IODIDE OF LIME TABLETS (NICHOLS').

Examination of the tablets of "Iodide of Lime," sold by Billings Clapp Co., demonstrated that, like "Calcidin Tablets," they differ in composition from the original substance which they are supposed to represent. Iodide of Lime (Nichols') was found to contain approximately 10 per cent. "available" iodin. Each ⅓ grain tablet should, therefore, contain about 1/30 "available" iodin. Instead, it was found that each tablet was equivalent to 1/128 grain of free iodin.

It is worthy of note in this connection that the tablets appeared decidedly brown in color, which might be taken to indicate that they really did contain a considerable amount of free iodin. The examination, however, showed that brown color to be due to the presence of large amounts of iron oxid.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

EXAMINATION OF TABLETS OF BISMUTH, OPIUM AND PHENOL.

W. A. Puckner and A. H. Clark.

(*From The Journal A. M. A., July 25, 1908.*)

The demand for "palatable and convenient" medicaments has led manufacturing pharmacists to attempt to produce in tablet form mixtures which, from the nature of the case, are not suited to that method of compounding. In such cases it becomes a question as to what reliance the physician may place in such products and so an examination of a type of these preparations was made in the Association's laboratory.

Nearly every manufacturing pharmacist lists in his catalogue a tablet composed of bismuth, opium and phenol (carbolic acid). According to the price lists and labels, each tablet contains either five or three grains of bismuth subnitrate, one grain of aromatic powder, one-half grain of powdered opium and one-half grain (in one case one-eighth grain) of phenol.

Specimens of different makes of this tablet were purchased, in open market and from the manufacturer, and were examined to determine the amount of phenol each contained. A long series of experiments, the details of which will be published elsewhere, were carried out to determine the best metho

of estimating the amount of phenol in mixtures of this nature. The methods adopted are given below.[1]

The results here tabulated were obtained from the examination of specimens purchased direct from the manufacturer. At least one other specimen—bought in the open market—of each manufacturer was examined, the latter giving, in nearly every instance a lower figure, probably because it had been in stock longer. In the few cases in which the latter specimen gave a higher result, both findings are given.

The essential point brought out by the table is, of course, that shown by the figures in Column 8—"Amount Found Expressed as Per Cent. of Amount Claimed." It should be realized that if the tablets contained the amount of phenol claimed, the numbers in this column would all be 100. But instead of this even the best specimen contained only 72.65 per cent., while some ranged as low as 12.66 per cent.

The comparative weights of the tablets also is interesting. While the difference in weight between the heaviest (Column 1) and the lightest (Column 2) tablet in one-half the specimens, amounted to less than 10 per cent (Column 4) of the average weight (Column 3), in one instance the difference amounted to 34.35 per cent. (Column 4).

These tablets are a typical illustration of the attempts to produce, in "elegant and palatable form," the impossible—impossible at least without care and expense. From the nature of the processes involved in the manufacture of a tablet, it is very difficult to produce one containing a definite amount of a volatile substance like carbolic acid. Accuracy in dosage

1. Estimation of Phenol (Method A) : A quantity of the powdered tablets containing not more than 0.175 gm. phenol was placed in a distilling flask and water sufficient to cover the powder added. The mixture was then acidulated with about 1 c.c. U. S. P. phosphoric acid and the distilling flask connected with a Liebig condenser and a current of steam driven through the flask. The distillation was continued until 250 c.c. of distillate was obtained. Of this distillate, 50 c.c. was measured into a 250 c.c. glass-stoppered flask and 25 c.c. standard bromin solution added, and the mixture acidulated with 5 c.c. hydrochloric acid. After standing one-half hour, the uncombined bromin was determined by adding potassium iodid T. S. and titrating the liberated iodin with standard thiosulphate V. S. As a typical example 8 tablets weighing 3.1045 gm. and calculated to contain 0.2592 gm. phenol were taken. Fifty c.c. of the distillate, representing 0.6209 gm. of the tablets and which should have contained 0.05184 gm. phenol, consumed 11.24 c.c. tenth-normal bromin V. S. Each c.c., being equivalent to 0.001556 gm. phenol, the 50 c.c. contained only 0.017489 gm. phenol, or 2.85 per cent. of the weight of the tablet. (Method B) : The same procedure was followed as above outlined, except that the mixture of the powdered tablets and water was saturated with carbon dioxid and the distillation conducted with a brisk current of carbon dioxid passing through the distilling flask constantly.

Manufacturer.	1 Weight of Heaviest Tablet in Gms.[2]	2 Weight of Lightest Tablet in Gms.[3]	3 Average Weight of Tablet in Gms.[4]	4 Per Cent. Variation.[5]	5 Per Cent. Phenol According to Formula on Label.[6]	6 Per Cent. Phenol Found. Method A.	7 Per Cent. Phenol Found. Method B.	8 Amount Found expressed as Per Cent. of Amount Claimed.[7]
Hance Bros. and White	.4053	.3400	.3833	17.03	8.45	1.81	1.85	21.89
W. S. Merrell Chemical Co	.5225	.5152	.5142	1.42	6.30	3.02	3.08	48.89
H. K. Mulford & Co	.4837	.4569	.4752	5.64	1.72	.86	.90	52.34
Parke, Davis & Co. (No. 1)	.5747	.4993	.5328	14.17	6.08	4.27	...	70.23
Parke, Davis & Co. (No. 2)	.5800	.5245	.5518	10.06	5.87	2.76	2.74	47.02
Sharp & Dohme (No. 1)	.3951	.3742	.3852	5.24	8.41	6.06	6.11	72.65
Sharp and Dohme (No. 2)	.4213	.3544	.3937	17.00	8.23	2.83	2.85	34.63
Frederick Stearns & Co	.5221	.3690	.4457	34.35	7.27	1.92	1.93	26.55
Truax, Greene & Co	.3428	.2482	.3232	29.27	10.03	1.38	1.36	13.69
H. K. Wampole & Co. (No. 1)	.3646	.3417	.3525	6.21	9.19	4.06	4.24	46.14
H. K. Wampole & Co. (No. 2)	.3670	.3487	.3609	5.07	8.98	3.53	3.49	39.31
Wm. R. Warner & Co	.2850	.2397	.2684	17.55	12.08	1.53	1.53	12.66

2. Ten tablets, or if the variation proved to be great, 25 tablets, were separately weighed and the weight of the heaviest tablet recorded.

3. Ten tablets, or, if the variation proved to be great, 25 tablets, were separately weighed and the weight of the lightest tablet recorded.

4. One hundred tablets were weighed, and from this weight the average of a single tablet calculated.

5. These figures were obtained by dividing the difference in weight of the heaviest and lightest tablet by the average weight and multiplying this quotient by one hundred.

6. These figures were obtained by dividing the weight of phenol each tablet should contain by the average weight and multiplying this quotient by one hundred.

7. The figures given here are obtained by dividing the highest per cent. of phenol found by either method by the per cent. of phenol indicated by the formula on the package and multiplying this quotient by one hundred.

is indispensable to the scientific administration of drugs. In medicinal preparations of the type just described the essential —accuracy—is sacrificed for the merely desirable—convenience and palatability. To the extent to which physicians prescribe, as tablets, combinations of drugs that can not be successfully put up in that form, to that extent does scientific medicine suffer.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

SALIODIN.

W. A. Puckner and A. H. Clark.

(*From The Journal A. M. A., Oct. 26, 1907, 1454.*)

[The Council on Pharmacy and Chemistry refused recognition to Saliodin because it conflicted with Rules 1 and 6, and directed publication of the following.

W. A. PUCKNER, Secretary.]

Saliodin is sold by the Saliodin Chemical Co., Scranton, Pa. In the literature and on the trade package the following "formula" is given:

FORMULA

Each Grs. XX of Saliodin contains approximately:

℞

Salicylic Acid, (Aceto—Salicylate)	Grs. XV
Iodine, (Iodate) Equivalent to Iodide Potass	Grs. XV
Acetic Acid, (Acetate) Equiv. to Acetate Potass	Grs. V
Aconite - Equiv. to	Tr. Aconite R. Gtts. IV
Bryonia - - " "	- Tr. Bryonia, Gtts. V
Colchicum - "	" Vin. Colchicum R. Gtts. XV
Capsicum - "	" - Tr. Capsicum Gtts. II
Oil Gaultheria "	" - - - - - m III

This formula being indefinite and vague, the examination of saliodin was taken up in the Association laboratory.

From the analysis we calculate the composition of saliodin to be approximately equivalent to a mixture of:

Sodium salicylate	57.54
Potassium iodid	1.18
Potassium acetate	30.00
Matter volatile at 130° (oil of anise, oil of gaultheria, moisture, etc.)	8.10
Undetermined (extractive?)	3.18
	100.00

The analysis shows that the formula is not only indefinite and vague, but incorrect and false.

To emphasize the incorrectness of the published formula the following comment on the first two items is offered:

In the "formula" it is stated that 20 grains of saliodin contain approximately "salicylic acid (aceto-salicylate) Grs. XV." The statement is not clear, but conveys the impression that 20 grains of saliodin contain an amount of an aceto-salicylate, a salt of acetyl-salicylic acid (aspirin), equivalent to 15 grains of salicylic acid. But the chemical examination shows that it contains neither acetyl-salicylic acid, or salt of acetyl-salicylic acid, nor even salicylic acid itself. In the place of these, the analysis shows that over half of saliodin is the common, every-day sodium salicylate.

According to the "formula," each 20 grains of saliodin contains "iodin (iodate), equivalent to iodid potass. Grs. XV." This statement, too, is vague, but conveys the impression that 20 grains of saliodin contain an amount of iodin, in combination as an iodate, which corresponds in iodin content to 15 grains of potassium iodid. But the analysis shows that the product does not contain any iodate whatever, and that the amount of iodin contained in it is sufficient to account for only ¼ grain of potassium iodid in each 20 grains of saliodin.

COMMENTS.

The above report is published simply as another example of the "ethical proprietaries" that physicians are asked to prescribe. It is not unique. It is neither better nor worse than hundreds of others.

To show what absurdities appear in the "literature" (?) that is sent to physicians, we reproduce a paragraph from an advertising pamphlet. The promoters' statement as to the composition of the product is absurd, but not more so than are the claims made for it as a therapeutic agent. There is not a "patent medicine" on the market for which any more blatant, extravagant and ridiculous claims are made.

The manner of exploiting saliodin is another illustration of the tendency on the part of nostrum-makers to advertise their wares through pseudo-scientific articles published in a certain class of medical journals. In the pamphlet sent out by the Saliodin company appears a reprint of an article from the *Philadelphia Medical Summary* of February, 1905. It is entitled "A Similarity in the Etiologic Factors of Rheumatism and Malaria," and was written by J. C. Denston, M.D. In it occurs this statement: "The manufacturers (of saliodin) publish their formula and, *I think,* distribute samples and literature on request." The charming ingenuousness of this statement is fully realized when it is understood that J. C. Denston is the president of the Saliodin company. This is

It is an "Iodated, Aceto-Salicylate with Adjuvants," and the SPECIFIC treatment for every form of URIC ACID DIATHESIS. "Saliodin" is a SOLVENT and ELIMINANT of URIC ACID and is a happy combination of ℞ Salicylic Acid, Iodine, Acetic Acid, Aconite, Bryonia, Colchicum, Capsicum and Gaultheria and chemically appears in the form of a PINK, GREYISH POWDER soluable in water 1 to 3—dose grs. X to grs. XXX; for the EXCLUSIVE USE OF PHYSICIANS—put up in one ounce bottles; price PER OUNCE $1.50. Is manufactured ONLY by the Saliodin Chemical Co. "SALIODIN is SPECIFICALLY indicated in RHEUMATISM, GOUT NEURALGIA, MALARIA and LA GRIPPE; is ANALGESIC, ANTIPYRETIC; an INTESTINAL ANTISEPTIC, DIAPHORETIC, DIURETIC, EXPECTORANT, DEOBSTRUENT, SIALAGOGUE, CHOLAGOGUE, EMMENAGOGUE, ANTI-SYPHILITIC, GONOCOCOCIDAL, PARASITICIDAL, ASEPTIC, BACTERICIDAL and ALTERATIVE. Doctor, you may prescribe Saliodin with confidence wherever IODINE or a SALICYLATE is indicated. Used both internally and externally.

Reproduction (much reduced) of a paragraph in the advertising pamphlet on Saliodin.

Note the twenty-one indications for Saliodin. Lest some condition might be overlooked, we are advised to use it "internally and externally." Isn't this scientific therapy?

also another illustration of what is now a common occurrence, viz.: men who are engaged in manufacturing proprietary products and who have an M.D. degree use that degree as a commercial asset, and by this means the average reader is led to think that articles written by them in praise of their own products are spontaneous tributes from practicing physicians.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

SODIUM PERBORATE.

W. A. Puckner and A. H. Clark.

(*From The Journal A. M. A., Sept. 5, 1908.*)

A chemical compound known as sodium perborate has been put on the market in the last few years and its use proposed in both medicine and the arts. Its therapeutic and technical value depends on its property of forming hydrogen dioxid when brought in contact with water, and it has been proposed as a substitute for hydrogen dioxid solution (Aqua hydrogenii dioxidi, U. S. P.). The advantages claimed for it over the well-known "peroxid" are those of stability, uniformity, convenience, greater oxidizing power and decreased cost. Thus, it is stated that while "hydrogen peroxid preparations are subject to deterioration and loss in strength when once the bottle is unsealed" sodium perborate "will keep and stand

transportation in its concentrated powder form and always be ready for solutions of hydrogen dioxid of any desired strength, whereas the bulky hydrogen peroxid 10 volume solution has to be diluted for use in most cases and keeps you always uncertain of its real strength." Another advantage claimed for sodium perborate is that its solutions in water are alkaline, while the available medicinal hydrogen peroxid solutions are always acid.[1]

Since it appeared that sodium perborate might possess some real advantages over hydrogen dioxid the Council on Pharmacy and Chemistry took up the examination of the product as found in the American market with a view to including it in the New and Non-Official Remedies. In this country sodium perborate is advertised and sold chiefly by the Roessler & Hasslacher Chemical Company, New York, and the firm claims that the preparation contains from 9 to 10 per cent. of available oxygen. Samples of sodium perborate were obtained both direct from the firm and also in the open market. When assayed by the method given below they were found to contain, not from 9 to 10 per cent. of available oxygen as stated on the label, but from 6.54 to 7.66 per cent., as is shown in the account of the examination given in detail below.

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1. The chemical formula assigned to sodium perborate is $NaBO_3+4H_2O$. While sodium meta-borate $NaBO_2$ has the constitutional formula BO(ONa) and is derived from BO(OH) sodium perborate $NaBO_3$ has the constitutional formula BO(OONa) and is derived from BO(OOH). When sodium perborate is treated with water hydrolysis occurs, thus: $NaBO_3+H_2O = NaBO_2 + H_2O_2$; the sodium meta-borate so formed gradually absorbs water to form borax and sodium hydroxid, thus: $4NaBO_2 + H_2O = Na_2B_4O_7 + 2NaOH$. From this, it appears that sodium perborate when dissolved in water reacts to a certain extent to form hydrogen dioxid, borax and sodium hydroxid; if acid is added to neutralize the sodium hydroxid then the reaction goes on to completion, and all the sodium perborate is decomposed into hydrogen dioxid. Assuming that every molecule of sodium perborate $NaBO_3$, $4H_2O$ yields one molecule of hydrogen dioxid, which, in turn, contains one atom of available oxygen, then every 152.94 gm. sodium perborate should yield 15.88 gm. of available oxygen.

2. SPECIMEN 1.—Three one-quarter pound packages (designated A, B and C) received at the chemical laboratory of the American Medical Association direct from the manufacturer, in July, 1907. Package A was assayed at that time and found to contain 6.79 per cent. available oxygen. Package B was left in its original condition, and package C was transferred to a glass stoppered bottle. On June 3, 1908, packages A and B each assayed 7.14 per cent. available oxygen, while package C (the one kept in the glass stoppered bottle) assayed 5.29 per cent. available oxygen.

SPECIMEN 2.—Three one-quarter pound packages (designated A, B and C), received at the chemical laboratory of the American Medical Association direct from the manufacturer Aug. 23, 1907. Packages A and C were not opened when received. Package B was opened and examined at once. The contents were found to weigh

The above report was submitted to the Council on Pharmacy and Chemistry. The council having directed publication of the report, it was sent to the Roessler & Hasslacher Chemical Company prior to publication. The reply of the firm was submitted to the Council by a subcommittee, with the following report:

In accordance with the general procedure followed by the Council, the report of the chemical laboratory as adopted by the Council and ordered published was submitted to the manufacturer. In reply the manufacturer states that the firm is now conducting experiments to overcome the defects found. Your committee regrets that the manufacturer does not agree

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140 gm. It assayed 7.66 per cent. available oxygen. On June 6, 1908, the contents of this package weighed 115.5 gm. and assayed 7.32 per cent. available oxygen. Package A was opened and found to assay 7.2 per cent. available oxygen. Package C is still retained in its original condition.

SPECIMEN 3.—A one-quarter pound package purchased in the open market in Chicago, Aug. 24, 1907. The contents of the package weighed 130 gm. on date of purchase and assayed 6.59 per cent. available oxygen. On June 3, 1908, the contents of this package weighed 106 gm. and assayed 7.34 per cent. available oxygen.

SPECIMEN 4.—A one-quarter pound package purchased from the Chicago branch of the Roessler & Hasslacher Chemical Co., May 13, 1908. On the date of purchase this specimen assayed 6.54 per cent. available oxygen.

SPECIMEN 5.—A one-quarter pound package purchased in the open market in Chicago on April 21, 1908. On date of purchase this specimen assayed 6.74 per cent. available oxygen. On June 3, 1908, this specimen assayed 6.26 per cent. available oxygen.

The above examination reveals two important facts regarding this substance. In the first place it is not of the strength indicated on the label; in the second place the product seems to be decidedly unstable and unreliable. Specimen 1, in the eleven months intervening between the two assays, increased in strength. The weight of this sample was not ascertained at the time of purchase. Specimen 2 lost by keeping, approximately 17.5 per cent. in weight. If this loss is due to the loss of moisture or water of hydration only, a corresponding increase in available oxygen should be noted. In other words the specimen should have assayed at this time something over 9. per cent. available oxygen. Instead approximately 4 per cent. of the amount of available oxygen originally present had disappeared, showing that the actual loss of available oxygen was about 26 per cent. of that originally present. Specimen 3 lost approximately 18 per cent. in weight. Again, if this loss was due to water only, the specimen should have assayed approximately 8 per cent. available oxygen. This indicates an actual loss in available oxygen of approximately 10 per cent. of that originally present.

METHOD EMPLOYED.—The following method was used to determine the available oxygen content in sodium perborate: A weighed quantity of the salt was placed in a dry flask and about 200 c.c. of water added. To this was added 10 c.c. dilute sulphuric acid and titration with potassium permanganate solution at once begun. A few of the earlier estimations were checked by the method proposed in Merck's *Prüfungsvorschriften für die pharmazeutischen Spezial-Präparate*, as follows: To a weighed quantity of sodium perborate

to withdraw the false claims made for the product until the product possesses the strength claimed. It is understood that the Council will gladly reinvestigate the product any time that the firm believes that their experimentations have led to a successful issue and the product as found on the market complies with the rules. In the meantime your committee recommends that the report be published so that physicians may be informed of the truth and not be misled by the claims of the manufacturer which may in the future be trustworthy but certainly are not so at present.

This report was adopted.

W. A. PUCKNER, Secretary.

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about 1 gm. was placed in 100 c.c. volumetric flask and treated with 50 c.c. water. To this 10 c.c. of dilute sulphuric acid were added and solution hastened by moderate agitation. Potassium iodid, 5 gm., dissolved in 25 c.c. of water were added and the mixture allowed to stand with frequent agitation during one-half hour. Sufficient water to make the liquid measure 100 c.c. was then added and portions of 10 c.c. titrated with tenth-normal sodium thiosulphate solution.

The results above given were transmitted to the manufacturers. In their reply the manufacturers did not claim that the product sold by them contained from 9 to 10 per cent. available oxygen, but nevertheless appeared to consider it their privilege to sell it under this claim. While not claiming that the product really contained 9 to 10 per cent. available oxygen, they did express surprise at the low results obtained in this laboratory and, as was but natural, suggested that probably the method of assay used by us was faulty and did not do their product justice. Thus, they suggested, that there is danger that some oxygen may be liberated from the solution before the titration is made. They suggested that the liquid should not be heated in order to produce a quicker solution and that the sulphuric acid should only be added after all the porborate has dissolved. To determine whether complete solution of perborate before titration is essential, the following experiments were made:

1. Sodium perborate was treated with water having a temperature of 9 C. (48.2 F.); the dilute sulphuric acid was added before complete solution and titration with permanganate begun at once. Result, 7.89 per cent. available oxygen.

2. The conditions of the experiment were as in (a), except that the water had a temperature of 35 C. (95 F.). Result, 7.76 per cent. available oxygen.

3. The water had, and was kept at, a temperature of 9 C. (48.2 F.); the acid was added only after complete solution had occurred (this required 30 minutes), and the titration then begun. Result, 7.58 per cent. available oxygen.

4. The water had a temperature of 35 C. (95 F.). The acid was added after complete solution had occurred (4 minutes), and titration then begun. Result, 7.59 per cent. available oxygen.

These experiments show that the method of titrating sodium perborate as used in our experiments did not entail loss of oxygen prior to the titration.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

URICEDIN.

W. A. Puckner and A. H. Clark.

(*From The Journal A. M. A., Nov. 23, 1907, 1788.*)

In view of the interesting report given below concerning investigations of Uricedin made by F. Zernik in the Pharmaceutical Institute of the University of Berlin, and because this preparation is being advertised to physicians in this country, its examination was taken up in the Association laboratory to determine the composition of the product as sold here. The following is a translation of the Zernik report from the *"Arbeiten aus dem Pharmaceutischen Institut der Universitat Berlin, dritter Band,"* 1906, and is given to show how this remedy has varied in its composition as put on the market in Germany.

URICEDIN (STROSCHEIN).

BY F. ZERNIK.

Uricedin is made by the firm of manufacturers of chemical preparations, J. E. Stroschein, Berlin.

1. This powder, recommended for the treatment of the uric acid diathesis, appeared first in 1893. According to the statements of the manufacturers, it was produced in the following manner: "In lemon juice freshly expressed and clarified and purified according to the process announced for the patent the amount of citric acid is quantitatively determined and to the juice are added 50 parts of anhydrous citric acid, 20 parts of the purest sulphuric acid containing 95 per cent. H_2SO_4 and 4 parts of the purest hydrochloric acid of 25 per cent. and then the purest sodium carbonate until the mixture shows only a faint acid reaction. In addition 1 part of lithium carbonate is dissolved in sufficient of the lemon juice for exact neutralization, and this solution is mixed with the first and the whole completely dried and granulated. The preparation contains:

27.5 parts of	Na_2SO_4
1.6 parts of	$NaCl$
67.0 parts of	$Na_3C_6H_5O_7$
1.9 parts of	$Li_3C_6H_5O_7$

2. According to an analysis by Goldmann, Uricedin consisted of:

31.9 parts of	Na_2SO_4
1.6 parts of	$NaCl$
6.2 parts of	Na_2CO_3
59.1 parts of	$Na_3C_6H_5O_7$
1.6 parts of	H_2O

A second preparation was found by Goldmann to have a strong acid reaction.

3. A sample of Uricedin investigated by Schneider at the same time had an alkaline reaction and contained sodium carbonate as well as lithium.

4. According to later reports the Uricedin produced by the use of fresh lemon juice contains sodium citrate 62.7 per cent., sodium sulphate 29,694, sodium chlorid 1.206, sodium acetate 1.320, sodium tartrate 1.500, sodium malate 1.550, iron 0.040, sodium pectinate 1.170, extractive material 0.820.

The preparation used for examination was in an intact original package. The blue octagonal bottle, closed with a metal screw cap, contained about 135 grams of a yellowish-white, granulated powder of a salty taste that dissolved in water to a turbid liquid of acid reaction. Sodium, sulphuric acid, citric acid, chlorin, tartaric acid and traces of iron could be detected in it, but neither lithium, acetic acid, nor malic acid. From the results of the quantitative analysis Uricedin contains about 2.5 per cent. of sodium chlorid and 66.5 per cent. of anhydrous sodium sulphate; the remainder consists of sodium citrate and a little sodium tartrate.

As a comparison of the results of the present examination with the previous analyses shows, the composition of Uricedin seems to vary.

The Fischer Chemical Importing Company of New York is the American agent. The product is sold in blue, screw-cap bottles, each containing the name "Uricedin-Stroschein" blown in the glass. In the literature distributed by the American agents appears the following statement:

"This remedy is not a 'patent medicine,' as might appear from the name that has been adopted for it. The preparation is a definite chemical compound of unvarying composition, consisting of citrate of sodium, sulphate of sodium, chlorate of sodium, acetate of sodium, tartrate of sodium, pomate of sodium, limonin, etc., in definite proportions. The preparation is produced by a special chemical process through the action of purest sulphuric and hydrochloric acids and carbonate of sodium on true citric acid from the lemon fruit."

From our analysis we conclude that the composition of Uricedin as now found on the American market is approximately:

Sodium sulphate (anhydrous)	61.52 per cent.
Sodium citrate (anhydrous)	29.62 per cent.
Sodium chlorid	2.13 per cent.
Citric acid (anhydrous)	3.25 per cent.
Moisture	2.53 per cent.
Undetermined	0.95 per cent.
	100.00

Uricedin, therefore, is not a definite chemical compound as claimed, but a simple mixture which consists essentially of sodium sulphate (dried Glauber salt) $\frac{2}{3}$, and sodium citrate $\frac{1}{3}$.

COMMENT.

It is evident from the analyses that this product is a typical nostrum, in addition to which it would seem that the composition is changed from time to time to suit the whim of the manufacturer. The claim is made by the manufacturer that this product is a definite chemical compound, when, in reality, it is simply a mixture. This well-known device of nostrum manufacturers has been exposed so often that it is becoming an old story—and a disgraceful one.

The therapeutic claims made for this nostrum are of the same extravagant nature. For instance, a recent advertisement states that it is "used successfully for Gouty Diathesis, Urinary Calculi, Rheumatoid Arthritis," "useful in Migraine, Occipital Headache, Epilepsy, Hay Fever, Asthma, Nasal Catarrh, Hysteria, Neurasthenia, Eczema, and certain functional disturbances of the sexual organs." Who would have believed that such wonderful therapeutic effects could ever be obtained by the administration of Glauber salt and sodium citrate. If a simple mixture of this sort will do all the promoters claim Uricedin will do, then in the name of suffering humanity let us use it, but at the same time, in the name of common decency, let us prescribe its ingredients by their proper names, knowing what we are giving our patients. The ingredients for such a mixture would cost not to exceed 50 cents a pound, while this wonderful remedy is listed at $1.25 wholesale, per bottle of about 5 ounces. Surely if this combination will do what its promoters claim for it, it is an act of philanthropy to put it within the reach of the poorest patient. Finally, if we must prescribe nostrums, let us at least be patriotic and confine ourselves to home-made fakes, of which there is surely no lack at the present time.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

URISEPTIN.

W. A. Puckner and W. S. Hilpert.

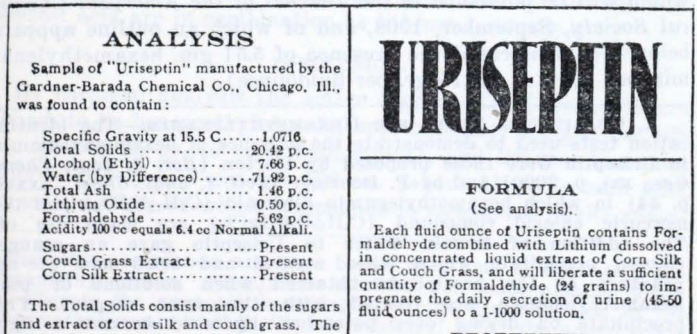
(*From The Journal A. M. A., Aug. 29, 1908.*)

"Uriseptin," manufactured by the Gardner-Barada Chemical Co. of Chicago and claimed to be a "urinary antiseptic, uric acid solvent and diuretic," was examined in the laboratory of the American Medical Association to determine to what extent the claims made for it are justified.

The preparation as purchased in the open market bears a label which presents the claims of the manufacturers, emphasized by the chemical analysis duly signed by an analyst and attested by a notary. Accompanying is a reproduction of part of the label.

Before the examination had extended very far it was found that discrepancies existed between facts and claims, and by the time the analysis was complete Uriseptin was found to be in the same class as many other proprietary remedies that have been discussed in these columns.

Our examination shows that the most misleading statement is that concerning the "lithium-formaldehyd" compound the



ANALYSIS

Sample of "Uriseptin" manufactured by the Gardner-Barada Chemical Co., Chicago, Ill., was found to contain:

Specific Gravity at 15.5 C	1.0716
Total Solids	20.42 p.c.
Alcohol (Ethyl)	7.66 p.c.
Water (by Difference)	71.92 p.c.
Total Ash	1.46 p.c.
Lithium Oxide	0.50 p.c.
Formaldehyde	5.62 p.c.
Acidity 100 cc equals 6.4 cc Normal Alkali.	
Sugars	Present
Couch Grass Extract	Present
Corn Silk Extract	Present

The Total Solids consist mainly of the sugars and extract of corn silk and couch grass. The couch grass and corn silk extracts were determined by taste and smell in comparison with authentic samples of same products. The Lithium Oxide and the Formaldehyde are in combination in the Uriseptin and together represent 26.77 grains per liquid oz. I remain,

Yours very truly,

(Signed) DR. EDWD. GUDEMAN.

STATE OF ILLINOIS } ss.
COUNTY OF COOK }

Subscribed and sworn to before me this 13th day of May, 1905.

(Signed) PAUL E. BUEDEFELDT,
Notary Public.

URISEPTIN

FORMULA

(See analysis).

Each fluid ounce of Uriseptin contains Formaldehyde combined with Lithium dissolved in concentrated liquid extract of Corn Silk and Couch Grass, and will liberate a sufficient quantity of Formaldehyde (24 grains) to impregnate the daily secretion of urine (45-50 fluid ounces) to a 1-1000 solution.

PROPERTIES

Urinary Antiseptic, Uric Acid Solvent, Diuretic.

INDICATIONS

Diseases of the urinary tract and their complications—Nephritis, Pyelitis, Urethritis, Gonorrhea, Gleet, Cystitis, Bacteriuria, Uremia, Phosphaturia, Prostatitis. Diseases dependent on uric acid diathesis—Gout, Rheumatism, Calculus, Asthma and generally as an antiseptic and uric acid solvent.

DOSE

Tablespoonful night and morning, or one to two teaspoonfuls four times a day, preferably in hot water.

Reduced reproduction of part of the label from a package of Uriseptin.

presence of which is claimed, more or less directly, by both the manufacturers and the analyst employed by the manufacturers. Although the chemical properties of lithium and formaldehyd indicate in themselves that the existence of such a compound would be most improbable, yet considerable time was spent in searching the chemical literature for such a compound. Thorough search, however, demonstrated that no such compound, nor any that even approximated it, has been described.

The question then arose as to the form in which the lithium and the formaldehyd are present. The statements regarding its properties as a urinary antiseptic and the fact that the preparation is said to slowly liberate formaldehyd in the bladder point strongly to the presence of hexamethylenamin.

Tests[1] were applied to demonstrate whether the formaldehyd was present as a lithium compound, and if not, whether it existed in the form of hexamethylenamin. By these the presence of hexamethylenamin was proved and the absence of formaldehyd in other combinations demonstrated. This fact alone shows that the preparation is deliberately marketed under a false claim, and it shows further that the analysis on the label is worthless. The quantitative method of analysis—which will be published in the *Journal of the American Chemical Society*, September, 1908, and of which an outline appears below[2]—demonstrated the presence of 5.51 gm. hexamethylenamin per 100 c.c. (25.15 gr. per fluidounce).

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1. QUALITATIVE TESTS FOR HEXAMETHYLENAMIN.—The identification tests used to demonstrate the presence of hexamethylenamin in Uriseptin were those proposed by Horton (*Ber. d. deut. Chem. Ges.*, xxi, p. 2000) and by P. Dobriner (*Zeit. f. anal. Chem.*, xxxvi, p. 44) in which hexamethylenamin dibromid ($C_6H_{12}N_4Br_2$) and the mercuric chlorid compound ($C_6H_{12}N_46HgCl_2$) are made use of. The addition of bromin water to Uriseptin gave an orange-colored precipitate which when washed and dried had the appearance of the precipitate obtained when solutions of pure hexamethylenamin are treated with the same reagent. This precipitate on drying over potassium hydroxid became a light yellow identical with the corresponding body obtained from pure hexamethylenamin. When boiled with water it gave off the odor of formaldehyd and by ordinary tests ammonia, bromin and hexamethylenamin were found in the resulting solution exactly as is the case when pure hexamethylenamin dibromid is subjected to the same conditions. The melting point of the yellow body obtained was found to be 196-200 C., which is practically the melting point of hexamethylenamin dibromid. As a final and rigorous proof of identity pure hexamethylenamin dibromid was mixed with some of the supposed dibromid and the melting point taken. The melting point of the mixture was found to be 194-200 degrees demonstrating beyond question the identity of the compound. As a confirmative test the mercuric chlorid test was applied. Mercuric chlorid precipitated from Uriseptin an amorphous white body which later turned to a mass of crystals. This crystalline body when washed and dried and boiled with dilute acid liberated formaldehyd. The resulting solution responded to tests for ammonia, hexamethylenamin and mercury. The same test applied to pure hexamethylenamin solution gave exactly the same results. A still further confirmation that hexamethylenamin was present as such and not in some combination which bromin water or mercuric chlorid might decompose, was the fact that chloroform extracted from Uriseptin a substance that had the same crystalline form as pure hexamethylenamin crystallized from chloroform, and which responded to all the above reactions for hexamethylenamin.

2. QUANTITATIVE TEST FOR HEXAMETHYLENAMIN.—Uriseptin was boiled with alkali to liberate and drive off all ammonia present as

Besides the hexamethylenamin, Uriseptin contains lithium[3] and a benzoate.[4] Concerning the latter nothing is said in the analysis, whose worthlessness is again demonstrated. By quantitative methods[5] Uriseptin was found to contain lithium and a benzoate in such proportions as would indicate that the lithium and the benzoate radicle exist as lithium benzoate. This fact is further indicated by the claims made for the preparation regarding its properties as a uric acid solvent, for which purpose lithium benzoate is often used. Again, the demonstration that the formaldehyd present is in combination as hexamethylenamin precluded any possible chemical combination between lithium and formaldehyd and adds another strong point in support of the conclusion that the lithium and benzoic acid are in combination as lithium benzoate.

CONCLUSION.

By chemical analysis the active ingredients of Uriseptin are shown to be hexamethylenamin, approximately 5.5 gm. per 100 c.c. (about 25 gr. to each fluid ounce), and lithium benzoate, approximately 0.70 gm. per 100 c.c. (about 11 gr. to each fluid ounce), neither of which compounds is mentioned in the adver-

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ammonium compounds, and then boiled with acid to decompose the hexamethylenamin. Finally the mixture was made alkaline again to liberate the ammonia resulting from the decomposition of the hexamethylenamin and distilled into normal acid; the actual quantities taken and the results obtained are given here: It was found that 5.0346 gm. of Uriseptin yielded an equivalent of 74.43 c.c. tenth-normal ammonia and 5.0197 gm. Uriseptin yielded an equivalent of 74.33 c.c. tenth-normal ammonia. The average of the two calculated to hexamethylenamin gives the result given above, 5.51 gm. per 100 c.c. or 25.15 grains hexamethylenamin per fluidounce.

3. LITHIUM.—This element was identified in the ash resulting from the incineration of Uriseptin by the ordinary tests.

4. BENZOIC ACID.—This was found by making a chloroform extraction of an acid solution of Uriseptin and applying tests for benzoic acid to the residue left after the evaporation of the chloroform.

5. QUANTITATIVE TESTS FOR LITHIUM AND BENZOIC ACID.—Lithium was estimated by the method of Gooch (*Amer. Chem. Jour.*, ix, p. 33). Uriseptin, 2.8696 gm., yielded 0.0246 gm. lithium sulphate (Li_2SO_4) and 2.1330 gm. Uriseptin yielded 0.0228 gm. lithium sulphate (Li_2SO_4), giving an average of 0.95 per cent. Li_2SO_4 which is equivalent to 2.35 gm. lithium benzoate in 100 c.c. The benzoic acid was determined by extraction of an acid solution of Uriseptin, evaporating and titrating the residue. Estimations made in this way indicated the presence of 2.00 per cent. of benzoic acid, or 2.10 gm. per 100 c.c. To show that the benzoic acid and lithium are present in the proper proportions to form lithium benzoate, the following is given: Calculating the proportional quantity of benzoic acid required for the quantity of lithium found, the figure, 2.24 gm. per 100 c.c., was obtained, agreeing very closely with the percentage of benzoic acid actually found, that is, 2.00 per cent., or 2.10 gm. per 100 c.c.

tising matter on the label or in the so-called "analysis" on the label. The statements concerning the composition of Uriseptin are false and appear to be a deliberate attempt to mislead physicians.

COMMENT.—Investigation of the various "patent" and so-called "ethical proprietaries" advertised to the public and to the medical profession shows that those that have any value as therapeutic agents depend for that value on some well-known drug or drugs. Hence, while many proprietaries have some virtue, the ingredients which are of any value are so concealed by the coined and "near-scientific" names applied to them that these drugs are usually unrecognizable. The many and various acetanilid mixtures furnish examples of this class of proprietaries. And now we find another example in that much advertised nostrum, Uriseptin.

According to our chemists, the chief ingredients of Uriseptin are hexamethylenamin and lithium benzoate.[1] Hexamethylenamin is a valuable so-called urinary antiseptic—probably one of the best we have. It is a pity that more physicians do not know the value of this drug in and of itself; it is a common ingredient of many proprietaries, and yet too seldom prescribed under its true name. There is no reason for its being given in the form of a nostrum; it requires no skill in compounding, for it is best given in its powdered form, either in capsules or otherwise. So that, like acetanilid, the old argument of the nostrum men that the preparation needs skill in compounding will not hold. If a physician wants to prescribe hexamethylenamin let him prescribe it in its simplest and best form, and thus know exactly what he is giving.

Lithium benzoate also has its rightful place in the materia medica, but not hidden in a proprietary mixture to be prescribed unknowingly. It is hard to conceive of any one thing that operates more disastrously against scientific therapeutics than the vicious practice of marketing under proprietary names standard and valuable drugs, with their identity purposely concealed. Yet how frequently it is done. Well-known drugs of unquestioned worth are combined with those that are little known and of doubtful value, or more likely absolutely worthless, the mixture is put on the market under a high-sounding name and it is exploited through physicians as a panacea for all kinds of diseases.

In this, as in so many other instances, an "analysis," made to order is given to lend an air of apparent respectability and scientific standing to the preparation or to its exploiters, with the object, of course, of misleading physicians into thinking they are reading unbiased testimony. In addition, the "litera-

1. Note the report of the Council on Uron (page 79), another mixture of these two drugs.

ture" accompanying the preparation is usually a jargon of pseudo-scientific verbiage put in to serve the same purpose as the analysis—that of catching the careless physician.

This state of affairs will continue just so long as the medical profession will tolerate it—and no longer. So long as members of our profession will prescribe proprietaries on the statements of their owners—both as to their composition and therapeutic value—just so long will pseudochemical and pseudopharmaceutical companies fatten at the expense of the medical profession and to the detriment of the public health.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

ZYME-OID.

W. A. Puckner and W. S. Hilpert.

(From The Journal A. M. A., May 23, 1908.)

Zyme-oid, manufactured by the Oxychlorine Chemical Company of Chicago, is advertised as "a powerful gastrointestinal antiferment" which will "arrest and prevent bacterial fermentation in any portion of the intestinal tract, whether the media be acid or alkaline." These extravagant statements, like many others made regarding the properties of zyme-oid, are very similar in character to those made in the circulars accompanying the preparation oxychlorine, manufactured by the same firm and exposed in THE JOURNAL, July 6, 1907, page 54.

As examples, several parallel statements help to show this similarity. The formula (?) of oxychlorine, as expounded on the label, is given in full, while in the case of zyme-oid only a hint is given as to its composition, but still sufficient to point to a similarity between the two:

OXYCHLORINE.	ZYME-OID.
"Oxychlorine is a tetraborate of sodium and potassium combined with oxychlorid of boron, thus: $(6NaKB_4O_7)BOCl_3$."	"Zyme-oid is a double borate salt."

In the matter of claims for chemical stability the two seem to be very closely allied:

Oxychlorine is "a stable salt under all conditions until brought in contact with suboxygenated organic matter."	Zyme-oid is "a product which is stable enough for keeping purposes, but which readily yields nascent oxygen in the presence of bacterial products."

The therapeutic properties attributed to these sister products are even more similar, for we find that:

"Oxychlorine is adapted to all morbid and abnormal fermentative alimentary states."	"Zyme-oid is a powerful gastrointestinal antiferment."

Many more statements and claims could be quoted to show a similarity between, amounting almost to an identity of, oxychlorine and zyme-oid.

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1. ANALYSIS OF ZYME-OID.—Zyme-oid as purchased in the open market is a white granular product devoid of odor, soluble in water, and having a salty taste. The aqueous solution responds to tests for hydrogen, sodium, potassium, chlorate, nitrate and borate ions, the proportions of which were determined quantitatively.

In order to determine sodium and potassium by the sulphate method, all other interfering ions were removed; chlorate and nitrate by the action of acids, and boric acid by repeated distillation with methyl alcohol in the presence of acid (Quantitative Analysis, Olsen, p. 112). In this way 0.3073 gm. of zyme-oid gave 0.1850 gm. combined sodium and potassium sulphates, and 0.3041 gm. zyme-oid yielded 0.1843 gm. combined sulphates. From these figures the sodium content was calculated after the potassium was determined; average, 9.84 per cent. sodium.

The combined sodium and potassium sulphates were dissolved in water and freed from sulphate, and the potassium determined in the usual way as the chlorplatinate, 0.3041 gm. zyme-oid yielding 0.2562 gm. potassium chlorplatinate, equivalent to 13.58 per cent. of potassium. In the second determination 0.3073 gm. of zyme-oid yielded 0.2557 gm. potassium chlorplatinate, an equivalent of 13.42 per cent. of potassium; average, 13.50 per cent. potassium.

The chlorate was determined by reduction of the chlorate to chlorid, having first demonstrated the absence of any chlorid and determining as silver chlorid (Daclin-Répert. de Pharm., 1907, p. 397) and calculating to chlorate. It was found that 0.0751 gm. zyme-oid gave 0.0355 gm. of silver chlorid, which corresponds to 0.0206 gm. chlorate (ClO_3), or 27.51 per cent., and that 0.0815 gm. zyme-oid yielded 0.0387 gm. silver chlorid, equivalent to 0.0224 gm. chlorate (ClO_3), or 27.55 per cent.; average, 27.53 per cent. chlorate (ClO_3).

The nitrate was determined by the zinc-iron method (U. S. Department of Agriculture Bulletin, No. 46, p. 21). By this method 0.7949 gm. zyme-oid was found to contain 0.0433 gm. nitrogen, equivalent to 24.15 per cent. of nitrate. A second determination indicated the presence of 25.29 per cent. of nitrate; average, 24.22 per cent. of nitrate (NO_3).

Boric acid was determined by titration in the presence of glycerin (R. T. Thomson, Jour. Soc. Chem. Industry, xii, 432). It was found that 1.2977 gm. zyme-oid required 5.01 c.c. normal alkali, equivalent to 23.94 per cent. of boric acid, and 1.5826 gm. zyme-oid required 6.12 c.c. normal alkali, equivalent to 23.69 per cent. of boric acid. From the average of these results, boric acid anhydrid was calculated.

Calculations.—All the chlorate was calculated to potassium chlorate and all the nitrate was calculated to sodium nitrate. The remaining potassium and sodium was then calculated to potassium and sodium tetraborates, as this appeared to be the most likely combination of the extra sodium and potassium. Then the quantity of boric acid equivalent to the sodium and potassium tetraborates was subtracted from the total boric acid, giving the quantity of uncombined boric acid.

With these facts in mind, the analysis[1] of zyme-oid was undertaken in order to compare it with the previously examined oxychlorine and to determine to what extent the claims made for zyme-oid are upheld by its composition. The analysis indicated, as was expected, that zyme-oid is essentially the same as oxychlorine as is shown in the following, quoted from the report of the analysis of each:

ANALYSIS OF OXYCHLORINE.		ANALYSIS OF ZYME-OID.	
Potassium (K)	12.26	Potassium (K)	13.50
Sodium (Na)	8.20	Sodium (Na)	9.84
Chlorate (ClO_3)	25.32	Chlorate (ClO_3)	27.53
Nitrate (NO_3)	21.70	Nitrate (NO_3)	24.22
Boric acid anhydrid (B_2O_3)	18.63	Boric acid anhydrid (B_2O_3)	13.42
Water, calculated	13.29	Water, calculated	10.42

Assuming that the chlorate in zyme-oid is present as potassium chlorate and the nitrate is present as sodium nitrate, the figures obtained by analysis correspond to a mixture approximately as follows:

Potassium chlorate ($KClO_3$)	40.43
Sodium Nitrate ($NaNO_3$)	33.22
Potassium tetraborate ($K_2B_4O_7$)	1.60
Sodium tetraborate ($Na_2B_4O_7$)	3.31
Boric acid	21.14

From the results of the analysis and from the physical properties of zyme-oid we conclude, just as was done in the case of oxychlorine, that the preparation is not a definite chemical compound, but is essentially a mixture of alkali chlorate and nitrate with boric acid, probably produced by fusing together the constituents.

COMMENT.

An examination of the claims made for the firm's two products, while, as already proved, disclosing many points of similarity, will also show one remarkable difference. We refer to the skilful indefiniteness that pervades the claims made for zyme-oid and which defies scientific refutation. This verbal obscurity is becoming daily more common in the "literature" of firms marketing nostrums. Since the Council has analyzed many of the much advertised articles and proved the unreliability of the pseudo-scientific claims made for them, the more cautious of the nostrum-mongers have modified the matter descriptive of their products. They have called to their aid the principle that words were given to man to conceal thought rather than to express it, and they have reduced equivocation to a fine art. Wherever it was possible to put forward claims by implication rather than by expression this has been done.

To substantiate further the claims made by the manufacturers of zyme-oid for their product, a laboratory report is

brought in evidence. This report, which is written more in the style of a peruna testimonial than that of a conservative scientific statement, fails to verify the claim that zyme-oid is a "double borate salt," but confines itself to a statement of its harmlessness and its anti-fermentative properties. In passing, it seems regrettable that scientific laboratories should, for a pecuniary consideration, be willing to jeopardize their reputations by lending their names to the furtherance of nostrum exploitation. The results of the examination of zyme-oid demonstrate that the product is no more worthy of the physician's consideration than its close, and equally worthless, relative oxychlorine.

PART III
MISCELLANEOUS NOSTRUMS

ALLEOTONE.

(*Abstracted from The Journal A. M. A., Feb. 1, 1908, 379.*)

The formula of this preparation, given in the literature, reads as follows:

Alcoholici (Monatomic)	gr. 1/1000
Quininæ Sulphatis	gr. 1/384
Ac. Sulph. Dil. (10 per cent.)	gtt. 2½
Ac. Nitrici Dil. (10 per cent.)	gtt. 1/77
Ac. Butanol-Dioic.	gr. 1/3
Tr. Ferri Chloridi	gtt. 1/26
Aquæ	gtt. xx

The formula is worthless. It can only mislead and mystify. Here and there, it is true, flashes of truth appear, but the greater part of the literature is a mere jumble of inaccurate and mystifying statements. The various constituents of the preparation are taken up as follows: The advertising literature states that "Monatomic Alcohol is one of the constituents of all nerve tissue: It is a product of the replacement of one atom of hydrogen of the hydrocarbons by their hydroxyl group H.O." This information does not inform, since there is a vast number of monatomic alcohols and of every description. The assertion that the preparation "contains a salt" would be perfectly analogous and just as enlightening. Of "Ferri Chlo" the literature says: "Ferri Chlo is found with all proteids and nucleins and herein acts as magnetic iron, aiding the play of the electrical travel." The first assertion is untrue, for iron does not exist as chlorid in the cells of the body, but as some organic iron compound; neither is it found in all proteids, but principally in nucleoalbumins; and all proteids do not contain nucleoalbumins. The assertion that the iron chlorid "acts as magnetic iron aiding the play of the electrical travel" is nonsensical and on a par with the electrical belt method of exploitation, and suggests forcibly the class to which Alleotone belongs. The literature further states: "Sulphuric and nitric acids act in removing hydrogen atoms and substitute atoms of the radical NO_2; that is, as hydrogen tranquilizes the speed of burning or oxidation, its action is substituted by the atom nitrogen which is energy itself, nitrogen being the base of all explosives." Sulphuric acid is certainly an oxidizing agent and in virtue thereof removes hydrogen; but not in a solution whose concentration with respect to sulphuric acid is approximately only 0.82 per cent. The statement that nitrogen is the

"base of all explosives" is another example of the methods of the promoters. As it is a well-known fact, however, that nitrogen itself is one of the least reactive of gaseous elements, little confidence can be placed in such remarks as "Nitrogen which is energy itself." Another mystifying term used in the formula is "Ac Butanol-Dioic," which is a true chemical name, certainly, but it is one by which few physicians will recognize simple malic acid, an ordinary vegetable acid widely distributed in ripe fruits, such as apples and pears, and possessing the properties simply of a relatively weak organic acid. To describe it as exercising any potent influence "in the oxidation of the phosphorus as lecithin in the cell"—especially in the extremely low concentration in which it is stated to exist in Alleotone—is simply an absurd juggling with words. It is not much to be wondered at that the public should be taken in by pseudoscientific "literature;" but it is not only strange, it is discreditable to our profession, that among its members should be found any to accept such rubbish as the above quoted "literature" as information worth acting on—yet such there are, judging from the testimonials.

The Commercial Value of Adverse Criticism.

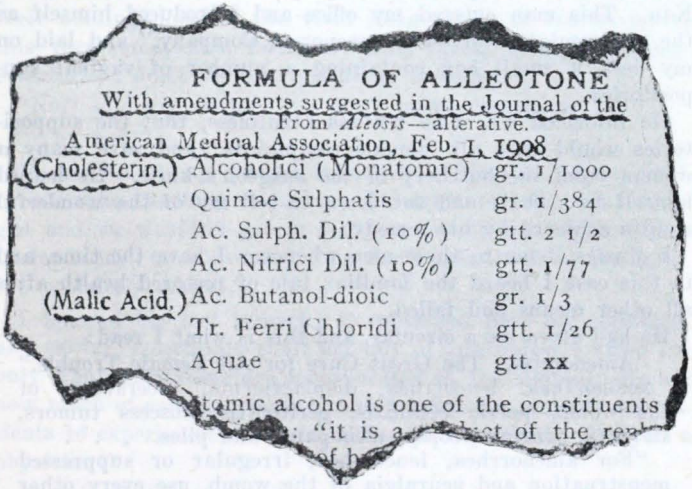
(From The Journal A. M. A., Oct. 17, 1908.)

For skillful attempts to convert a "knock" into a "boost," commend to us the discredited nostrum exploiter. The federal Food and Drugs Act did much to bring out this amiable quality—possibly developed it. While somewhat ancient history, it is well to call to mind what happened when the excise authorities insisted either that the "patent medicine" booze, Peruna, have some medicine put in it, or else that its manufacturers should go into the saloon business. Hartman at once got out a new label stating that "for a number of years a multitude of grateful friends" had urged "that Peruna be given a slight laxative quality." Thenceforth the innocents and near-innocents could get their perunaese jag only at the risk of a "bad quarter of an hour."

One of the latest attempts to wriggle out of an uncomfortable position, and at the same time make capital out of the wriggling, is seen in the advertising of Alleotone, a nostrum of the pseudo-scientific type, which was shown up in THE JOURNAL of Feb. 1, 1908. The "formula" furnished is for the most part a jargon of misleading and mystifying nonsense and fulfills the same purpose as the voluble "patter" of the gentleman who is manipulating three shells and a pea at the county fair.

Every constituent of the "formula" was discussed in THE JOURNAL and the absurdities and impossibilities of each dwelt

on. Did the manufacturers of Alleotone feel downcast over the exposure of their humbug? Not to judge by their advertising, for they write to physicians that "since the A. M. A. analyzed Alleotone it has made great strides"—direction not specified. But the choicest piece of impudence, and one that but for its dishonesty would be laughable, is found in this portion of their advertising pamphlet:



FORMULA OF ALLEOTONE

With amendments suggested in the Journal of the American Medical Association, Feb. 1, 1908

From *Aleosis*—alterative.

(Cholesterin.)	Alcoholici (Monatomic)	gr. 1/1000
	Quiniae Sulphatis	gr. 1/384
	Ac. Sulph. Dil. (10%)	gtt. 2 1/2
	Ac. Nitrici Dil. (10%)	gtt. 1/77
(Malic Acid.)	Ac. Butanol-dioic	gr. 1/3
	Tr. Ferri Chloridi	gtt. 1/26
	Aquae	gtt. xx

tomic alcohol is one of the constituents
: "it is a ct of the re
f h

In the original, the words "With amendments suggested in the Journal of the American Medical Association, Feb. 1, 1908," and also "(Cholesterin.)" and "(Malic Acid.)," which we have underscored in the illustration, are printed in red and have been added to the original "formula." Such are the uses of adversity.

What claim, if any, the exploiter of this nostrum—B. F. Copeland—has to medical or pharmaceutical knowledge, we do not know. In fact, to be consistent with the "ethics" of the nostrum business he need have none. Such knowledge, indeed, tends to hamper that free play of the imagination so necessary in this work. We understand that he has at different times been in charge of a stave factory and connected with a brokerage firm, which may exert some subtle influence in developing the ability to relieve suffering humanity, though the connection is not quite clear. One would imagine, however, that the keen business instinct, untrammeled by any considerations of conscience, which is exhibited in the exploitation of Alleotone, would in purely commercial pursuits have long since assured a competence.

AMENORETTS.

"The Great Cure for All Female Trouble."

(From The Journal A. M. A., March 24, 1906.)

DODGE CITY, KAN., March 9, 1906.

To the Editor:—As a slight contribution to the fight against nostrums, permit me to relate a recent experience with a detail man for a proprietary preparation made at Topeka, Kan. This man entered my office and introduced himself as the representative of "The Amenorett Company," and laid on my desk a small box containing a number of vaginal suppositories.

He informed me, with zealous kindliness, that the suppositories would cure all "female complaints" and save many a woman from the butchery of the surgeon's knife. He helped himself to a chair and sat down to tell me of the wonderful results achieved by his remedy.

I always listen to these men whenever I have the time, and in this case I heard the familiar tale of restored health after all other means had failed.

He had given me a circular, and this is what I read:

"Amenoretts. The Great Cure for All Female Trouble."

"Amenorrhea, leucorrhea, displacements, ulcerations of the womb, pelvic cellulitis, peritonitis, abscess tumors, sterility, ovarian dropsy, menopause and piles. . . .

"For amenorrhea, leucorrhea, irregular or suppressed menstruation and neuralgia of the womb, use every other night.

"For enlargement and falling of the womb, use every night for three nights, thereafter every other night until cured.

"Ulceration and catarrh of the womb, use every other night.

"Pregnancy period, use once or twice a week after second month.

"Change of life period, twice a week.

"To correct non-development of young women, use three times a week.

"Gonorrhea, use every night for ten nights, or until there is a feeling of lassitude, indicating overuse of the remedy.

"Piles, insert one in the rectum every other night, pushing it well up," and so on.

I asked him what the Amenoretts were made of, and he referred me to the circular. And here is what I read:

"FORMULA OF THE SUPPOSITORY.

"The active principles of Pyrolingenous Acid, Iodine, Picric Acid, Boracic Acid, Quinine, Tetraborate of Soda, Glycerine and Oil of Theobromo."

"TABLETS.

"Pyrolingenous Acid, Iodine, Boracic Acid, and Tetraborate of Soda."

I said: "There is no active principle of pyrolingenous acid [wood vinegar], iodin, picric acid or boracic acid. Quinin is itself an active principle of cinchona, while the active principles of sodium tetraborate [borax], and glycerin must have their abiding place in the vivid imagination of the writer of this very remarkable formula. But, laying aside these non-essentials, I don't see any quantities specified."

"No," said my visitor, "we don't print quantities."

"Why not?"

He smiled at my evident innocence. "Because," he replied, "you'd take the formula across the street to your local druggist and we wouldn't get to sell you any of our suppositories. Understand," he continued, "we don't sell these to the laity. We're strictly ethical."

I ignored his last remark; it contained food for reflection, and said: "I certainly shall not buy of you unless I know not only what substances are incorporated in the suppository, but how much of each substance. And I think too much of my patients to experiment on them with such a product. Are you a physician?"

He said that he was not.

"Well, if you were a physician, how do you suppose you would feel if a man, not a doctor, should come into your office and volunteer advice with regard to the treatment of your patients with something he had to sell, the composition of which he refused to disclose?"

Not being a physician, he didn't know how he would feel under such circumstances. I asked him if he had any difficulty in getting rid of his samples. He said that there was not much, that occasionally a doctor declined them, but that did not occur often. He had recently sampled Kansas City, spending two weeks there, and during the following month he received orders for $200 worth of the goods. And I am afraid that he told the truth.

What right has medicine to be called a learned profession when its votaries, in the use of remedies of unknown composition, exhibit a credulity that puts them on a level with the aboriginal medicine man and far below that of the Christian scientist?

W. H. GRAVES, M.D.

AMOLIN DEODORANT POWDER.

(Abstracted from The Journal A. M. A., Feb. 22, 1908, 626.)

Amolin is a "patent medicine" put on the market by the Amolin Chemical Company. After enumerating the claims made for the preparation by the promoters, THE JOURNAL states that a sample of the powder was examined in the Association laboratory. Amolin was found to be a very fine white powder slightly unctuous to the touch, similar to boric acid or talcum and emitting a faint odor of thymol. Qualitative tests showed the presence of large quantities of boric acid and traces of thymol. Further examination demonstrated the absence of alum, zinc salts and other metallic constituents usually employed in the preparation of deodorant powders. Neither did the tests indicate the presence of salicylic acid, phenol, or any similar organic antiseptic except thymol.

NINETY-NINE PER CENT. BORIC ACID.

In plain words this remarkable powder is practically nothing but boric acid, and furnishes another illustration of what has so often been proved, i. e., that "patent" and "ethical proprietary" medicines usually depend on some well-known drug, or drugs, in every-day use for whatever therapeutic value they possess. This particular preparation happens to come under the designation of "patent medicine," simply and only because it is advertised to the public direct, and the physician who wrote us got his knowledge of it through a patient—reversing the usual order.

BORIC ACID AND ITS QUALITIES.

Boric acid is a good thing; there is no doubt about it. It makes a splendid dusting powder; there are few, if any, better. Modify it as one may, give it an odor or a color to disguise it as one pleases, surround it with mystery or secrecy as one sees fit, it is still but boric acid with all its virtues—and limitations. Dissolved in water, it makes as good a mouth wash, as good an antiseptic solution as any of the high priced, extravagantly advertised, antiseptic lotions on the market, of which it forms the chief and most important ingredient.

ANTIKAMNIA.

The Nostrum and Its Method of Exploitation.

(From The Journal A. M. A., July 1, 1905, 55.)

Our readers will be interested to learn some of the remarkable properties which, according to the statements of the manufacturers, this antikamnia possesses. We quote from the advertising literature:

The well-known nerve specialist (?), Dr. Harley, in an interview published in the *London Daily Express*, says: "I have treated more than one American for nervousness and 'brain fag' directly due to their incessant energy. I had a young man in here this morning who complained of headache 'in the back of the neck.' He was threatened with congestion of the brain, and seemed somewhat aggrieved when I told him he had been trying to do too much.

"I also treated a young American woman, who since her arrival in London had apparently been living on antikamnia tablets by the advice of her physician. It was the only thing, she said, which kept her 'braced up' for the strain of sight-seeing."

(Why did the young woman consult this Dr. Harley—for the drug habit?)

Note the following:

For the severe pains of rheumatism, dysmenorrhea, neuralgia, gout, sciatica and lumbago, as well as for the lightning pains of locomotor ataxia, there can be no quicker and more lasting relief obtained than by the administration of antikamnia and codeine tablets.

Imagine an intelligent physician trying to treat the diseases mentioned below with the various impotent means of the pharmacopeia and physiological therapy when he might depend on antikamnia! We quote again:

As a Pain Reliever.—In headache, cephalalgia, hemicrania, migraine [some other words might have been thrown in so as still more to emphasize the headache business], myalgia, coryza, la grippe and its sequelæ, the lightning pains of locomotor ataxia and all pains due to irregular menstruation.

As an Anodyne or Sedative.—In alcoholic delirium, indigestion, cardialgia, gastralgia, dyspepsia, hysteria, insomnia, inebriety, car-sickness, sea-sickness, worry and sight-seer's fatigue.

As an Antipyretic.—In typhoid, intermittent, puerperal and malarial fevers, bronchitis, pneumonia, pleurisy, and tuberculosis.

As an Anti-Neuralgic.—In acute or chronic neuralgia, facial neuralgia, earache, pain about the teeth, angina pectoris, neurasthenia, palpitation, pains of locomotor ataxia and sciatica.

As an Anti-Rheumatic.—In acute or chronic rheumatism and gout, fever and pleurodynia.

There is no remedy so useful and attended with such satisfactory results as antikamnia tablets in the treatment of melancholia with vasomotor disturbances, anemic headaches, emotional distress, and active delusions of ap-

prehension and distrust. They increase arterial tension and promote digestion, as well as being particularly serviceable in relieving the persistent headache which accompanies nervousness.

In neurasthenia, in mild hysteroid affections, and in the various neuralgias, particularly ovarian, and in the nervous tremor so often seen in confirmed drunkards, they are of peculiar service. In angina pectoris this drug has a beneficial action; it relieves the pain and distress in many cases, even when amyl nitrite and nitroglycerin have failed entirely. In pseudo-angina, frequently observed in hysterical women, its action is all that can be desired.

Patients who suffer from irritable, weak, or palpitating heart, needing at times a pain reliever, can take antikamnia tablets, without untoward after-effects, knowing that the heart is being fortified. In delirium tremens, they relieve when there are great restlessness, insomnia, the general lowering of the nerve power.

Only the vivid picture of a crisis in locomotor ataxia, or the agony of a true migraine, can impress the observer with the full value of this pain reliever.

The following testimonials are from physicians:

Dr. Caleb Lyon, an old Bellevue practitioner, in referring to antikamnia and codein tablets, says:

In my practice they accompany the maid from her virgin couch to her lying-in chamber, assuaging the perplexities of maidenhood and easing the trials of maternity with most gratifying results. I earnestly hope that the proprietors of this valuable remedial agent will keep it up to its present standard of purity and excellence.

Dr. Walter M. Fleming, A.M., M.D., New York City, writes:

. . . With all the experience of more than a quarter of a century, in the treatment of winter cough, and all its complications of laryngeal, bronchial and pulmonary irritability, dyspnea, asthmatic spasms, and finally whooping cough—usually the most persistent and tenacious of all these membranous maladies—I find no one remedy more strongly indicated, or which yields more prompt and satisfactory results than antikamnia and heroin tablets, composed of antikamnia 5 grains and heroin hydrochloride 1/12 grain. . . . Result: a prompt and efficient expectorant, at once relaxing the harsh and rasping cough, releasing the tenacious, sticky and gelatinous mucus which is soon readily expectorated, while the soothing influence of the antikamnia is at once manifested, greatly to the comfort and contentment of the patient. . . . Independent of the fact of the direct applicability of this remedy to the various membranous maladies of the lungs, bronchi, fauces and nose, it proves also, an invariable remedy in all febrile cases where anodyne is required.

This, together with its analgesic and antipyretic merits, eminently qualify this combination for a responsive agent in the treatment of nearly all the numerous febrile attacks characterized by pain, nervousness, insomnia and their accompanying symptoms.

"Antikamnia and Quinin."

If there is any virtue in the particular combination known as "antikamnia," a physician prescribing the tablets supposed to contain combinations of "antikamnia" and some other drugs should have some guarantee that they contain those remedies. Take, for example, the tablets advertised and sold as "antikamnia and quinin." It might reasonably be supposed that the tablets contained the combination known as "antikamnia;" this, however, seems not to be the case. Previous analyses, as published[1] by us, have shown that antikamnia contains approximately 20 per cent. of sodium bicarbonate, yet two chemists, working separately, have been unable to find this ingredient in the tablets advertised and sold as "antikamnia and quinin." Are we to understand, therefore, that the manufacturers do not consider the bicarbonate of sodium of importance in their preparation, antikamnia; or are they guilty of misrepresentation and of misleading physicians in omitting this constituent from their product antikamnia when that is combined with the bisulphate of quinin? The above statement regarding the omission of bicarbonate of sodium from the quinin combination may be verified by any physician who desires to make a few simple chemical tests—carbonic acid is not given off when the tablets are treated with dilute acids, as would be the case if sodium bicarbonate were present. Further, while the ordinary "antikamnia" contains no constituent not soluble either in water or in chloroform, and while quinin bisulphate is readily soluble in water, the tablets said to contain antikamnia and quinin bisulphate, when treated successively with water and with chloroform, leave a residue of more than 18 per cent.

One of the chemists who analyzed the preparation for us, in commenting on this in a letter, says: "The matter which is insoluble in water, alcohol or in chloroform, i. e., the substance which is neither 'antikamnia' nor quinin bisulphate, amounts to more than 18 per cent. in 'antikamnia and quinin bisulphate tablets.' The tablets weigh close to five grains and are said to contain 2.5 grains each of antikamnia and quinin bisulphate. How is this possible when each tablet contains almost one grain of foreign substance (chiefly starch)?"

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1. THE JOURNAL A. M. A., June 3, 1905; reproduced on page 4 of this edition.

Further comment is superfluous. We have presented facts to our readers and leave them to draw their own conclusions.

Adding Insult to Injury.

(Abstracted from The Journal A. M. A., Jan. 26, 1907, 340.)

When the Council on Pharmacy and Chemistry, nearly two years ago, began its work of independent and scientific investigation of proprietary preparations, some of the questions asked were:

"What guarantee has the medical profession that the formulas of these proprietary medicines are not changed at the will of the manufacturers? How can the physician who confidingly prescribes them for his patients know that the preparation which he orders to-day is the same as that which was furnished him last year, or which may be given him next year, under the same name?"

At once a wail, as of injured innocence, went up from countless vendors of proprietary medicines, who replied with one voice:

"The honor and reputation of the proprietors and manufacturers is sufficient guarantee of the stability and permanence of these preparations."

So vehement were their protestations and so well simulated were their declarations of Pecksniffian virtue that many physicians were deceived thereby. Many medical journals (whose views were, perhaps, slightly biased by the consideration of fat advertising contracts) also were apparently convinced. But the fact was overlooked that guarantees based on honor are of value only in proportion to the amount and quality of honor possessed by the guarantors.

The enactment of the national Food and Drugs Act is bringing many things to light. Some of them are interesting, some would be amusing were they not so utterly despicable. Among other things, it has furnished a demonstration of the value of the "honorable assurances" of nostrum vendors.

The nostrum antikamnia has pointed many a moral in the campaign in the last two years. It was hardly to be hoped that it would deliberately furnish a demonstration of the utter lack of honesty on the part of a certain class of proprietary manufacturers. Yet, relying apparently on the ignorance of the public and the long-continued lethargy of the medical profession, its promoters have, in the last few weeks, unwittingly convicted and stultified themselves. When the pure food law went into effect, the proprietors of this mixture found themselves in a sad dilemma; if they labeled their mixture in

accordance with the provisions of the law they would have to admit that it contained acetanilid and that the charges against them were true. Failing to comply with the law, they must go out of business. The latter alternative was not to be thought of. The profits gained by selling, with the aid of careless or ignorant physicians, a five- or ten-cent mixture for $1 were too great to be surrendered without a struggle. The same brilliant intellect, perhaps, that first saw the commercial possibilities in the business, said: "Change the formula. Phenacetin is about as cheap as acetanilid; the patent has just expired and consequently we can get it at a low price. Let us substitute phenacetin for acetanilid."

As a result the profession is treated to an edifying exhibition of virtue triumphant, a wolf so completely covered by the harmless coat of a sheep that he flatters himself that his wolfish nature is completely concealed. No longer are skulls and skeletons sent out in calendar form as grinning advance agents to be displayed in every doctor's office, but instead a beautiful domestic scene, showing a convalescent child nestling in the arms of its mother. The familiar "AK," however, as usual, is in the lower right-hand corner. And what a change in labels! No longer is antikamnia a chemical entity, but the label now openly but ingenuously declares that "Antikamnia tablets in this original package contain 350 grains of acetphenetidin, U. S. P., per ounce. Guaranteed under the Food and Drugs Act, June 30, 1906. Serial No. 10." While below, as an entirely unnecessary display of conformity to the Pure Food Act, appears this statement:

"The Antikamnia tablets in this original ounce package contain no acetanilid, antifebrin, antipyrin, alcohol, morphin, opium, codein, heroin, cocain, alpha- or beta-eucain, arsenic, strychnin, chloroform, cannabis indica or chloral hydrate."

Truly, Satan is appearing as an angel of light. What a gratification it is to the long exploited profession to know that antikamnia contains no alcohol, no chloroform, no cannabis indica, no chloral hydrate. How unfortunate that this spontaneous display of confidence is not carried far enough to inform the profession of the ingredients, aside from phenacetin, contained in the mixture!

The label is an admission that the nostrum does not contain what it was never supposed to contain, with the exception of acetanilid, and is directly an attempt to conceal the real contents. The proprietors knew that the dear public, whose "pains, headaches, neuralgias, women's aches and ills, grippal neuroses, nervousness, insomnia, rheumatism, lightning pains

of locomotor ataxia, sciatica, etc," they are longing to assuage, will not know that acetphenetidin is the official designation for what is popularly known as phenacetin, and that this dangerous product is found in the new mixture in the proportion of approximately 4 grains to a 5-grain tablet. Evidently they also presume considerably on the ignorance of our profession, or why should they make the brazen statement that four grains of phenacetin is the "most reliable remedy" for the long list of diseases enumerated on their advertising calendar.

When the formula for which such wonderful virtues was claimed was suddenly thrown overboard, was the medical profession, which by its short-sighted patronage had built up this business, notified in any way of the change? Search the new advertising matter of this nostrum from beginning to end and you will find not one word to show that "The Antikamnia tablets in this original ounce package" differ in the slightest particular from those sold to the profession and the public for years past. This being true (and the statements of the promoters themselves are our authority for it), what remains of the pratings of "honor" and the "guarantee of the manufacturers"? Has a physician no right to know when a change is made in the formula of a preparation which he has been prescribing for years?

What assurance has the profession that, at any moment, a cheaper or more dangerous drug may not be substituted for "acetphenetidin" if thereby the law can be evaded or the profits of the delectable business enhanced?

How can any conscientious physician prescribe, for those who confide their lives to his care, a preparation the stability of the formula of which must depend absolutely on its owner's whim?

How can a physician with the slightest sense of responsibility to his patients allow his office to be used as a free advertising bureau for a preparation manifestly founded and developed on deceit and misrepresentation?

How can any medical journal, except those avowedly and unblushingly seeking to aid the nostrum maker to exploit the profession, whose interests they claim to serve, continue to carry the deceptive and misleading advertisement of a twice exposed fraud?

How can any physician with a particle of self-respect or manhood continue to support, by subscription or contribution, any medical journal which, by accepting such advertising, allies itself with the army of deceit and chicanery?

Still Further Duplicity.

(*Abstracted from The Journal A. M. A., Feb. 8, 1908, 467.*)

When the Food and Drugs Act went into effect the manufacturers of this preparation, instead of continuing to put out the same mixture as they had been doing, radically changed the composition by substituting acetphenetidin (phenacetin) for acetanilid. By doing this the company avoided the disagreeable necessity for acknowledging on the label that the nostrum contained acetanilid, as was shown by the analysis published in THE JOURNAL, June 3, 1905. In addition to stating that the package of antikamnia contained acetphenetidin, the company also stated that it contained no "acetanilid, antifebrin, antipyrin, alcohol, morphin, opium, codein, heroin, cocain, strychnin, chloroform, cannabis indica, or chloral hydrate." Knowing that the nostrum is being advertised in Great Britain and Canada as well as in the United States, THE JOURNAL obtained some Antikamnia from London, and it was analyzed in the Association's laboratory. As was suspected, the analysis showed that Antikamnia as sold abroad has the same composition now as it had in the United States before the Food and Drugs Act went into force, viz.: Acetanilid, 67.75 per cent.; caffein, 4.88 per cent., and citric acid and sodium bicarbonate, by difference, 25.36 per cent. This corresponds with the analysis previously made and published in THE JOURNAL, June 3, 1905. The Antikamnia on the market in this country was also analyzed and it was found to contain: Acetphenetidin (phenacetin), 72.05 per cent.; caffein, 13.95 per cent.; citric acid and sodium bicarbonate, 14 per cent. The preparation sold as "Antikamnia and Quinin" was also analyzed, and it was found that starch had been substituted for the bicarbonate of sodium which is found in the Antikamnia itself. The details of the analyses are given with the following comments: "The above are brief statements of bald facts. Two of these should be emphasized: (1) When the Food and Drugs Act went into force, January, 1907, the manufacturers of Antikamnia, rather than acknowledge the truth of the past —we can imagine no other reason—materially and radically changed the composition of their preparation, and did this without notifying the medical profession or intimating in any way, so far as we can learn, that such a change had been made. We have no doubt they believed they had a right to do as they pleased with their own; that it was nobody's business but theirs what they did with their own preparation, or how they changed it. As they never had told physicians what it contained, there was no reason why they should do so now. This is logical, and we can not blame the manufacturers so long as

the medical profession is willing to be humbugged. (2) For the same reason, we presume, they claim that they have a right to continue to use acetanilid in the product for the foreign market. The Food and Drugs Act applies only to the United States, of course, and acetanilid being cheaper, why not use it? What is the difference if one is more dangerous than the other? The fact that the Antikamnia sold abroad differs from that sold in this country some may say is of no special interest to us. Still this fact is worth noting: The dose of acetphenetidin—phenacetin—(7½ grains) is nearly double that of acetanilid (4 grains); one becoming accustomed to a certain dosage of the nostrum as sold in this country might, while abroad, unwittingly be led to take a double dose of acetanilid.

Samples, Form Letters and "Prescriptions" Sent to the Laity.

(*From The Journal A. M. A., April 18, 1908, 1281.*)

To the Editor:—The enclosed "literature" is being sent broadcast to the laity by the Antikamnia people and still a great many of the physicians throughout the country are prescribing the preparation thus advertised. Will the time ever come when the medical fraternity will awaken to the fact that it has been humbugged by a great many manufacturing concerns? I certainly hope so.

J. W. DuVal, M.D., Wichita Falls, Texas.

Comment:—The "literature" referred to by our correspondent consists of a form letter and a small pamphlet. The letter reads as follows:

Dear Mr. ————:

Do you ever suffer pain? If so, try Antikamnia Tablets; Sample enclosed. Your druggist will supply them in any quantity (10 cents worth or more), also in our regular "Vest-Pocket Boxes." Sincerely yours,

The Antikamnia Chemical Company.

The pamphlet accompanying the letter is entitled "Practical Prescriptions," and contains a list of diseases and morbid states arranged alphabetically from "Alcoholism," "Asthma" and "Backache" to "Wind," "Women's Pains" and "Worry." For the one hundred and twenty-two conditions listed, "Antikamnia," "Antikamnia and Codein" or "Laxative Antikamnia and Quinin" are prescribed, demonstrating that the "prescriptions" are more "practical" than scientific.

In many respects the methods of the proprietors of "headache powders" and "anti-pain pills" are less offensive to one's sense of professional decency than the course pursued by the Antikamnia people. The former have at least never recommended their products as "ethical proprietaries;" they have not used

medical men as their unpaid agents; the claims made for their products have been no more exaggerated; and they have not found it necessary, from the requirements of the Food and Drugs Act, to substitute acetphenetidin for acetanilid to avoid giving the lie to their former claims.

As to the query propounded by our correspondent: We are optimistic enough to believe that the time he longs for is already here. The fact that the proprietors of nostrums of the Antikamnia type are finding it necessary to advertise to the laity is, in itself, evidence of the diminishing demand for such products on the part of the medical profession.

ARHOVIN.

A Proprietary in Process of Evolution.

(From The Journal A. M. A., May 9, 1908, 1541.)

The German product iodofan was referred to recently[1] and attention called to the discrepancy between the facts, as determined by analysis, and fiction, as represented by the manufacturer's description. Instead of containing nearly 50 per cent. of iodin, as represented, it actually, according to the analysis, has less than 5 per cent.—a remarkable variation! Another preparation of this same firm is arhovin which, unlike iodofan, has been on the American market some time. This product seems to be in an evolutionary state with regard to its composition. According to the descriptive advertising matter sent out a few months ago by the American agents, arhovin at that time was a "thymyl-benzoate of diphenylamine." This description is eminently scientific—providing it is true. Possibly because such a specific description could be challenged with comparative ease, the "literature" sent out a little later described the product as a "chemical compound of diphenylamine, thymol and benzoic acid." This, of course, is less definite and would be proportionately harder either to prove or disprove. The latest description (or the latest we have seen) gives even greater opportunities for "hedging" should that be necessary. Here we find that arhovin "consists of diphenylamine and thymol-benzoicacid-ethyl-ester in *molecular* proportions." [Italics ours.—Ed.] Thus in its evolution from the atomic to the molecular and from the specific to the general, we may confidently expect before long to hear that this much advertised "synthetic" has become a mere mixture.

Firms of the better class are beginning to recognize the unwisdom of jeopardizing their reputations for commercial in-

1. The Journal A. M. A., March 7, 1908, 784.

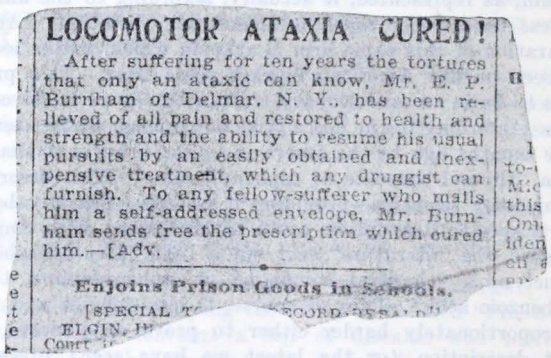
tegrity by standing sponsor for the wildly unscientific statements put out by some of the foreign pharmaceutical manufacturers. This will result in the weeding out of the valueless foreign products and in saner descriptions of those which may become valuable therapeutic agents.

BIOPLASM.

A Concrete Instance of the Manner in Which Remedies Supposed to Be Ethical Are Exploited to the Laity.

(*From The Journal A. M. A., Dec. 9, 1906.*)

The accompanying advertisement has been appearing in the newspapers for some time, and its resemblance to the old advertisement of the "Rev. Joseph T. Inman" of lost-manhood fame, aroused the curiosity of a member of THE JOURNAL force—or it may have been an innate desire to keep in touch with things. In any event, he, as a layman, answered the advertisement, and, in due time, an imitation typewritten letter was received. In it was rehearsed the old, old story of how the writer had for years suffered the tortures, etc.,



LOCOMOTOR ATAXIA CURED!

After suffering for ten years the tortures that only an ataxic can know, Mr. E. P. Burnham of Delmar, N. Y., has been relieved of all pain and restored to health and strength and the ability to resume his usual pursuits by an easily obtained and inexpensive treatment, which any druggist can furnish. To any fellow-sufferer who mails him a self-addressed envelope, Mr. Burnham sends free the prescription which cured him.—[Adv.

Enjoins Prison Goods in Schools.

[SPECIAL T... RECORD-HERALD]

ELGIN, Ill.

Court ...

how he had tried all kinds of physicians, all kinds of patent medicines, serums, various climates, etc., until he heard of the virtues of the medicines which finally cured him. Accompanying the circular letter was a sheet containing the prescription, with full directions. But it was not the "Rev. Joseph T. Inman" trick in all its apparent simplicity; it was Inman improved. Here is the first prescription: "Bioplasm (Bower) series No. 235a, No. 212, in sealed bottles; 2½ oz., containing about 175 tablets, cost $1.50." Then followed the directions. Farther down the sheet is the second preparation, which is:

"Sal Lithin. Take a heaping teaspoonful," etc. Bioplasm! Sal Lithin!! Certainly we have seen these names before. "These prescriptions may be had of almost any druggist. If not, send to the manufacturers, Bioplasm Company, 100 William Street, New York."

Of course! We pick up certain medical journals and find that "Bioplasm" and "Sal Lithin" are "ethical proprietary" preparations, put up for physicians' use, for are they not advertised in medical journals? We wondered whether or not the Bioplasm Company was aware of the generous work that E. P. Burnham is doing, but this wonder only lasted ten days, for then came a letter from the company itself, with circulars, testimonials and other literature, all appealing directly to the credulous laymen, and especially to those suffering from that terrible affliction, locomotor ataxia. Of course, the literature said that bioplasm is endorsed by physicians, and, in fact, testimonials from medical men were among the literature sent to this layman by the company.

We shall have something more to say about this wonderful cure-all, bioplasm, in the immediate future.

Claims Made for Bioplasm.

ITS COMPOSITION.

The circulars sent out by these people bear evidence of having been written by persons who are either densely ignorant of the subject on which they write or decidedly unscrupulous. A glance at the following quotations taken from these circulars shows very clearly of what a mass of absurdity and contradiction they are composed:

> "After a careful extraction under aseptic methods the enzymes are treated by a process which unites them, creating a new product or ferment which resembles closely the bioplasm of Dr. Lionel S. Beals. . . . There is in bioplasm the several enzymes[1] (ferments) of digestion which include nuclein, lecithin, trypsin, etc."

In another circular we are told:

> "Bioplasm is produced from the digestive and ductless glandular organs of young herbivorous animals, but it essentially differs from the glandular extracts and nuclein preparations. . . . The defibrinated products after cultivation are desiccated and finally triturated with chemically pure sugar of milk. The exceptional therapeutic virtue of bioplasm is chiefly attributed to the compound element acquired by the process of cultivation described. It positively contains nothing besides the

1. We quote spelling and grammar exactly in all these extracts.

organic products stated, the vegetable ferments being no longer used."

Of course, intelligent physicians know that there is no process by which digestive enzymes may be united, creating a new product of a ferment nature. In the circular we also find this positive statement:

"Bioplasm contains absolutely nothing besides the organic products stated, and its marvelous curative properties reside in the basic ferment resulting from action of the 'mother substance' of the several digestive ferments upon each other."

We learn from another circular:

"Bioplasm . . . non-toxic preparation of animal and vegetable enzymes so compounded as to preserve their original cell vitality."

Note we have just quoted that the vegetable ferments are no longer used, and that only the organs of young herbivorous animals are utilized. The enumeration of nuclein and lecithin as digestive enzymes is sufficient to show that the writer of the circular knows little of the subject on which he has written.

ITS THERAPEUTIC CLAIMS.

The therapeutic claims made for this cure-all are as grotesque and as absurd as are those which are made regarding its composition. It would be wearisome to enumerate all the diseases which it is claimed to cure, but a few taken at random will not be out of place:

"Equally efficient in morbid obesity and emaciation." "A fatal epidemic of diphtheritic toxemia in West Virginia was checked only when Bioplasm was used."

Here is what appears on the label as it is sold in the drug stores:

"Indications: All neuroses or other disorders in which assimilation and metabolism are faulty. Most prompt and powerful restorer of leucocytes and phagocytes, immunizing by strengthening bactericidal properties of blood. Unique as neuro-nutrient and blood builder, invaluable in Tuberculosis, Typhoid, Scarlet and Malarial Fevers; in Diphtheria, Pneumonia, La Grippe, Dysentery, etc.; prompt specific in all forms of indigestion, unequaled in Locomotor Ataxia, in Pelvic diseases of women and convalescence."

It may be interesting for physicians who are prescribing bioplasm to have quoted for their edification some of the testimonials from the laity:

BROMIDROSIS (OFFENSIVE PERSPIRATION).

"'I found relief in a short time after beginning Bioplasm, more noticeable to others than myself. I think it

is due to say that, while I was taking it, I used no other remedies.' "

"IMPOTENCE."

"I became incompetent at the age of 45, as a result of a long nervous strain from overwork and unusual responsibility. For four years I have tried many doctors and many remedies, including the rest cure, with some improvement in my general health, but none in my functions. I was gradually drifting towards melancholia, when a physician advised me to try Bioplasm. I did so faithfully, and inside of a week noticed a change in my feelings. My depression disappeared and my ambition returned, and gradually all my powers and functions were restored to me. I used nothing but Bioplasm, except an occasional aperient. In my whole vigorous life I was never better in every way than I am now—and I consider myself a perfect man, thanks to Bioplasm. This should be made known to the million sufferers, such as I, and you may use this as you see fit."

"INFANTILE INDIGESTION."

. . . "We had no more trouble with baby after using that sweet powder (Bioplasm), which she took greedily, and the only medicine you have prescribed which we have not had a struggle with her to take. The relief from suspense is great, I assure you." . . .

A WONDERFUL CURE.

Among the diseases in which Bioplasm seems to get in its work most effectively is tuberculosis, and if one-tenth of what the literature claims for it were true, consumption would soon be a thing of the past. Here is one instance worth recording: A certain physician reported one of the most rapid cures ever effected. His patient had night sweats that were very bad, had been to Colorado, "has taken all patent medicines on the market," his previous physician gave him up and said he could not live through the winter; nine physicians had treated him and given him up, assuring him that his days on earth were few.

This is enough to show that the poor patient was in the very last stage, and yet a miracle was performed, for after giving the Bioplasm for a week the testimonial says:

"The change in my patient during the seven days of treatment is most remarkable. The night sweats have ceased. The appetite has improved, and the condition of the lungs has improved to such an extent as to make me sanguine where I have been utterly hopeless. . . . Doctor, I feel like a new man. My strength is rapidly returning, and all I want now is a little more time and Bioplasm, and Bio will put me on a sound basis for the

enjoyment of life, and a happy old age—a living chagrin to the many physicians who have been pointing me to the grave."

But there is another side to this bright picture. Before us is correspondence to the effect that the patient died soon after this testimonial was written. The doctor who reported the remarkable cure had been in practice but a little while. He evidently imposed on himself, and in a recent letter he expresses regret that he wrote as he did. It is for this reason that we omit his name. In a letter recently received he says:

"Yes, I have used Bioplasm a number of times since with absolutely no results. . . . I was very enthusiastic at that time and it is certain that I would not attach such value to the treatment as at the time mentioned. When I wrote to the Bioplasm people, it was simply with the hope that their product might be of value to those afflicted with tuberculosis."

LOCOMOTOR ATAXICS CURED.

The following letter from one whom we will call X, as we do not care, under the circumstances, to publish his name, is one of the bits of literature that is doing good work for Bioplasm:

———, June 9, 1905.

Bioplasm Company, 100 William Street, New York City:

Gentlemen:—Your inquiry about Mr. R.——, the tabetic patient from Mexico, who has been taking Bioplasm for some seven or eight months, I want to answer briefly, so as to cover the ground.

Mr. R—— is about 45 years old, rather frail all his life. . . . Something less than a year ago he began to experience trouble with his legs and general health . . . and on consultation with doctors was promptly pronounced a tabetic, having almost all the classical symptoms. His people here came to me, asking what to do. I could only advise Bioplasm. This was begun as soon as he could get a supply from you, in the meantime being treated with strychnin, massage, and so forth. . . . No improvement. Soon after beginning Bio, felt better. Five or six months ago he came here. When he arrived he could not get on a street car. To see him walk was agony. Soon he was taken to the cars with an attendant. Shortly after he was going around alone. Took long walks. Got better every day. He called on me yesterday, and upon inquiry said: "The padded sensation of soles still present to some degree, and knee-jerk absent. Aside from these, I consider myself a well man." He looks well, feels well, walks well, and as far as can be told IS well.

Could all ataxics see this case as I have seen it, they would send in such a blast for Bio that you would flee

from it. Doubtless, "things seen are mightier than things heard" (of), and there are so many "cures" reported that, like miracles, dwindle at short range, that one more or less will not count for much—in print. But I have seen this, and I believe.

Since coming here Mr. R—— has taken Bio constantly, and also has had massage twice a week. No other treatment, except that he has been going through some of the kicking for "re-education."

Yours very truly, ——, M.D.

A physician in Kansas wrote to the Bioplasm people, asking them to give him the names of some reputable and well-known physicians who had used Bioplasm with the success that was claimed for it. In reply the Bioplasm people said:

"We take pleasure in referring you to Dr. X, whose letter we enclose herewith (see above), and who is well known and highly esteemed in ———."

We had already written for information in regard to Dr. X and received a reply to the effect that no such physician was practicing in ————. On receiving the communication from our Kansas correspondent we again tried to get information in regard to Dr. X, which resulted in the following letter just received from our investigator:

In regard to Dr. X, of whom you wrote me a few days since: He graduated from ———— years ago; he suffers from locomotor ataxia, and can only get around in a wheel chair; he is a deaf-mute, and has been in that condition for ten years; he has not practiced any for twelve years; he has no license in this state or county. He uses Bioplasm himself, and thinks he derives benefit from it. He says that he only recommends it from his personal experience. Dr. C. is his attending physician and has charge of him in a general way. Dr. C. says that he is a perfectly innocent, well-meaning, broken-down man.

We have followed up several other testimonials and it would make interesting reading if we had space to devote to a record of the results of the investigation.

One physician from Pennsylvania writes:

"I am glad that Bioplasm is finally being exposed. About two years ago the Bioplasm people imposed on we younger physicians by giving us testimonials and ending with selling us five bottles of their dollar size for $2.50. I dispensed an entire bottle with no effect whatever in any of its so-called usages. The other four I have still as a reminder of my folly. A few days ago a 'locomotor ataxic' told me of his wonderful new cure or 'sure cure' and behold it was Bioplasm, which he got direct from the firm with their wonderful 'epitome.' He had just run

out of his '175 tablets for $1.50,' and wanted to get some more."

When some great disaster overtakes a community and the dead and dying lie scattered about, fiendish ghouls steal forth to despoil the dead and the helpless. By common consent such loathsome creatures are usually ordered shot when found at such work; but with what words can we characterize those still more loathsome creatures who scent quarry in that vast army of the sick and miserable, who, loath to acknowledge the presence or approach of the king of terrors, turn to those who speak them fair with bright promises of succor while they rob them of a few dollars and, far worse, ofttimes of the one chance of help which medical science affords? And what shall be said of physicians who, consciously or unconsciously, aid in such a despicable business?

Bioplasm's Originator.

An instructive and yet pathetic incident relative to this nostrum was revealed in the death of Dr. Peter Manuel Wise, which occurred Sept. 22, 1907. Dr. Wise, it is understood, was the originator, and for some years the most important factor in pushing the sale of, Bioplasm. In one of the numerous form letters sent out by him, he said: "You can depend on it, Doctor, that if Bioplasm is taken properly by a tabetic, for not less than four months, his disease is permanently checked." Dr. Wise died a tabetic. Surely Fate in her unkindest moods never perpetrated a more ghastly irony.

BROMIDIA.

Deaths from the Use of the Remedy.

(*From The Journal A. M A., April 21, 1906, 1221.*)

Dr. Horatio C. Wood, Jr., Philadelphia, writes:

One of the deleterious results of using proprietary mixtures even when the formula is known is that the physician gets in the habit of thinking of the mixture as a remedial entity, instead of a combination of active ingredients, and is thereby led to use this combination in cases in which he would have avoided the individual drugs making up the mixture. The following item is taken from the Philadelphia *Evening Telegraph*, February 13, and also appeared in several New York papers; it preaches an eloquent but pathetic sermon on this subject:

> Within an hour after his father, a Brooklyn physician, had given him a dose of bromid, H. G. P., a prodigal son, died yesterday at his father's home in Brooklyn. Two years ago, when he appeared to have sown his wild oats,

the father made him superintendent of his country place, near Grants Mills, Delaware County. A week ago the son left his place, and at 1 o'clock yesterday morning appeared at his father's Brooklyn home. He was nervous, and at 9 a. m. begged for a sedative.

"I prescribed the usual quantity of bromidia," the young man's father told a reporter. "He was weak and had suffered from weak heart and kidney trouble for some time."

An hour later the father found the son dying and administered restoratives, but to no avail.

In an article published in THE JOURNAL, June 10, 1905, page 1836, I quoted in regard to bromidia the remarkable statement of the manufacturers that it is "the safest hypnotic known," and questioned how the addition of potassium bromid and tincture of hyoscyamus could overcome the depressant action of the chloral, which is the active ingredient of this nostrum. If the physician had thought of his bromidia as a solution of chloral rather than as a solution of bromid he probably would have hesitated before using it in an alcoholic case.

The following appeared in the Bangor (Me.) *Commercial*, March 8:

"Frank H. Perkins, a newspaper reporter of Plymouth, Mass., was found dead in a room in a hotel in Augusta, Sunday. The coroner stated that death was due to bromidia poisoning, but whether the drug was taken accidentally or with a suicide intent is a matter of conjecture. Perkins was a newspaper correspondent in Plymouth for 22 years. He left a few weeks ago to accept a position on the city desk of the Kennebec *Journal*. While a resident of Plymouth, he was correspondent for a number of Boston papers, and in recent years was connected with the Plymouth *Observer*. He was 55 years old and unmarried. It is understood that his nearest surviving relative is an aunt in Middleboro."

The above item was sent to Dr. O. C. S. Davies, Augusta, with a request that he send us a more complete report of the case. In his reply Dr. Davies stated that Mr. Perkins had at one time been an inmate of an inebriates' home and that he had gone to Augusta to do newspaper work, but had been unable to hold the position because of his condition. Dr. Davies, in his letter, says: "When the body was found, there were eleven one-ounce bromidia bottles about the room or on his person. Nine were entirely empty and the other two were about half full. None of these bottles indicated that they had been purchased on a physician's prescription, only the druggist's label marked 'bromidia' being on them."

BROMO-SELTZER.

Its Composition and Some of Its Effects.

(*From The Journal A. M. A., Sept. 29, 1906, 2158.*)

In response to requests for information regarding the composition of bromo-seltzer, we had the preparation analyzed. According to the analyses, 100 parts of the effervescing salts contain:

Potassium bromid	10.53 parts.
Acetanilid	4.58 parts.
Caffein	1.20 parts.

Assuming an average dose of the preparation—a teaspoonful—to weigh 76 grains (5.0 gm.), each dose would contain:

Potassium bromid	7 grains (0.5 gm.).
Acetanilid	3 grains (0.2 gm.).
Caffein	.8 grains (0.05 gm.).

Since a half ounce of this preparation is often taken at a dose, and since many, especially women, are taking it daily, it is anything but "harmless."—THE JOURNAL, Feb. 10, 1906, p. 454.

A case of poisoning from this preparation was reported by Dr. D. T. Quigley, North Platte, Neb., in THE JOURNAL, Feb. 10, 1906, p. 454.

Dr. W. J. Robinson, New York, reported a case of impotence following the excessive use of this nostrum.—THE JOURNAL, Aug. 18, 1906, p. 508.

Dr. H. B. Hemenway, Evanston, Ill., reported the death of a woman, aged 31, from acetanilid poisoning caused by taking bromo-seltzer.—THE JOURNAL, Dec. 29, 1906, p. 2158.

BUFFALO LITHIA WATER.

It Is Now an "Alkaline Diuretic."

(*From The Journal A. M. A., Sept. 12, 1908.*)

CHICAGO, Aug. 10, 1908.

To the Editor:—A few weeks ago the representative of the Buffalo Lithia Water called on me at my office. In discussing the merits of the water, I called his attention to the fact that it contained merely a trace of lithium. He replied that they made no claim for it as a lithia water, but sold it as an alkaline water which the physician might prescribe as he saw fit. He said that the name was selected simply to distinguish it from the host of other mineral waters. If my memory serves me correctly, this constitutes a remarkable change of front on the part of the promoters of this widely advertised

mineral water. Not long ago it was highly vaunted as a uric acid eliminant depending on its content of lithium for its therapeutic action. Doubtless many physicians during the last twenty years have prescribed gallons of this water, sometimes for patients who could ill afford to pay for it, on the supposition that it contained lithium, and was, therefore, a valuable remedy against uric acid. What is the reason for the abandonment of this claim on the part of the proprietors? Is it because, following closely the advance of medical science as they must, they have learned that lithium is no longer regarded as a uric acid eliminant? Or have they learned for the first time from the government analyses that their water contains practically no lithium? The claim that the water is an alkaline water is no better supported by facts than that it is a lithia water. This also they can learn from the government report if they will read it carefully. The alkaline theory will doubtless serve its purpose until attention is called to the fact that it is a calcic saline water. It will be interesting then to learn what quality will next be invoked to sell it. It seems as if it is time that physicians should awake to an appreciation of the need of caution in accepting the claims of those who have mineral waters to sell. There is as much need for supervision here as in the case of proprietary remedies.

* * * *

COMMENT:—Were it not for the tragic element it would be ludicrous to note the way in which manufacturers and proprietors of medicinal agents adjust themselves to varying conditions. Adaptation to environment is the essential element for success. This is illustrated by the facts brought out by our correspondent in the above letter.

When Buffalo Lithia Water was first put on the market uric acid was the scapegoat on which most of the sins of etiologic ignorance were heaped. Contemporaneous with, and in a sense a corollary of, the uric acid fallacy was another hypothesis, viz., that lithium was the uric acid eliminant *par excellence*. The proposition, therefore, was a simple one: Uric acid causes disease; lithium eliminates uric acid; *ergo*, Buffalo Lithia Water, because it contains lithia, eliminates disease. Q. E. D.

The result of these two theories, combined with skilful advertising on the part of the proprietors, made Buffalo Lithia Water a valuable piece of property. "The mills of the gods grind slowly," but finally government and other chemists, with small appreciation of the psychic and commercial value of the name, demonstrated that Buffalo Lithia Water con-

tains but the merest trace of lithium—an amount almost as small as the hypothetical gold in a widely advertised liquor cure.

Now, therefore, it is an "alkaline diuretic." While government analysts dispute the claim that it is an alkaline water, yet its proprietors may rest assured that the statement regarding its diuretic properties is beyond contradiction, for water of any kind is the simplest, surest and most universal of diuretics. It may be noted in passing that the more recent advertisements refer to Buffalo Lithia Springs Water instead of Buffalo Lithia Water. This is a distinction with a difference and the change in title has probably been brought about by that great agency for comparative righteousness in advertising—the national Food and Drugs Act!

CAPUDINE.

Another of "The Subtle Poisons."

(*From The Journal A. M. A., Oct. 17, 1908.*)

A great many inquiries reach the Association's laboratory regarding various nostrums and "patent medicines" with requests for analyses, but the number of preparations thus brought to notice is so great that it would take an army of chemists to satisfy all inquiries. As it is, only such preparations are examined as will serve as examples of a class of nostrums which it is desired to expose or that are of special interest to the profession. Hicks' Capudine Cure—or as it is known to physicians "Elixir Capu-Hicks"—is one of such examples, and its investigation has been deemed advisable.

MANUFACTURERS' CLAIMS.

The manufacturers—the Capudine Chemical Company, Raleigh, N. C.—issue two kinds of advertising pamphlets—one for physicians and another for the public. The medical profession is told that Capudine is

> "especially recommended for the relief of all headaches, colds, la grippe, neuralgia, sick headache, nervous headache, acidity, flatulency, and indigestion pains, also for dysmenorrhea, after pains, etc."

A formula of the type that usually accompanies preparations of this character is given:

> "Elixir Capu is composed of the combined Bromids of Potassium, Sodium and Ammonium, Caffein, Capu, Elixir Peppermint, Adjuvants and Correctives, Syrup and water, q. s."

To elucidate further and for the information of those who have never heard of the substance capu, we are told:

"Capu is a cellulin product—Chemical formula $C_{18}H_{20}N_3O_4$ possessing very powerful analgesic properties and is a mild antipyretic."

In a "Laundry List" pamphlet extolling the virtues of the remedy, the public are informed that

"Hicks' Capudine CURES all headaches, indigestion, la grippe, colds, etc."

"No remedy ever placed before a suffering mortal has the wonderfully quick curative powers of Capudine."

"Hicks' Capudine is not a 'dope'; will not produce a habit."

"Try this splendid remedy and enjoy life once more."

"Capudine is a liquid, acts immediately and is sold by dose at soda founts, and in 10, 25 and 50c bottles at drug stores."

LABORATORY FINDINGS.

Capudine (whether in the form of Elixir Capu-Hicks, or as Hicks' Capudine Cure) is a brown, rather syrupy liquid, slightly alkaline to litmus, with an aromatic odor and a salty taste. Besides 8 per cent. of alcohol, Capudine was found to contain sugar, aromatics, chlorids, caffein, antipyrin and salicylates. Quantitative estimations demonstrated the presence of about 1.25 gm. (19 grains) of antipyrin and caffein to each fluid ounce, and salicylates equivalent to about 0.9 gm. (14 grains) of salicylic acid to each fluid ounce. Thus Capudine depends for its action principally on antipyrin.

COMMENTS.

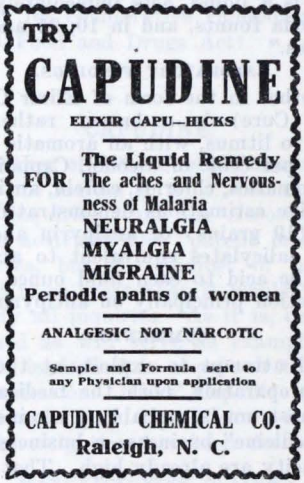
As a barefaced attempt to exploit, at the same time and with the same preparation, both the medical profession and the public, this nostrum is probably preëminent in the annals of the "patent medicine" business—a business whose claims to deceit and mendacity are already high. That medical journals should aid and abet such methods would seem unbelievable. Testimonials are forthcoming, of course. In the pamphlet to the laity, these come from the butcher the baker and the candlestick maker, while in the "literature" to physicians, at least some of the testimonials—"case histories," if you please! —come, it is needless to say, from our old testimonio-maniac friend, W. T. Marrs,[1] M.D., of Peoria Heights, Ill. As Dr. Marrs has recommended, at various stages of his literary career, such remedies as Neurilla, Antikamnia, Bromidia, Chionia, Arsenauro, Cactina Pillets, Thialion, Phenoseptine, Papine, Calcidin and others too numerous to mention, his opinion regarding Capudine must be considered authoritative. Dr. A. S. Reed of Naples, Maine, also details a "case history" in which the marvelous results achieved by the administration

1. See THE JOURNAL, March 14, 1907, p. 897.

of Capudine are surpassed only by the still more marvelous spelling and composition of the testimonial.

In the lay press we find Capudine extensively adverstised in the typical "patent medicine" style. In the "Laundry List" pamphlet, previously referred to, which goes direct to the public, there are graphically portrayed some of the conditions in which Capudine is indicated.

For the purpose of determining the attitude of the Capudine Chemical Company regarding its policy of combining the "patent medicine" and "ethical proprietary" business in one and the same preparation, a Chicago physician wrote, asking if it made any particular difference whether he wrote a pre-



Reproduction (reduced) of an advertisement of Capudine in a medical journal (*Medical Summary*). In this way the physician is reached.

scription for Elixir Capu-Hicks or told his patients to go to the drug store and ask for a bottle of Hicks' Capudine Cure. The Capudine Chemical Company rose gracefully to the bait and swallowed it hook and line. The answer, dated Sept. 28, 1908, is so ingenuous and enlightening that we give it almost in full. For the purpose of emphasizing certain passages we have employed italics and small capitals:

> "We use the name Elixir Capu-Hicks so that doctors can write for it and have their prescriptions filled *without the consumer knowing that it is the same thing as the advertised product.* A great many of our doctor friends prefer this.

> "In regard to the cost to the druggist it is the same and we presume that MOST DRUGGISTS DISPENSE CAPUDINE BY THE DOSE OVER THE COUNTER AND ELIXIR CAPU-HICKS ON PRESCRIPTION FROM THE SAME ONE-PINT OR ONE-GALLON BOTTLE OF CAPUDINE, WHICH IS PERFECTLY ALL RIGHT. [! !] Though some of our drug friends buy it labeled as Elixir Capu-Hicks specially for their prescription trade."

"Perfectly all right" indeed! What though you deceive your patient, stultify yourself and use your druggist as a catspaw; just so you increase the sale of Capudine it "is perfectly all right"—for the Capudine Chemical Company.

The formula furnished physicians is, of course, a joke. The various ingredients given—without quantities—are, with the

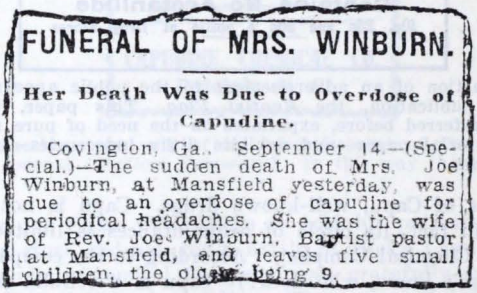
Reproduction of an advertisement to the public appearing in a religious publication, the *Baptist Flag*. This paper, to which we have referred before, expatiates on the need of pure reading—in its editorial pages—and exhibits filthy indecencies—in its advertisements.

exceptions of Capu, well-known drugs. Capu is not so well known; in fact, its circle of acquaintances is limited to the Capudine Chemical Company. According to the company (and if it doesn't know, who does?) "capu is a cellulin product—chemical formula $C_{18}H_{20}N_3O_4$." This looks abstruse and scientific, and doubtless in many cases prevents further impertinent and awkward questions. The description only lacks one thing to prevent it qualifying for an honored position in the hall of fakes—a "structural formula" of weird and impressive design. The great unknown—Capu—is, of course, as the analysis demonstrates, our old friend antipyrin. On the "literature" furnished physicians and on the advertising distributed to the

public, great stress is laid on the fact that Capudine "contains no acetanilid." This puts the nostrum in that dangerous class of "patent medicines," increasingly common of late, in which a heart-depressing drug is present, but one, unfortunately, which

Diagnosis and treatment in the home! Reproduced from the "Laundry List" pamphlet sent out to the public.

the Food and Drugs Act does not require to be specifically named on the label. Mr. Adams in the "Great American Fraud" series says, in speaking of the labels on "patent medicines:" "If the words 'warranted harmless' appear any-



FUNERAL OF MRS. WINBURN.

Her Death Was Due to Overdose of Capudine.

Covington, Ga., September 14.—(Special.)—The sudden death of Mrs. Joe Winburn, at Mansfield yesterday, was due to an overdose of capudine for periodical headaches. She was the wife of Rev. Joe Winburn, Baptist pastor at Mansfield, and leaves five small children, the oldest being 9.

Reproduction from the Atlanta (Ga.) *Constitution*, Sept. 15, 1908, which gives the lie direct to the statement that Capudine "does not contain poisonous drugs."

where, look twice over for the Ethiopian in the woodpile." We would say if the words "contains no acetanilid" appear on the label of any "headache cure," it is a safe guess that some other equally dangerous heart-depressant is there in its place. The statements that (1) "Hicks' Capudine is not a

'dope'"; (2) "does not contain . . . poisonous drugs," and (3) "will not produce a habit," are three separate and distinct falsehoods. As to its "harmlessness," a telegram that appeared in the Atlanta (Ga.) *Constitution,* which we reproduce, refutes briefly but tragically, this cruel lie. Dr. E. W. Warren of Palatka, Fla., reports the case of a woman who was thought to have been murdered, but the state's attorney concluded that her death was caused by too much Capudine.

And this hybrid "'patent medicine'-proprietary" is to be found advertised in medical journals! How much longer will the medical profession put up with it?

CHINOSOL.

A Mixture Advertised as a Definite Chemical Compound.

(*Abstract from The Journal A. M. A., Jan. 25, 1908, 293.*)

In the circulars issued to physicians Chinosol is said to be a remarkable antiseptic, germicide, disinfectant, and deodorizer, perfectly safe for external use and in proper dosage for internal use. It is also said to be free from the dangers of poisoning, yet far more prompt and efficient than carbolic acid, corrosive sublimate, lysol, formol, creolin, saprol, or any other product thus far discovered. The Council's report states that the statement that Chinosol is free from danger of poisoning is questioned by Weyl, in an article in the *Viertel jahrschft. f. gericht. Med.,* xxxiv, No. 3, in which this investigator states that administered to rabbits Chinosol produced symptoms and lesions similar to those of lysol and creosol. Weyl's article concludes as follows: Chinosol, when given by the stomach, is as poisonous for rabbits as lysol, if not more so; given subcutaneously, it is 100 per cent. more poisonous, but when absorbed by the peritoneum it is 50 per cent. less poisonous than lysol. The report of the Council also includes the report of a bacteriologist which disproves the extravagant claims made for the bactericidal powers of this preparation.

> Tests were made with two organisms: *Staphylococcus pyogenes aureus* and *Bacillus typhosus.* These organisms were selected because they are mentioned repeatedly in the circular accompanying the package. The first series of tests were made for the purpose of demonstrating the antiseptic or preservative action of Chinosol. For this purpose, solutions of Chinosol of varying strengths in neutral bouillon were inoculated with the test organisms and the presence or absence of growth after a period of incubation of at least four days was noted.

The results of these tests as shown from the table confirm the statements made in the circular that Chinosol in a strength of 1 to 15,000, 1 to 4,000 and 1 to 200,000 arrests or prevents the growth of *S. p. aureus*. The antiseptic action with reference to the typhoid bacillus is not as pronounced since a good growth was obtained in bouillon containing 1 to 20,000 of Chinosol. The statement in the circular that, according to Vogelius, the typhoid bacillus ceases to grow in a Chinosol solution of 1 to 20,000 is not confirmed, but this difference in results may well be due to varying experimental conditions.

The results given in Table 1 show that Chinosol does possess considerable antiseptic action and that in this respect it is superior to carbolic acid. On this point the statements in the circular are essentially correct. It is necessary, however, to draw a sharp line of distinction between the antiseptic or preservative action and the disinfecting or germicidal value. A substance may be a good preservative, but a very poor disinfectant, and such is the case with Chinosol. The germicidal action of Chinosol was tested on only *S. p. aureus* and *B. typhosus* and the results are not in accord with those ascribed to Palatschenko. Thus, while the circular sent out by the Parmele Pharmacal Company states that he found Chinosol solution 1 to 3,000 killed typhoid bacilli in one and one-half hours, it will be seen from tests given in Table 4 that 1 to 100 did not kill this organism in one hour.

The further statement in the circular that typhoid bacilli were destroyed in fifteen minutes with a Chinosol solution of 1 to 1,000, whereas carbolic acid was without any result is not substantiated by these tests since a carbolic acid solution of 1 to 100 has distinctly more injurious action than Chinosol in like concentration (Table 4).

The extravagant claims that Chinosol is five times as efficient as corrosive sublimate and 100 times as efficient as carbolic acid in destroying the pus organism can not be upheld. On the contrary, it is inferior to either of these agents. Similarly, the statement that *S. p. aureus* is killed by Chinosol 1 to 4,000 in fifteen minutes is offset by the fact that solutions of 1 to 200, 1 to 500 and 1 to 1,000 were without any germicidal action even at the end of one hour, when thick suspensions of the test organism were used (Table 2).

This examination shows that the inference that Chinosol prevents the growth of all organisms because of its marked action in the case of *Staphylococcus* is not justifiable. Neither is the assumption warranted that it possesses extraordinary

germicidal action because of its preventive properties in this one instance. As a matter of fact, it appears to be a poor germicidal agent, and the statements regarding its superiority over carbolic acid and mercuric chlorid are exaggerated, to say the least.

TABLE 1.—PRESERVATIVE ACTION OF CHINOSOL AND CARBOLIC ACID.[1]

	Chinosol.		Carbolic acid.	
	S. P. aureus.	B. typhosus.	S. P. aureus.	B. typhosus.
1 to 5,000.....	—	—	+	+
1 to 10,000.....	—	—	+	+
1 to 20,000.....	—	+	+	+
1 to 40,000.....	—	+	+	+
1 to 200,000.....	—	+	+	+

TABLE 2.—GERMICIDAL ACTION ON S. P. AUREUS (THICK SUSPENSION).

	Chinosol.			Mercuric chlorid.	Carbolic acid.
	1 to 200.	1 to 500.	1 to 1,000.	1 to 1,000.	1 to 100.
5 min....	+	+	+	—	+
15 min....	+	+	+	—	+
30 min....	+	+	+	—	—
60 min....	+	+	+	—	—

TABLE 3.—GERMICIDAL ACTION ON S. P. AUREUS (THIN SUSPENSION).

	Chinosol.		Carbolic acid.
	1 to 100.	1 to 200.	1 to 100.
5 min.....	—	—	—
15 min.....	—	—	—
30 min.....	—	—	—
60 min.....	—	—	—

TABLE 4.—GERMICIDAL ACTION ON B. TYPHOSUS (THIN SUSPENSION).

	Chinosol.		Carbolic acid.
	1 to 100.	1 to 200.	1 to 100.
5 min.....	+	+	+*
15 min.....	+	+	+*
30 min.....	+	+	+*
60 min.....	+	+	+*

In regard to the chemical composition of Chinosol, an abstract is first given of the investigations made abroad and then the result of the examination of Chinosol is appended as follows: "The results of the chemical examination of the specimens of Chinosol purchased in the open market agree with those obtained and reported by European chemists. It was found that barium chlorid precipitated, from a water solution of Chinosol, all the sulphur as barium sulphate. On determining the barium sulphate it was found that it represented, calculated to sulphate ion (SO_4) 33.10 per cent. of total weight

1. In the tables the sign + indicates a heavy growth, +* a slight growth, and — means no growth.

Chinosol, agreeing with the total sulphates 33.46 per cent., found by Sonntag (*Arend's Neue Arzneimittel und Spezialitäten,* p. 121). The total nitrogen was found to be 3.80 per cent., also in accord with the work of Sonntag, who reports 4.08 per cent. All the potassium was found to be in the form of neutral sulphates and amounted to 30.70 per cent., confirming Sonntag's figure of 31.25 per cent. and 15.18 per cent. of the sulphates to be in combination as oxychinolin sulphate.

"From these figures it is seen that the analyses of Chinosol by different chemists agree and that they show that the sulphur present is in the form of sulphates and not in the form of sulphonates as claimed by the promoters of Chinosol, thereby disproving the statement that Chinosol is a definite chemical body and proving it to be simply a mixture of potassium sulphate and oxychinolin sulphate."

COD-LIVER OIL PREPARATIONS.

Fraud and Deception Connected with So-Called Cod-Liver Oil Preparations.

(*From The Journal A. M. A., Oct. 13, 1906, 1207.*)

The introduction of cod-liver oil as a supposedly easily assimilable nutrient and reconstructive was followed by its extensive use in wasting diseases, especially in phthisis, in the treatment of which it came to be considered almost essential, as it was supposed to possess some mysterious power different from that of other oils. Its unpalatable character led to various devices to render it tasteless and to make it more acceptable to the stomach. Emulsions containing the oil in mixture with other substances were put on the market and served a useful purpose. But the oily nature, imperfectly concealed, was disagreeable to many, and gradually other preparations appeared which attempted to retain the supposed therapeutic virtues of cod-liver oil while dispensing with its disagreeable character. This attempt has been carried to the extreme that in many of the cod-liver oil preparations now on the market the oil has been entirely eliminated and all that is left of the oil is the name. This is a species of fraud which has been tolerated too long, but which will be kept up so long as physicians are willing to be duped. Some of these articles are said to "represent" the oil and to possess all its virtues. Others are said to contain oil, while still others are stated to contain "all the valuable constituents." What is the standard by which we may determine the true value of these preparations and by which we may determine whether or not we, and through us our patients, are being humbugged?

A FOOD OR MEDICINE—WHICH?

Is cod-liver oil to be considered a food or a medicine? A food, certainly. As a food its value will consist in the fats it contains. These fats are more easily oxidizable and are considered more digestible than other fats because of the presence of compounds derived from the liver which favor its emulsification and enable it to penetrate the mucous membrane more easily than other fats. Aside from their nutrient properties we have no evidence that the fats of cod-liver oil possess any therapeutic value; if the oil possesses therapeutic qualities they must reside in its non-fatty constituents, and the activity of these non-fatty constituents is not acknowledged by those who have investigated them scientifically. Most pharmacologists believe that whatever virtue there is in cod-liver oil depends on its qualities as an easily assimilable fat.

On the whole, we must conclude with Cushny that "cod-liver oil has not been shown to have any action apart from that of an easily digested food, and its superiority to some other fats and oils has not been satisfactorily established."

If, then, the value of cod-liver oil depends on the presence of fat as its nutritive constituent, the amount of fat a preparation contains will determine the worth or worthlessness of such a preparation; at all events, a preparation claiming to represent cod-liver oil which does not contain fat in some form is fraudulent.

HOW TO PROVE OR DISPROVE THE PRESENCE OF COD-LIVER OIL.

Fats may be changed to fatty acids or to soaps, as occurs under the influence of pancreatic juice in digestion, and still retain their nutritive value, but it is not possible to manipulate them in any way so that they are still valuable as food, and yet do not respond to easily applied chemical tests which demonstrate their fatty nature.

Any preparation of cod-liver oil in which fat or fatty acid is not recognizable by proper tests is valueless as food, since its food value depends on the amount of fat or fatty acid present. An elementary knowledge of chemistry and the application of a few simple tests will enable any physician to learn for himself whether or not a preparation contains fat or fatty acids.

The preparations claiming to "represent" cod-liver oil are in liquid form, and if they contain oil it must be one of the following forms:

1. An emulsion of the oil which may be miscible with water, but from which the fat tends to separate and rise to the top. In this form the fat can be seen as globules under the microscope.

2. A solution, resulting from the saponification of the oil, containing a soap which usually will be alkaline in reaction, especially when mixed with water, and from which fatty acids are separated as a precipitate when the solution is acidified.

3. A solution of fatty acids. This will be acid in reaction and will be precipitated by the addition of water, in which the fatty acids are not soluble.

Waterbury's Metabolized Cod-Liver Oil.

To illustrate the testing of these preparations we may take Waterburys "Metabolized Cod-Liver Oil Compound," which, according to the label, "contains the metabolized product obtained by the action of ferments on cod-liver oil," with other ingredients. It is claimed that the oil has been "metabolized"* by the action of pancreatic juice. We would expect to find the fat in one of three forms mentioned above. Examination which any physician can make shows the following facts:

1. It is a clear liquid and no globules of oil are seen under the microscope. It is, therefore, not an emulsion.

2. It is of acid reaction when mixed with water and remains clear when strongly acidified. Hence it does not contain a soap, and is not a saponification of fat.

3. It mixes with water without precipitation; hence it can not contain more than traces of a fatty acid.

By these simple tests a physician is easily able to demonstrate that the preparation does not contain cod-liver oil. It is, therefore, valueless for the purpose of nutrition, for which we give the oil. More careful analysis confirms the results of these tests and shows that it contains no fat or fatty acids (except the merest traces); one or more bodies with alkaloidal reaction may be extracted from the compound with ether after adding an alkali. No intelligent physician should be misled by the extravagant and unfounded claims made for this preparation.

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* The use of the term "metabolized" is by a manufacturer's license and does not correspond to that of physiologists or of the dictionary, which defines metabolism as the "act or process by which on the one hand dead food is built up into living matter, and by which on the other hand the living matter is broken down into simpler products within a cell or organism." It can not properly be used to describe a process occurring outside the body unless the manufacturers have penetrated the secrets of Nature farther than any physiologist has yet been able to go.

Hagee's Cordial of Cod-Liver Oil.

But there are other preparations which present the matter in a slightly different form.

Hagee's Cordial of Cod-Liver Oil Compound is said to "represent 33 per cent. of pure Norwegian cod-liver oil," with other ingredients, in perfect solution. It is also claimed, according to the advertising pamphlet, that "in this preparation we have every beneficial constituent of the best and purest Norwegian cod-liver oil." Put to the above three tests, however, Hagee's cordial of cod-liver oil is not, 1, an emulsion of cod-liver oil; 2, is not a saponification of cod-liver oil; and, 3, does not contain fatty acids. It, therefore, contains no cod-liver oil. The only nutrients in the mixture, revealed by analysis, are sugar, alcohol and glycerin, none of which is contained in cod-liver oil.

In this case the manufacturer misleads by the use of the word "represents;" he is careful not to say "contains," although the average reader would not be apt to notice the nice distinction. The manufacturer unwittingly admits that it contains no oil when he says that it "contains everything of value except the grease." What else there is of value in cod-liver-oil besides the "grease" we do not know. Certainly, if we estimate the value of the remedy by its nutrient properties, it must be set down as practically worthless, if not fraudulent, for although a mixture of sugar, alcohol and glycerin does possess certain nutrient value, the materials can be purchased for it far more cheaply in the open market. It is evident that claims are made for this preparation which can not be substantiated.

Again, some of the so-called cod-liver oil preparations are termed extracts of cod-liver oil, but are not in fact made from the oil, but from the cod-livers instead. They are preparations which, if honestly made, might be worthy of trial, but they are improperly called "extracts" of cod-liver oil, since they do not contain the fat, which is the active constituent of the oil, but the extractives from the liver which may or may not possess therapeutic virtues. So far as we know, however, no satisfactory evidence is forthcoming to indicate that such extractives have any therapeutic value.

The attempt to modify cod-liver oil for therapeutic purposes may be pronounced a failure and the large variety and extensive sale of these preparations appear to be owing to the fact that physicians do not recall the ordinary facts of chemistry and fail to apply simple tests with little technical skill, but too readily accept as facts the statements of the manufacturers.

CUTICURA RESOLVENT.

A Weak Solution of Potassium Iodid.

(*From the Journal A. M. A., May 23, 1908.*)

In the investigation of secret remedies the *British Medical Journal* (April 18, 1908), takes up the nostrums advertised to the British public for the treatment of skin diseases. Among these the Cuticura remedies which are prepared by the Potter Drug and Chemical Corporation, Boston, and are widely sold in America, are of special interest. The advertisements recommend these preparations for a variety of skin affections and imply their special value in syphilis. The remedies consist of the cuticura soap, ointment and an internal remedy known as Cuticura Resolvent. The last named preparation is said to be alterative, antiseptic, tonic, digestive, and aperient, and is recommended for purifying the system of humors of the skin, scalp, and blood, with loss of hair. It is to be given in a dose of two teaspoonfuls for adults three times a day. Analysis showed the composition of the mixture to be:

Potassium iodid	17 grains
Sugar and glucose	486 grains
Extractive	8 grains
Alcohol	10 fluidrams
Water sufficient to make	6½ fluidounces

In this preparation, which is sold for 60 cents for 6½ ounces, no alkaloidal substance was present; the extractive gave a slight indication of the presence of a preparation of rhubarb; all other drugs with well-marked characters were absent. It is a good illustration of the power of advertising and the faith of the credulous public that less than a grain of potassium iodid at a dose is believed to produce effects when given in a secret nostrum which can not be attained by the usual methods of treatment.

ENO'S FRUIT SALT.

(*From The Journal A. M. A., April 11, 1908.*)

PHILADELPHIA, March 21, 1908.

To the Editor:—Can you furnish the formula of Eno's Fruit Salt? A patient under my observation took this preparation on the advice of a friend and has since developed signs of cardiac dilatation, weakness and arrhythmia. A. A.

ANSWER:—According to an analysis in the *Pharmaceutische Centralhalle*, Nov. 1, 1906, Eno's Fruit Salt consists of about 50 per cent. sodium bicarbonate, 15 per cent. sodium bitartrate and 35 per cent. free tartaric acid. Therefore, its composition is very similar to that of seidlitz powder.

ENTERONOL.

The "Greatest Germicide Known to Science"!

(*Abstracted from The Journal A. M. A., March 21, 1908, 977.*)

This preparation is put on the market by the Enteronol Company, Oswego, N. Y., which declares that Enteronol is "the greatest antiseptic and germicide known to science," and that it "destroys the germs of typhoid fever, acute and chronic diarrhea, dysentery, cholera infantum, cholera morbus, summer complaint, Asiatic cholera, etc., within two hours." The formula furnished by the company reads as follows: "Ipecac. sub. nit. bismuth, latalia rad., camphor, lupulin, caffein and rheum." The attention of the Council on Pharmacy and Chemistry of the American Medical Association was directed to this preparation by a correspondent who had received a circular from the Enteronol Company. He sent a dollar to the company asking for a sample of "latalia rad." that he might study the drug botanically, as he was unfamiliar with it. He expected to receive by return mail a sample of root or bark, but instead, he received three boxes of Enteronol and the information that as "latalia rad." costs from $25 to $45 a pound the company could not afford to send samples. In a circular letter sent out by this company "latalia rad." is said to grow on the sides of the Himalaya Mountains in India, and that the company is unable to obtain enough for its own use. This statement is probably correct, and no one else could secure the drug either. A sample of Enteronol was submitted to Professor Day, of the University of Illinois, and to Professor Kraemer of the Philadelphia College of Pharmacy. Professor Day reports that he was "unable to find any mention of the drug 'latalia rad.,' which is stated as one of the ingredients of this preparation. I have searched the usual works of reference on pharmacognosy without being able to find any reference to a drug of this name. A microscopic examination of the tablets shows the presence of rhubarb and of ginger, but no lupulin, at least not in substance; nor could I locate definitely any ipecac., also stated to be one of the ingredients. Since ginger is not stated to be one of the ingredients of the compound, it, perhaps, may be the mysterious stranger 'latalia rad.' I was unable to locate any of the ordinary astringent drugs, such as kino, grameria, or nutgall." The results of Professor Kraemer's examination were practically identical with those obtained by Professor Day. A report from the chemical laboratory of the American Medical Association states that as Professors Kraemer and Day suggested the presence of alum, tests were made for this substance. The analysis, details of which are given, leads to the conclusion that alum is the chief constituent of Enteronol. The

report adds strongly to the impression that "latalia rad." is simply a ruse to catch the unwary and trusting physician who lacks the time to look into the botany of every new plant discovered, and who is willing to trust the honesty of every manufacturer. Attention is also directed to the fact that while bismuth and caffein are mentioned as ingredients tests made in the laboratory failed to discover either of these substances. Since there is no lupulin, no ipecac., no caffein, no bismuth, and possibly no "latalia rad." one is forced to the conclusion that the "formula" is meaningless and worthless, and that it is used simply to satisfy the demand for formulas for proprietary remedies. This is one more beautiful illustration of the absurdity of accepting a preparation because the "formula is on every package."

FRUITOLA.

A Fake Remedy for Gallstones.

(*From The Journal A. M. A., March 14, 1908.*)

WEST ELKTON, OHIO.

To the Editor:—A neighboring practitioner has been giving treatment for gallstones, his patients paying him $50 if they pass any stones. I think the remedy he uses is sold under the name of "Fruitola." The patients are said to pass hundreds of gallstones after using it. Have you any account of the stuff? I think the concretions, which pass without pain, are soft and float when fresh. I believe that olive oil is the bulk of the remedy. A. W. Y. CONARROE.

ANSWER:—Fruitola is a "patent medicine" which is alleged to have the wonderful power of relieving appendicitis or any intestinal inflammation without an operation. It is also said to be a system-cleanser, to remove gallstones and to cure all stomach trouble. Dr. E. E. Flagg of Mooreland, Okla., writes us that he has obtained identically the same results with large doses (2 ounces) of olive oil.

When olive oil was suggested for the treatment of gallstone colic, it was noticed repeatedly that after its administration the patient passed a considerable number of small lumps which were supposed to be gallstones. Chemical examination of these concretions showed, however, that they mainly consisted of soap which had been produced by the digestion of the oil. This observation has since been made use of by nostrum manufacturers to convince physicians and their patients of the efficiency of their preparations in securing the expulsion of gallstones. A simple examination will usually show the true nature of these bodies, since they disintegrate readily

when stirred in water. It is probable that they consist of fecal matter mixed with the mass of soap.

The value of olive oil in painful affections of the gastro-intestinal tract is well established and there is much clinical evidence to its soothing action in cases of gallstones, but the physician should not be misled into supposing that he has secured the elimination of a large number of gallstones because the patient passes a large number of lumps of soap, and he should be equally cautious in admitting the claims of the nostrum manufacturers that their remedies secure the passage of gallstones unless he has the opportunity to examine and test the stones for himself.

GERMAN PROPRIETARIES.

The Results of Examinations.

(*From The Journal A. M. A., April 4, 1908, 1136.*)

F. Zernik in an address to the German Pharmaceutical Association in Berlin, Jan. 9, 1908, reviews the principal proprietaries introduced during 1907, and comments on the results of their examination. Recently, the great commercial houses have facilitated the investigation of their products by furnishing information regarding the source, composition and properties of their preparations. In the main, this information has proved reliable, but not always. Zernik's examinations show the imperative necessity of impartial investigations of the products of even the most reputable firms. Such firms will be glad to acknowledge and correct errors, but Zernik notes another spirit as prevalent to some extent in the commercial world.

That reports of irregularities in their products should be unpleasant to the manufacturers is quite natural, especially as these reports are not confined to the pharmaceutical press; various medical journals, both domestic and foreign, are beginning to open their columns to them.

Then appear corrections: These corrections, however, it is sad to say, are often based on the motto *"si fecisti, nega"* (if you have done anything deny it), and in them facts that have been established by absolute evidence are opposed by an expenditure of dialectics that is worthy of a better cause.

Zernik regards the exposure of unworthy preparations as decidedly to the advantage of the pharmaceutical and chemical industry of Germany. He says: "In this relation, the reaction which has set in in the United States, against the prevalence of doubtful preparations, may serve as a model."

He describes the work of the Council on Pharmacy and Chemistry, and concludes: "In this cooperation of the physician and the pharmaceutical chemist as it has been established in the United States, the way is pointed out in general by which relief from the present inconveniences may also be obtained by us."

Zernik reviews the principal preparations which have appeared during the year 1907, but we have space only for a notice of those which are on the American market, or are otherwise of special interest:

FORMIDIN.

Formidin was found by Zernik to be deficient in its iodin contents. He emphasizes the fact that it is not a chemically individual substance. His report on formidin was given in THE JOURNAL, July 13, 1907, page 157.

IODOFAN.

In the report of last year on iodofan given in THE JOURNAL, June 22, 1907, page 2129, Zernik stated that iodofan contained only about 4 per cent. of iodin instead of from 42 to 47 per cent. which it should contain according to the formulas given by the proprietors. His conclusions in this respect were questioned, but subsequent examinations fully confirmed his previous results. An account of these results can be found in THE JOURNAL, March 7, 1908.[1]

ATOXYL.

Zernik gives the result of investigations into the composition of this preparation and notes especially the varying quantity of water as shown by the differences between analyses made in Germany and the results obtained by the American Medical Association.[2] He concludes: "It is a striking fact that in spite of the amount of sodium which was undoubtedly known to the manufacturer the incorrect designation meta-arsenicanilid was for years attached to this, in no sense, indifferent remedy. The determination of the constitution of this remedy now confirmed from three different sources has given a certain clearness to the pharmacologic relations of atoxyl. It is well known that after the use of this preparation, poisoning, especially severe disturbance of vision, even to blindness, has occurred, so that the name 'atoxyl' is to be understood only *cum grano salis*. While it was formerly a matter of discussion whether the arsenical or the anilin com-

1. See page 185 of this edition.

2. THE JOURNAL A. M. M., Sept. 21, 1907, reproduced on page 88 of this edition.

ponent was to blame for these toxic effects, it is now scarcely to be doubted in consideration of the constitution of atoxyl that we have here to do with the action of arsenic, as the anilin as such is detoxicated by the entrance of the arsenical radical into the nucleus, as is the case, e. g., in sulphanilic acid. Experimentally also, Blumenthal and Jacoby have lately determined that atoxyl poisoning is really an arsenical poisoning. The demand that in the case of so active a preparation the content of water shall be exactly fixed and shall not be subject to such variations as have been exhibited, appears to be thoroughly justified. On the other hand, in consequence of the easy decomposition of the commercial preparation, it is the duty of the apothecary to protect atoxyl from the action of the air in tightly closed vessels."

GONOCOCCIDE.

(*From The Journal A. M. A., Aug. 24, 1907, 708.*)

CHICAGO, Aug. 1, 1907.

To the Editor:—Can you give any information about the composition of the preparation known as "Gonococcide," sold by Cox Chemical Co., Chicago? The circular accompanying the package gives the following formula:

C_8H_8BrNO monobromacetanilid; $C_{10}H_{44}N_2C_7HO_3$ eudermol; $CaSo_32H_2O$ gypsum and selenite, $CaSo_4$ anhydrite; H_2O aqua and myrrh.

NOTE.—In combining calcium coral with sulphuric acid, calcium occurs as gypsum, selenite and anhydrite.

The literature of eudermol limits the usefulness of that drug to skin diseases. W. H.

ANSWER.—Gypsum, selenite and anhydrite are the names applied to different forms of calcium sulphate. Gypsum and selenite are chemically identical, being calcium sulphate and containing two molecules of water crystallization, $CaSO_4 + 2H_2O$, but differing in crystalline form. Anhydrite is also calcium sulphate, but contains no water of crystallization. The inclusion of three different forms of the same substance should be sufficient to demonstrate the "fakeness" of the formula. The first substance named, monobromacetanilid, has been used as an antiseptic under the trade names of antisepsin and asepsin. It is practically insoluble in water, and hence but little of it can be contained in the preparation. Eudermol is a name given to nicotin salicylate and its use externally has been recommended in scabies, chronic eczema, and other skin diseases. This being practically the only medicinal constituent given in

the formula, its determination in gonococcide was taken up in the Association laboratory. Tests, however, failed to show the presence of this or any other alkaloid. While the addition of iodin to a 0.1 per cent. nicotin salicylate solution produces an abundant precipitate, the addition of iodin to a specimen of gonococcide produced no reaction whatever. Further comment on the formula seems to be unnecessary.

GOWAN'S PNEUMONIA CURE.

(From The Journal A. M. A., May 9, 1908, 1541.)

WALLBURG, N. C., Feb. 19, 1908.

To the Editor:—Please print the analysis of "Gowan's Pneumonia Cure." What effect does this remedy have on pneumonia? J. A.

ANSWER.—The results of an examination of this preparation in the American Medical Association's laboratory follow:

This preparation was not considered of sufficient importance to warrant an exhaustive chemical analysis, as its general character, sufficient for all practical purposes, can be determined by a cursory examination. The "pneumonia cure" as found on the market is a brownish ointment, having an odor of camphor. When applied to the skin, or subjected to a temperature approximately that of the body, it becomes liquid. It is almost completely soluble in chloroform, indicating the absence of any appreciable quantity of water or inorganic constituents. Tests indicate that the base of the ointment is a fat. From these facts we conclude that "Gowan's Pneumonia Cure" is an ointment composed of some fat having a low melting point and containing camphor, and, if the statements on the label are to be given credence, a small quantity of opium.

This nostrum is recommended by the purveyors as a valuable remedy for local application and it is said to be "antiseptic, nutrient, antipyretic and diaphoretic." It is claimed that it will determine blood to the surface and relieve congestion. The base is said to be emulsified fats which are readily absorbed and the implication is made that the other constituents, also, are absorbed. It probably equals in therapeutic value the old fashioned camphorated oil application. In common with other so-called "cures" sold to the public, its viciousness lies in the false sense of security its use engenders.

HYDROCINE.

Another Consumption Cure. (?)

(From The Journal A. M. A., Aug. 17, 1907, 622.)

We have had occasion to comment on the diabolical cruelty exhibited by cancer fakers in deluding their victims with false hopes and by inducing them to delay such treatment as might be effective until too late. Next to cancer, tuberculosis offers the most promising field for such vampires, for it is a disease in which the patient is always hopeful and always ready to say that he is better; just such a condition as makes him an easy victim for those who are without principle and ready to prey on the hope which springs eternal in the human breast.

During the past three months, physicians all over the country have been receiving postal cards announcing the discovery of a new and wonderful remedy for consumption. The card is signed, "C. S. Roberts, M.D., Member N. Y. State Medical Society and American Medical Association." It is to be regretted that what Roberts says regarding his membership is true. Until within the last few months Roberts lived at Syracuse, N. Y., and is a member of the Onondaga County Medical Society and consequently of the Medical Society of the State of New York. Last December he became a member of the American Medical Association. This was just before his removal to New York City, and he evidently obtained this membership because he was going into this wretched business and wanted to use his membership as apparent guarantee of his ethical standing. As soon as the Onondaga County Medical Society discovered the business Roberts had gone into he was asked to resign, but this he refused to do. Hence it became necessary for the society to go through the legal form of trial before expelling him from the society. We understand that his trial cannot come off until September, and that Roberts is fighting to retain his membership.*

According to the postal card, Roberts is "just commencing to introduce to the medical profession (on strictly ethical lines)," this is put in parentheses probably for emphasis, "a positive cure for tuberculosis in any form." "This discovery," he says, "is the result of fourteen years scientific study and experimentation," but so far as we have been able to learn, Roberts has not been noted as performing any remarkable cures of tuberculosis in Syracuse, nor was it known that he was using this wonderful remedy. The last paragraph of the postal card is supposed to be a clincher:

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* He was dropped at the September meeting.

"Doctor, a trial will prevent your tubercular patients from saying your neighbor doctor is curing his patients in a few weeks right at home, while you are sending them at great expense in time and money to the remote resorts for consumptives."

Judging from the circulars, Roberts seems to have gone to New York to help exploit a nostrum—hydrocine—put out by the "Medical Food Co.," and evidently the postal card is the initial move in a scheme to exploit the medical profession.

Incidentally, it might be said that some two or three years ago Roberts was interested in a scheme to work the doctors by getting them to invest in a water still, and the circular letters he sent to physicians at that time sound very similar to the circulars he is now sending out puffing this specific for consumption. In one of the "still" letters[1] he states that he made $3,200 in less than two months on an investment of $300. Evidently something must have happened to the "still" business, for such a man would hardly give up a business net-

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1. The following is a copy of a circular letter, imitation typewritten, sent out by Roberts. The physician to whom it was addressed, said: "This is the third letter I have received from Dr. Roberts in the past few weeks, none of which I have answered."

Syracuse, N. Y., Nov. 26, 1904.

Dear Doctor:—My letters to you of recent date may have found you busy with your own affairs; they may have found their way into your waste basket (never to return with any profit to you). However, permit me to say I meant well and hoped to favor you.

You may be interested in knowing that my profits since being interested in this company (September 29) on an investment of $300 have been $3,200.

I will state for your information, Doctor, that one of the four ways in which to make money on this proposition by associating with this company to the extent of $300 to $500 (and this amount is all you can invest with them) is by the sale of their Automatic Water Still in your county by any method you may choose to adopt for a period of 15 years.

This Still is the greatest household device I ever saw; it requires no more room than, and can be used as, an ordinary tea-kettle and does not require as much watching and care. The water is boiled and the steam condensed in the presence of pure hot air, giving the nicest pure and live water, entirely free from the taste of ordinary boiled or distilled water. I know of no water for table use so nice and pleasant to the taste. The Still is capable of distilling several gallons per day. The price is reasonable and within the reach of everybody, and one should be in the home of every family in your town and you can do your patients no greater favor than recommending one of these to them.

This Water Still has been endorsed by every board of health where sold and by all physicians who have seen it.

Why not accept the company's liberal offer to pay your fare one way for the purpose of an investigation? If this business was not high class and worthy they certainly would not make you such terms.

If at all interested, please let me hear from you for further information, or I will arrange for your transportation to Rochester.

Very truly yours. C. S. ROBERTS.

ting $2,900 in two months, even to exploit a remedy that is to relieve the human race of one of its most fatal diseases.

The recipient of the postal card above referred to is told that if he will send 15 cents in postage stamps he will be furnished with the "theory, literature and abundant testimonials and a $3 size sample to prove what we say." This part of the agreement is lived up to. The theory is furnished, plenty of literature, including testimonials, and also a box of the tablets. The theory ought to take with an ignorant layman, and the literature certainly is promising and hopeful enough to convince the most desperate individual that he could be cured.

The wonderful remedy is known as hydrocine—hyper-oxidized hydro-carbon. The circular tells us that "the physician is unquestionably entitled to a full, frank and candid statement of the composition, nature and character of any and every medicinal preparation he is asked to prescribe." This sounds excellent, and then follows the formula:

FORMULA.

Hyper-oxidized hydro-carbon (vegetable)	28 gr.
Pure Rock Sugar	8 gr.
Powdered Pancreatin	.1-20 gr.

The oxids are liberated in the stomach and thrown into the circulation.

It is barely possible that there is somebody on this mundane sphere that can tell what "hyper-oxidized hydro-carbon (vegetable)" is. Most of us have a knowledge of pure rock sugar and powdered pancreatin, but when we come to the other ingredient, we fear the majority of us would have to give it up.

However, we find this in the printed circular:

> The hydro-carbon is extracted from oils of cinnamon, coniin, peppermint, spruce, myrtle, chekan, marrubium, myrrh, turpentine and thymol, is then condensed, and positively all toxic properties are eliminated. The residue is hyper-oxidized, predigested by pancreatin, mixed with a small quantity of powdered rock sugar and pressed into 30 grain tablets.

There we have it. And when we have it, what have we?

The literature is of the usual quackish order, the optimistic kind that will make the physician who does not stop to think feel that it is something worth trying at least.

Of course, there are testimonials—several of them. What nostrum was ever introduced, whether to the public or to the profession, that did not have testimonials ready? Many of the testimonial givers we have not located, but they may be genuine for all that. One who speaks in high praise of the nostrum is Dr. O. P. Barber of Saginaw, Mich., who is given

as "professor of surgery, Michigan College of Medicine and Surgery, Detroit, Mich." Dr. Barber's success is really remarkable when it is considered that he disregarded Dr. Roberts' instruction to select an incipient case, for he seems to have taken one with extensive cavities, in the third stage, a man with undoubted complications, whose sputum was so offensive that the doctor asked him to expectorate in the closet in the next room. He also neglected to give a "good liver cathartic at the start," as the circular advises, but put him at once on hydrocine. Possibly Dr. Barber did not carry out the full instructions because he did not get them from the right source, for he tells us that he was led to use the remedy on the advice of a layman, from whom he seems to have obtained his early supplies. However, notwithstanding these palpable violations of the correct method of using the preparation, this unpromising patient recovered to such an extent that the cavities all filled up and over 40 per cent. of the patient's lung consists of scars. This was proved by the *x*-ray. Dr. Barber had other equally remarkable cures.

Another name that is often seen in a certain class of literature appears in connection with this hydrocine. This is Dr. J. W. P. Smithwick, of LaGrange, N. C. Dr. Smithwick, however, is given to writing very favorably of preparations that are not in the Pharmacopeia, such as glycobenphene, borobenphene, tongaline, bromidia, maltopepsine, ecthol, phenalgin, dermapurine, Angier's petroleum emulsion, thialion, etc., for we find his testimonials in the advertising literature of all of these articles. Dr. Smithwick, who, by the way, is given as "first vice-president of the American Congress on Tuberculosis," and therefore should be an authority on the subject, seems also to have had a most notable experience, for every patient treated recovered, and his cases included not only pulmonary tuberculosis, but also hipjoint disease, lupus vulgaris, etc., and of the worst sort.

When we began to receive Roberts' postal cards and were asked to show up the scheme, we thought the card itself was so quackish that no intelligent physician would risk even the 15 cents. It seems, however, that some have been "almost persuaded," and we have been astonished to receive letters asking if it is not possible that this nostrum may do what its promoters say it will do, evidently feeling that possibly, after all, the long-looked-for remedy has been discovered. How foolish! If Roberts and the promoters (who are, perhaps, making him a cat's paw) really had a remedy that would do what they claim this one will do, there would not be words in the English language strong enough to characterize their vil-

lainy and inhumanity in keeping it secret. If, on the other hand, the stuff is a fraud, then it is simply another instance to add to the list of attempts to humbug the public, and to make money out of their suffering. Either horn of the dilemma is certainly reprehensible, and to have one who is supposed to have once been a reputable physician mixed up in it should be a source of regret to every member of our profession.

An Analysis of the "Hyper-Oxidized Hydro-Carbon."

(*From The Journal A. M. A., Feb. 15, 1908, 546.*)

Hydrocine, widely advertised as a consumption cure and belonging to the class that Samuel Hopkins Adams would designate the "fundamental fakes," has been analyzed by our chemists and found to consist chiefly of cane sugar. This preparation was referred to in THE JOURNAL, Aug. 17, 1907, and its evidently fraudulent nature commented on.

In common with other members of its class, it is advertised as being an essentially non-secret preparation and, to bear out that claim, an involved and meaningless "formula" is appended. Its promoters state that Hydrocine is "a vegetable hyper-oxidized hydro-carbon"—whatever that may mean. Its "formulas" are equally enlightening. We use the plural advisedly, as Hydrocine exhibits that fine fickleness and mutability of composition that characterizes nostrums of its kind. Its early "formula" was as follows:

Hyper-oxidized hydro-carbon (vegetable)	28 gr.
Pure rock sugar	8 gr.
Powdered pancreatin	1/20 gr.

The oxids are liberated in the stomach and thrown into the circulation.

For some unknown reason, however, this "formula" was changed before the edition of the pamphlet, setting forth the wonders of the combination, was exhausted. "Formula" No. 2, as printed on a "sticker" placed over "Formula" No. 1, states that Hydrocine consists of:

Oxidized carbo-hydrates and essential oils	18½ gr.
Mineral constituents	1½ gr.
Pure rock sugar	9 gr.
Powdered pancreatin	1/20 gr.

Accompanying this later pamphlet—or more correctly, the earlier pamphlet with a later "formula"—is a circular giving the following enlightening information regarding the composition of Hydrocine:

INGREDIENTS.

"Oil of cinnamon, coniin, peppermint, spruce, myrtle, chekan, marrubium, myrrh, turpentine and thymol, with all toxic properties positively eliminated. The residue is highly oxidized, mixed with oxidized sugar, pancreatin and pressed into a 30 grain tablet. The oxygen is liberated in a nascent form, and taken up by the circulation, and thus enables patients to become saturated with the same in 30 minute doses."

This same circular also gives what purports to be a report of an analysis of Hydrocine Tablets, which, however, reads more as if it were a testimonial prepared at the request of the manufacturer, in spite of the fact that it is written by a presumably reputable chemist. Thus, while the report states that the tablets contain a certain amount of "aldehydes, ketones and oxidized products from the bodies used," the chemist virtually acknowledges that these bodies were not actually determined by him. In fact, from the language of the report one is led to believe that he accepted the manufacturer's statement in regard to their presence. Of course, we do not know the composition of the hydrocine which the manufacturer submitted to this chemist for report, or the composition which hydrocine will have in the future. The report of the analysis made for the American Medical Association by its chemists indicates the composition of Hydrocine such as is sent to physicians, and is, therefore, of interest. It is as follows:

We have made a careful examination of the original package of Hydrocine and find that the average weight of the tablets is 29.5 grains. Of this, 95 per cent., or 28 grains, of the total of 29.5 grains, is cane sugar. Each tablet contains an average of 0.3 of a grain of a substance, insoluble in alcohol, containing nitrogenous matter. The indications are that this substance may be very impure pancreatin, that is, that this 0.3 of a grain may contain the 1/20 grain of pancreatin claimed to be present by the manufacturers. It also contains very small quantities of aromatic oils, and it is probably due to the fact that these oils, like turpentine, react with oxygen that it is claimed that the vegetable matter is "hyper-oxidized." The formula, however, mentions "hyper-oxidized hydro-carbon." Perhaps the manufacturers have reference to the rock sugar and mean carbohydrate, for there is probably no oxidation of the sugar, though it is probable that the aromatic oils present may be partially oxidized and changed in other ways after a time, but the "hyper-oxidized hydro-carbon (vegetable) 28 grains" of the formula is an absurdity, particularly as the analysis shows that the tablet contains 28 grains of sugar. We do not believe

that it is possible for such a substance as turpentine, for instance, when in contact with sucrose (cane sugar) to act as an oxidizing agent.

Apparently, therefore, the essential constituent of Hydrocine, as it is now offered to physicians, is cane sugar, and evidently this was the substance which was referred to as the "hyper-oxidized hydro-carbon." As indicated by our chemist's report, the very learned (?) statements regarding the "hyper-oxidized hydro-carbons" or "oxidized carbo-hydrates" may be reduced to a simpler statement: "Each 29.5 grain Hydrocine tablet contains 28 grains of cane sugar and small quantities of volatile oils and a trace of pancreatin."

SUMMARY.

To sum up, we have: A preparation, shown by analysis to be 95 per cent. cane sugar, put on the market to be retailed at a cost of $8 a pound (avoirdupois). The claim is made that by giving this preparation in 30-grain doses to the extent of one and a quarter ounces daily, tuberculosis can be "permanently cured" in "from six to sixteen weeks." To impress the unthinking, the main constituent in the formula is given a quasi-scientific name, meaningless in import. The exploiter of this "remedy" claims to have given up a practice yielding $10,000 annually "to spread the truth regarding this preparation"—and incidentally, we suspect, to reap the benefits that must accrue from selling sugar at over $5 a pound, wholesale.

Our chemist having translated for us into simpler language the statements as to the composition of the article, we, as physicians, should not find it difficult to interpret correctly the evidence on which the claims are based.

HYDROZONE AND TONGALINE.

Preying on the Yellow Fever Victims.

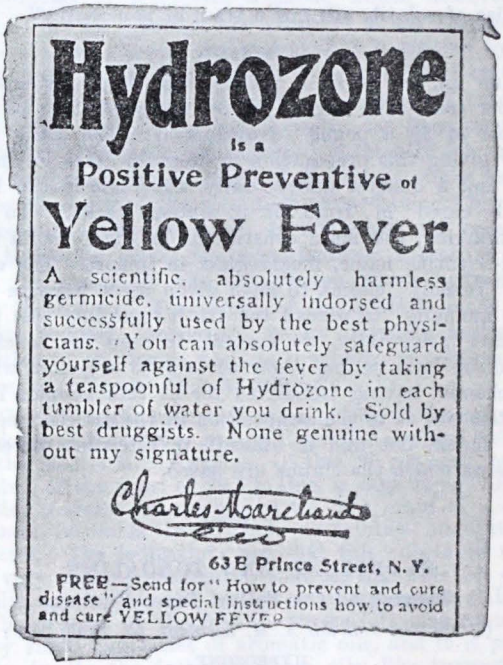
(From The Journal A. M. A., Sept. 23, 1906, 936.)

HYDROZONE.

The moral principle governing the action of secret proprietary and patent medicine men is an unknown quantity; sometimes it would seem to be a negative one. Just how much lower in the scale of humanity a man can go than to prey on the fears of a people in the time of a terrible epidemic for the sake of a few dollars we do not know. There may be something more despicable, but what is it? Two weeks ago we referred to the cold-blooded methods of the peruna people; this week we reproduce an advertisement from the New Or-

leans *States* that tells another story of man's inhumanity to man.

This brings up the problem that we are trying to solve, viz.: "What is the difference between a 'secret proprietary medicine' advertised in medical journals to physicians and a 'patent medicine' advertised in newspapers to the public?" Hydrozone is being advertised in nearly all medical journals, and at the same time in newspapers. Where shall we place it? And if hydrozone, with the methods recently adopted to exploit it, is tolerated in the medical press, why not peruna?



TONGALINE.

Tongaline, too, is good for yellow fever if we are to believe the absurd claims made by its enterprising salesmen. Here is the advertisement from current medical journals:

"Stegomyia fasciata has produced an epidemic of yellow fever in certain sections of Louisiana and adjoining states.

"Stegomyia punctata has inoculated thousands with virulent malarial germs throughout the balance of the Mississippi Valley.

"Tongaline, Mellier, in one of its forms as indicated, antagonizes and destroys the effects of these parasites on account of its extraordinary eliminative action on the liver, the bowels, the kidneys and the pores, whereby the poison is promptly and thoroughly expelled. For full literature, etc."

THE "HYOSCIN-MORPHIN-CACTIN" ANESTHESIA.

An Example of Subordination of Science to Commercialism.

(*From The Journal A. M. A., Dec. 21, 1907, 2103.*)

SCOPOLAMIN-MORPHIN ANESTHESIA.

Some eight years ago, a combination of scopolamin and morphin was introduced in Germany as an anesthetic. Since then it has been extensively used in Germany, France, Italy, Russia, the United States and elsewhere, and medical periodicals—German especially—have contained many articles, reports, etc., on the subject. While the method and technic originated in Germany, and while it has had its greatest use in that country, it has also been used more or less extensively in practically every other country, including the United States, and reports both favorable and unfavorable have appeared in all these countries. Our readers, through abstracts in the Current Medical Literature department, have been kept informed of what has been published at home and abroad regarding this method of producing anesthesia, but although the method has been used for over seven years it may be said to be still in an experimental stage.

HYOSCIN-MORPHIN-CACTIN ANESTHESIA.

Over a year ago the Abbott Alkaloidal Company put on the market as a "new" anesthetic a tablet said to contain 1-100 grain of hyoscin, ¼ grain of morphin and 1/67 grain of a product called "cactin." During the past year this tablet has been exploited to an extent and in a manner as has no other medicinal preparation in this or in any other country. Full page advertisements and reading notices, all extravagantly laudatory of the preparation, have appeared in medical journals of all kinds. More original articles highly praising it have been published than have ever appeared in the same length of time on any other one medical subject. Extreme optimism has characterized the exploitation of the product from the very first.

What is this combination on the promotion of which so much money and energy have been spent? Is it something new and original, as the advertising literature would lead one to believe? Everything connected with its promotion has con-

veyed the impression that this method of producing anesthesia is entirely new. Dr. Emory Lanphear, who seems to be interested in its promotion, has repeatedly referred to it as new. Here are a few quotations from his writings:

"After exhaustive experimentation, the formula decided on by Dr. Abbott and adopted and extensively used by myself is:

"Chemically pure hyoscin hydrobromid..... 1-100 gr.
"Chemically pure morphin hydrobromid..... 1-4 gr.
"Cactin (from *Cactus grandiflorus*)..... 1-67 gr."

"The formula of the hypodermic tablet finally decided on by Dr. Abbott and myself, after many experiments is:" and then follows the formula.

"The so-called Abbott-Lanphear anesthetic."

These are samples only; similar quotations could be made from Abbott's writings, and also from the literature in general. It is evident that it has been the intention of the manufacturers to convey the impression that this method of producing anesthesia originated with them. It is not strange, therefore, that many physicians who are unfamiliar with the subject are writing about it in a manner to show that they, too, consider it new. The majority of the reports carry this impression.

Dr. C. E. Case, Tacoma, Wash., in the Abbott Alkaloidal Company's journal—the *American Journal of Clinical Medicine* —in an article entitled, "The New Anesthesia—Remarkable Results," says: "Dr. Spiro Sargentich . . . joins me in expressions of the profoundest regard and thankfulness to both yourself and Dr. Lanphear in giving to the profession and to humanity so potent a remedy for good."

"This remarkable combination of Abbott's" is the way E. G. Paxton, of Chicago, refers to it.

Dr. E. A. Hall, Vancouver, writes: "During the last few operations I have used Lanphear's formula as an anesthetic."

Dr. G. H. Stephens, Personville, Texas, writes: "Hurrah for the new anesthetic, hyoscin, morphin and cactin comp., Abbott. It's O. K."

Dr. F. H. Lukin, Pamplin City, Va., says: "I am using the Abbott-Lanphear anesthetic, hyoscin, morphin and cactin compound, and find it a great thing."

Dr. B. H. Kohler, Reedsville, Pa., says: "Your Abbott-Lanphear anesthetic tablet fully justifies all your claims."

And so on—the same idea is expressed by at least half of those who write or speak on the subject. But is it "new"? In one way, yes!

The combination of scopolamin-morphin has been on trial for the last eight years. It is non-proprietary, non-secret, no one firm has a monopoly on it, and there have been no com-

mercial interests to exploit it for selfish gain. The "H-M-C—Abbott" combination, which, as we shall show, is simply scopolamin-morphin, is owned and controlled by one firm, so it is proprietary (the name has been registered); and on account of the "cactin" is secret; it has been and is being exploited for commercial gain. From this point of view alone it is "new" and the Abbott Alkaloidal Company is to that extent justified in calling it "new." But the Abbott Alkaloidal Company will not agree with this reason for calling it "new." They claim that it is new, first, because they use hyoscin,

But greatest of all is the triumph the new remedy has won in the field of obstetrics. Nothing like it has ever appeared. Women who had taken chloroform in previous confinements say that the new remedy is incomparably superior. Every day I receive letters from men who assert that they are "scooping in the neighborhood" of obstetric practice since beginning the use of these tablets.

Women are canceling their engagements with their old physicians to secure the attendance of those who employ the H. M. C. Comp. tablets. Men write to us that they are extinguishing the fear of child-birth, putting a stop to family quarrels, and one man goes so far as to predict an increase in the birth-rate of the American women as a result! When one is daily overwhelmed with shoals of such encomiums as these he can scarcely avoid becoming somewhat enthusiastic himself.

The above is reproduced as a sample of the scientific literature that has been appearing in medical journals. It is from a paper by Dr. W. C. Abbott, president of the Abbott Alkaloidal Company, which appeared as an original article in the *Chicago Medical Recorder*, September, 1907. It is a most optimistic write-up of the proprietary combination "H-M-C." In this article Abbott refers to "cactin" as "a quickly acting stimulant of the heart and respiration." The journal in which this article appeared carries some of the worst nostrum advertisements and yet is edited and controlled in every way by a physician of high standing in the profession, and has on its "editorial board" some of the very best men in Chicago.

which is safe, instead of scopolamin, which is dangerous; second, because they have added to it "cactin," which makes it still safer. Let us take up these two differences.

ARE HYOSCIN AND SCOPOLAMIN THE SAME?

The conclusion that the alkaloid obtained from hyoscyamus

chemically, physiologically and clinically was reached some years ago. The Abbott Company, however, seems not to accept this conclusion, as these quotations show. First from an article by Abbott in the Abbott Alkaloidal Company's journal:

> "It is now an established fact that hyoscin, when chemically pure, is not therapeutically identical with scopolamin, as some have claimed."

Dr. Abbott, in the *International Journal of Surgery*, March, 1907, says:

> "My own views, as here and elsewhere expressed, are based on the use of the chemically pure alkaloids, hyoscin and morphin . . . but I am simply protesting against being held responsible for results accruing from the use of scopolamin by all sorts of operators, both at home and abroad."

From a communication to the *Fort Wayne Medical Journal-Magazine*, in which Dr. Abbott criticises the conclusions of an editorial that appeared in a previous number, which were to the effect that scopolamin-morphin is dangerous, and in which Wood's statistics are referred to, we quote:

> "It will be noted that while Wood speaks of scopolamin we talk of hyoscin [italics in original]. He and others claim that these are identical; but whether this is correct or not (which we do not believe) we deem it wise to adhere to the true hyoscin derived from hyoscyamus. . . . Your statement that hyoscin-morphin has yielded a mortality of over four per thousand; and that 69 per cent. of its uses have been unsatisfactory is, of course, an error, your deductions being based on the assumption by Wood that scopolamin and hyoscin are one and the same thing; therefore that scopolamin-morphin and hyoscin, morphin and cactin are identical. The well-known obstacles in the way of the use of scopolamin-morphin, to which the writer long ago called attention, shall not be opposed to 'hyoscin, morphin and cactin,' which is quite another thing."

An editorial, presumably by Dr. Abbott, in the issue of his journal for December, 1906, under the title, "Another Death from Scopolamin," contains an abstract of a report of a death in Europe from the use of scopolamin-morphin, and closes by saying: "If Rys had employed pure hyoscin hydrobromid with morphin it is probable there would have been no fatality."

From a letter from Dr. Abbott, published in THE JOURNAL of the American Medical Association, Jan. 26, 1907, we quote:

> "I am perfectly well aware that scopolamin is claimed by some to be identical with hyoscin, but the fact remains that the same therapeutic results are not obtained from one that are obtained from the other."

The following quotations are from Lanphear:

> "Knowing that hyoscin hydrobromid is a drug of known

strength and especially valuing the fact that it is, apparently, perfectly safe—whereas scopolamin is notoriously unreliable, . . . I determined to give it a trial."

"There is on the market a great deal of 'scopolamin' which is said [italics in the original] to be identical with hyoscin, but—some of it contains atroscin, much of it has more or less apoatropin (which renders it dangerous). So the doctor should insist on having a tablet consisting of:" —then follows the "H-M-C" formula.

"Dr. W. C. Abbott, of Chicago, called attention to the fact that the good results attributed to scopolamin depend entirely on the amount of hyoscin which 'scopolamin' contains—in other words, that the anesthesia is a hyoscin anesthesia and not a scopolamin anesthesia, plus morphin. This seemed to me to be a declaration of marvelous possibilities." ["Marvelous possibilities" is appropriate.]

"Dr. Abbott's position is well known; that only pure hydrobromid of hyoscin should be employed for making this anesthetic tablet; and that if scopolamin be substituted it should be with a full understanding that by reason of one impurity or another it may be either unreliable or dangerous—a danger for which the surgeon himself must be held responsible, since he can easily secure pure hyoscin instead."

The following is taken from the Abbott Alkaloidal Company's price-list, and essentially the same paragraph appears in the advertising literature and in advertisements of the product in current medical journals:

"Scopolamin must not be substituted on this formula, neither so-called hyoscin derived from scopola. Regardless of alleged chemical identity, results are NOT the same. Neither should you underestimate the value in this formula of 'Cactin.' It's the synergistic whole that produces the results. There is no 'just as good.'"

These quotations—the "H-M-C" "literature" is full of similar statements—are sufficient to show the emphasis with which this firm insists that the hyoscin is pure and its uses safe, while the scopolamin which has been in use by others is not chemically pure or safe. The one thing emphasized on all occasions is that hyoscin and scopolamin are different, that the former is pure and safe, the latter impure and dangerous.

These statements now being made by the Abbott Company would have been excusable ten years ago when there was a controversy on the question; the German literature, until within recent years, furnished an abundance of material from which to quote to prove that the alkaloid as made from hyoscyamus is different from that made from scopola. These quotations, however, will not apply now. The question was

settled long ago by those who were competent to settle it—by those recognized as authorities on the subject. There have been echoes of the old controversy until recently, but this is as much as can be said. In spite of this, the Abbott Alkaloidal Company denies the conclusions and is making statements to-day that are more dogmatic than any that were made by the most earnest advocates during the height of the controversy a decade ago.

To save going into the question whether or not there is a difference, therapeutically, between the alkaloid made from hyoscyamus—provided such an alkaloid were obtainable—and that made from scopola or from some other of the Solanaceæ, we refer those interested to a "reply" to a letter from Dr. Abbott, published in THE JOURNAL of the American Medical Association, Jan. 26, 1907.

HYOSCIN AND SCOPOLAMIN SYNONYMOUS TERMS.

Assuming for a moment that the alkaloid made from hyoscyamus is safer and better than that made from *Scopolia atropoides* and other of the Solanaceæ, what evidence is there that the hyoscin on the market is made from hyoscyamus? As so much depends on this, so far at least as the Abbott Alkaloidal Company is concerned, let us look at the facts.

WHAT THE PHARMACOPEIAS SAY.

The Pharmacopeia of a nation is the standard according to which drugs are manufactured and by which they are judged. In all countries these standards are recognized by law; they are the highest authority.

The alkaloid on the market as scopolamin hydrobromid or hyoscin hydrobromid is not made in the United States; so far as we are able to learn, it is made only in Germany—where the subject has been given more attention than elsewhere—and consequently is made according to the German Pharmacopeia. But the German Pharmacopeia recognizes the alkaloid only under the name scopolamin hydrobromid. Hyoscin hydrobromid was introduced into the German Pharmacopeia in 1891, but later the pharmacopeia commission adopted the name scopolamin hydrobromid to replace hyoscin hydrobromid, since the identity of the alkaloid from the different sources had become established. Hence, the German Pharmacopeia no longer retains the name hyoscin hydrobromid, for to do so would be to give two names to the same article. As we shall see, one nation—the United States—does do this, and officially recognizes the same alkaloid by two different names.

The United States Pharmacopeia—eighth revision, which became official in 1905—adopted the new and more correct name,

scopolamin hydrobromid, at the same time retaining the old name hyoscin hydrobromid. The definitions are as follows:

"Hyoscinæ Hydrobromidum. Hyoscin Hydrobromid. The hydrobromid ($HBr.C_{17}H_{21}NO_4+3H_2O$) of an alkaloid chemically identical with scopolamin, obtained from hyoscyamus and other plants of the Solanaceæ."

"Scopolaminæ Hydrobromidum. Scopolamin Hydrobromid. The hydrobromid ($HBr.C_{17}H_{21}NO_4+3H_2O$) of an alkaloid obtained from the plants of the Solanaceæ; chemically identical with hyoscin hydrobromid (see hyoscin hydrobromidum)."

The British Pharmacopeia (issued nine years ago, 1898), describes the alkaloid under the definition hyoscin hydrobromid, but gives as a synonym scopolamin hydrobromid. It is described as follows:

"Hyoscinæ Hydrobromidium. Hyoscin Hydrobromid. Synonyms.—Hydrobromate of Hyoscin; Scopolamin Hydrobromid. The hydrobromid, $C_{17}H_{21}NO_4$, HBr, $3H_2O$, of an alkaloid contained in hyoscyamus leaves, different species of Scopola and possibly other solanaceous plants."

The Danish, the Swiss, the Netherlands and the Japanese pharmacopeias, all of which have been revised recently, describe the alkaloid under scopolamin hydrobromid, but do not mention hyoscin. Neither the French, the Italian nor the Austrian pharmacopeias mention the alkaloid under any name. Some of these, however, are not recent.

From the above it will be seen that the pharmacopeias that mention it at all recognize the alkaloid as identical, whether it is made from hyoscyamus or scopola; all, with the exception of the United States and British pharmacopeias, have discarded the name hyoscin hydrobromid; and these two—the United States and British—use the terms hyoscin hydrobromid and scopolamin hydrobromid as synonymous terms. Yet in spite of this the Abbott people have the effrontery and the colossal conceit to deny brazenly that which the scientific world has accepted as proved facts. Is this done through ignorance or for commercial gain?

WHAT THE MANUFACTURERS SAY.

If we need further confirmation of the fact that the alkaloid sold under the two names is identical, let us turn to the manufacturers; they certainly ought to know what they are putting on the market.

As already stated, Germany supplies the world (including the Abbott Alkaloidal Company) with this drug, and investigation seems to show that most, if not all, of that which is imported into this country is made by E. Merck of Darmstadt,

or by C. F. Boehringer & Soehne of Mannheim-Waldhof, and is imported by their respective representatives, Merck & Co., New York, and C. F. Boehringer & Soehne, New York.

Since Dr. Abbott is quoted as saying that his firm obtains its "hyoscin" from Merck & Co., let us first see what the latter say.

Merck & Co. issues a book called "Merck's Index," which is considered a reliable authority on alkaloids, etc. From the 1907 edition we quote:

> "Hyoscin.—According to the latest investigations, it is chemically and physiologically identical with scopolamin (q. v.)."
>
> "Scopolamin.—Salt of alkaloid from roots of various plants of Solanaceæ, chemically, physiologically and clinically identical with hyoscin."

In a letter to a member of the Council on Pharmacy and Chemistry, under the date of Aug. 14, 1907, Merck & Co. write:

> "We may say that, as the fact of the identity of hyoscin and scopolamin has been absolutely established, hyoscyamus is no longer the sole source from which hyoscin is made. For this reason we have some time since discontinued the use of the expression 'from hyoscyamus' on our labels and in our literature."

In the price-list issued by C. F. Boehringer & Soehne, hyoscin is given in its alphabetical order, followed by "see scopolamin." Referring to scopolamin, we find "Identical with hyoscin hydrobromid." In a description of scopolamin in another part of the price-list appears the following important statement:

> "Scopolamin.—Hyoscin hydrobromate was admitted to the U. S. P. 1890. The German Pharmacopeia of the same issue almost made this product official, but in a supplement, issued a year later, the pharmacopeial commission adopted the name scopolamin hydrobromate to replace 'hyoscin.' The reason for this change is that nearly all the hyoscin supplied by manufacturing chemists is made from *Scopolia atropoides*, and hence "scopolamin' more correctly indicates the source of the alkaloid. In this country the name hyoscin is, moreover, alleged to be a trade-mark, and as a consequence it is sold at an exceptionally high price. Taking these facts into consideration, we supply this product labeled thus: 'Scopolamin hydrobromate, identical with hyoscin hydrobrom., U. S. P., in 5, 10 and 15 grain vials. We guarantee the identity of our product with the hyoscin hydrobromate of the U. S. Pharmacopeia.' "

After giving these ample facts, we do not think it necessary to enlarge on the argument by quoting from the statements of the leading authorities on pharmacognosy, pharmacology, etc.

CONCLUSIONS AS TO HYOSCIN AND SCOPOLAMIN.

From the above facts we are compelled to make the following conclusions:

1. Hyoscin and scopolamin are synonymous terms for the same alkaloid.

2. The claim of the Abbott Alkaloidal Company to the effect that the alkaloid it uses, and which it calls "hyoscin," is purer and safer than scopolamin has no basis in fact, for that alkaloid is scopolamin.

3. No one connected with the Abbott Alkaloidal Company—or, for that matter, anyone else—is able to detect whether the alkaloid it buys is made from hyoscyamus or from some other plant of the same family. It may be chemically pure—or impure—whether marketed under the name hyoscin hydrobromid or scopolamin hydrobromid.

4. The Abbott Alkaloidal Company, therefore, has been misleading the medical profession of the United States regarding hyoscin in its "H-M-C" tablets, and has been doing this either deliberately, with the intention of deceiving for commercial gain, or from ignorance of well-known facts.

"CACTIN," WHAT IS IT?

We have shown that the "H-M-C" tablets of the Abbott Alkaloidal Co. are simply scopolamin-morphin plus "cactin." What is "cactin"? There is no such drug in the Pharmacopeia of the United States or in any other Pharmacopeia; it is not in the National nor in the United States Dispensatory; neither have we been able to find it in the price-lists or catalogues of the leading pharmaceutical firms of this or of any other country. There is a proprietary remedy called "Cactina Pillets," but "cactin" is presumably a different thing. What is it? Originally, the Abbott Alkaloidal Co.'s price-list defined it as a glucosid. Now, however, it is classed as "a concentration." Presumably it is a tincture of *Cactus grandiflorus*, but just what it is we do not know.[1] Whatever it is, it is a secret, and is a product of, and controlled by, the Abbott Alkaloidal Co., can be obtained of no one else, and, therefore, is a nostrum.

1. "Concentration" applied to pharmaceutical preparations is a loose term, originating with the eclectics and used to indicate the class of preparations obtained by extracting drugs and concentrating the extract by precipitating it in water, or by some similar process. The terms "concentration" and "resinoid" were regarded as practically synonymous, indicating a more or less indefinite dry mixture of the proximate principles of the plant whence derived. The only preparation of cactus used by the eclectics, so far as we can learn, has always been the so-called "green" or "specific" tincture. According to the accepted nomenclature of the U. S. Pharmacopeia, the name "cactin" should mean a glucosid or some other active principle. As a matter of fact, however, no active principle has ever been isolated from *Cactus grandiflorus*.

"CACTIN," WHAT ARE ITS THERAPEUTIC PROPERTIES?

But under the present circumstances it is immaterial what it is. It is more important to know what it will do, what its properties are. So far as we know, there is no reliable evidence of its having any virtue whatever. Dr. Abbott recently was asked in a society meeting whether his firm had made any physiologic test with it; he acknowledged that it had not.

While the firm itself has not put "cactin" to a physiologic test, others have. As will be remembered, Prof. Robert A. Hatcher made some experiments in the Loomis Laboratory of Cornell Medical College, New York, and his report was published in THE JOURNAL, September 21. His conclusions are: "These two preparations (cactina pillets of the Sultan Drug Co. and Abbott's cactin) are not only devoid of a digitalis-like or a strychnin-like action, but they are inert when used on animals in doses that are hundreds, and even thousands, of times as large as those recommended by their exploiters." It is now three months since Hatcher's article appeared, which is ample time for presentation of reliable evidence that his conclusions were wrong. No such evidence has yet been offered.

Prof. S. A. Mathews, of the Laboratory of Experimental Therapeutics of the University of Chicago, has been experimenting with the product and we have his report ready for publication. His conclusions, however, are the same as, and his work corroborates that of, Hatcher. The writer of these lines swallowed the pillets contained in a bottle labeled "Cardiac Tonic (cactin) (45) gr. 1-124. Gm. .0005," supposed to contain one hundred of the pillets. These were all taken within fifteen minutes, and the experiment was repeated at another time. No effect was appreciated; the pulse did not seem to be affected in the slightest, nor was there any change in the breathing. Possibly "cactin" has some mysterious power of acting only when the heart "wabbles." This experiment is not reported as a scientific one, but is given for what it is worth. Considering that there was taken at one time 100 times more than is contained in the smaller (No. 1) "H-M-C" tablet, one is prompted to conclude with those who performed the experiments on animals that *"cactin" is inert.* Our readers are asked to bear this in mind when reading the quotations below:

The following is not a "patent-medicine" advertisement, as some may think on reading it, but appears as a reading notice in the *New York Medical Journal* of Oct. 19, 1907:

> "Whether the indication is a pulse which is too fast or too slow, too weak or too strong, if the cause is vasomotor instability, as in the tobacco heart, the heart of the drunk-

ard, some cases of menopause, overwork, etc., no remedy in the proper condition will do just what cactin will; no remedy will so quickly restore the necessary equilibrium as this; continued as required in 'dose enough,' no remedy will serve better. Cactin is a balancer, and it is this peculiar balancing action on the circulation, preventing regional dilation, which accounts for the wonderful and otherwise inexplicable effect of hyoscin-morphin-cactin compound as compared with hyoscin and morphin alone."

"Cactin" has the remarkable power of slowing the pulse if too fast, and of increasing it if too slow; of making it stronger if too weak, or making it weaker if too strong! Think of it! No wonder it has "a wonderful and otherwise inexplicable effect!"

"The value of cardiac stimulant, cactin, which is added to obviate any possible depressant effect, is also ignored by Wood; yet one of the first surgeons of the midwest [Lanphear?] assured the writer that he looked on this addition as of the first importance in rendering the combination perfectly safe."—(W. C. Abbott, *Fort Wayne Medical Journal*, May, 1907.)

The literature on "cactin" is of the character of the above two quotations.

CONCLUSION AS TO "CACTIN."

Comparing the results of physiologic experiments with the claims made by the Abbott Alkaloidal Company concerning "cactin," we leave it to our readers to decide for themselves whether or not "cactin" is a fraud.

CONCLUSION AS TO "H-M-C—ABBOTT."

To sum up the facts concerning the "H-M-C" tablets, it may be said that this mixture is nothing but scopolamin-morphin to which has been added an inert secret article called "cactin," thus adding mystery to it all and making out of this well-known and important combination of scopolamin-morphin a proprietary nostrum.

IODOFAN.

What It Is and What It Is Claimed to Be.

(From The Journal A. M. A., March 7, 1908.)

Within the last two or three years there has been placed on the German market a preparation known as iodofan. It is manufactured by the *Chemisches Institut*, Dr. A. Horowitz, Berlin. As it is quite possible that in time the preparation will be offered to physicians in this country, the following is appropriate:

Iodofan, according to the statements published by the manufacturers, is a chemical compound containing 47.75 per cent. of iodin. The article was analyzed by F. Zernik of the Pharmaceutical Institute of the University of Berlin, and was found to contain less than 5 per cent. of iodin. This report by Zernik appeared in the *Apotheker Zeitung*, Feb. 2, 1907.

As is usual in such cases, the manufacturers denied the correctness of this analysis and attacked Zernik, who again took up the matter. Two samples were taken, one being bought in the open market and the other obtained, through a physician, direct from the manufacturers. These were analyzed in duplicate by Lucius, who also is connected with the University of Berlin, as well as by Zernik. The results of these analyses agreed very closely and verified the original analysis published. In other words, it was again demonstrated that there is not one-tenth as much iodin in the preparation as the manufacturers claim. Zernik's second report was published in the *Medicinische Klinik*, Nov. 24, 1907.

It is of interest to note that while the work heretofore done at the University of Berlin has appeared only in pharmaceutical and chemical publications, it can now be found in medical journals. This is certainly encouraging, as it shows that the German medical journals are now accepting such contributions for publication even at the risk of losing advertising patronage.

JAYNE'S EXPECTORANT.

Dangers of Using the Remedy.

(*From The Journal A. M. A., March 14, 1908.*)

Newspapers recently chronicled the death of a child in Cincinnati from an overdose of a "patent medicine." We communicated with the coroner, who kindly sent us a copy of the verdict. After recounting in the usual fashion the name, age, etc., of the deceased, the verdict goes on to state:

> The testimony shows that this child had been troubled with a cough for the past five years; that he had always been quite pale and had slept a great deal. The statement is also made that in this family JAYNE'S EXPECTORANT had been used for all the children.
>
> This proprietary remedy has on its label the statement that each fluid ounce contains 15 per cent. of alcohol and one and one-fifth grains of opium. The single dose of this remedy given in this case could not have caused the child's death, but there is no doubt that the continued use of the remedy containing opium, even in a comparatively small dose, is harmful, and especially so to infants and children.

The pale color and the drowsiness can be accounted for by the prolonged use of opium, and the attention of parents can not be too strongly called to the danger of the use of such remedies for children as those that owe their efficacy to this drug. OTIS L. CAMERON, Coroner.

KARGON.

A Diuretic Nostrum and Its Composition.

(*From The Journal A. M. A., March 16, 1907, 967.*)

In response to requests for information regarding the composition of Kargon, we had the preparation analyzed. From the reports of our chemists this nostrum appears to contain potassium acetate and buchu as the essential constituents. One chemist concludes his report as follows: "This wonderful remedy, then, seems to be acetate of potash, about 15 grains to each teaspoonful, and fluid extract of buchu." Another chemist states: "Kargon contains buchu, potassium acetate, glycerol and 18 per cent. alcohol."

The nostrum is put up by the Kargon Extracting Company of Cincinnati, the title "extracting" evidently referring to the process to which the gullible public's purse is subjected. The mixture is advertised as "being composed of common every-day vegetable (?) ingredients" as being better than "patent medicines" which are largely "alcoholic concoctions." The method of advertising is as ingenious as it is misleading. Appearing, in many cases, as solid reading matter, it discourses on the importance of the free action of the kidneys as an essential to health. A harmless-looking prescription is then given, consisting of Fluid Extract of Dandelion, Compound Kargon and Compound Syrup of Sarsaparilla, which can "be procured from any good pharmacist and mixed at home." The "Compound Kargon" is always carefully sandwiched between the two pharmacopeial preparations with but one evident object in view, that of leading the public to suppose that Kargon is but one of the numerous standard diuretics. Of course, a combination of acetate of potash and fluid extract of buchu with fluid extract of dandelion and compound syrup of sarsaparilla makes an active diuretic. But it is a combination that in the majority of cases of kidney disease will do great harm. And no matter what the conditions, if used indiscriminately and "taken regularly," as the advertisements advocate, it can not be otherwise than dangerous.

KIDNEY PILLS AND SIMILAR NOSTRUMS.

Analysis of Remedies for Kidney Diseases.

(From The Journal A. M. A., Feb. 9, 1907, 534, and March 16, 1907, 959.)

The *British Medical Journal*, Dec. 8, 1906, page 1645, gives the results of analysis of some of the chief proprietary remedies for kidney diseases. Several of these preparations are in the form of pills, while others are liquids.

The two principal drugs employed are oil of juniper and potassium nitrate, separately or together; in some cases aperients are added. Altogether extravagant claims are made for some of the articles, as is usual with proprietary medicines.

Analysis of Doan's Backache Kidney Pills gave results from which the following formula giving a similar pill was constructed:

Oil of juniper	1 drop.
Hemlock pitch	10 gr.
Potassium nitrate	5 gr.
Powdered fenugreek	17 gr.
Wheat flour	4 gr.
Maize starch	2 gr.

Divide in twenty pills.

Forty pills and four dinner pills sell for 2 shillings and 9 pence (66 cents); the estimated cost is one halfpenny (one cent).

The dinner pills were found to have approximately the following composition:

Oil of peppermint	1 drop.
Podophyllin	3.8 gr.
Aloin	6.9 gr.
Jalap resin	0.8 gr.
Powdered capsicum	0.5 gr.
Powdered licorice	0.6 gr.
Maize starch	0.5 gr.
Acacia gum	1.5 gr.
Extract of henbane	1.5 gr.

Divide in twenty pills.

Dodd's Kidney Pills, which are advertised as the "only remedy that has cured Bright's disease," were found to consist of extract of cascarilla, jalap resin, hard soap, potassium nitrate, sodium bicarbonate, hard paraffin, turmeric, and wheat flour. Var's American Kidney Pills are similar to Doan's, containing also oil of peppermint and powdered squill and extract of henbane. Fitch's Kidney and Liver Cooler, a liquid preparation was found by the analyst to consist simply of a solution of potassium nitrate in water, 56 grains to the ounce—that is, 14 grains in a dose. The estimated cost of a bottle, containing rather under 4 ounces and selling for 2 shillings (48 cents), is one-eighth of a penny (¼ cent).

WARNER'S SAFE CURE.

This preparation, according to the literature supplied by the manufacturers, is "purely vegetable," says the *British Medical Journal*, and this predilection on the part of the public for vegetable remedies is probably responsible for potassium nitrate being classed as a vegetable. Analysis of this remedy showed "the presence of potassium nitrate, alcohol, glycerin, a trace of oil of wintergreen and vegetable extractive." No alkaloid or similar active principle was found and the extract had little distinctive taste or character, all its properties pointing strongly to its consisting largely of taraxacum, with some other extract containing a small quantity of tannin.

VENO'S SEAWEED TONIC.

The label on this preparation, according to our contemporary, states that the remedy "contains in a pleasant and agreeable form the active principle of seaweed . . . is prepared on an entirely new principle and is free from poisonous and mineral drugs." Analysis shows that the mixture contains "a small proportion of undissolved sediment, which, when collected and examined, agrees in all respects with the insoluble portion of leptandrin. Glycerin, a little phosphate, alcohol and a trace of chloroform are present and vegetable extractive. Careful examination of the latter gave evidence of the presence of the constituents of cascara sagrada, senna and rhubarb."

MUNYON'S KIDNEY CURE.

The label on this preparation is said to bear the words: "Cures Bright's disease, gravel, all urinary troubles, and pain in the back or groins from kidney diseases." It is stated that the pills were found to vary much in size, the average weight being 0.6 grain. Analysis showed them "to consist of ordinary white sugar; no trace could be detected of any alkaloid or other active principle, or of any medication. The sugar was determined quantitatively and found to be just 100 per cent. of the weight of the pilules."

KUTNOW'S POWDER.

Which Is It, a "Proprietary" or a "Patent" Medicine?

(From The Journal A. M. A., Oct. 21, 1905.)

The accompanying is a reproduction of a full-page advertisement from the *Standard*, one of the leading London dailies. The page of the *Standard* is larger than that of any American newspaper, the space occupied by the advertisement being 18

THE STANDARD, TUESDAY, FEBRUARY 20, 1906.

Prescribed for the Royal Family.

KUTNOW'S POWDER

Prescribed for the Royal Family.

FROM DOCTORS.

DR. J. BOND SULLIVAN

WRITES:

"Knock, Ennis, Co. Clare, Ireland.

"Having recently got from you a sample bottle of Kutnow's Powder, from which I personally derived much benefit, will you now kindly send me a larger supply? I really feel unsatisfied without it myself, and I have recommended it to several lady patients, who approve of it greatly. An aged clergyman to whom I recommended Kutnow's Powder tells me he finds it both effective and agreeable.

"J. BOND SULLIVAN, M.D., M.R.C.S., Eng., &c."

DR. I. N. LOVE, M.D.,

WROTE:

"The great surgeon, Prof. Lawson Tait, M.D., himself a sufferer from a gouty diathesis for years, found Kutnow's Powder of great value to himself personally and in his practice. Kutnow's Powder stimulates the activities of the bowels and kidneys. It cleanses the bowels, acts as a diuretic, and flushes out the kidneys in a most satisfactory way. Thorough elimination is salvation, and there is no better eliminator than Kutnow's Powder.

"I. N. LOVE, M.D."

(Professor of Clinical Medicine, Diseases, Marion-Sims College of Medicine, and College of Physicians and Surgeons.)

DR. LEON BLANC

WRITES:

"Aix-les-Bains, June 7, 1905.

"Many thanks for Kutnow's Powder you sent me for the Thermal Hospital. It has proved equally beneficial for my Rheumatic and Gouty Patients, both in the hospital as well as for those patients taking the Aix-les-Bains cure.

"LEON BLANC, M.D."

(Consulting Physician at Aix-les-Bains, Physician of the Thermal Hospital, &c., &c.)

FOR LIVER TORPOR, KIDNEY AILMENTS, CONSTIPATION, URIC ACIDÆMIA, LUMBAGO, RHEUMATISM, AND GOUT.

SIR JAMES CRICHTON BROWNE said that a prolongation of life is not desirable unless that life be vigorous and happy. Many of the quick-killing diseases that involve but brief disability and suffering, like typhus and typhoid fever, are decreasing, while slowly degenerative diseases, involving protracted invalidism and much misery, like Bright's disease, diabetes, and cirrhosis of the liver, are mounting up. Society has always had to pay for every mistake it makes, except when the habit of hygienic correction is cultivated. PROFESSOR LAWSON TAIT, M.D., recognised the importance of removing the débris of undigested food the morning after the banquet, and after careful investigation, not only prescribed Kutnow's Powder in his hospital and private practice, but used it personally for years with unqualified success. The secret of health is often found in the elimination of uric acid, and this is easily achieved by the morning health draught of Kutnow's Powder, taken before breakfast. It cleanses the stomach, rouses the liver, flushes the kidneys, and clears the bowels. By this simple means the errors of excess in diet and drink are corrected, and the poisonous débris removed from the system. You can now try Kutnow's Powder free of charge!

YOU CAN TEST THE REMEDY FREE OF ALL COST!

LIVER TORPOR.

A TORPID LIVER makes itself known in various ways; sometimes lassitude and depression attack the victim, at other times there is discomfort after eating, the feeling of abnormal fulness or emptiness, flatulence, a bitter taste in the mouth, a furred tongue, headache, and general irritability. Now Kutnow's Powder acts directly on the liver and keeps it active—not unduly so, but according to the requirements of Nature—thus preventing rheumatism, gout, and any excess of uric acid. The powerful testimony below are specimens of many such letters from the highest authorities in all parts of the world. Every applicant can now have one supply of Kutnow's Powder absolutely free of charge.

URIC ACID HEADACHE.

URIC ACID HEADACHE, or what is commonly termed Nervous Headache, is peculiarly a malady of an advanced and highly artificial state of society. It is indeed the too common symptom of the restless and high-pressure life we lead—the struggle to get rich or the struggle to get a bare living. Excessive uric acid is absorbed into the blood, and by the blood carried quickly to the brain, there to insidiously poison the great body-nerve centres. Thousands of these delicate threads spread from the brain to every part of the body. They are wonderfully sensitive; the least thing disturbs their well-being. They are fed by the blood, and if the blood is infected by uric acid poison, the nerves are the first to feel it. Hence uric acid headache, which is the alarming danger-signal of worse trouble to follow unless checked or relieved. The treatment required is that which will dissolve and eliminate uric acid, thus restoring the system to a naturally healthy condition. In the opinion of the most distinguished physicians Kutnow's Powder exactly fulfils this office. You can test it free of charge.

KIDNEY TROUBLES.

THE KIDNEYS REQUIRE need and cleansing in order to prevent the retention of uric acid. It is common knowledge that this uric acid is responsible for many ailments of a minor character which lead directly to those of a more serious nature, producing gout, rheumatism, lumbago, sciatica, and Bright's disease. Every one should attend to the hygienic treatment of the kidneys and bladder. A dose of Kutnow's Powder will flush, cleanse, and disinfect the urinary organs, expel the gravel, and eliminate the excessive uric acid. Do not buy before you have tested Kutnow's Powder free of cost. Every applicant can now obtain Kutnow's Powder free of charge on filling up and sending the application form below to our London offices.

FROM CLERGY.

REV. F. L. BULLEN

WRITES:

"Wellesley, Church-lane, Highfield, Southampton, Oct. 27, 1905.

"Dear Sirs,—I have no objection to your publishing my testimony concerning the excellent properties of Kutnow's Powder. I only wish I had tried it years ago. In my case it has proved to be an agreeable and gentle aperient, cleansing the liver and kidneys, relieving the brain of any symptoms of pain or discomfort, and regulating generally the whole organic system. I shall have much confidence in recommending its use to my friends.

"(Rev.) F. L. BULLEN."

REV. F. G. RILEY, M.A.,

WRITES:

"Helperthorpe Vicarage, York, 13th May, 1905.

"Dear Sirs,—I have given Kutnow's Powder a fair trial, and I may say at once that its action is gentle and its effect all that can be desired. I shall in future keep a stock at hand for use as required from time to time. The Powder is agreeable to the palate as an excellent household medicine.—Yours faithfully,

"(Rev.) FRANCIS G. RILEY, M.A. (Sidney Sussex Coll., Camb.)"

REV. C. E. WINCOTT

WRITES:

"Gentlemen,—About three years ago I was confined to my bed for a short time with a very acute attack of liver complaint. After other medicines had failed to give any effect, I was recommended by my doctor to try Kutnow's Powder, and I am glad to say that after taking two bottles I was completely cured, and my health has been better ever since. I have never recommended a more excellent preparation to quite a number of sufferers, who testify of similar results.

"(Rev.) CHARLES E. WINCOTT, Incumbent of St. Philip's Church, Arlington, Lanc."

What a Baroness writes:

"Alton House, Send Hill, Gibraltar South, 13th Jan., 1906."

The Baroness von Gessaige begs to inform Messrs. Kutnow that she is entirely satisfied with their excellent Powder, and has recommended the same to many of her friends.

A University Graduate writes:

"6, Belvidere-place, Dublin, 6th February, 1905.

"I feel bound to add my grateful testimony to the merits of Kutnow's Powder, the effects of which to me have been new life and invigoration. I was led to try Kutnow's Powder last autumn, and although having no faith in any medicines or drugs for the habitual and severe constipation I have suffered from for nearly 20 years, I procured a bottle. Its effect was all I could desire, bringing about a gentle, natural action, almost unfelt, and leaving the bowels in a healthy, natural state.

"F. W. BUTLER, B.A."

HOW TO DETECT FRAUDULENT IMITATIONS

The genuine and original Kutnow's Powder can be had from all conscientious Chemists at 2s. 9d. per bottle, or it will be sent direct from Kutnow's London Offices to any address in the United Kingdom for 3s. post-paid. Beware of spurious substitutes which are put up in bottles and packages to imitate the genuine Kutnow's Powder; sometimes the reading on the label is copied, and even a sham doctor's or other name is used in the place of "Kutnow" so as to deceive intending purchasers. On analysis these substituted articles have been proved to be absolutely worthless and often injurious. Insist on being supplied with Kutnow's Powder. See that the fac-simile signature, "S. Kutnow and Co., Ld.," and the registered trade mark, "Hirschensprung, or Deer Leap," appear on every package and bottle. You will then avoid fraud.

AND GET THE GENUINE KUTNOW'S POWDER.

A Celebrated Artist writes:

"Junior Athenæum Club, Piccadilly, W., Dec. 21st, 1905.

"I cannot highly enough praise the value of Kutnow's Powder for a sluggish liver. Since it was brought to my knowledge I have not been without it, and I consider it absolutely essential to health for one leading a sedentary life as an artist in his studio.

"H. J. THADDEUS, Royal Hibernian Academician, "Court Painter to His Highness the Khedive of Egypt, "F.R.G.S., &c., &c."

Sir John B. Monckton

(late Town Clerk of London) writes:

"Gentlemen,—I have much satisfaction in stating that, for the last two years I have regularly used Kutnow's Powder, with the result that troublesome and frequent attacks of lumbago, with other gouty symptoms that had troubled me for years, seem to have entirely disappeared.

"Yours truly, JOHN B. MONCKTON."

FROM THE ARMY.

GENERAL DUNSTERVILLE

WRITES:

"The Avenue, Upper Norwood, S.E., 29th May, 1904.

"Dear Sirs,—I began to use Kutnow's Powder about a fortnight ago, and finding it both palatable and efficacious, I have procured a bottle of the regulation size, and mean to have some always by me. I visit Hombourg every year, and am glad to find that my friend Dr. Glasser, Hof-Apotheker there, thinks it. —Yours faithfully,

"L. DUNSTERVILLE, Lieut.-General."

COLONEL R. J. VINCENT

WRITES:

"West Runton Hotel, Cromer.

"Dear Sirs,—The sample of Kutnow's Powder came duly to hand, for which I have to thank you. I have been suffering from Rheumatic Gout, and I am bound to say that I have already found benefit from the Powder you sent me. I am so convinced of its efficacy that I shall be careful always to keep it by me.—Again thanking you, I am, Sirs, yours faithfully,

"R. J. VINCENT, Lieut.-Col."

COLONEL C. K. HALL

WRITES:

"Elm Cottage, St. Margaret's Bay, Dover, December 12, 1905.

"Dear Sirs,—As an old Anglo-Indian, I well know the efficacy of Kutnow, and always have recourse to it when I feel a bit liverish, with an unfailing beneficial result.

"C. K. HALL, Colonel."

COLONEL J. C. GORE

WRITES:

"Nicosia, Cyprus, May 21, 1905.

"Gentlemen,—I like Kutnow's Powder, and consider it very useful, and have sent for a supply from the Army and Navy Stores.

"J. C. GORE, Lieut.-Colonel."

NERVE EXHAUSTION.

THE MAJORITY OF PEOPLE nowadays do not die from old age, but from the stress of life, exhausting competition, and perpetual excitement induced by modern conditions. The retention of good health all depends on the amount of vital force we possess, which some unfortunately allow to "run to waste." We can all recall the time when our brain never seemed to grow weary and our body never seemed to tire, but there are periods which overtake us when we feel a loss of power, a sense of dulness or indescribable distress, usually aggravated by mental effort, and generally accompanied by headache and backache. The true and only sure way to relieve these conditions is to flush and cleanse your liver, kidneys, and bowels with Kutnow's Powder.

HOW TO KEEP HEALTHY STAMINA.

HIS MAJESTY KING EDWARD VII. annually visits one of the famous Continental spas for the recuperation of health. Unfortunately we are not all princes of the blood, or even merchant princes, and most of us at least find it impossible to spare the time. The great surgeon, Prof. Lawson Tait, M.D., never lacked the means, but always found it difficult to spare the time. He therefore welcomed the advent of Kutnow's Powder—a scientific preparation, containing all the beneficial medicinal elements of these most famous spas. He not only enthusiastically prescribed Kutnow's Powder for his patients in his private and hospital practice, but regularly treated himself by taking it as a health-draught before commencing the arduous duties of the day. He realised (as do all distinguished practitioners) the vital necessity of cleansing and clearing the system of all indigestible and poisonous débris. He recognised in Kutnow's Powder its usefulness in getting rid of all surplus uric acid, and its adequateness as the ideal antiseptic aperient in clearing the bowels of all poisonous accumulations. It is by reason of these simple yet withal inestimable medicinal virtues that Kutnow's Powder is universally recognised by the medical profession throughout the world as one of the most valuable aids to health and strength.

FREE OF CHARGE!

"TRY BEFORE YOU BUY" is a common-sense maxim which combines prudence with common-sense. The opportunity of obtaining Kutnow's Powder free of charge is one that should not be lost sight of. Thousands of free samples are sent daily to all parts of the world, and the justification of this plan of making known the beneficial advantages of Kutnow's Powder is amply demonstrated in the universal approval expressed in the continuous stream of testimonials from all parts of the world. There are no obligatory conditions attached to the free gift. You have simply to fill in the health coupon below, post it to the address indicated, and you will then receive a package containing the remedy post-paid.

FROM NURSES.

NURSE CROSS

WRITES:

"[illegible], Percy-road, Wrexham.

"Sirs,—Some few years ago I had an acute attack of sciatica (inflammation of the kidneys), and was advised thorough rest. After trying them for some time with very little result, the doctor suggested giving Kutnow's Powder a trial, with such excellent result that in a short time I felt very much better. I continued taking it regularly every other day for two years, and consider it works like a charm.

"MARGARET CROSS (Nurse)."

NURSE PHILLIPS

WRITES:

"25, West Derby-street, Edge-hill, Lpool.

"Having given your Kutnow's Powder a fair trial, I feel it my duty to let you know the results. I have given it in two special cases of chronic constipation, with the result that one patient now has quite well; the other only needs an occasional dose. Both are cases of several years' standing. I shall continue to use it and recommend it to all my friends. As a nurse of great experience, I think your Powder is excellent."

NURSE A. WHUR

WRITES:

"3, 1 Gilbert-road, Bexhill-on-Sea.

"August 16th, 1905.

"Gentlemen,—Thank you for sample of Kutnow's Powder. For years I have suffered from severe headaches, and have tried almost every medicine, without doing me the least good; your Powder is wonderful. I have been more than thankful for the results. Will you kindly send a bottle, for which I enclose P.O. for 2s. I shall certainly always keep a bottle by me.—Yours faithfully,

"A. WHUR (Nurse)."

FORWARD AT ONCE THE APPLICATION FORM BELOW!

KUTNOW'S POWDER SENT FREE & POST-PAID

SEND YOUR FULL NAME AND ADDRESS AND GET KUTNOW'S POWDER FREE

(WRITE DISTINCTLY)

To S. Kutnow and Co., Ltd., 41, Farringdon-road, London, E.C.

Name ______________________

Address ______________________

(Standard, 20.2.06.)

If this Form be signed and posted in an open envelope, only ½d. stamp need be affixed.

KUTNOW'S POWDER SENT FREE & POST-PAID

TO OBTAIN A FREE SAMPLE

Write to S. KUTNOW & CO., Limited, 41, Farringdon Road, London, E.C.

inches by 24 inches. We have an assortment of advertisements of Kutnow's powder clipped from English newspapers, showing, as our correspondent who sent them remarks, that this is one of the best advertised "patent" medicines in England. In this country it is one of the most widely advertised "proprietary" medicines, as will be noted by a reference to our medical journals. We had to reduce the advertisement to get it down to our page limit. It will be noticed that the testimonials from physicians—four of the six, we are proud to notice, are Americans[1]—are separated from those of the laity. This is wise, as the two do not mix well.

N. B.—We do not charge anything for inserting this advertisement, but give it as a specimen of the newspaper advertising of Kutnow's powder in England.

Muzzling the Press.

(*From The Journal A. M. A., Aug. 31, 1907.*)

The term "patent medicine" has been applied, rather loosely, to those nostrums sold and exploited directly to the public, while the name "proprietary" has been given such preparations as are advertised only to the medical profession. As has been many times exemplified by reports in THE JOURNAL, the distinction is often a very fine one and the dividing line frequently reaches the vanishing point.

It is not unusual, for instance, for "proprietary" preparations to be foisted on the medical profession until a certain number of testimonials (of doubtful value, it is true, but still testimonials) have been ingeniously wheedled out of physicians and the product rather generously prescribed. When this objective point has been reached the manufacturer comes into the open and advertises the nostrum to the public direct and the testimonials previously given for the "proprietary" are used as advertising assets for the "patent medicine."

Then again there are certain preparations which are "proprietaries" or "patent medicines" according to the location. On one side of the Atlantic the product is advertised to physicians only, while on the other side it runs indiscriminately on the billboards and in the newspapers. One of the best ex-

1. Of the Americans, Dr. A. A. O'Neill is a graduate of Jefferson Medical College, 1890. He is a member of the Chicago Medical Society. Dr. Edward E. Koehler is a graduate of Niagara University, Buffalo, 1894. Dr. William E. Jones is professor of chemistry and toxicology in University Medical College, Richmond, Va., and graduated from the University of Virginia in 1892.

amples of this last class is Kutnow's Powder. In England, where it originated, this preparation which "dissolves and eliminates uric acid," is consistently lined up with Beecham's Pills and Pink Pills for Pale People. Full-page newspaper advertisements announce the fact that free samples will be

. . . . . .

"SENT TO ALL APPLICANTS."

. . . . . .

In the United States, however, Kutnows' have learned from their wide advertising experience that a cheaper and surer way of introducing a nostrum to the public is to advertise it to the medical profession only. By means of advertisements in medical journals (whose space is much less expensive than that of the daily papers) and the liberal distribution of samples

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"SENT FREE TO PHYSICIANS ONLY."

. . . . . .

the medical profession becomes the unpaid "barker" for the nostrum manufacturer. At present, therefore, Kutnow's Powder is—in the United States—an ethical (!) "proprietary."

There exists in this country, as most of our readers know, an organization of "patent medicine" manufacturers whose "reason for being" is to get full value received for the $40,000,000 paid annually in advertising nostrums in the newspapers of the country. This organization is known as the Proprietary Association of America. The now familiar "red clause" in the advertising contracts by which the newspaper forfeits its contract if state laws are enacted that are inimical to the "patent medicine" interests, is a creation of this organization and has been most effective in making the newspapers the unpaid lobbyists of the nostrum interests. The "silence clause" is another "joker" in the contracts by which the agreement is cancelled if matter detrimental to the nostrum "is permitted to appear in the reading columns" of the paper. It is little wonder that with such weapons the "patent medicine" manufacturer has assumed an arrogance that is as disgusting as it is serious.

Great Britain, too, has its "patent medicine" men's organization, which is known as the Proprietary Articles Trades Association. Of both these honorable bodies Mr. S. Kutnow of Kutnow Brothers, Ltd., is, or was, a conspicuous member. At a recent meeting of the British organization, Mr. Kutnow worked himself into a fine frenzy of indignation because of some articles that had appeared in the *Pharmaceutical Journal* of London on the subject of "Secret Remedies and Proprie-

taries." As these articles did not specifically mention Kutnow's Powder, and as criticism was directed against only those preparations as were most disreputable, it is evident that Mr. Kutnow now appraises his own product at its face value. He gave his opinion of the *Pharmaceutical Journal* and told the meeting that when the advertising man for that journal solicited advertising he refused to have any more dealings with him owing to the articles that had appeared in the *Pharmaceutical Journal.* He expressed himself as quite independent of any newspaper or journal, and able to take care of himself.

Therein Mr. Kutnow is mistaken; he is not independent of newspapers and journals. On the contrary, he, and others of his ilk, are most subserviently dependent on them. Let reputable papers and medical journals refuse, for but one year, to carry the high-flown advertisements of his Anglo-American Patent-Proprietary, and his firm would perforce seek some worthier, if less profitable, line of business.

The editor of the *Pharmaceutical Journal* resents Mr. Kutnow's "implied assumption that by inserting paid announcements in the advertising columns of a newspaper, he or any one else, can dictate the policy of that organ."

The *Pharmaceutical Journal*, it should be said, is the official organ of the Pharmaceutical Society of Great Britain, and is the most influential organ of the drug trade in the British Isles. It is refreshing to note, in these days of "canned" editorials and paid "write-ups" masquerading as original articles, that there is still to be found a journal that can not be bought.

One wonders whether a large experience in the advertising world, and especially his membership in the Proprietary Association of America, has unconsciously led Mr. Kutnow to assume that muzzling the press is one of the perquisites of the large purchasers of advertising space.

MANOLA.

Unpaid Peddlers of Secret Nostrums.

(*From The Journal A. M. A., May 6, 1905, 1462.*)

Evidently there must be a considerable number of physicians in the United States who sell themselves cheaply. Last week we printed in this department a description of a scheme that a St. Louis chemical company had for getting the doctors to work for them for very small pay. This week we have to record another St. Louis firm in the same delightful business.

This scheme comes in the form of a triple postal card arrangement, on which the following liberal offer is made:

Dear Doctor: In order to give you an opportunity to further test the properties of our MANOLA TONIC, we make you the following liberal propositions: Fill out the attached cards Nos. 1 and 2, mail No. 1 to US and hand Nos. 2 and 3 TO YOUR DRUGGIST. Upon receipt of the order for 1 dozen MANOLA TONIC from your druggist we will send with his order 3 full size bottles of MANOLA TONIC free of charge to YOU.

Yours truly,
THE MANOLA COMPANY.

Card No. 1 is directed to the company, and the doctor is to fill in the name of his druggist, sign his name and put on the stamp. (The company ought to be willing to furnish the stamp.) On this card is this statement:

Gentlemen:—I have this day accepted your offer through Mr.————————————Druggist.

Card No. 2 is as follows:

Mr. ————————————, Druggist:

Please order of the Manola Company, St. Louis, Mo., 1 dozen MANOLA TONIC, all of which I agree to prescribe in my practice. By filling out the attached card No. 3 and forwarding it to the above company, they will forward me, with your order, 3 full-size bottles MANOLA TONIC free for clinical purposes.

Yours truly, ————————————M.D.

In this instance the poor doctor either has to put this card in an envelope and put on a two-cent stamp, or carry it to the druggist himself. As he will probably be a cheap doctor in any event, he will no doubt save the two cents.

Card No. 3 is as follows:

Date————————————19

MANOLA COMPANY, St. Louis.

Gentlemen:—Please ship (me us), as per you roffer, 1 dozen MANOLA TONIC at $8.50 per dozen. ¼ dozen MANOLA TONIC free, for Dr. ————————————.

(Signed) ————————————Druggist.

Ship through my jobber.

Here we have the doctor not only used as an unpaid peddler for a secret remedy, but also as a club to make the druggist fill up his shelves with the stuff. Of course, the three bottles the doctor gets for his labor are to be given to his patients, who will thus become acquainted with what the preparation is good for, and will then buy it direct.

Certainly, it can not get very much worse, unless the nostrum manufacturers get the doctor to go on the street and peddle their stuff on a percentage.

Manola Prescribing and Its Results.

(*From The Journal A. M. A., Aug. 8, 1908.*)

MUSCODA, WIS., July 31, 1908.

To the Editor:—Enclosed is a copy of a letter sent to Dr. X. of Y., and his reply in the form of a marked advertisement

of Manola clipped from a medical (?) journal. The style of the advertisement sent would lead one to classify the product with "Peruna and the Bracers." The preparation was prescribed by Dr. X. for a Mr. Q., for a cough and "run-down" condition. Q. has been unable to do any work since he began taking it, but for three months he thought it benefited him, after which time he stopped taking it for three months and then took it again for five weeks. As he was emaciating rapidly and was troubled with high fever and night sweats, he came to me, and I found him in an advanced stage of pulmonary tuberculosis. The patient had wasted nearly eight months of precious time, closely housed and depending on the restorative virtues of Manola, instead of consulting a physician at a time when a properly regulated out-of-door life might have saved him. And all because Dr. X. prescribed Manola to be taken for several months.

Who is Dr. X. who did the prescribing? Polk's Register, 1906, records him as a graduate of a university in Germany; surgeon for the C., M. & St. P. Railway Company; member of the American Medical Association; member of the American Association of Railway Surgeons; member of the state historical society; medical examiner, etc. Shades of Æsculapius! This young man, now near death's door, asked me if Manola was not a good medicine, for, said he, "Dr. X., a very prominent physician, prescribed it to be taken continuously for a long time." And what could I, an insignificant doctor, reply? I said, "I don't know. I have not used it." And then I wished that I belonged to some other profession whose members are not "suckers" to bite at the bait of drug promoters and thus help them to fleece innocent persons while on the road to chronic invalidism and death. C. R. PICKERING, M.D.

COMMENT: The above is only one example—a typical one, however—of the results of nostrum prescribing. The physician who in the above instance prescribed Manola—an old practitioner, over 70 years of age—when asked by another practitioner for information regarding it, has to fall back on an advertisement. This is what the advertisement says:

"New strength can be given to the failing heart, tissue changes arrested, and senile decay indefinitely postponed by the prescription of MANOLA which furnishes to the exhausted cell protoplasm the inorganic elements necessary for a renewed and increased activity, improves the quality and quantity of the blood, supports the heart, tones up the nerves, induces refreshing sleep, and checks the decline of mental and bodily vigor.

"Manola can be depended on in all cases of loss of strength and weight in old and young alike."

A wonderful remedy, truly, that will do all this. Evidently Ponce de Leon in his search for the fountain of eternal youth labored under the insuperable disadvantage of being born 400

years too soon. Had he but known, the fluid he sought, which "indefinitely postpones senile decay" and "checks the decline of mental and bodily vigor" was to be found, not in the untrodden wilds of Florida early in the sixteenth century but in the "laboratory" of a nostrum manufacturer four centuries later.

Had this advertisement appeared in a newspaper and had one of Dr. X's patients consulted him regarding taking this "patent medicine"—for now it would be a "patent medicine"—he would most certainly have told the patient that it was foolish to believe such rubbish and not to waste his money on the stuff. And yet "Dr." Hartmann in his wildest flights of Perunaese oratory has never transcended in mendacious assertiveness the claims made for this "strictly ethical preparation."

Three years ago[1] we exposed the methods by which this nostrum was exploited, and concluded: "Here we have the doctor not only used as an unpaid peddler for a secret remedy, but also as a club to make the druggist fill his shelves with the stuff. . . . Certainly, it can not get much worse, unless the nostrum manufacturers get the doctor to go on the street and peddle their stuff on a percentage."

Manola illustrates another point: One of the curses connected with the nostrum business is the fact that many of the preparations are exploited by pseudo-pharmacal and pseudo-chemical companies. The Manola Company is reported as a side affair, and controlled by those who own the Luyties Homeopathic Pharmacy Company of St. Louis. What is the reason for creating a special company to exploit this nostrum? Is it because physicians might be prejudiced and not willing to buy from a homeopathic concern, or is it because the concern itself wishes to retain at least the outward semblance of decency?

The above case brings out another evil inseparable from nostrums. While the great majority are useless and most of them innocuous, they do harm in a negative way. The layman, depending upon the advertisements in the newspapers and believing what the advertisements state, takes a "patent medicine" and delays consulting a physician until too late. In the case of a physician, he, too, believes what the advertisement says, takes it for granted that he is doing what is right, neglects to study his case, to make a correct diagnosis, and to follow up the treatment by careful study of the case as it progresses.

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1. THE JOURNAL A. M. A., May 6, 1905; see reproduction of same on page 193 of this pamphlet.

In a case like the above nothing can relieve the physician of his responsibility; he can not fall back on the advertisement. In the case of the patient taking a "patent medicine," he depends on his own judgment. In the case in question, the patient depended on one whom he believed knew what should be done. And the physician was false to his trust!!

MARIENBAD TABLETS.

The Commercial Value of a Name.

(*From The Journal A. M. A., July 18, 1908.*)

What potentialities exist in a name! The great watering places and health resorts of Europe are household words and their names compel attention. Hence, when a physician receives in his mail a package bearing a foreign postmark and an unusual looking stamp, with the name "Marienbad" on the enclosure, he may possibly restrain his first impulse, born of experience, to throw the "sample" into the waste basket. He may be excused for expecting to find something of unusual merit in a medicine elaborated at such a world-renowned health resort as Marienbad. Especially is his enthusiastic expectancy pardonable when he learns that "Marienbad Tablets" are "prepared according to the prescription" of an individual with the imposing cognomen, "Prof. Dr. Med. Chevalier de Basch."

Then, too, accompanying the "sample" is a circular descrip tive of the virtues of this great medicine, printed in parallel columns of massive German and picturesque English. In it he is informed that the "Marienbad Tablets act mildly, without pain on the bowels, and consequently effect their evacuation." Great stress is laid on the advantage of the "tablet-shape" which makes possible the "offering of a perfectly equal dose of the efficacious ingredients" and simplifies the administration "on account of their compendious shape." "Marienbad Tablets," he is told, are unexcelled for the treatment of that condition recognized by all physicians as "sanguiness and its after-effects, such as vergitiousness," and they are highly recommended in cases of "arteriosclerose." As a sop to Cerberus, the circular suggests "the diagnosis should be made by the physician," the assumption being that the proprietors of "Marienbad Tablets" will take care of the treatment while the prognosis will naturally take care of itself.

And the composition of this "compendious" cure for "sanguiness" and "vergitiousness"? Well, if carefully looked for,

the physician will find that "Marienbad Tablets" consist of extract of aloes, powdered rhubarb, podophyllin, extract of cascara sagrada and extract of belladonna. That is all; just a simple cathartic tablet such as physicians are prescribing for their patients daily. They do not even contain a picturesque, pharmacologic nonentity like cactin or "latalia rad." Wherein, then, lies the special virtue of their "efficacious ingredients"? We are forced to the conclusion that this must reside in the psychic effect produced by taking a silver-coated tablet from a gilt-trimmed box, labelled "Marienbad," rather than in the essential contents of the tablets themselves.

MUNYON'S PILE OINTMENT.

Other Patent Remedies for Piles.

(From The Journal A. M. A., Sept. 12, 1908.)

The investigation by the *British Medical Journal* (July 11, 1908) of the nostrums most extensively advertised for piles shows that the manufacturers rely either on local applications, internal remedies or both. The local remedies generally contain an emollient base, but few ingredients of active properties. One contained calomel, zinc oxid, phenol, beeswax and soft paraffin, and another lead acetate, creosote, resinoid substance, vegetable tissue, hard paraffin and oil of theobroma. The former preparation is used as an ointment, the latter as suppositories.

The preparation of the greatest interest to us is Munyon's Pile Ointment. The label states: "Munyon's Pile Ointment permanently cures all forms of piles or hemorrhoids and immediately relieves pain, burning, itching and distress at the outlet of the bowels."

According to the *British Medical Journal:* "Analysis showed the ointment to consist of soft paraffin, with a trace of ichthyol sufficient to give a slight odor, but not enough to affect the appearance of the ointment. Experiments showed that 0.2 per cent. or over of ichthyol appreciably darkens the color of soft paraffin, and it appears, therefore, that less than this proportion is present. Estimated cost of one ounce of the ointment, one farthing" (half a cent). Its price in England is one shilling (24 cents) a package.

PAS-AVENA.

How Its Formula Evades the Food and Drugs Act.

(From The Journal A. M. A., March 7, 1908)

Pas-Avena is a widely advertised "nerve sedative and hypnotic." The preparation is put on the market by the Pas-Avena Company of New York City. As a headliner the advertisements of the remedy state that the formula has always been on every bottle, and this, THE JOURNAL states, has a twofold object: It aims to give the impression that the preparation is non-secret, and it is calculated to inspire confidence in the—apparently—scientific nature of the product. As a matter of fact, it should do neither. The preparation is essentially secret in its composition because of the presence in the formula of an unknown quantity and the liability to change of formula at the whim of the manufacturer. On the bottles some time ago the following formula was given:

Each tablespoonful contains:

Passiflora	20 minims.
Avena sativa	10 minims.
Somnalgesine ($C_{30}H_{28}N_5O_3$)	2 grains.

The first two ingredients are plants in whose therapeutic value but little confidence is placed. Somnalgesine, the third constituent, is a secret preparation, the chemical formula of which the manufacturers were kind enough to add. To a chemist, however, the formula is absurd and impossible, and is included either because of the manufacturer's ignorance or because of an intent to deceive the profession. Since the Food and Drugs Act became law, the label of Pas-Avena has been changed to read:

Alcohol	8.37 per cent. by volume.
Anilipyrine	16.00 grains per fluid ounce.

Guaranteed under the Food and Drugs Act of June 30, 1906.

Substitution of anilipyrine for somnalgesine gives little more information. Chemists may recognize this as a name applied to a mixture said to be formed by the fusion of two molecules of antipyrin and one molecule of acetanilid. To physicians, however, the name carries with it the same mystery as did somnalgesine. Attention is directed to the fact that by publishing the guarantee under the pure food laws the company presumes to disperse all doubt and criticism, assuming that the majority of physicians will be satisfied with the guarantee as it stands. Inasmuch as the preparation contains acetanilid and antipyrin, however, the manufacturers are disregarding that part of the Food and Drugs Act which requires that the name of the parent substance—in this case acetanilid and antipyrin—be put in parenthesis. The laws are so well

defined that physicians appear to be content to do nothing, firmly believing that they are safe from the defrauding methods of unscrupulous manufacturers.

Proprietary House Insolvent—and Physicians Lose?

(From The Journal A. M. A., Oct. 17, 1908.)

The Pas Avena Chemical Company, whose product, Pas Avena, was exposed in THE JOURNAL a few months ago, has recently failed, according to our pharmaceutical exchanges. In recording the fact, one journal says:

> "It is reported that considerable stock of this company had been sold to physicians."

At this time, when physicians are importuned daily to invest money in various wildcat pharmaceutical concerns, this sentence might well be used "to point a moral or adorn a tale."

PEPTO-MANGAN (GUDE).

Scientific Work Misrepresented and Commercialized.

(From The Journal A. M. A., Sept. 23, 1908.)

In pursuance of the deliberately assumed purpose to enlighten the physicians of the United States on all features of the traffic in proprietary remedies, there will be offered to our readers not only information regarding the composition of such remedies, but also facts concerning the methods of their advertising and sale, which come to light in such shape as to be of service to the profession. No firm or product will be subjected to attack, but publicity will be given to all facts obtainable. Having in mind this purpose the following recital of facts is offered to the profession as an illustration of methods employed in the proprietary trade, and as a step in the era of pharmaceutic publicity.

Under date of Dec. 1, 1904, there was published by the government of Porto Rico a "Report of the Commission for the Study and Treatment of 'Anemia' in Porto Rico." The splendid scientific results of this study of uncinariasis we commented on editorially[1] February 11, page 478. A few weeks

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1. This editorial brought from the Breitenbach Company a letter addressed to THE JOURNAL of the American Medical Association, which is worth quoting in this connection, and also in connection with the correspondence with the *Medical Record*, which follows. The italics are ours:

"It seems to us, in looking over the issue of your journal for Feb. 11, that the editorial department of your publication is quite at variance with your advertising pages. A short while ago we sent you a new electrotype stating that peptomangan was par-