THIS.

BAYLY'S LAUNDRESSES' FRIEND

(REGISTERED).

One used will always be required. One trial will prove its value to Ladies, Housekeepers, and Laundresses for the brilliant gloss and stiffness it imparts to all kinds of Linen, especially to Shirt Fronts, Collars, &c., and can be used with equal success in hoiled and cold water starch. Sold by all Chemists, in 1d. and 3d. Packets, and 6d. Tins. 1d., 8s.; 3d., 2s.; 6d., 4s. gross, less 10 per cent. for cash.

INSECT POWDER TINS.

Perforated, to hold ½ oz., 6s.; 1 oz., 8s. 6d.; 2 oz., 11s. gross, less 5 per cent. for cash.

PREPARED BY

G. W. BAYLY,

65 MACDONALD STREET, BIRMINGHAM.

INDEX TO ADVERTISEMENTS,

See Pages 35 & 36.

OZOKERIT.

Grand Medal,
MOSCOW, 1872.



Grand Medal,
VIENNA, 1873.

PATENTED.

MADE TO ALL SIZES.

At the CENTENNIAL PHILADELPHIA EXHIBITION the Highest Honours

WERE AWARDED TO **J. C. & J. FIELD** FOR THEIR EXHIBIT OF

CANDLES.

PATENTEES AND ORIGINAL MANUFACTURERS OF SELF-FITTING CANDLES.

Made in all Sizes. | Made in all Colours. | Burn to the End. | Require no Scraping.
Made in all Qualities. | Fit all Sockets. | Require no Cutting. | Are Safe, Economical, Cleanly.

CANDLES SPECIALLY ADAPTED FOR EXPORTATION TO HOT CLIMATES.

OZOKERIT (Patented). In handsome 1-lb. Packets.

These beautiful Candles are made in ALL SIZES, and from their great hardness and non-liability to bend when exposed to a high temperature, are well adapted for Ball Rooms and Tropical Climates. They possess the highest illuminating power of all descriptions of Candles.



Tablets 5 to lb.

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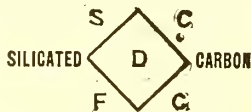
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ENO'S "FRUIT SALT,"

"FRUIT SALINE," OR "FRUIT POWDER."

ENO V. STEPHENS IN THE COURT OF CHANCERY.

Shorthand Writer's Notes of Vice-Chancellor Bacon's Summing-up and Judgment.

Sir HENRY JACKSON, Q.C., on proceeding to sum up in detail on the evidence and arguments in the case, was stopped by the VICE-CHANCELLOR in the following words:—

Sir Henry Jackson, I do not think I ought to trouble you. The case has been discussed at very great length. I confess somewhat to my astonishment when Mr. Hemming declined to adopt the evidence as it was before the Court of Appeal, and put the Plaintiff to prove by the same evidence the same facts which had been proved before. I was under the impression that he meant to call witnesses on his own behalf. If that had been, as it probably may have been his intention at that time, there would have been a reason perhaps for repeating over again at very great length and considerable expense, of course to somebody, the evidence upon which the Court of Appeal had acted—I say nothing about what was done in this Court, but the Court of Appeal had acted upon that evidence. The case, however, concludes, and no evidence whatever is advanced by the Defendant—not even his own statement in his Defence verified by his own affidavit. What is to be done with a case like that? The whole principle of the case was decided upon the first occasion. The Court of Appeal thought it right to adopt that restriction which I had thought it right to adopt, not to extend the Injunction further than the then present exigency of the occasion required. Not one word of the judgment of the Court of Appeal shows that there should be any restriction, or that there should be any restriction when the case came on for hearing. Now it comes on for hearing upon precisely the same evidence, and the evidence, among other things, is, that in the circular which accompanies this bottle of Salt, the words to which the Plaintiff particularly objects are repeated by the Defendant, and repeated by means of copying the Plaintiff's circular. Mr. Giffard says nobody buying the bottle would think of looking at the circular, for it is enclosed in the wrapper, and not even visible to the eye. But the case is one in which the Plaintiff complains of the general similarity and the general appearance of the names which are used by the Defendant, and if a purchaser entertained any doubt, if he was puzzled for a moment between "Vinous" or "Vinous," and Eno's—the sounds being, in one mode of pronunciation, very much alike—if he opened the wrapper and read the circular he would say, My doubts are removed; this is what I want—I want Fruit Saline, and here it is—the circular says it is "Fruit Saline."

The Defendant in his statement at the end of the fourth paragraph says he has not "at any time since the month of August, 1877, used the words Fruit Saline, or Fruit Powder, in any label or advertisement or otherwise in connection with the sale of the said preparation." Under the old system if a defendant had put in his answer, as he must, upon oath, he might perhaps have read that passage and said "the Plaintiff's allegation in that respect is denied." The Defence is not put in on oath and the Defendant declines to pledge his oath to that fact. But it does not rest there; for the evidence is clear and conclusive that after the month of August, 1877, when the Plaintiff, not without some degree of forbearance, as it seems to me, was content to take the Defendant's word that he would not repeat that offence which the Plaintiff complained was doing him that injury which he thought he was suffering, he did, in spite of his promise, repeat that which the Plaintiff called an offence and believed to be an injury to him. The case comes to a hearing, the Defendant insists upon the Plaintiff proving his case. At the Defendant's instance the Plaintiff has proved his case, and, among other things, has proved the utter falsehood of that Defence which is set up in the paragraph which I have read. The matter, therefore, is wholly without doubt, without defence, without excuse of any kind that I can perceive, because, when I am told that I must consider what the intention of the parties was, and when I am told, moreover, that there is no evidence that anybody has been deceived, and the Defendant in his defence says nobody has been deceived, his intention to deceive is not contradicted. That is what the Plaintiff imputes to him; and that is what, I think, the Plaintiff establishes not only from the simplicity of the sign, but from the fact that, when the complaint was first made in August, 1877, they were words which the Defendant admitted he had no right to use. For what reason? Because they were calculated to deceive—calculated to represent the Defendant's goods as those which the Plaintiff was selling under the title which he had adopted.

Upon the general case, therefore, in my opinion, the matter is beyond all doubt. It is proved that the use of the word "Fruit" with other substantives, "Saline" and "Salt," and so on, has been made by the Defendant since the time when he promised not to make it, when he admitted it was unlawful, and which I have no doubt whatever was wholly unlawful. It is said that he endeavoured to keep his promise by pasting something over the word "Fruit." Well, if that meant anything it is a plain admission of the justice of the Plaintiff's claim in that respect. But how can I consider that that is keeping his promise? Whether that pasting over was to be effectual or not would depend upon the consistency of the paste or glue, or perhaps the humidity of the atmosphere or any other accident. That there was no intention to perform his promise, I am satisfied of, and that there has been no performance of his promise I think is clear.

Upon the general case, therefore, I think the Plaintiff is entitled not only to the Injunction in the terms of the Interlocutory Order, but upon those more extensive terms which the Plaintiff asks, by his claim, should be applied to the Defendant's infringement of his rights.

Then there is another subject which is so intimately connected with that that I desired to hear them both together, and I am very glad I did, because, as Mr. Giffard has just told me, that is the main question in dispute between the parties. For the Injunction the Defendant does not seem to care much, though he has violated it, in my opinion, plainly; but he says the question is whether there is a title to register this Trade Mark for which the Defendant proposes to apply. Now that depends upon the words of the Act of Parliament which have been used, the more important of which are "so resembling as to be calculated to deceive." That is a question not to be decided by eyesight; I am invited to lay these two devices side by side, and, since they are not identical and since there are

great differences in their external appearance, to decide that they are not calculated to deceive. To that word DECEIVE I have no right to criticise or quarrel with; it is used in the Act of Parliament, and if I were to give one sense to it, it is plainly in my judgment calculated by the Defendant and intended by him, to deceive any person who is not vigilant enough either in eye or in ear to detect at once the difference between Vinous and Eno's, and the difference between Fruit Salt and any other salt. Eno's title being plainly upon his Trade Mark, Eno's Fruit Salt.

It is not, as I have said, by sight; it is not by the use of a microscope it is by any other means of detecting more or less of resemblance that you can decide a question which the statute contemplates by using the word that I have referred to. But it is whether the Registrar, whose office it is to register, is satisfied before he performs his function by registering a mark, that the applicant's mark does so resemble as to be calculated to deceive. Can any living man doubt that it is not only calculated—that intended—but that it is also calculated—that is to say, meant and contrived for the purpose of deceiving—else why does he do it? The world is wide as has been said in the Judgment referred to, and all things in the animal and inanimate world are open to the Defendant to make a device which shall distinguish his goods from those of any other person. But the Plaintiff having appropriated to himself, and enjoyed for years a device which the principal characteristic consists of a bunch of grapes, with Latin motto, and the specific description which relates to Eno's Fruit Salt the Defendant proposes to register a design in which the principal device is the stem of a vine with a bunch of grapes and some leaves, and a Latin motto around it, and it is to be called "Vinous Salt." If there was nothing in the case but the contrast of these two things, it might, perhaps, to some persons trusted only to their eyes, be said there was no resemblance between them, no sufficient resemblance; but the Registrar is bound to take the whole case into consideration; he is not to be guided by any mere similarity or dissimilarity. It is not the way that the Court of Appeal, in the latest case before it, the Sheffield case—dealt with the question. The Defendant there had as good a right as anybody in the world could have to stamp his own crest or coat of arms, or anything else, upon his commodities. Nobody could dispute it, and nobody, putting the case under consideration, could say they were so much alike as to deceive. Mr. Hemming insisted that the stamping, being made on a hard metal, was likely to be blurted, and the persons to be deceived. I have a very clear recollection of that case, and say it would be impossible for a man with eyes, or with one eye, in his head mistake the device in that case for the device which the Plaintiff desired there to be registered.

Mr. HEMMING:—Your Lordship will pardon me, I was only quoting the Master of the Rolls.

The VICE-CHANCELLOR:—I know, and have also clearly in my mind what the Master of the Rolls said and what he did not only in the "Dog and Porcupine" case, but in that case. The Master of the Rolls' judgment takes a wide and comprehensive view of the matter. He refers to the statute only for the purpose of verifying and corroborating that view, but what he said was "an honest man wants to mark his goods never thinks of taking the device partly or wholly from some other tradesman is employing for the purpose of marking his goods, that I take to be the true principle of the case."

And, taking all these things together, the Plaintiff's evidence in the first place is total absence of evidence or statement on the part of the Defendant, excepting ingenious and elaborate statements which Counsel have addressed to me, the being no statement whatever by him at any time except that he admitted he had done wrong in using the word "Fruit." I am asked to say that there is no resemblance between those two devices as, between those two men, are calculated to deceive in reference to the commodities tendered in the shape in which they are into the world. I manifest I should be wasting time if I observed further upon this; it is so clearly manifest not only that there is sufficient resemblance to answer the strictest words of the statute, but that there is a resemblance which has been carefully and intentionally calculated to deceive. And as the Defendant will not plead guilty to a contrary intention, I cannot come to a contrary conclusion than that the Injunction ought to go in the terms in which the bill prays for it, extending it to the time beyond the Injunctions granted on the Interlocutory Order and upon the motion, to say that the Defendant is not entitled to register the device of a bunch of a vine with a bunch of grapes upon it, and a Latin motto on it and the name "Vinous Salt." There is an error of fact there.

Sir HENRY JACKSON:—Well, my Lord, of course I must have the case.

The VICE-CHANCELLOR:—You must have the costs of both.

Sir HENRY JACKSON:—And I think I must ask for the Shortland Notes of the evidence yesterday. That your Lordship has given on occasion it was impossible for us to avoid incurring that expense, although it has proved to be absolutely useless. Your Lordship has given it on several occasions, and I must say your Lordship for the costs of taking the evidence.

Mr. HEMMING:—I do not think your Lordship is ever in the habit of giving costs of that kind, unless there is some special reason for taking the note. I do not know whether my friend anticipates an appeal upon that evidence. I am sure he will not say so, and I do not think the Court is in the habit of allowing them to be kept, and that could only be done according to the present practice of this Court by the employment of a shorthand writer. Mr. Hemming therefore drew upon his own head the necessity for the employment of a shorthand writer, and having done it without reason as I thought; and having done it without the Defendant being bound to pay to the Plaintiff.

The VICE-CHANCELLOR:—So far from laying down any rule or notion of this particular subject of the costs incurred by the shorthand writer, that it ought not to be done without a good and sufficient reason for it. No such reason is so perfectly apparent and conclusive. Sir Henry Jackson proposes to treat the evidence as it had been used in the Court of Appeal, as being put in by Mr. Hemming objected to that, and insisted upon the witnesses being examined in my opinion it became indispensably necessary that a record of that evidence should be kept, and that could only be done according to the present practice of this Court by the employment of a shorthand writer. Mr. Hemming therefore drew upon his own head the necessity for the employment of a shorthand writer, and having done it without reason as I thought; and having done it without the Defendant being bound to pay to the Plaintiff.

Mr. HEMMING:—That does not mean any transcript—there has been no transcript taken.

Sir HENRY JACKSON:—I have the transcript here, and I was prepared to sum up this morning.

Mr. HEMMING:—There was no occasion for it.

Sir HENRY JACKSON:—I do not want of course the costs of any of the speeches; I merely take the transcript of the shorthand notes of the evidence.

The VICE-CHANCELLOR:—I think that must be so, because for any thing I know this day week the Lords Justices will have them in their hands.

Mr. HEMMING:—Then would be time to ask for it.

Sir HENRY JACKSON:—My Lord has decided.



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