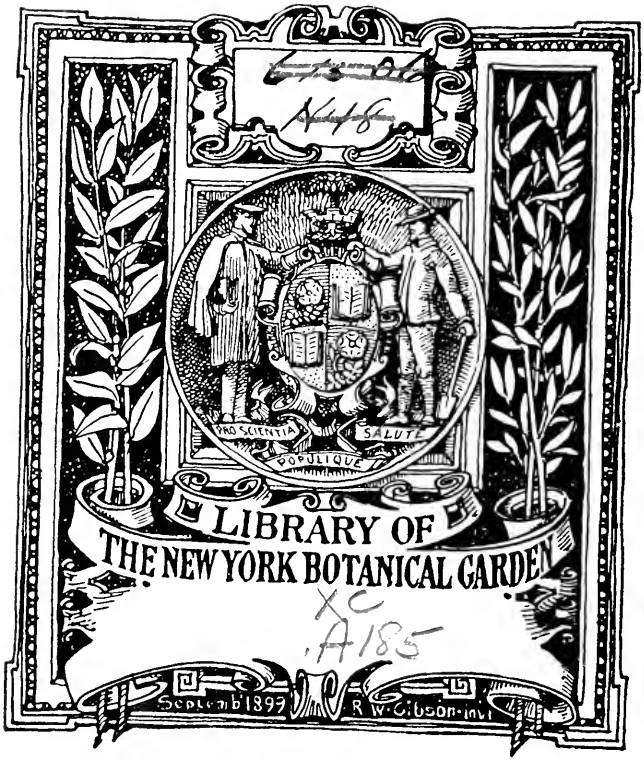
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New York College of Pharmacy

Columbia University

The Eighty-fourth Annual Term of Instruction of this College, open to men and women, began on Monday, September 22nd, 1913.

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New York Journal of Pharmacy

(THE ALUMNI JOURNAL)

Published Monthly by the Alumni Association of the New York College of Pharmacy—Columbia University.

CURT P. WIMMER, A. M., PHAR. D., MANAGING EDITOR

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The Journal will be published the last Wednesday of each month.

Contents:

Greetings.

THE NEW YORK JOURNAL OF PHARMACY makes its initial bow to you.

What is it to be? Is it to fill another "long felt want"? Nay, nay, it is an old and humble friend, who had his name changed, bought a new suit and fattened up a bit with good and interesting news and articles.

It is still the Journal of the Alumni Association, but increased in scope and size, to be the more compatible with the standing of the Association and the College and to reach, and be read by a larger number of people.

What are we going to print?—Everything that is of interest to the educated pharmacist in general and to the graduate of the N. Y. C. P. in special: original articles by men of name, such as Arny, Vorisek, Ferguson, Hynson, Niece, Lascoff and others, abstracts of current articles of importance, prepared by Professor George C. Diekman, college news, alumni notes, student activities. Have you a warm heart for the student's joys and woes? If yes, read our student columns and be ready for a laugh.

Make use of our queries and answers column—all questions cheerfully answered. And if there are no questions, there will be answers just the same, and no originality is claimed for this idea.

The now famous Goldberg of Pharmacy (alias George Hohmann) will contribute to our pages.

But enough of the enumerations. Read the first few numbers of the Journal and you will read all the others.

Last but not least, remember that this is a subscription journal, that it costs the munificent sum of $1.00 per year. Cut out the subscription blank on page 24 and mail it to the Editor with $1.00. Get your friends to subscribe. Do it now.

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OUR COLLEGE LIBRARY AND HOW TO USE IT.

By H. V. Arny, Ph.D.

It is an axiom that what we have at our very doors, we count of little worth and a thing is appreciated directly in proportion to the difficulty in getting it.

If this is so, the writer may be pardoned in bringing to the attention of the alumni how great a mental treasure-house the College library is and what great benefit each of us can secure by using it; for to the writer, whose library facilities have, in the past, been more or less limited, the free use of such a splendid collection of

books and journals as the library affords has been a real joy.

Many have been the times during the past three years that he has "called blessed" the thoughtful, painstaking and generous men of the past eighty years who have made the College library what it is, and as the present librarian, he feels he can best pay his debt to past librarians and other book-loving friends of the College, by calling attention at this time to what the library can do for every pharmaceutical worker around New York.

It is not his purpose to detail all the books in the library catalogue, nor will he say much of the fine lot of herbals, dispensatories and other medical books of the sixteenth and seventeenth centuries which our library possesses. These will be worthy of a later paper, especially after the directions of the trustees of the College to properly exhibit these in suitable cases, will have been carried out. What is purposed to do at this time is to merely enumerate those books that the librarian would recommend to one seeking information on a special subject as the Source Books, not merely because written with authority, but chiefly because in such books the best references to the literature on the subject is given; in short, those books which give the most complete bibliographies of the subjects taken up.

As to the use of our library, suppose our inquirer desires information on some pharmaceutical subject; of course we have the dispensatories, the best known text-books on pharmacy, Hager's classic work, practically every pharmacopoeia of the modern world, and last but not least that great work Real-Enzyclopaedie der Gesamten Pharmazie. If these do not furnish the information, we turn to the 60 volumes of the Proceedings of the American Pharmaceutical Association or to Beckurt's Jahresbericht der Pharmacie, of which we have the entire 72 volumes. If the original article is desired, the inquirer can consult practically every American pharmaceutical journal and those mostly in complete sets, and in addition, two of the leading English journals, three German and one French periodical. It would be well if we could have the leading drug journal of each of the other European countries and contributions in that direction would be much appreciated.

If the searcher is after a botanical subject, our library is just as great a pleasure, for not only can one consult the modern botanical literature, but one can delve into quaint old herbals. The source book of pharmaceutical botany is Tschirch's Handbuch der Pharmakognosie, which represents twenty years of labor on the part of its distinguished author, and which is still coming from the press. Its peculiar value comes from its excellent bibliography and many of its references can be verified from the three botanical journals now on our shelves and these in nearly complete form. The yearly progress in botany is reflected in the Just's Botanischer Jahresbericht, while the library has a large number of books on the drug and commercial botanical products of special countries, such as Watts' Commercial Products of India and Simmond's Tropical Agriculture. Likewise, we have the leading books describing the flora of each country, including such monumental works as

"Index Kewensis" and Engler & Prantl's "Die Naturlichen Pflanzen familien." In this connection, only recently a gentleman visited the library seeking aid in translating an Arabic medical work of some six hundred years ago and we were able to place in his hands Bossier's "Flora Orientalis," which gave a list of the plants of the Orient with their titles in Arabic, Greek and Latin. One notable omission from our botanical books is one that should soon be supplied—that splendid work, North American Flora (published by the New York Botanical Garden)—which we hope we will soon receive either by donation or by purchase.

In chemical books, our library is uncommonly rich and that thanks to the proper selection during the past few decades of that type of book peculiarly needed in a pharmaceutical library. A marked advantage that can be found in the classical books on chemistry is that phase as yet not sufficiently shown in books on pharmacy; sufficiently voluminous bibliographies. A book on science to be of the utmost value should not only present succinct facts, but should also refer the reader to volume and page of the journal where the original communication is found. Of course, such information is not usually required by the casual reader, but it need not necessarily enlarge the book beyond comfortable limits, and when there, is of utmost value to those readers who wish to go deeply into the subject. And pharmaceutical books—even such classics as the Real-Enzyclopaedie and the dispensatories are considerably behind the average authoritative book on chemistry or on pharmacognosy in the matter of adequate and systematic bibliography. Notable among the American works furnishing fine bibliographies are the Bulletins of the Lloyd library, of which No. 18 on the history of official drugs is a masterpiece of bibliographical research.

Discussion of the chemical books of our library will therefore consist largely in stating those source books from which the inquirer should start his hunt. Without question, the master books on chemistry from the standpoint of proper bibliography are Gmelin-Kraut-Friedheim which give practically every reference in inorganic chemistry that is worth while, and Beilstein which does the same service to organic chemistry. Our library also has both Dammar and Abegg who discusses inorganic chemistry, though not quite as fully as Gmelin-Kraut; and in English we have Roscoe & Schorlemmer, Watts' Dictionary and Thorpe's Dictionary, although not in the latest edition. Moreover, the bibliographies of these English books leave much to be desired.

All these works are to chemistry what the Century Dictionary is to the English language, and like the Century these books are primarily works of general reference and for ultimate details the searcher is supposed to consult the special books on the several branches of chemistry. In these, our library is particularly good and the ones mentioned below are those which appeal not merely because of excellency of contents but also because of their fine bibliographies.

Thus we have Gildermeister-Hoffmann "Die Aetherische Oele," Pictet-

Biddle "The Vegetable Alkaloids," Van Rijn "Die Glykoside," Winterstein & Trier "Die Alkaloide," Mann "Die Moderne Parfumerie," such works of technological chemistry as Bolley and also Thorpe, the best books on analytical chemistry (including, of course, Fresenius) Abderhalden's and also Hoppe-Seyler's classic works on physiological chemistry and Cohnheim's "Chemie der Eiweisskorper." And what is still more satisfactory is that most of the original articles referred to in the books just mentioned can be consulted in the journals on our shelves. We have seven English and American journals, including the publications of the American and of the English Chemical Societies. We have 10 German journals, including almost complete files of Liebig's Annalen and the "Berichte" of the German Chemical Society,and we have partial files of the Compte rendu of the French Academy and the Journal de Pharmacie et Chemie.

Mention has already been made of how indispensable to the library worker are those pharmaceutical publications which give in abstract all of the published work of the year. This type of publication is particularly well furnished in chemistry, and in our library we have Chemical Abstracts and Chemisches Centralblatt as well as practically complete files of Liebig-Kopp "Jahresbericht und die Fortschritte der Chemie" and Wagner-Fischer's "Jahresbericht der Chemischen Technologie."

Let us close by giving a concrete example of what we can do with our library. Choosing at random, suppose we were looking for some information regarding Valerian and its preparations. Turning to Tschirsch's Handbuch der Pharmakognosie we find 14 pages (Part II, pp. 511-525), given to this subject and in his bibliography there are ten references (to books and journals) to the etymology; 15 to botanical origin; 7 to the culture; 17 to the anatomy; 58 to the chemistry and 7 to the adulteration and uses of the drug. As to the pharmacy of Valerian, we find in the Proceedings of the American Pharmaceutical Association 2 references to the fluid extract, one to the tincture, 3 to valerianic acid, 4 to ammonium valerianate. Assuming it is valeric acid and valerates regarding which we wish information, we turn to Beilstein and we find reference to thirty-five papers on iso-valeric acid (the pharmaceutical variety), and in order to complete the bibliography to date since the publication of Beilstein (1899), we find in Liebig-Kopp Jahresberichte up to 1908, forty-four references to the valerianic acid, and in the Chemical Abstracts of 1909 to 1912, inclusive, seven other articles on valeric acids and preparations of same. And, as mentioned above, on our shelves we find a large percentage of the journals in which the original articles were published, thus giving opportunity of reading the paper in full.

The foregoing is but one of many ilustrations of the richness of the College library and indicates the service it can render to those desiring information on practically every phase of pharmacy. It is offered to every one desiring pharmaceutical information and each year its value is becoming more appreciated not only by the drug trade of Greater New York, but also by chemists and physicians of the vicinity.

ON SULPHUR OINTMENTS PREPARED BY MELTING.

By L. Sabbatani.

(Pharmacological Institute of the Royal University at Padua.)

Translated from Kolloid Zeitschrift

by Curt P. Wimmer.

Sulphur ointments are usually prepared by a thorough mixing of flowers of sulphur or precipitated sulphur with vaseline, lard or lanolin; sulphidal has also been employed in recent years. In the flowers of sulphur, the sulphur is crystalline; in the precipitated sulphur it is amorphous and much more finely subdivided; sulphidal consists of still smaller granules and contains about 20% of albuminous substances. These pharmaceutical preparations are, technically, the more perfect the more evenly the sulphur and base are mixed; they are, theoretically, the more active, the more finely the sulphur is subdivided. This is the reason why, in order to obtain a fine and well prepared sulphur ointment, the solubility of sulphur in fats was made use of. Such ointments have not, as yet, been thoroughly studied from a chemico-physical nor a pharmacological point of view.

Take 100 gms. of vaseline and melt, add 2 gms. of precipitated sulphur and slowly increase the temperature with constant shaking, to 140°-145°, until the sulphur is entirely liquified. Cool the solution so that it solidifies quickly. In this manner a sulphur ointment is obtained by melting.

A microscopical examination of the ointment, consisting of vaseline and 2% of sulphur, made immediately after the preparation shows exceedingly small, round sulphur granules, measuring from 0.7 to 1.1*u* evenly subdiuring from 0.7 to 1.1y evenly subdivided in the masses of vaseline crystals.

A 2% sulphur ointment prepared with lard in a manner alike to the previous one and examined immediately with the microscope shows the sulphur granules measuring from 1.5 to 6.6*u*.

An ointment prepared with cacao butter shows the sulphur granules of about the same size as in the ointment prepared with lard. In an ointment prepared in the usual manner, consisting of 2% sulphur and white wax, the granules are very small, about 0.5 to 0.7*u*. In an ointment prepared with lanolin in the usual manner, no trace of sulphur granules can be detected with highest magnification, immediately after the preparation. A thin film of it enclosed between cover glasses shows a slight opalescence, while the other ointments which contain sulphur in form of smallest granules, appear white and milky. With lanolin, the granules form slowly and become visible after an hour; first one by one and very small, then more numerous and somewhat large. After a few hours the ointment becomes similar to the others as far as number and subdivision of the granules is concerned, only the granules are very much smaller. They cannot be measured with accuracy; but they measure approximately 0.2 to 0:5*u*.

An ointment of 2% of sulphur in spermaceti shows immediately after cooling sulphur particles and granules of different sizes, but mainly larger

ones which measure 6μ; their shape is not always round, but often oval or palisade-like.

Finally, an ointment consisting of 2% of sulphur and paraffin (M. P. 58-60°) shows between the crystals of paraffin, irregular, pointed, triangular or trapezoid spaces which appear to be filled with a yellow sulphur mass. They are like sulphur drops which have been deformed by the pressure of the surrounding paraffin crystals. Inside of each of these liquid masses, a small, round and light-refracting body, which has a deeper, yellow color, may be seen. This preparation is quite permanent and retains its miscroscopic appearance unchanged for one and one-half months.

With the exception of the paraffin ointment all others are unstable and undergo considerable change sooner or later; the change consists in the transition of the sulphur from the globular into the crystal rhombic form.

In the vaseline ointment one notices after eighteen hours that the sulphur granules have entirely disappeared and that sulphur crystals of a fine yellow color have formed. After two days the crystal formation has considerably progressed and after one month the granules are completely replaced by crystals which form microscopic ray-like figures. Similarly, in lard ointments the granulated form of sulphur has been found to be replaced by the crystalline after twenty-four hours. The entire microscopic field shows extensively branched crystal forms and only here and there some well-shaped large groups of crystals can be observed. The crystal formation increases slowly and it can be stated that no more granules are present after sixteen days.

In the ointment prepared with cacao butter the transformation of the granular into the crystalline form starts also very soon after the preparation, and, like the other ointments, the microscopic picture loses whenever crystal formation begin its milky appearance and becomes more transparent. To the extent in which the crystalline branches increase, the granules become smaller and finally disappear altogether.

After a few days the transformation must be regarded as complete because in spite of the fact that a decidedly crystalline form does not show, the granules are no longer uniform in size and shape, but seem to be changed into minute badly-shaped crystals.

In the white wax ointment, the granular form of sulphur is much more permanent. Only after 25 days one notices in a few places that the granules have been replaced by small crystals which are irregular and scale-like.

The crystal formation shows up also very slowly in the ointment made with spermaceti and is somewhat complete only after twenty-four days. The crystals are lamellar and badly formed.

In the lanolin ointment the crystalline form appears quickly but spreads very slowly. Even after twenty-five days one notices only a few crystals or small groups which appear nicely and regularly shaped, very transparent and of a fine yellow color.

In the following tabulation the properties of 2% sulphur ointments prepared with different vehicles are compiled:

VEHICLE	Melting Point	MICROSCOPIC EXAMINATION		Transformation of Globules into Crystals.
	Degree	Immediately after preparation.	After 1 Hour	
Cacao Butter	30-35	Globules 1.5-6μ	Same	appear after a few hours.
Lanolin	35-40	None	Globules 0.2-0.5μ	After a few hours but very slowly increasing.
Vaseline	35-45	Globules 0.7-1.1μ	Same	After about 18 hours.
Lard	36-45	Globules 1.5-6μ	Same	After about 24 hours.
Spermaceti	50-54	Plates and globules of irregular shape	Same	Appear after many days as lamelae.
Paraffin	58-60	Angular irregular masses	Same	None even after 1½ months.
White Wax	65	Globules 0.5-0.7μ	Same	Appear after many days and increase very slowly.

We note in general that the transformation of globules into crystals takes place the sooner and the more quickly, the lower the melting point of the vehicle is. However, for purposes of a rational comparison, one must consider the purposes and properties of the ointment bases: hydrocarbons, fats, alcohol, cholesterin, vaseline. Taking the diameter of the granules as 0.57 and the density of amorphous sulphur as 1.92 there would be in 1 g of the 2% sulphur ointment about 160,000,000 globules. Assuming the size limit of colloid particles as 0.1μ, sulphur globules would not figure as such on account of their large size. However, they come very near to this limit and in the lanolin ointment we find them to be 0.2 and possibly still smaller—consequently we can call this globular form of sulphur the "disperse phase." We have seen above that the globules appear more or less rapidly, more or less numerous, and that they are replaced by crystalline sulphur, that is, by the solid phase. Inasmuch as the crystals are formed at the expense of the globules and the latter are mechanically fixed in the solid ointment body and, furthermore, inasmuch as the crystals are formed with the assistance of the molecules, we are compelled to assume that the globules are dissolved in the fat, forming a liquid phase, from which the crystals withdraw the amount of molecular sulphur necessary to their growth. In these ointments we find the sulphur in three different phases which are in a labile equilibrium with one another.

Disperse phase—liquid phase—solid phase.

The instability of the equilibrium depends upon the solution tension of the sulphur globules which is very considerable on account of the relationship of their volume to their tremendously large surface, while the tension of the sulphur crystal solution is very slight on account of the minimal surface of the crystals as compared with their volume.

A stable state of equilibrium: liquid phase—solid phase is obtained only when the disperse phase of sulphur in

the ointments prepared by melting has entirely disappeared and in the ointments made by simple mixing of fats with flowers of sulphur or precipitated sulphur when complete saturation has taken place.

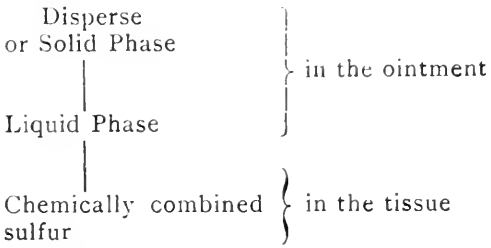
As to the nature of the liquid phase considering the physical properties of the fat, lanolin, etc., it cannot be regarded as a true liquid solution nor as a solid solution, however, it comes nearer to being the latter than the former. Only in a vaseline ointment we can speak of a liquid solution, since it consists of a mixture of hydrocarbons, some of which are solid and others liquid at ordinary room temperature.

Different authors have previously spoken of a partial solubility of sulphur in ointments, since they considered its solubility in many organic liquids and especially in liquid fats. This was, however, only a supposition, since a direct and certain proof could not be brought by chemical methods only, and since it has only now been brought indirectly by the study of the transformation of the physical state of sulphur in ointments prepared by melting.

The proof of a liquid phase in the sulphur ointment is of great interest for pharmacology.

If the sulphur were present in the ointments only in the solid state, it could, in spite of finest subdivision, exert no therapeutic effect upon the tissues. A very thin layer of fat would be sufficient to keep the sulphur away from the tissues and the intimate contact, which is absolutely necessary for a chemical reaction between sulphur and tissue, could not take place. Since the presence of dissolved sulphur has now been proven, it can readily be understood how that absolutely necessary contact can take place, which makes chemical reaction possible and guarantees the pharmacological activities dependent upon them.

It must also be stated that on account of the slight solubility of sulphur in fats the pharmacological action is very slight and might even be entirely disregarded. However, because of the state of equilibrium mentioned above, while it gradually passes from the liquid state into the tissues and is there combined, new quantities of sulphur change from the disperse or solid phase into the liquid one. In this manner large quantities of sulphur, although but slightly soluble in fats, can get into the tissues. The absorption of sulphur by the tissues would take place acording to the following scheme:



We have mentioned before that in the ointments prepared by melting the tension of the almost colloidal globules towards solution is very large as compared with those made with flowers or precipitated sulphur. Consequently, the change into the liquid phase and the subsequent absorption into the tissues will be more rapid and the pharmacological activity will be more intense in the ointments prepared by melting.

The best attended College meeting in many years was held on January 20 in the lecture hall. Mr. Harry B. Mason, editor of the Bulletin of Pharmacy, Detroit, gave a most interesting and instructive lecture on "Profit-Making in the Retail Drug Business." An interesting discussion followed, which was led by Dr. F. J. Wulling, a graduate of this College, now Dean of the College of Pharmacy of the University of Minnesota. This was the second of a well-planned series of lectures given at the College meetings. The next one will take place on the evening of the third Tuesday in March. All members of the Alumni Association are cordially invited to attend these lectures, the details of which may be obtained from Mr. Simpson at the College.

The Board of Trustees has voted to make a payment of $10,000 on the mortgage, thus reducing it to $70,000. The members of the College all look forward to the day when the institution is entirely free from debt.

It is likely that but few of the Alumni knew that the late Hon. Timothy L. Woodruff was a life member of this institution. In the high political position which he attained he was able to give great assistance toward enacting laws which have proved of great benefit to the profession.

In looking through the box in which the diplomas are kept, we find that the following alumni, for one reason or another, have never received their sheepskins. These may be obtained by personal application at the office of the College or by forwarding twenty-five cents in stamps:

William G. Rothe	1873
George H. Hoerning	1879
William Frank Hall, Jr.	1886
William Ellery Jennings, Jr.	1890
John T. Meytrott	1891
Helen Marguerite Warner	1891
Ernest M. Hoefer	1892
John Nelson	1892
Theodore B. Sayre	1892
Isaac M. Wilzin	1892
Anthony H. Molina	1894
George Sidney Tomlinson	1894
Frederick C. Buckmaster	1896
Hubert Jerome Geenen	1897
Sumner S. Shears	1897
Frederick W. Brecht	1898
De Witt C. Cleary	1898
Adolph Dalbon	1898
Rudolph Eberhardt	1898
Edward M. Gardner	1898
Lewis S. Patterson	1898
William L. Seither	1898
Henry Schenck	1898
Foster H. White	1898
Frederick Fuhr	1899
Ernest E. Molwitz	1900
George W. Morse	1900

Hugo A. Emeis	1901
Archie B. Hoover	1901
Dann L. Wood	1901
August Eichler	1902
Frank H. Keeler, Jr	1903
James H. Patten	1903
Joseph F. Armstrong	1904
Roy M. Holmes	1904
Persifer J. Northrup	1904
Charles F. Quick	1904
Charles Gaylord Eaton	1905
Harry Brundage	1906
Philip Monves (duplicate)	1907
Emil Imhof (duplicate)	1907
Mugurditch Hagopian (duplicate)	1907
Andrew O. Sorgi	1913

We also have Doctor of Pharmacy diplomas as follows:

Joseph L. Byrne	1899
Augustus F. A. Wiggers	1899
Miss Ernestine I. Molwitz	1900
Dann L. Wood	1902

A. PH. A. ELECTION.

The following officers were elected at the meeting of the American Pharmaceutical Association (New York Branch), held on January 12th, 1914: Dr. H. V. Arny, President; Mr. J. Roemer, Vice-President; Mr. F. L. McCartney, Secretary; Dr. J. Weinstein, Treasurer; Dr. Geo. C. Diekman, Progress in Pharmacy; Mr. Rehfus, Membership; Mr. Berger, Fraternal Relationship; Dr. Anderson, Legislation. Mrs. Rainsford-Gay read a very interesting paper on the United States Pharmacopoeia and its limitations. The paper evoked considerable discussion which resulted in the following motion made by Mr. Roemer and carried by the branch: Resolved, that it is the recommendation of the branch that the United States Pharmacopoeia contain only standards of drugs and chemicals and that only galenical preparations be made official in the National Formulary.

Professor George C. Diekman.

Adulteration of Bucha Leaves.

James Small, in Phar. Journ. 90, 1913, 511, calls attention to a recent adulteration, the botanical origin of which has as yet not been determined. The leaves used however closely resemble, in both form and color, the genuine buchu leaves. A close study of the mid-rib reveals some difference as compared to the mid-rib of the genuine article. The false leaf is also more pointed than the genuine one. The upper side of the leaf is hairy, oil cells however are absent. The under side

of the false leaf is corrugated and hairs are absent. The color ranges from pale green to yellow-brown. The taste is slightly bitter, but not aromatic.

Microscopically, crystals of hesperidin and such of calcium oxalate are not discernible. The palisade tissue is divided into two distinct layers on the upper side of the leaf, the under side showing but a single layer, as in the genuine leaf. The individual hairs in the false leaf are smooth and not rough as in the genuine.

False Nux Vomica Seeds.

The same author in Phar. Journ. 90, 1913, 510, calls attention to a variety of nux vomica seeds, found in commerce, and growing in Burmah, which do not contain strychnine. He was unable to establish any material anatomical differences between the genuine and false seed, and claims that it is impossible to detect any admixture of the false with the genuine seed when in form of powder.

Australian Sassafras Oil.

This oil which is obtained from Atherosperma moschatum, has been examined by E. Scott. Both the leaf and the bark of the plant are employed medicinally in Australia. The leaves were found to yield from 1.7 to 2.65 per cent. of an ethereal oil, possessing a S/G of 1.027, and an optical rotation of + 7.5°. The oil contains from 50 to 60 per cent. of methyleugenol, 15 to 20 per cent. of pinene, 15 to 20 per cent. of a camphor, and 5 to 10 per cent. of safrol.

Cinnamomum glanduliferum.

S. S. Pickles, in Pharm. Journ., 411, states that this plant grows in Assam, and that its wood yields about 2.95 per cent. of an ethereal oil. The oil is yellow in color and has an odor resembling that of safrol. Its S/G is 1.103, and its optical rotation = —4°. The oil contains safrol, myristicin and elemicin, with small quantities of acids, alcohols, ketones and aldehydes. Terpenes are absent.

The Detection and Estimation of Salicylic Acid in Fruit Juices.

Heintz and Limprich, in Ztschr. f. Unters. d. Nahrungs-u. Genussm. 1913, 25, 12, 706, report as follows:

The authors first endeavored to confirm the results claimed to have been obtained by Vierhout, whose method consists in shaking out the salicylic acid by means of petroleum ether, and determining it quantitatively by titration. They found the results thus obtained practically valueless.

They further found that upon shaking an aqueous solution of salicylic acid with a mixture of 2 volumes of petroleum ether and 1 volume of alcohol, as had already been determined by Vierhout, the salicylic acid may be removed without emulsification, and without removal of substances which might interfere with the iron-salicylic acid reaction. They state furthermore, that when this petroleum ether solution of salicylic acid is shaken with an aqueous solution of chloride of iron, the salicylic acid, in the form of ferric salicylate (violet-colored) will be found entirely in the aqueous layer, the ethereal layer being colorless. Based upon these findings the authors suggest the following method:

Solutions required:—(a) an aqueous solution of salicylic acid, 0.1 : 100, (b)

a freshly prepared solution of ferric chloride in water, 0.1 : 100, (c) petroleum ether of lowest possible boiling point, (d) 96 per cent. alcohol.

Solutions required for comparison: 50 ccm. of the 0.1 : 100 salicylic acid solution are placed in a mixing cylinder having a capacity of 250 ccm, acidulated with a few drops of sulphuric acid, and shaken vigorously with 100 ccm. of petroleum ether, this being followed by shaking again with 50 ccm. of alcohol, the liquids then being allowed to separate completely into layers. 0.5, 1.0, 1.5, 2.0, 2.5 and 3 ccm. (intermediary quantities can also be taken) of the petroleum ether mixture, are then mixed, in Eggert's tubes, each with 10 ccm. of the ferric chloride solution, 0.1 : 100, and thoroughly shaken. This results in transferring completely the salicylic acid contained in the petroleum ether solution, to the aqueous layer containing the iron solution, of course in the form of violet colored ferric salicylate.

The colors thus produced remain unchanged for a period of at least 24 hours or longer, and thus these "Comparison" Solutions may be employed for a number of determinations.

Method of estimation:—25 gm. of the fruit juice or syrup to be examined are placed in a mixing cylinder having a capacity of 250 ccm. and water added until the whole measures 50 ccm. After acidulating with a few drops of concentrated sulphuric acid, the mixture is first shaken thoroughly with 100 ccm. of petroleum ether, and then with 50 ccm. of alcohol, and then set aside to layer.

10 ccm. of the petroleum layer are then mixed in an Eggert tube with 10 ccm. of the aqueous iron chloride mixture, thoroughly shaken, after which the violet color produced is compared with that of the solutions made for comparison.

If too deeply colored, a lesser quantity of the petroleum ether solution, 5 ccm. or more or less must be used for the experiment. If on the other hand the violet color produced with 10 ccm. of the petroleum ether solution is too pale, more of the latter should be employed or added. It is recommended that in such instances the petroleum ether which has already been shaken out, be removed by decantation, before adding the additional quantity.

In this manner, by using smaller or larger volumes of the petroleum ether solutions of salicylic acid, as the case may be, accurate determinations may be made.

If, after employment of the entire 100 cccm of the petroleum ether solution, a violet color is still absent, it can with certainty be said the salicylic acid has not been employed as a preservative, in the juice or syrup under observation.

Calculation:—The quantity of salicylic acid present is a given sample of juice or syrup is calculated after the following formula:

$$X = \frac{5 \cdot c}{a \cdot b}$$

In this formula a = Quantity of juice or syrup employed expressed in grammes. b = Quantity of Petroleum ether layer employed, expressed in ccm. c = Quantity, expressed in ccm., of the Petroleum ether layer used for comparison. x = Quantity of Salicylic Acid found. Example:

Suppose 50 grammes of fruit juice had been employed. 10 ccm of the petroleum ether layer produced with the solution of iron chloride, a violet color, corresponding with a "Comparison" solution in the preparation of which 2,5 ccm of the petroleum ether layer were employed. Then:

$$X = \frac{5 \cdot c}{a \cdot b} = \frac{5 \cdot 2.5}{50 \cdot 10} = 0.025,$$

The preparation therefore contains 0,025 per cent. of Salicylic Acid.

If the methods to be used in the cases of liquids containing alcohol, this must first be removed, as otherwise the relation of 2 to 1 of the petroleum ether and alcohol, necessary for a proper extraction, would be destroyed.

Melting Point of Mixtures of Cacao Butter and Yellow Wax.

J. van Biel and P. van der Wielen, in Pharm. Weekb., have made the following observations: Mixtures of

Cacao Butter with 3.00% of Yellow Wax = M. P. 31.2°

Cacao Butter with 4.05% of Yellow Wax = M. P. 32.6°

Cacao Butter with 4.80% of Yellow Wax = M. P. 34.8°

Cacao Butter with 6.05% of Yellow Wax = M. P. 37°

Cacao Butter with 7.00% of Yellow Wax = M. P. 38.2°

Mixtures of this kind should not possess a melting point above 37° C., the body temperature, about 5 per cent. of yellow wax should be the limit. The authors also found that aqueous solution can readily be incorporated in such mixtures. Thus to 2 grammes of a mixture of cacao butter with 2½% of yellow wax, 1 gramme of an aqueous solution, glycerine or ichthyol may be added with ease.

Constituents of Ipe Tabaco Wood.

O. A. Oesterle, in Schweiz. Wochenschr. f. Chem. u. Pharm., states the following: A fluid extract as well as a tincture of this wood are found ready made in all Brazilian pharmacies. Aqueous infusions of the wood are employed in certain skin diseases. The wood is also employed in building operations, and contains a coloring matter used in dyeing cotton fabrics.

Peckolt found that the wood contained a resin which does not resemble the resin found in guaiac wood in the least. He also found that this wood contains a considerable quantity of a yellow substance, which he states is identical with chrysophanic acid. Th. E. Lee, who examined this wood relative to its coloring matter, also reports the presence of a yellow substance, useful in dyeing, and which he called Tecomin.

According to the investigations of the author this yellow substance crystallizes from hot alcoholic solutions in flat yellow needles or plates, which after repeated crystallization melt at 142-143° C. The substance dissolves readily in most organic solvents. Its solution is alkalies and alkali carbonates are colored an intensive red. In sulphuric acid it dissolves with a yellowish-red color. If the solution in alkalies is boiled with zinc dust, it becomes decolorized. In glacial acetic acid it dissolves with an orange-red color, which disappears upon treatment with zinc and hydrochloric acid. The decolorized solutions when exposed to

air, rapidly assume their original color.

Further investigation shows that this yellow coloring matter is not identical with chrysophanic acid. It is most likely identical with Lapachol, which is a derivative of a-Naphthochinon, possessing the formula of $C_{15}H_{14}O_3$.

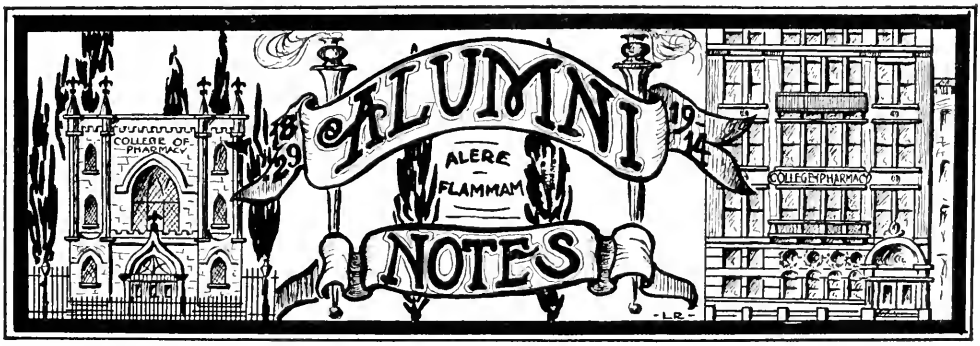
Sensitive Reaction for Free Bromine.

If an aqueous solution of rosanilin-bisulphite be brought into contact with bromine water or bromine vapor, a red-purple or violet color or precipitate results. The addition of chloroform intensifies the violet color. This violet colored chloroformic solution of the reaction product, shows two absorption bands, a faint one in the blue, and a more distinct one, in the orange-yellow part of the spectrum.

The requisite solution of rosanilin-bisulphite is prepared as follows: One liter of an aqueous fuchsin solution, 1 : 100 is brought into reaction with 10 ccm. of a solution of sodium bisulphite, 30=33° Baume, and after a lapse of 5 minutes 20 ccm. of hydrochloric acid, S/G. 1.18 are added. After setting aside for a period of about 2 hours the solution is ready for use.

2 ccm. of this solution are mixed with an equal volume of solution of hydrogen dioxide (10 vol.), 1 ccm. of chloroform is added, and a sufficient quantity of suspected liquid, after which the whole is shaken thoroughly.

If bromine is present the chloroform assumes a more or less intense violet color. In presence of bromine to the amount of 0.01 mg. the solution will still assume an amethyst color. In case of air containing bromine vapors, this is passed through the reagent, when after a time the chloroformic layer will assume the characteristic color. A coloration of the aqueous layer is to be disregarded.



THE RUSBY DINNER.

The Eighteenth Annual Dinner of the Alumni Association was held at the Chemists Club on the evening of December 17th, 1913.

This dinner was given in honor of Dean Rusby, who celebrates this year the Twenty-fifth Anniversary of his connection with the College of Pharmacy, and it was a complete success socially. About ninety-five participants enjoyed the splendid menu served, there was good feeling aplenty and an atmosphere of "homelikeness" prevailed throughout the entire evening.

Dr. Joseph Weinstein, President of the Association, started the post prandium exercises by announcing that the dinner would be held in honor of Dean Rusby, who had been a member of the Faculty for a period of twenty-five years. He also stated that he would request Dr. Wimmer to act as toastmaster.

In accepting the office of toastmaster, Dr. Wimmer said that he considered it an honor and privilege to be permitted to preside at an occasion of this kind; that no outside speakers had been invited because the committee felt that everything should go the "Rusby-way," which was a simple way, a "no frills and fancies" way, but a way of results and achievements. He next read a number of letters from absent members and friends, among them Samuel W. Fairchild, M. J. Breitenbach, Albert Plaut, Ernest Stauffen, Virgil Coblentz, G. W. Wray and others. He called upon Provost Carpenter, of Columbia University. Prof. Carpenter spoke in part in a humorous vein; he found it difficult to think of Dr. Rusby's connection with a college for twenty-five years, as he had always looked upon him as a young man, young in heart, soul and mind. He paid a high tribute to the trustees of the college and to the work of the college as a part of Columbia University. Professor Chandler spoke next. He related some of the incidents connected with his work while actively engaged as professor of chemistry in the College of Pharmacy. He remembered Dr. Rusby as a student in the College of Physicians and Surgeons, and characterized him as a thorough investigator and splendid teacher. Dr.

PROFESSOR HENRY HURD RUSBY

Who Celebrates this Year the 25th Anniversary of his connectio with the College of Pharmacy.

William Jay Schieffelin, who came from a dinner at President Butler's house, brought the greetings of the President of the University. He spoke of the relentless fight which Dr. Rusby had waged for pure drugs and higher standards in pharmaceutical education. Professor Diekman spoke for the faculty of the college. He reviewed the progress which the college has made under the direction of Dean Rusby and related the struggles for a pre-requisite clause and the part which the Dean had in their final victorious conclusion. He

Cup presented to Dean Rusby by the Faculty.

presented to the Dean in the name of the faculty a suitably inscribed loving cup, "as a reminder of the very cordial and fraternal relationship which exist between yourself and the members of the faculty, as a tangible evidence of their love and affection, as a token of fidelity and loyalty, which will endure as long as we are permitted to labor together for the glory of our Grand Old Institution, the College of Pharmacy of the City of New York." Quite overcome with emotion, Dr. Rusby arose and thanked Dr. Diekman for his remarks and presentation. He said that he had to pinch himself to see if he was still alive, as so many fine and complimentary things are said, usually, after people are dead. His associations with and his work for the College had strengthened and moulded his character to an extent which no one could estimate, and this, in turn, had helped him in his efforts to fashion the character of his students.

To him, as Dean, it was the greatest satisfaction that the college, at all times strictly adhered to its claims and that it was, therefore, not necessary to deny statements to the contrary. There was unity of purpose in every part of the college, the most friendly relationships existed in the faculty and he hoped for continuance. Mr. Thomas F. Main, Honorary President of the Alumni Association, spoke next and related, briefly, the early history of the formation of the Association. He spoke of the first lecture given by Dr. Rusby before the Alumni Association, in 1888, and the subsequent affiliation of the Dean with the College. Mr. Main presented to the Dean, in the name of the Alumni Association, a silver tea set. He proposed a standing toast which was followed by "He's a jolly good fellow." In expressing his gratitude to the Association, the Dean stated that of all demonstration material which he used in his lectures there was none more useful and helpful than the botanical models presented by the Alumni Association. Mr. E. W. Runyon, '73, related some amusing incidents of his student years.

Toastmaster Wimmer closed the festivities by expressing the hope that the evening had served to show the Dean the love and affection which all have for him, the respect and esteem in which he is held and the appreciation of his work. If all this had been accomplished, the purpose of the dinner had been amply fulfilled.

Tea Set presented by the Alumni Association.

ALUMNI BALL ANNOUNCEMENT.

The Eighteenth Annual Ball of the Alumni Association will be held at the Hotel Majestic, Central Park West and Seventy-second Street on the evening of February 11th. The committee having the affair in charge is doing its utmost to have as successful an affair as in past years. This is only possible if the members and friends of the Alumni Association will turn out and assist by being present. The committee believes that it has chosen an ideal location, easy to reach from all parts of the city. The ball room of the Majestic Hotel is a beauty and arrangements have been made to have refreshments served. The date, February 11th, Lincoln's Birthday Eve, ought to tempt many to come early and stay late, as they will have a holiday the next day and will therefore be able to rest after having tangoed the night before.

DON'T FORGET — KEEP THIS DATE IN VIEW
ALUMNI BALL
HOTEL MAJESTIC
Seventy-second Street, Central Park West.
LINCOLN'S BIRTHDAY EVE
FEBRUARY 11th, 1914.

Minutes of the Stated Meeting of the Alumni Association of the College of Pharmacy, held on Wednesday evening, December 10, 1913, in the Alumni Room of the College.

President Weinstein in the chair.

Present:

A. B. Daub,	'13
W. Taylor,	'13
F. A. Leslie,	'04
J. Hostmann,	'06
E. C. Steinach,	'00
C. P. Wimmer,	'02
A. Henning,	'76
E. Brooker,	'11
J. Legoll,	'13
S. F. Brothers,	'85
J. Weinstein,	'06
J. H. Hecker,	'08
P. Mayerowitz,	'12
A. Vorisek,	'98
S. H. Fritz,	'11
Geo. Hohmann.	'08

The minutes of the special Executive Board and regular stated meetings were approved as read.

The Treasurer's report was read, accepted and ordered placed on file.

Dinner Committee: Dr. Wimmer reports progress.

It was moved, seconded and carried that a five-miuute recess be taken for the distribution of dinner tickets.

Ball Committee: Progress.

Correspondence: A letter was received from Mr. I. A. Solomons, Jr., of Savanah, Ga., in which he acknowledges receipt of his Alumni certificate.

Election of New Members: Motion was made, seconded and carried that Mr. W. A. Hoburg, Jr., be elected to serve the unexpired term of Mr. William Pruss on the Executive Board, whose term of office expires in 1916. Mr. Hoburg was duly elected.

New Business: Motion was made, seconded and carried that the editor of the Alumni Journal be permitted to change the name of this publication to The New York Journal of Pharmacy.

At the request of Dr. Wimmer the Treasurer promised to furnish him with a complete list of members in

good standing on or about January 1, 1914.

There being no further business, it was moved, seconded and carried to adjourn.

GEORGE HOHMANN,
Secretary.

ALUMNI NEWS.

Louis Weiss, '13, was married to Miss Antoinette Fischer on the 1st of January, 1914. Mr. Weiss and bride made an effort to get marriage lincense No. 1 at the newly established license bureau of The Bronx. They were, however, a moment too late and succeeded in getting No. 2. Miss Fischer was a teacher in P. S. No. 83. Our congratulations.

Morris Friedman, '06, announced his betrothal to Miss Frances Cahn. Miss Cahn has a well-established millinery shop at 119 West 116th St. (Frances & Clarice). The reception took place at Carlton Hall on Sunday, January 18th. Mr. Friedmann is working for Mr. Geo. Bruns. Heartiest congratulations.

Lewis L. Caplan, '13, is in business for himself at 4322 16th Avenue, Brooklyn.

The following have been reported by our Phi Delta Chi reporter:

Bro. Allen, '13, is with Bailey, 75th St. and Columbus Ave.

Bro. Donovan, '12, is located with the Maugatauk Drug Co., Maugatauk, Conn.

Bro. Lonis, '08, is with the Mykrantz Co., Columbus, Ohio.

Bro. McGurty, '03, is with the Central Gas Co., this city.

Bro. Curly Oehlers, Phar. D., '13, has announced his engagement to Miss Theda Champlin, of Leonards Bridge, Conn.; Curley is with Dehls & Stein, Chemists, this city, but manages to run up to the country here and then. All his friends join in wishing him happiness galore. Bro. Oehlers is living in the old Phi Delta Chi stronghold, 75 West 68th St.; others who live in the same "den"are: Peddie, Murray, Lord, Graves and Frawley.

Bro. Ritter, '07, is in the Canadian prairies, at Richdale, Alberta.

Bro. McDaniels, '12, is in business with his father at Dover, Del.

Bro. Hutton, '10, is working in White Plains.

Bro. Wise, '10, is manager of the Riker-Hegemann store at Schenectady, N. Y.

Bro. Kipp is travelling the Pacific Coast for Borroughs, Welcome & Co.

DR. SCHIEFFELIN'S DAUGHTER MARRIED.

Miss Margaret Louisa Schieffelin, daughter of Dr. and Mrs. William Jay Schieffelin and a grand-daughter of Mr. William H. Vanderbilt, was married to Mr. Frederick Henry Osborn on January 10th, 1914, in the Madison Avenue Presbyterian Church.

Miss Mary Schieffelin was the maid of honor. Some of the guests at the Church were Mr. and Mrs. Andrew Carnegie, Mrs. French Vanderbilt, Mr. and Mrs. Sloane, Mr. and Mrs. John Hays Hammond, Countess Szechenyi, Mr. and Mrs. John A. Dix and many other notables. We extend our sincere congratulations.

METHODS IN STUDYING MATERIA MEDICA.

C. W. Ballard, A. M., Ph.C.

I have been asked many times if the study of materia medica cannot be reduced to systematic form; if there is no method by which the essential facts may be easily grasped and retained in mind. I take this opportunity of reiterating and explaining the answers I have given to these queries.

We start with the great advantage that these studies, from the standpoint of the student, are regarded as useful and necessary knowledge; but he is overcome with the multiplicity of detail. He finally loses himself in a bewildering maze of facts and either crams the material word for word, thus losing sight of the corelating of one fact to another, or gives it up entirely after a vain attempt to commit everything he hears to memory. A knowledge of the essentials of pharmacology would give the student a better chance to reason out the therapeutic effects of drugs from their action, but pharmacology is a science in itself and there is little to be gained by adding another study to the already crowded pharmacy curriculum unless we lengthen the course. Undoubtedly this latter means of solving many of the problems encountered in the schools, will eventually be adopted. The history of every school shows that there has been an increase in the amount of time required to obtain a diploma; the increase being made voluntarily or involuntarily to comply with the requirements set by the Conference of Pharmaceutical Faculties.

Considering the subject of materia medica we find that there are certain facts to be noted in regard to each drug studied. I might set forth these facts in the following order:

1. Official Latin Title (if official).
2. Official English Title (if official).
3. Synonyms, common names or trade names,
4. Definition as set forth by the Pharmacopoeia.
5. Botanical Family (if drug is of vegetable origin).
6. Habitat (if drug is of vegetable origin).
7. Important constituents.
8. Action.
9. Therapeutic uses.
10. Preparations, their strength and dose.

In my recitation work on the subject I have urged the student to adopt this or some other regular order of procedure in studying each drug and not to consider each in haphazard fashion. If the topics of such regular order are firmly fastened in one's memory he is not as apt to omit some of the details as would be the case if in one drug we considered the action first, while in the next we studied the definition first; having no definite point for beginning or ending and unnecessarily overtasking the mind in trying to remember what follows next. My experience has been that when one has the mechanical details of a certain order of topics so well in mind that he does not have to stop to remember what follows next, he is less liable to waste his energy over mechanical details and will thus conserve energy for the more difficult task of learning the real facts. This is the first step in systematizing the study and at the same time of covering the whole field.

We will now turn our attention to classification according to specific topics or the covering of one of the details. Drugs of vegetable origin may be classified according to the botanical family in which the plant yielding the drug is placed. This classification by families in many cases will give valuable information as to the constituents and action for in quite a few instances drugs in the same family have similar constituents and actions. Another method of classification is by habitats, although this is not of as great importance as other classifications. In the medical course the therapeutic classification is almost entirely employed, because the object in view is the intelligent application of drugs in the treatment of disease. This, of course, is not the particular object in view in the study of materia medica in the pharmacy school, but nevertheless it is important enough for our purposes to warrant a classification according to therapeutic uses or according to action.

The various topics most worthy of classification are as follows:

1. As to botanical families.
2. As to habitats.
3. As to actions.
4. As to therapeutic uses.
5. Standardized drugs.
5. As to synonyms.
7. As to constituents.

By many students the terms action and therapeutic use are thought to be synonymous. This, of course, is not the case, although the therapeutic use is dependent upon the action of the drug and it might be well to differentiate between the terms and illustrate with a typical example. Selecting the drug ergot for purpose of illustration, we find that this drug acts upon the involuntary muscular tissues causing contraction of these; therefore ergot in point of action is a stimulant or constrictor of the unstriped muscle fibers. This action of ergot is the cause of the therapeutic effects, as we note ergot is employed as a vaso-constrictor and ecbolic, both of which uses are due to the constriction of the unstriped muscular tissue. Action corresponds to cause and therapeutic use corresponds to effects of this cause.

Besides making separate lists or classifications, we may prepare a complete synopsis combining the individual items of information so that we may have a complete résume, omitting superfluous words and combining the most material in the least space. Culbreth's volume on Materia Medica, the reference book recommended in this school, presents an excellent outline form for the vegetable drugs of the materia medica. Any student may construct his own outline in much less time than is usually employed in recopying his lecture-notes and will obtain all the advantages claimed for the recopying method, together with the great advantage of having the principles set forth in distinct form and not hidden amid unnecessary words. I append a blank form of outline especially adapted to our needs so that my explanation may be clearly understood.

Off. Title	Family	Habitat	Constituent and %	Uses	Preparations and Doses

I know that it is usual practice among our students to recopy their

lecture-notes and assemble the rough material into readable form. Many men have told me that it took them two or three hours to rewrite their rough notes. While I will not commit myself by saying that the outline plan is superior in all subjects of the pharmacy curriculum, I do make the assertion, founded on results, that this plan is excellent in materia medica. The only disadvantage being the omission of the explanatory material given in the lecture. Coupling an outline with brief notes on the explanatory material is very near the ideal method. Rules as to the taking of lecture-notes and the exact details to note while the lecture is in progress, cannot be given for any subject or lecture. The student must acquire the faculty of obtaining the essential facts and omitting the words used to clothe these facts and bind them into lecture form. Judgment and intelligence can no more be dispensed with in taking a lecture than in any other work. A stenographer may obtain the lecture word for word, but this method will be more of a hindrance than a help, for after transcribing the notes, although he will have an exact record of the lecture, he must now separate the facts from the words used to connect them. Thus taking lectures is not mere mechanical work. Another point is not to allow lectures to accumulate before you transcribe them, do this work while the lecture is fresh in mind and you will be saved the trouble of wondering what some of your rough notes mean.

Considering the question of text-books. Quiz-compends of the old type consisting of questions and answers are utterly worthless because the man who studies from them devotes his time to learning the answer to a specific question, rather than learning the subject they are represented to cover. He ilustrates perfectly the psychological law of association. He associates a certain combination of words as question with another combination as answer. Happily this form of compend is losing favor with the publisher in these times. The newer form of compend is intended as a brief outline, as a condensation of the essentials and as such has some value for the student. The main difficulty in the use of all forms of compends is that they presuppose a knowledge of the subject they are intended to cover. As understood by the average student, the quiz-compend is an easy and rapid way of cramming facts to pass an examination and in many cases is used as such without the necessary preliminary knowledge. The better plan is to construct one's own compend.

The larger text-books are replete with facts but are intended for reference and cannot take the place of the lecture. There is so great an amount of material in these books that it is difficult for the student to memorize all the facts presented, more especially as he has to separate those which are necessary to him from those which he does not need. Used as reference books where one may look up facts when in doubt they are, of course, invaluable. They must contain all facts and details in order to be of value for reference and for this very reason are, to say the least, not satisfactory for study unless supplemented by lecture and recitation work.

I have endeavored to point the way for the student to systematize for himself and rid himself of as much of the mechanical part of the work as is possible. After systematic and concise outlining there comes the task of learning the subject-matter of the outline. No schemes can be devised to take the place of concentration and solid study. But we can better give our attention to this major object by not wasting energy in trying to commit to memory whole lectures or in trying to recollect mechanical and minor details.

I hope at some future date to be permitted to present a few words on the subject to toxicology in the pharmacy curriculum with ways and means of simplifying this study.

F. R. S., New York. The State Board of Pharmacy allows the actual time spent at college as practical experience and not two years as you seem to suppose. It amounts to about 15 months. No extra time can be allowed for work on the three extra days of the college week. In all, 48 months of practical experience must be shown.

L. S., New York. An alcoholic solution of guaiacol with ferric chloride gives a light green color, whereas creosote gives a bluish color with the same reagent.

Ph.C., '08. The course for the Doctor of Pharmacy (three years' course) will be given only once more, namely in 1914-15.

R. G., New York. You may dispense Aqua Aurantii florum for Aqua Naphae.

Student, '14. The students of the College of Pharmacy have all of the privileges of Columbia University students. You can join the Athletic Association upon payment of the usual fee. The Gymnasium fee is $7.00 per year.

Alumnus. You complain that you do not receive the Alumni Journal. The great trouble with our Alumni members is that they do not notify us promptly of a change in address. Yours is such a case. Your journal has been mailed to an address different from the one you give in your letter. Inasmuch as you are a life member of the Association you are entitled to the New York Journal of Pharmacy. Part of your life membership payment has been applied towards your subscription.

R. R., New York. You are right, Dionin is a Morphine derivative.

L. A. F., Bronx. Inasmuch as pyramidon is soluble in water in the proportion of 1:15, you should have no difficulty in preparing a 5% solution of it.

Its solubility coefficient tells us that a saturated solution would be 6.25% strong. The Farbwerke manufacture the following salts of pyramidon: Pyramidon salicylate, pyramidon acid camphorate and pyramidon neutral comphorate. The average dose of these salts is about 9 grains. They can be had in tablet form.

P. W., New York. It is one of the rules of the State Board of Pharmacy that each pharmacy be required to have the following minimum equipment of utensils:

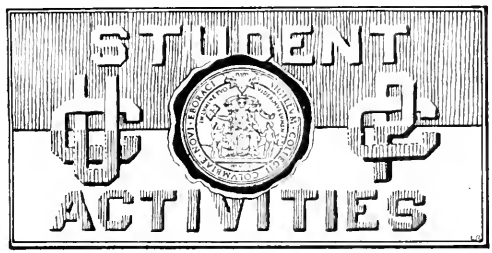
One base scale capable of weighing 1 grain or less.

One set of accurate troy weights from 1 grain to one ounce.

One set of accurate metric weights from 20 milligrams to 20 grams.

A set of glass graduated measures, two or more in number, capable of measuring from 10 minims to 16 fluid ounces.

A set of glass graduated measures from 5 to 500 cubic centimeters.



Edited by LEO ROON, PH. CH.

STUDENT BOARD:

L. N. BROWN, '14.
F. FLETCHER, '14.
B. E. GRAYSTONE, '15.
MISS. M. O'CONNOR, '16.
J. J. RAMPULLA, '15.
A. ZIPEROWITZ, '14.

EDITORIALETTE.

Come on there, all you fellows!

Of course you're not going to

Let this college fall by the wayside!

Life, spirit and snap would make

Every day of work here, a day of pleas ure for you.

Go to it! Obey that impulse!

Everybody's doing it now!

Stand up and cheer for old Columbia is

Part of a famous song you ought to know. Become

Intimately familiar with this and many other

Rousing Columbia songs and cheers. Keep

In touch with all the activities at Columbia and

This part of it "The Columbia University, College of Pharmacy".

Now comes the question, how to do it?

While it is realized that many of our students are self-supporting and that their spare time is occupied between home study and outside work, we have with us many students whose time is their own.

From these students the College asks and does expect support. Do you not feel duty-bound to offer at least your spare moments? **You must help** the social activities of the college to catch up with the stiff pace set by the educational activities. When these two run side by side and stride by stride, then and only then will this be a real college.

Boys! Let's have a REAL COLLEGE!

SPIRIT.

Not "**Spirits**" before or after taking, but Spirit with a large letter, that healthy energy, ardor or enthusiasm which grips each and every one of us at some period of our existence causing us to concentrate our powers for

some common movement, some general interest, some universal benefit. This **Spirit** must come from all, Senior, Junior, University man, yea, even the lofty Graduate.

Monday, Wednesday, Friday, Tuesday, Thursday, Saturday from September to May, with two weeks free at Xmas, for two long years, you come to College. Hustle to this lecture, rush for that three hours of laboratory or remain outside of the quiz room as long as possible. The day is over, once more a rush; this the final one of the day, to work or to home, trying to forget for at least twenty-four hours, that College exists, or that there was ever such a person as John Smith, the fellow sitting next to you in Botany or Miss Brown, the grind of Posology.

Did it ever occur to you that out of your own section, you were acquainted with a very few students? Moreover, your own section was only one of three of the Junior or Senior Classes? That the days you are not at College, it is just as hustling, bustling, busy beehive as on the days you are required to attend? Men and women too—there **are** other men in other sections and classes who are worth meeting and knowing. No time like the present. Don't wait till after years to meet a man who was in your own College Class, but a different section. Life is short, and it behooves each and every one of us to make the best of all we find in it and of it. But how?

You say you have no social gatherings, no athletics, no general clubs; nothing in short which would tend to bring the student body together. Why have you not these aids, why not monthly gatherings, why not Glees? It is up to you, and you alone, why these features are not living ones today. Let us forget ourselves for awhile, let us grow unselfish, willing to spare one hour now and then from business, pleasure, study, in order to learn to know Alma Mater better and at least get on a speaking acquaintance with more than half her eager, hustling children. Then and only then will College Spirit take root, never to be dislodged from a firm planting by 1914, 1915, 1916.

MAY O'CONNOR, 1916.

"Get the habit"! Watch the **Journal** posters for daily news of happenings at the University and the College.

Glee Club—Coming.

Student's Night—Watch the **Journal** posters.

SENIOR CLASS ELECTION.

The early part of December saw the senior class election. After an exciting and strenuous tussle, which resembled the Mexican senate in session, the following officers were elected:

J. Goldstein ..... President
L. V. Mango..... Vice-President
M. H. Dixon..... Secretary
M. Stewart ..... Treasurer

"Pax Vobiscum."

Orchestra—Coming.

YOUR DANCE.

"Haste thee, Nymph, and bring with thee
Jest and youthful Jollity,
Quips and Cranks and wanton Wiles,
Nods and Becks and wreathed Smiles,
Such as hang on Hebe's cheek,
And love to live in dimple sleek,
Sport that wrinkled Care derides,
And Laughter holding both his sides.
Come and trip it as you go,
On the light fantastic toe;"

To the
First Annual Dance
of the
Columbia University Pharmacy
Students,
which will be held at
Columbia University Gymnasium,
on
Friday Evening, January Thirtieth,
Nineteen Hundred Fourteen.
Tickets, One Dollar, admitting Ladies and Gentleman.

Dance Committee.

J. Paulonis, 1915, Chairman

B. Maslon, 1913; B. J. Davis, 1914; M. Levine, 1914; D Franceschi, 1915; L. V. Mango, 1914; F. A. Frawley, 1914; J. Mendiola, 1915; J. Friedlieb, 1915; J. Sesta, 1915; H. Hammer, 1914; M. Stewart, 1914.

"Come on along"; you'll have a good time, so will she!

Surplus goes to the Library fund, not to the Committee; philanthropy a la Ford.

ATHLETICS.

Did you say we had no athletics? Here's something to make any college man's heart swell with pride.

Listen! Did you know that Manfred Simon, 1914, won the Van Ambringe Cup after winning a series of four runs of about five miles each? That he was the first Columbia man to finish the inter-collegiate cross-country championship? That he was on the 1914 inter-class cross-country team and won? That he got places in the one and two mile races in the inter-class track meet?

Did you know that L. N. Brown, 1914, made the 1 mile relay team last year and won his numerals?

Did you know that Gustave Simon, 1912, was Columbia's high jumper, next best to famous Harry Babcock, now Olympic champion pole-vaulter?

Did you know that Deffaa, 1912, made Columbia's varsity swimming team?

Did you know that Dougherty, 1915, was on the basket-ball squad; or that

W. A. Smith, 1915, is a candidate for the crew and according to Coach Rice is making good; or that

A. C. Synder, 1915, is on the track team and did 440 yards in 54 seconds? Bernie Wefers, coach, is trying to induce him to give up freshman basket-ball team, for which he is making a strong bid.

Does this show lack of good material? Decidedly, No!

These are the men, who by their willingness to go out and do something for the name and fame of the College, realizing that their efforts would neither be heard of nor ap-

preciated, have shown the highest type of college spirit.

All of us ought to follow and take personal interest in the efforts of these men and feel proud of their achievements.

Shall we be indifferent and keep these facts guarded as secrets, as we have done heretofore, or shall we encourage and honor such men?

If there is any man who feels that he could represent Columbia in any branch of athletics, the faculty and surely, the student body would be or should be willing to at least pay that man's gymnasium fee of $7 per year, which every Columbia man must pay before he has the privilege of using the Gym.

For information come to **Journal** office. Columbia papers on hand.

YE SENIORS.

The Seniors of to-day will be the graduates of to-morrow and at that time, most likely, scattered to the four corners of the earth.

Then and not until then will you fully realize what the College of Pharmacy, your friends and also your classmates mean to you. But then it is too late, you lose connection with the College and gradually your friends and classmates drop from view and you have to choose new friends and new associates, never hearing—far less seeing your classmates again.

Think this over and if you disagree—ask some one who has been through the mill. If you agree, ask yourself how it can be remedied.

It is upon this question I wish to offer a few humble suggestions and to ask the members of the senior class to bring forward some suggestions and invoke some **class spirit**, that will help to hold and bind together the class of 1914 of the New York College of Pharmacy, so when we each take our various ways, we may still be in connection with our fellow classmates.

I therefore offer the suggestion to hold a special class meeting for that purpose.

I also advocate that the class make arrangements to hold a banquet every five years—or still better every year. In so doing it will enable the members of the class to renew their fellowships with their classmates.

No doubt the majority of the class, upon reading this, will say it is impossible, but I wish to say that it is far from impossible. To the writer's personal knowledge there is one class and only one class that has held together the members of its class after graduation. That class still has its annual banquet and no small attendance at its reunions either. It is no other than the Blizzard class of 1888 of the N. Y. College of Pharmacy—of which our esteemed Dr. Diekman is a member.

Although I have not interviewed Dr. Diekman personally, upon this subject, I am sure he would help the class of 1914 to carry out the same plan that his class has so successfully done for these past 26 years, namely, the annual banquet.

My final suggestion is for each member of the class to think these things over and then to act upon them as an entire class or not at all. For I believe in the old maxim "United we stand—Divided we fall."

L. N. BROWN, '14.

KAPPA PSI.

Gamma Chapter.

C. Hergert.....Regent
E. Baldwin.....Vice-Regent
F. Fletcher.....Secretary
F. Callahan.....Treasurer
M. Stewart.....Historian

At the opening of college, the Gamma Chapter made particular effort to get among the new arrivals, to make their acquaintance and to see that they felt at home in scenes so new to them.

For this purpose, a smoker was held at Healy's and many of the Juniors look back with pleasure to that evening. Songs were rendered by Bros. Hayes, McBride and Baldwin, while Bro. Schaefer "tickled the ivories." Speeches were made by Dr. Leslie, Mr. Hostmann, Bro. Hergert and others.

Each person present received a "corn-cob" and the "makin's" were plentiful. Refreshments, together with witty (?) stories came thick and fast and at an early hour the company broke up with three cheers for Kappa Psi.

Those about to become acquainted with the "goat" are: C. Boehlert, G. Reichardt, J. F. Andrews, F. Ward, B. Graystone, E. Cragg, A. Bankert, W. Gurry, J. Lynch, L. Taylor, E. Madden, J. Sinclair.

PHI DELTA CHI.

Gamma Chapter.

Francis A. Frawley.....President
Edward Schaefer.....Vice-President
Pasquale Guerrieri.....Treasurer
Brooke J. Davis.....Secretary
Maynard H. Dixon.....Sergeant
Edwin T. Murray.....Guard
Ray M. Peddie.....Chaplain
Clarence S. Lord.....Editor

Gamma Chapter started the year favorably with thirteen active men, eleven seniors and two post graduates. Messrs. Brown and Rose, both 1914, together with a number of juniors which have been pledged will soon fill the ranks.

The annual smoker of the fraternity was held on the evening of November thirteenth, and it certainly was a most enjoyable affair. The fraternity was fortunate in having as its guest Professor V. Coblentz, head chemist for E. R. Squibb & Son and formerly head of the Dept. of Physics & Chemistry at the college. He related incidents of the "old days." Brother Laffler of Xi Chapter, Ohio State University and Brother Schad of Alpha Chapter, University of Michigan, were also present and had their little "say."

Refreshments, smokes, etc., of course.

TAU EPSILSON PHI.

Alpha Chapter.

Chancellor.....Dr. Monroe H. Weil
Vice-Chancellor.....Henry L. Hudes
Treasurer.....Ephraim Freedman
Scribe.....Dr. Israel Schwartz
Asst. Scribe.....Harry J. Hammer

The annual smoker of the fraternity took place at Laurel Garden on December twenty-first.

A most interesting program, entirely devoid of any of the objectionable features usually prominent at most smokers, was thoroughly enjoyed by a large and enthusiastic audience.

The entertainment of the evening was contributed solely by members of the fraternity and all present were unanimous in unstinted praise of the various performances.

Useful souvenirs and refreshments were provided. All chapters were represented, the Cornell delegation having come to New York for the occasion and contributed strongly to the success of the program.

Dr. Mayer, Professor of Analytical Chemistry at Brooklyn College; Mr. Lascoff, Vice-President of the N. Y. State Board of Pharmacy and Dr. Hammer, a prominent physician of this city were present.

The college was represented by Dr. Ballard and Mr. Roon.

"Everybody Happy."

RUUFAH Oeshau Fraternity has been organized for the purpose of visiting different pharmaceutical plants, thus learning how operations are carried out on a large scale.

Student with set ideas, especially on woman suffrage, during a short campaign for position of reporter.—"I won't vote for a woman representative, but I'll vote for Miss O'Connor."

Miss Take.—"What can you recommend to keep falling out hair in?"

Drug Clerk.—"A cigar box."

M. B. '15.

Miss Prim-rose.—"Gimme another Bunsen burner; this isn't a decent one—hasn't got a collar on."

Drug Clerk, junior, experienced in tailor goods department; one capable to take charge; must furnish good references; good salary to right man. X. X.; 418 World, uptown.—N. Y. World, Dec. 8, 1913.

(Is Pharmacy going forward? Well, I should snicker!)

If Opiate would Iodine?—From the wilds of Jersey.

Stude at Prof. V's lecture.—"Shall we take notes, professor?"

Aforesaid Prof.—"Why certainly, if you can get cash for them."

* If you are English, don't waste time on this one.

Chem. Prof.—"What does fluorspar contain which is in your teeth?"

Boob.—"Dirt."

THE GIRL OF CHOICE.

Niemetz wants a handsome girl,
Good-natured, strong and tall,
A girl he can safely take
To the coming Students' Ball.
Levy wants a dashing blonde,
With talent and a load of cash,
For winter is no time to eat
Ham and eggs and corn beef hash.
Ferro's choice a brunette is,
With hair of glossy jet;
While Lovece says he'll have to take
Whomever he can get.
Spitale wants some "classy kid"
That can easily win his heart,
While Rinaldi wants an actress
Who knows how to play her part.
Vitale's aim is so very high,
Don't think he'll be content
With any girl upon this earth,
But the daughter of the president.
A girl of wisdom and of sense,
Is the apple of Mango's eye;
While Rosenthal wants a Trotta
Who can do the "dip" and sigh.
Then there is Ziperowitz,
The elected class-reporter,
Who'd ease upon his present job
To act as Mabel's porter.
I'm not so sure I want a girl,
But if I do, I pray
I'll get a girl who'll talk enough
But do just as I say.

C. LIGORIO, 1914.

S. F.—"Why is your exsiccated ferrous sulphate so dark in color?"

1915.—"Oh! I wanted to put in the 5 molecules of H_2O."

X. V.—"Doctor, I'm sorry to bring you away out to the suburbs."

M. D.—"Don't mention it. You see, I have another patient out this way, consequently I can kill two birds with one stone."

Mr. S. Port.—"Let me see some stationery."

$9 R-H Clerk.—"For your wife or—something expensive?"

M. B. '15.

If Potassium Iodide would Joseph Tell?

Prof.—"What do you get if you triturate Calomel and Antipyrin long and continuously?"

Boob.—"Tired." (Watson, the poison needle, quick!)

F. F. '14.

Prof.—"What is the difference between Eucalyptol and Ol. Eucalypti?"

Sol. Idhed.—"In Eucalyptol the 'ol' comes behind; in the oil it comes in front."

(Wireless from Huerta: "Shoot him at sunrise!")

Drug Clerk.—"Good morning, Mr. Jones. Left foot lame again?"

Old Man.—"Yes. Do you suppose its rheumatism?"

D. C.—"Old age, I guess."

O. M.—"Old age nothin', my right foot's just as old."

M. B. '15.

Dean.—"Will one of you gentlemen kindly pull down that shade? Thank you, I'll remember you in my will."

Student on the Q. T.—"Remember me at the exams."

PERSONALS.

Overheard.

Junior (female).—"Don't you think A. C. Burnett a fine boy?"

Proposal and wedding bells are now in order.

How about it?

At lectures: Hergert, Atwood, Simon, Odell, Cragg, Embree.—May they rest in peace.

Messrs. Klein and Kirschner will soon present their new farce in two acts, called, "Did we cough or did we sneeze." The epilogue of the play was furnished by the Dean.

Notice to Friends: Positively no free list.

Longfellow wrote "The Vacant Chair." Must have gotten his inspiration from Kinane, lecture seat No. 79.

Our congratulations and best wishes to D. K. Gritz, 1914, who is engaged to be "hitched-up" to Miss Mary A. Hamburger.

(The boys certainly have their nerve with them now-a-days.)

"May all their troubles be little ones."—Shakespeare.

EXCHANGES.

"Consider the fountain pen; it does its best work when it is full."—Stamford Chaparral.

"A guy without a pair of these tortoise-rim eyeglasses is about as rare as a blind man at the Winter Garden."—Columbia Jester.

"Your shaving powder aint no good," said Rustic Simplicissimus to the drug clerk, "I put some on my face last night, and the hair is longer than ever."—Texas Coyote.

"Here's a funny item, 'Cow Walks Into Bank!'" "Nothin' funny about that. She wanted to have her milk certified."—Columbia Jester.

Enid.—"I think Mr. Mutt is the nicest dancer. He's so easy on his feet."

Mirtyl.—"Humph! He may be easy on his feet, but he was hard on mine."—Dartmouth Jack-O'-Lantern.

Pa.—"You'll have to economize more this year, my dear."

Dear.—"Why, father, I don't see how you can complain. I've cut out petticoats entirely!"—Columbia Jester.

"My young man's a real gent, said Sadie, the saleslady, shifting her cud of chewing gum; he never blows his soup like a common person; he always fans it with his hat."—Pennsylvania Punch Bowl.

New York College of Pharmacy

Columbia University

The Eighty-fourth Annual Term of Instruction of this College, open to men and women, began on Monday, September 22nd, 1913.

The College offers a course of two years, consisting of three days instruction weekly, open to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on fifteen Regents' counts or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and of other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College also offers a course of three, four and six years, of three days' instruction weekly through the academic year leading respectively to the degree of Pharmaceutical Chemist (Ph. Ch.), Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.) Any one of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

A Summer Preparatory Course of twelve weeks prepares students in special directions for the regular work of the term.

Those interested will please communicate with

THOMAS F. MAIN, Secretary,

115-119 West 68th Street, New York City.

...The...

New York Journal of Pharmacy

(THE ALUMNI JOURNAL)

Published Monthly by the Alumni Association of the New York College of Pharmacy—Columbia University.

CURT P. WIMMER, A. M., PHAR. D., MANAGING EDITOR

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Copy of Advertisements must be in the hands of the Editor before the 15th of the month of publication.
The Journal will be published the last Wednesday of each month.

Contents:

A PERSONAL NOTE.

It would be ungrateful as well as selfish for us not to acknowledge publicly our sincere appreciation of the many expressions of satisfaction which have come to us since the appearance of the first issue of The New York Journal of Pharmacy.

Numberless congratulations, letters of commendation and a goodly number of subscriptions have been the fruits of our efforts. To all of them, our heartiest thanks. Also a promise: that we shall keep it up and work hard to maintain the standard established. We were especially gratified to have letters from graduates of our school who are no longer connected with the drug business, but who still have a kindly feeling towards us.

We take pleasure in reprinting two letters received:

Hamlin Bank & Trust Company.
Smethport, Pa.

Curt P. Wimmer,
New York City.

Dear Sir:

Enclosed please find subscription to the Journal, am glad indeed to receive it again. I wish I might be of some service in this undertaking or in some other endeavor for the College of Pharmacy. The memories of teachers and class mates there will always be fondly cherished by me.

With kind regards, yours truly,

GUY McCOY,
Class of 1886,
Asst. Treasurer.

The other letter:

Dear Sir:

Am pleased to enclose subscription for the New York Journal of Pharmacy. Am out of the drug business for 25 years, but can never forget dear old Professors Chandler, Bedford and Day. Always have a soft spot in my heart for the College of Pharmacy and am pleased to hear good reports about it.

Sincerely yours,
DANIEL DESBECKER,
Class of 1885.

Conclusion: If this Journal can and will serve to revive the interest of our older graduates in our school, its object will be partially fulfilled and it will be a most valuable asset of the College.

THE JOURNAL AND THE P. O.

We have made application at the Post Office at New York for entry of the Journal as second class mail matter and have all reason to believe that we will be so entered. Uncle Sam, however, wants proof that the Alumni members really desire this publication. We have, therefore, sent postal cards to the members of the Association with the request to fill them out and return them. Most of them came back to us properly filled out, but some are still missing. If you have your postal on your desk, please return it at once signed, or if you lost the card, write to us that you wish the Journal mailed and that you want part of your dues applied as your subscription. Do it now.

SIMPLE METHOD FOR FILLING AMPOULES.

By J. Leon Lascoff.

About 30 years ago Limousin introduced the ampoule as a convenient method of preserving hypodermic preparations. Ampoules were in use in all foreign countries, but very little known in this country. Only lately ampoules became known here, and they are now extensively used by the medical profession, and prepared by different American manufacturers. In France and Italy ampoules were used extensively. In 1905, in most of the Russian pharmacies, the ampoules were dispensed on prescriptions. Their process of filling ampoules was by the use of hypodermic syringe, or by heating. The retail pharmacist of this country had very little idea how the ampoule should be prepared.

Mr. Caswell A. Mayo, before the A. Ph. A., Local Branch, described that ampoules could be filled by pipette, burette, hypodermic syringe, vacuum, or by aspiration with the aid of an Auer apparatus. Several papers on ampoules were read by different pharmacists, and several apparatus for filling same were suggested. Some interesting papers were presented by Kurt Beysen, also by Steinbreuck, and others.

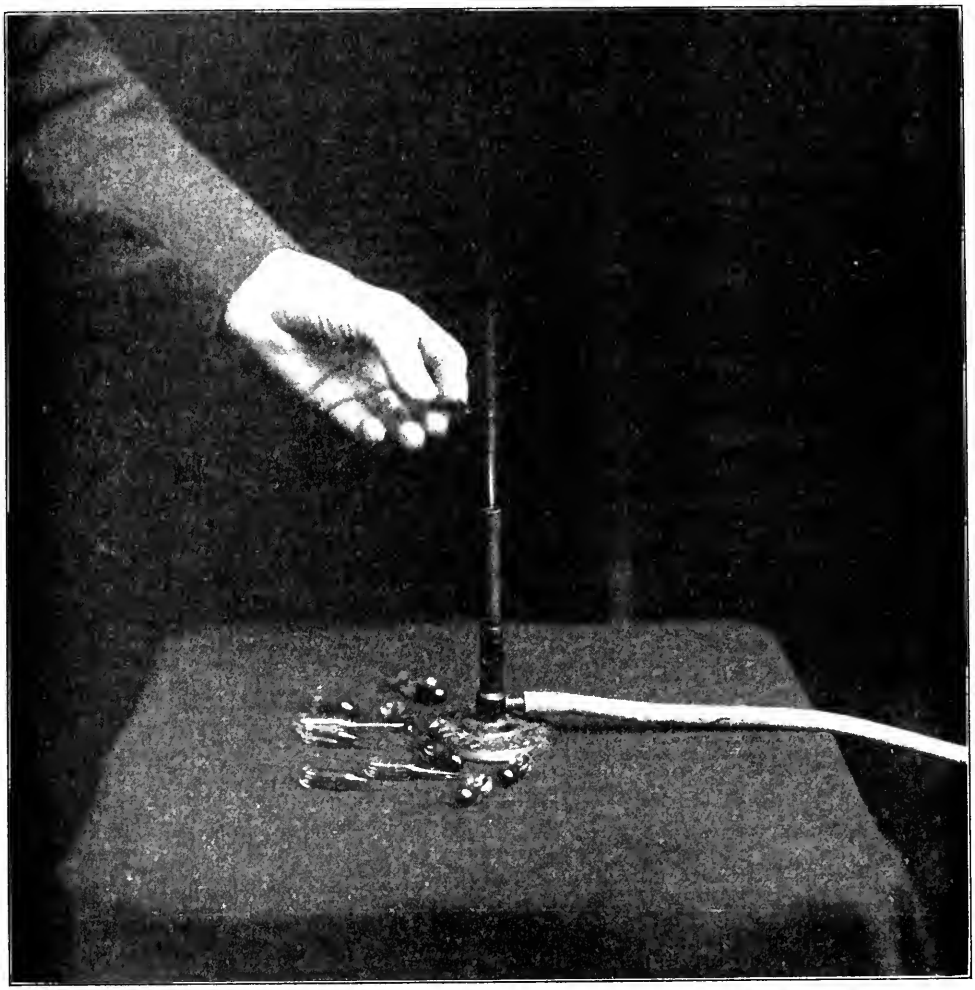
Two years ago I started to experiment with ampoules and devised a simple apparatus for filling them. I used a large test tube made of thick glass and especially thick bottom, and placed same in a holder (similar to a ginger-ale holder) put in the liquid, which was previously sterilized, put in the required number of empty ampoules, attached a large rubber cork to fit the mouth of the test tube. In the middle of the rubber stopper I put a glass tube with a stop-cock, connected same to a small rubber tubing. With the aid of on aspirator I removed the air (vacuum) and in a few seconds the ampoules were filled. After that I sealed the stem of the ampoule in a Bunsen burner, then sterilized by putting in hot mineral oil. As I found that the sterilizers were very expensive, I bought a little metal closet (on the style of a bread box) put in an electric stove (or heater), and attached a thermometer (to regulate temperature); the sterilizer served as good as any of the more expensive sterilizers that we have on the market to-day.

From the above description any pharmacist can easily and conscientiously put up ampoules in sterile form. In fact, I dispensed a good many hundreds in my establishment with very good results.

At the Nashville meeting of the A. Ph. A., while I was Chairman of the Section on Practical Pharmacy and Dispensing, I read a paper on Ampoules of Camphorated Oil. This paper will appear in the A. Ph. A. Bulletin in the near future. Since then I had a good many requests from pharmacists of different States to send them a description of the apparatus and the sterilizer, which requests were complied with.

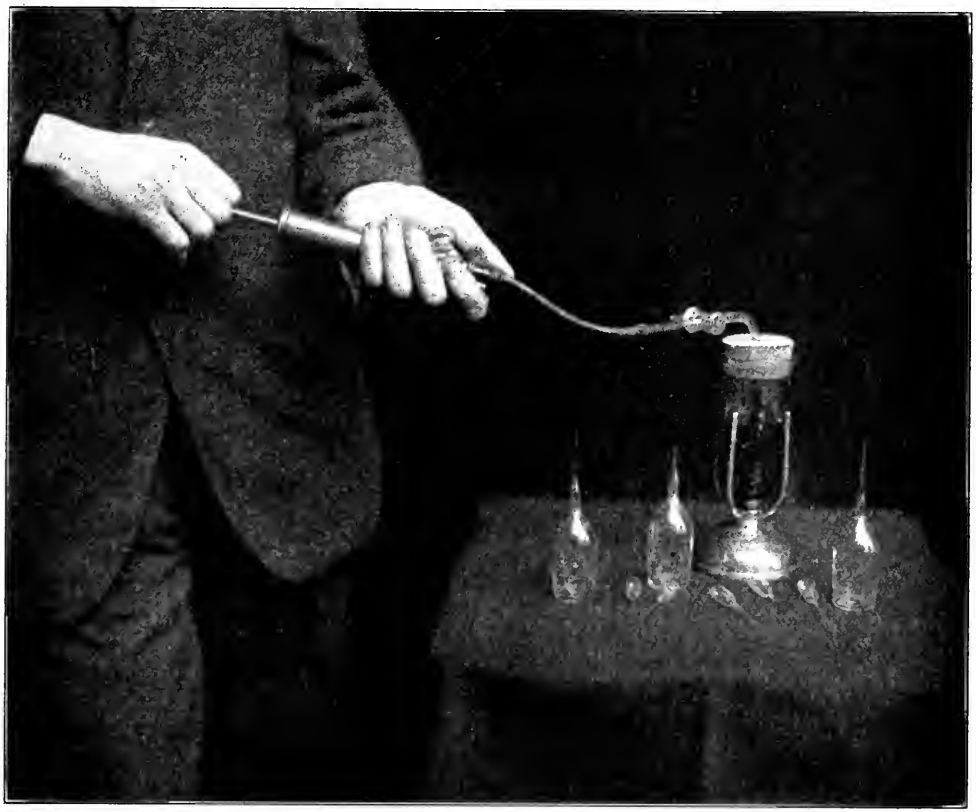
Since then, I again started to experiment with ampoules of other natures, such as sol. mercury salicylate in alboline.

During the first part of September of last year, while accidental poisonings were occurring with bichloride of mercury tablets, and while pharmacists were trying to find some device to prevent such occurrences, and the dangers resulting from the taking of one of the



most powerful, most deadly and most commonly used household chemical, bichloride of mercury, the idea came to my mind that the only safe way to put up bichloride of mercury tablets was in a special *ampoule*, containing about 2 cc. of a solution of 1 1g Cl_2 representing 7½ grains of the chemical, coloring the liquid a prominent red. This, in my opinion would entirely obviate the accidental taking of this poison, so much spoken of in the daily papers and scientific journals, also at discussions at the various pharmaceutical conferences

There is no doubt that many suggestions have been made to attempt to remedy or prevent fatalities, such as various shaped tablets, different colors, containers, labels, wrappers, and warning stoppers. Yet with all these, there is no doubt in my mind that once the tablet itself was in the hand of the intended taker that it required no thought or deliberation, no further warning, no un-



usual feel to the touch (as might occur in the dark), and the next step would be to place the tablet in the mouth and swallow. This meant that bichloride, which is used only externally, and to be dissolved in large quantities of water, for its legitimate and intended administration, should be put up in other than tablet or powder form, in order to obviate the dangers of error.

I, therefore, devised a special *ampoule*, mentioned above. This, at first, sounds very simple. All one has to do is to snap the stem of the ampoule, empty the contents into required quantity of water, and the solution is ready for use. Now, where are the advantages?

1.—Nobody can swallow a glass bottle.

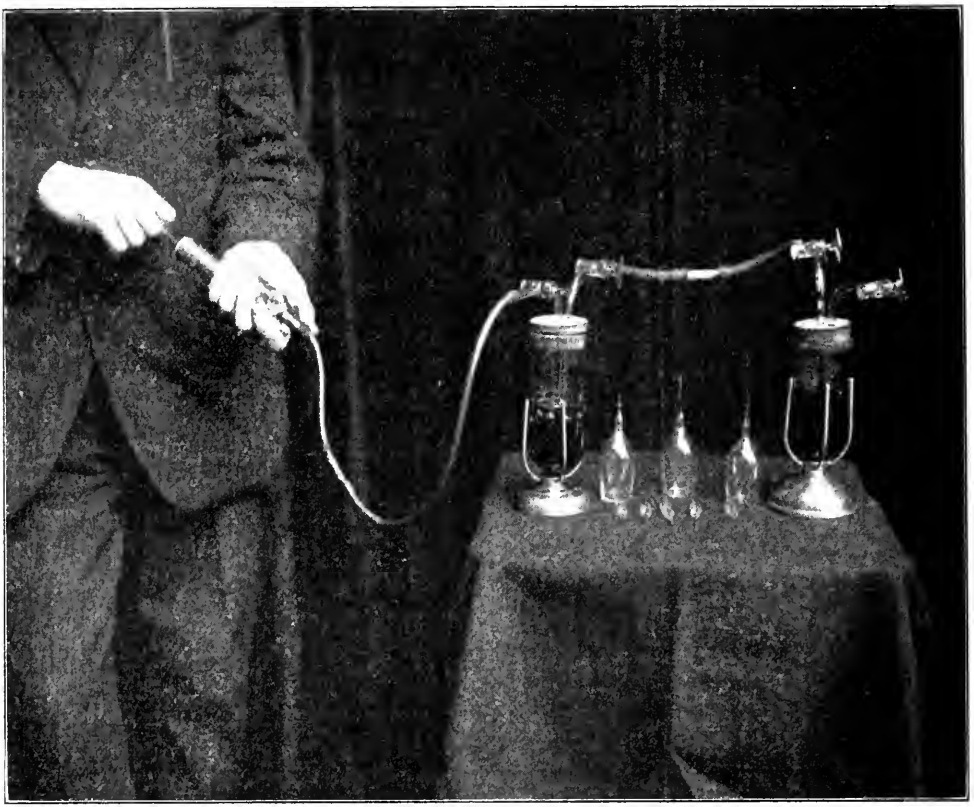
2.—The blind, the aged, are properly warned.

3.—No possible mistake can be made.

4.—Solution is practically completed on acount of its concentration in liquid form.

5.—The color, red, bespeaks of danger.

6.—When snapping the stem the ampoule *must be shaken* in order to be emptied, requiring a certain amount of thought and deliberation, which from a psychological standpoint interrupts the mental agitation of the intended suicide. These advantages, as may well be seen, really and truly overcome the common dangers of the Bichloride Tablets.



As to cost, let me say it is the cheapest ampoule that can be manufactured, in view of the fact that my method of making the solution and filling the ampoule is very simple and accurate.

DETECTION OF AGAR AGAR IN TOILET JELLYS.

By Eugene Dutz, Ph. G.

Agar Agar often called Chinese or Japanese isinglass is a substance prepared from marine algae.

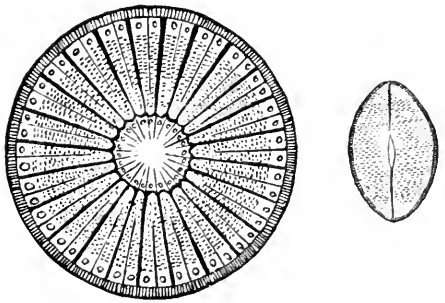
In commerce it occurs either in transparent yellowish strips or in thick pieces of a more whitish color. It is odorless and tasteless and insoluble in cold water, but yields, on being dissolved in hot water and cooled, a gelatinizing mass. Besides its chief use for making bacterial cultures, agar agar is often employed in the manufacturing of toilet jelly, and as a substitute for gelatine in the making of ice cream.

The presence of certain characteristic diatoms in agar agar induced me to devise the following process for its identification in toilet jellys.

Process.

50 grammes of the substance to be examined are melted on a water bath and sufficient distilled water added to give it the consistency of a thin syrup. Upon addition of solution of lead sub-

acetate a heavy ppt. is formed. The ppt. thus obtained is collected on a plain, folded filter allowed to drain, washed several times with cold distilled water and dried.



The dried ppt. is placed in a porcelain capsule, covered with a saturated solution of bichromate of potash in strong sulphuric acid and (5cc being sufficient) allowed to stand for 15 minutes. Distilled water is then added and the solution transferred to a sediment glass. After complete sedimentation several slides are prepared from the sediment and examined microscopically. If agar agar is present the two different types of diatoms represented in the accompanying drawing will be found.

THE CLASSIFICATION AND IDENTIFICATION OF MANGANESE.

Anton Vorisek, Phar.D.*

Manganese, Mn, occurs free only in meteorites. Its abundant compounds are found widely distributed, and in minerals they are found chiefly together with iron. Manganese is present in sea water and in some spring waters. The ashes of many plants contain manganese and there are minute amounts of it found in the animal tissues. In its elementary (metallic) form Mn is important only in the making of steel and as a component of an alloy, the so-called manganese bronze.

The compounds of Mn possess considerable commercial importance; some of them, particularly the organic ones, are used medicinally. Lately a relation of Mn compounds, present in the soil to the growth of plants, has been studied and Mn compounds considered as promising fertilizers.

The common salts of Mn are the "manganous," in which the metal is present as the divalent basic component ($Mn{+}{+}$). In most of its oxides Mn has a higher valence and exists also in two acidic components, the manganate ($MnO_4{=}$), and permanganate ($MnO_4{-}$).

Classification.

The basic component ($Mn{+}{+}$) was originally classed (Fresenius) as a member of the 3rd group, *i. e.*, together with Zn, Ni, Co, Fe, Al and Cr, a grouping which is still followed by many. In separations it is precipitated as a hydrated MnS by ammonium sulfide, the group reagent for that group. Later it was found that the members of this large group can be, with advantage, divided into two separate groups, namely, the 3rd and 4th, for which ammonium hydroxide and ammonium sulfide serve as the respective group reagents. In analysis the separation of these two groups depends on the property of the divalent components (4th group) to form soluble complex ions with NH_3, which the trivalent ones (3rd group) do

*Professor Vorisek is a graduate of N. Y. C. P., '98.

not form. Since $(Mn{+}{+})$ is divalent and does form a soluble complex ion with NH_3, there ought not be any question concerning its place in the new grouping for it logically belongs to the 4th group together with Zn, Ni and Co.

It is, therefore, not difficult to see why Mn has uniformly been included in the 4th group of basic components. On the strength of a theoretical consideration the classification is not incorrect. In practice, however, the grouping has not been justified.

It is true that in the presence of a large quantity of an ammonium salt in a solution containing $(Mn{+}{+})$, a precipitate of manganous hydroxide, $Mn(OH)_2$, is not produced by ammonium hydroxide immediately, or not at all if all air (O) be excluded from the liquid. However, in contact with the air (O), a brown precipitate of manganic hydroxide, $MnO(OH)_2$, is soon observed to form in the upper layers.

$$Mn(OH)_2 + O = MnO(OH)_2$$

Mixing and warming assist the reaction. The brown precipitate is not soluble in ammonium salts or in NH_4OH. While in simple solutions of manganese the quantity of this hydroxide formed is not large, it is very markedly increased when other hydroxides—those of the 3rd group—are precipitated from the same solution by NH_4OH. Indeed, with a large proportion of these compounds present, all or nearly all of the Mn in solution is precipitated together with them. The gelatinous hydroxides of Fe(ic), Al, Cr, not only hold some of the Mn salt by absorption, but appear to have the power to carry down the Mn hydroxide mechanically.

From this it will be evident that in the separation of the 3rd group from the 4th, carried out in analysis, $(Mn{+}{+})$ cannot be completely retained in the filtrate as a complex ion with NH_3. Its oxidation by air to $(Mn4{+})$ cannot be easily prevented while the contact action of other hydroxides (group 3) is unavoidable.

Since Mn cannot be kept out of the 3rd group, the question is can it be kept out of the 4th? It has been found that any Mn not precipitated by NH_4OH in the 3rd group can be easily oxidized by a little H_2O_2 added to the alkaline filtrate, and removed by filtration after heating.

$$Mn(OH)_2 + H_2O_2 = MnO(OH)_2 + H_2O.$$

The members of the 4th group are not precipitated from a strongly alkaline solution by hydrogen peroxide. The inevitable conclusion of this is that manganese should be classed with the 3rd group as the manganic component $(Mn4{+})$.

Identification.

The reactions utilized for the identification of Mn depend, in the main, on the property of its compounds to form acidic ions when oxidized. The original solid substance or the brown $MnO(OH)_2$ obtained in separations are the best suited for treatment.

1.—*Oxidation to* $(MnO_4{=})$ *by Fusion.*—The dry material is intimately mixed, by trituration, with 3 parts of anhydrous Na_2CO_3, and the powder heated on a platinum foil or in a capsule to fusion. A crystal or two of KNO_3 is then dropped on the edge of the fused mass and heating continued to cause a slight foaming. On cooling a green blue color

of an alkali manganate shows the presence of Mn.

$$Na_2CO_3 + MnO(OH)_2 + KNO_3 = Na_2MnO_4 + KNO_2 + CO_2 + H_2O.$$

The delicacy of this test is increased through the use of a sodium carbonate bead. A trace of the substance tested is heated in the bead to fusion and with the hot bead is quickly touched a little powdered $KClO_3$ and the bead allowed to cool without further heating. The green blue manganate is unstable; its solution rapidly changes in color. Ferric hydroxide, usually present with $MnO(OH)_2$, does not interfere.

2.—*Oxidation to (MnO_4—) in a Solution.*—The formation of permanganic acid takes place when Mn or one of its inorganic compounds (except chloride) is heated with 25% HNO_3 and some lead peroxide. A small quantity of the sample free from organic matters and chlorides is placed in a small porcelain dish, the acid and PbO_2 added, and the mixture gently boiled during 2 to 3 min. After the black particles in suspension have deposited, an intense purple color of the acid solution indicating the presence of Mn is observable.

$$MnO(OH)_2 + 3PbO_2 + 6HNO_3 = 2HMnO_4 + 3Pb(NO_3)_2 + 4H2O.$$

The PbO_2 must, of course, be Mn free. A large proportion of iron obscures the test. The presence of organic matter and of chlorides interferes, for the organic compounds are oxidized by the $HMnO_4$ while the chloride yields with it free chlorine:

$$2HMnO_4 + 14HCl = 2MnCl_2 + 8H2O + 5Cl_2.$$

3.—*Oxidation to MnO_2.*—In an alkaline solution a number of metals yield a black precipitate with oxidizing agents; in a strongly acid liquid only Mn forms a black colored compound. Chlorides interfere and must be removed before testing. The solid or solution is boiled with (c) HNO_3 and a little $KClO_3$, added in portions, in a porcelain dish. The formation of a black precipitate of MnO_2 indicates the presence of Mn.

4.—*Borax or Metaphosphate Bead Test.*—Heated to fusion in the oxidizing flame, Mn+ compounds color the bead amethyst red. In the reducing flame the color is discharged provided the heating is sufficiently prolonged.

In the 3rd group precipitate, $MnO(OH)_2$ or MnO_2 is left undissolved by Na_2O_2 and NaOH with which the precipitate is treated. Unless a large amount of iron is preesnt, the residue is dark brown or black in color and is then tested for Mn by tests 1 or 2, which serve to detect even a minute amount of the element.

RADIUM.

By Fannie Hart, Ph. G.*

Radium, discoverd by Prof. and Mme. Curie in 1899, is closely related to Barium. Its chloride is separated from Barium chloride by repeated fractional crystalization.

Radium shows a characteristic spectrum and colors the Bunsen flame carmine red.

Radium salts are luminescent and excite phosphorescence in a variety of compounds.

*Miss Hart is a graduate of N. Y. C. P., '10. Read before the Women's American Phar. Ass'n.

Radium compounds bring about chemical decomposition and physiologically affect vegetable and animal organisms. Because of its decomposition through the constant giving off of the so-called Alpha, Beta and Gamma rays, radium salts spontaneously develop heat and in consequence always show a slightly higher temperature than the surrounding objects.

It has been shown (by Ramsay & Soddy) that the *emanations* from radium bromide when collected, change, in a few days, into the element helium. The alpha rays are positively charged helium atoms, shot out with about 1/15 the velocity of light. The beta rays are about one hundred times more penetrating than the alpha and consist of negatively charged corpuscles, moving with a velocity of the same order as that of light. The gamma rays are from ten to one hundred times more penetrating than the beta.

The emanations are given off very slowly from the solid radium salts, but when strongly heated or dissolved, the emanations are given off quite freely.

The period of radium emanation is from three to four days and radium, free from its emanations, will again produce the equilibrium amount of emanation, if sealed for about thirty days.

Pure radium free from its disinegration products, gives out only alpha rays, but owing to the presence of these products, radium salts ordinarily emit all three types of radiation.

The rate of disintegration of radium corresponds to the transformation of about thirty-five one-hundred-thousandths of its mass per year and the time required for exactly half of any given quantity to completely disintegrate into other elements is about 2000 years. It has been supposed that the final stable form of matter ultimately attained after the series of radio-active changes, is ordinary lead.

Radium emanation is a chemically inert gas of the Argon type. It shows a characteristic spectrum like radium and when strongly cooled condenses at 150° C. In 1911, R. W. Gray and Sir W. Ramsay determined the atomic weight of radium emanation by weighing a known volume of pure emanation; from their results, the atomic weight was found to be 223, that of radium being 226.4. They have suggested the name "Niton" (Greek for "the shining one") for radium emanation.

One of the properties of radium emanation is to cause bodies which are exposed to it, to become temporarily radio-active. This effect is now known to be the result of a deposit of radio-active matter on inactive bodies; this matter being called the "active deposit." The source of this "active deposit" is the gaseous radio-active emanations that radium produces. The period of this active deposit is 26.8 minutes.

By means of a kinetic method, it was established that radium emanations are about three to four times as soluble in the blood as in water under the same temperature and pressure.

The sources of radium are carnotite ores and pitchblend. Carnotite was discovered as early as 1887 by Charles Poulot in Rock Creek district of Montrose County, Colorado; it is composed chiefly of uranium and vanadium min-

erals. Carnotite was named by Poulot in 1888 in honor of Pres. Carnot of France.

Poulot found pitchblend in Gilpin Co., Colorado, which he sold to a Roman Catholic Bishop of Denver; the latter died in 1890 and bequeathed it to his successor, who sold it in 1912 to Yale College for $10,000.

To-day both carnotite ores and pitchblend are found in Green River district of Utah and the Paradox Valley of Colorado. More than two-thirds of the world's supply of radium is obtained from the ores to be found in Colorado.

The ore is found in pockets in the rocks.

Carnotite is a lemon yellow mineral usually found in pockets of sandstone deposit; the mineral may be in the form of light yellow specks disseminated through the sandstone or in incrustations in the cracks of the sandstone. It may also appear massive associated with blue, black or brown vanadium ores.

Pitchblend is a hard blue-black ore, occasionally found with an orange mineral called gummite.

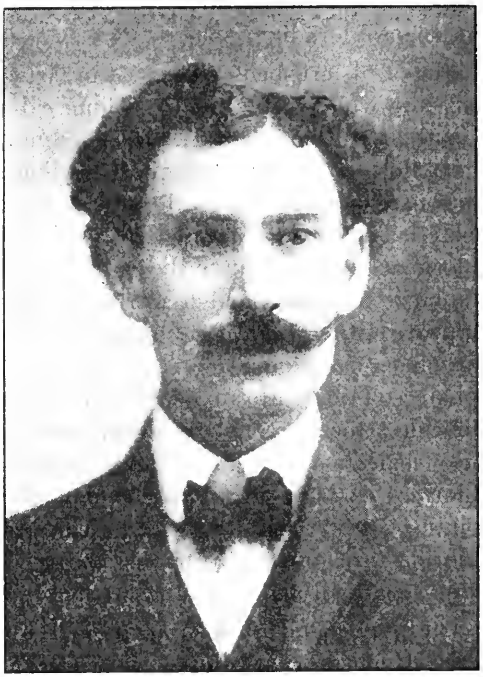
The best way of testing these ores is to wrap a photographic plate in the dark; in two thicknesses of black paper lay a key and then just above the key, suspend two or three ounces of the ore. Place the whole in a light-tight box. After three days develop the plate in the ordinary way. If the ore is appreciably radio-active, an image of the key will be found on the plate.

The manufacture of radium consists mainly in the separation of the iron and other metals held in the ores, together with the rock and the recovery of the radium in pure concentrated form or in the shape of radium salts.

The ore is crushed and placed in large vats into which a solution of sodium carbonate has been poured; after boiling, the whole is filtered and more sodium carbonate is added to wash out the sulphate. The liquid is treated with hydrochloric acid to precipitate the radium and sulphuric acid is added to form radium sulphate which is then changed to a carbonate by adding more sodium carbonate solution saturated with hydrogen chloride which precipitates only radium and barium chlorides and leaves chlorides of lead, iron, calcium, etc., in solution. The radium and barium chlorides are practically pure and ready to be separated and crystalized.

The pure metal is obtained in various ways. One process consists of the conversion of the chloride; 1/10 of a gram of pure radium chloride is electrolyzed in solution and the radium collected on a mercury cathode. The fluid radium amalgam is dried and then carefully heated in a stream of pure hydrogen gas under reduced pressure. The amalgam solidifies at 400° C., while 700° C. leaves a residue of metallic radium, the mercury being completely volatilized.

Radium or radium salts are generally carried in specially constructed glass tubes which are then slipped into tubes made of lead. The rays do not penetrate lead as easily and readily as other substances. The market forms consist of radium chloride and radium bromide which are bought and sold on the basis of the metallic radium they contain. The present price is $91,000 per grain of radium chloride and $70,000 per grain of radium bromide.



CHARLES S. ERB.

Died February 10th, 1914.

It is with great regret that we announce the sudden death of Mr. Charles S. Erb. Mr. Erb was of German parentage and was born in New York in 1867. He received his education in the public schools of this city, entered the drug business and graduated from the New York College of Pharmacy in 1886. For a number of years, he conducted a store at 65th St. and Amsterdam Ave., and later at 108 Amsterdam Ave. He was an indefatigable worker and became well-known through his kindly and optimistic disposition. He was a trustee of the College of Pharmacy, and for a number of years, the chairman of the property committee. He held the office of President of the Alumni Association for four successive years and was one of the most active workers in this body. He was an ex-president of the Manhattan Pharmaceutical Association, a member of the New York State Association, of the German Apothecary's Society and of the West Side Dispensary. He also was a Past Master of Charity Lodge, No. 727, F. and A. M. Mr. Erb contracted pneumonia on Monday, February 9th, and died the following evening at 9 o'clock. The funeral services were conducted according to the Masonic rite by Charity Lodge, on Thursday evening. He was interred at the Lutheran Cemetery.

"Man dieth and wasteth away; yea man giveth up the ghost and where is he? As the waters fail from the sea and the flood decayeth and drieth up, so man lieth down and riseth not until the heavens be no more."

COLLEGE NOTES.

The Annual Meeting for the Election of Officers of the New York College of Pharmacy will be held on Tuesday evening, March 17, 1914. President Butler has appointed the following nominating committee to prepare a list of candidates for the offices to be filled:

William P. Ritchey, Caswell A. Mayo,
Henry C. Lovis, F. K. James,
O. G. Kalish, Ewen McIntyre,
F. A. H. Anger.

It is seldom that the College has had such a large audience as was present to hear the last lecture, given by Mr. Harry B. Mason, and it is hoped that all pharmacists in and about New York will consider this a cordial invitation to attend the lecture to be given on March 17.

Professor George C. Diekman.

Detection of Oil of Sesame.

G. F. A. ten Bosch, in Pharm. Weekbl., 1913, 526, recommends that the reaction of Kries, in modified in place of the customary methods, form be employed. The reaction is shown as follows: One drop of oil of sesame is dissolved in one ccm. petroleum ether (benzol or chloroform may also be employed), and an equal volume of a mixture of one volume of sulphuric acid and ½ volume of hydrogen dioxide solution (prepared at lowered temperature) is added.

After shaking a green color is at once noted. The author states that the presence of sesamin is responsible for the color reaction. Examination spectroscopically in layers of one ccm. thick shows the following: A sharply defined absorption band in the red, and a less sharply defined band in the yellow part of the spectrum.

If ground sesame seed is shaken out with petroleum ether, or with benzol or chloroform, the presence of sesamin can readily be demonstrated by this method. Bosch claims that the presence of 0.5% of sesame oil in olive oil is readily detected as follows: 1 ccm. of the oil to be examined is mixed with 1 ccm. of petroleum ether, and an equal volume of reagent added. Shake thoroughly, and note after separation of the layers, the characteristic green color, more or less intense.

Estimation of Morphine by Means of Extraction with Phenyl-Ethyl Alcohol.

A. D. Thorburn recommends the following method in case of tablets and powders:

The powders or tablets in proper quantity are dissolved in a small quantity of slightly acidulated water. The resulting mixture is treated with 3/7 of its own volume of alcohol and filtered.

The filtrate is washed with 30% alcohol, collecting in all 15 ccm. of liquid. To this liquid are now added a few drops of ammonia water, or enough to make it alkaline, and it is then shaken out with a mixture of 3 ccm. of phenyl-ethyl alcohol, and 1 ccm. of benzine. The aqueous liquid is again shaken out with the same mixture, using 1.5 ccm. and 0.5 ccm. respectively. The three extracts are heated on a water-bath carefully for one hour, and, after cooling, enough

ether is added to make the liquid measure 20 ccm. This is now shaken out with 10 ccm. of 10/10 H_2SO_4 v. s., shaking for a period of 5 minutes. After standing for ½ an hour, the acid liquid is collected in a cylinder, and the washing or shaking out, twice repeated with 3 ccm. of water.

The combined extracts are then titrated with N/10 KOH, V. S., using haematoxylin as indicator.

1 ccm. of the deci-normal acid is the equivalent of:

0.03 gm. of crystalline morphine

0.0289 gm. of anhydrous

0.0376 gm. of crystalline morphine sulphate.

Adulterated Oleic Acid.

Von A. Roy, reports on two lots of Oleic Acid, each of which was found to be grossly adulterated. In the one sample the adulterant was found to be paraffin oil, while in the other both paraffin and fish oils were found.

5 grammes of the sample were treated with 38 ccm. of 95% alcohol and 2.50 gm. of potassium hydroxide dissolved in a minimum quantity of water. This mixture was boiled on a water-bath, with reflux condenser, for a period of ¾ of an hour, after which 25 ccm. of water were added and the mixture allowed to cool. After cooling, the mixture was exactly neutralized with hydrochloric acid, and then just enough alkali added to produce a faint alkaline reaction.

The mixture was then shaken out with 50 ccm. of petroleum ether. 25 ccm. of the ethereal layer were vaporized on the water-bath, the residue dried for one hour at 100°—105° C., and then weighed. The residue equalled 0.87 gm. and consisted of a clear and non-saponifiable oil. In per cent. this equals 34.80%.

In another sample the Iodine number, after treatment for 18 hours with the idodine reagent was found to be 137, thus showing the presence of substances capable of adding on much more iodine than is possible for a pure sample of oleic acid. The odor of this latter sample was fishy, and at once causes suspicion. The quantity of fish oil added was found to be about 16%, and the quantity of paraffin oil about 4.2%.

Substitute for Tincture of Iodine in Surgical Practice.

Prof. Dr. C. Bachem Bonn, proposed the following:—The preparation of a tablet in which is contained sodium iodide and sodium nitrate. In another tablet is contained tartaric acid. The quantities are so arranged that when the tablets react with one another in presence of water, exactly 0.485 gm. of iodine is produced, the quantity of water being 10 ccm. Moderate agitation will cause the tablets to dissolve and interact. The reaction is known to be completed when oxides of nitrogen cease to be evolved. Prof. Dr. Bachem justifies this method of procedure, because Tincture of Iodine prepared in accordance with the formula of the D. A. B., V. 1910, is not stable.

A Method for the Estimation of Resin in Sodium Soaps.

Leiste and Stiepel, in Chem. Rev. ue. d. Fett-u-Harzindustrie, 1913, 304, propose a method which is based on the solubility of resin soaps in acetone,

containing 2% of water. The sodium compounds of the fatty acids are soluble to the extent of less than 2% in the same solvent.

The authors suggest a method based on this difference in solubility. The substances to be examined may consist of mixtures of resins and fatty acids, or of mixtures of resins with sodium soaps, glycerine however must be absent.

2 grammes of the fatty mixture or 3 grammes of resin and soap, accurately weighed are placed in a nickel crucible and dissolved in 15 to 20 ccm. of alcohol. After adding phenolphthalein solution, the mixture is exactly neutralized, by carefully adding an alcoholic solution of sodium hydroxide. The liquid is then evaporated on an asbestos plate, until a pellicle forms.

10 grammes of sharp, clean sand are then added, the whole thoroughly mixed by means of a pestle, and the vaporization continued, under constant stirring, until all alcohol has been removed. The residue is allowed to cool, and then thoroughly dried in a drying oven.

The dry residue is now extracted with acetone containing 2% of water. Commercial acetone is treated with burnt sodium sulphate, until thoroughly dried and then 2% of distilled water added, about 100 ccm. of the reagent will be a sufficient quantity.

The extraction is carried out with 8 successive portions of 10 ccm. each of acetone. The liquid is thoroughly mixed with the residue, by aid of a pestle, in each instance, and the clear liquid decanted. The decanted liquids are collected in a beaker and allowed to stand. If any solid material separates out this is removed by filtration, and the filter washed with acetone. The filtrate and washings are now concentrated on the water-bath to one-half of the original volume, when the liquid should remain clear. In the event of a further separation of solids, these should again be removed by filtration. After this the rest of the acetone-water mixture is removed by evaporation, and the residue thoroughly dried and weighed.

A. Jönsson, in Farmaceutisk Revy. 1913, No. 49, calls attention to the variable composition of PASTILLES OF MERCURIC CHLORIDE. He examined a number of samples obtained on the market, each of which was required to contain a definite quantity of mercuric chloride.

The method employed was as follows:

One pastille was dissolved in 100 ccm. of distilled water, and the resulting solution filtered. 20 ccm. of the filtrate were treated with 5 ccm. of hydrochloric acid, and 100 ccm. of a saturated aqueous solution of hydrogen sulphide, heated and filtered.

The precipitate was thoroughly washed, and together with the filter was transferred to a glass-stoppered flask, taking care that none of the precipitate remained in the vessel in which the precipitation took place.

To the contents of the flask was added first 20 ccm. of distilled water and then 25 ccm. of deci-normal iodine solution, and the whole shaken thoroughly for several minutes.

The excess of iodine was determined in the customary manner by back-titration with deci-normal solution of sodium thio-sulphate, starch being used as indicator.

The results obtained were checked in that the mercuric chloride was estimated according to several other methods and were found to be correct. The samples examined were designated by letter, and were found to contain mercuric chloride as follows:

Sample "A" contained 68.60% of corrosive sublimate.

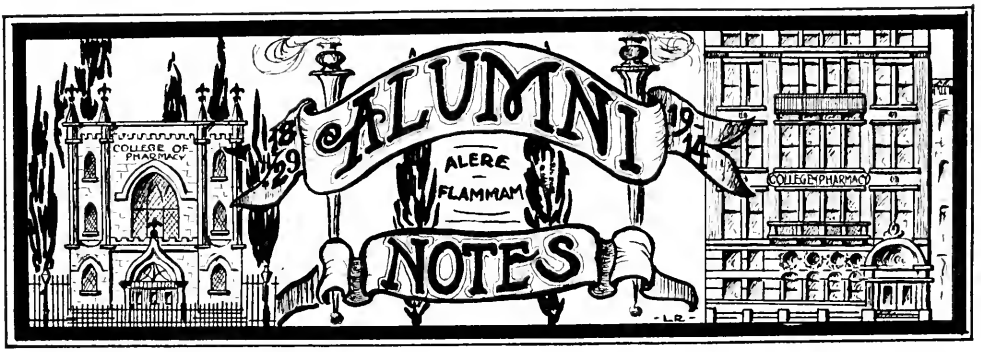
Sample "B" contained 52.90% of corrosive sublimate.

Sample "C" contained 29% of corrosive sublimate.

Sample "D" contained 27.50% of corrosive sublimate.

Sample "E" contained 15% of corrosive sublimate.

Sample "F" contained 10% of corrosive sublimate.



THE ALUMNI BALL.

The Nineteenth Annual Ball of the Alumni Association was held at the Hotel Majestic, 72nd St., and Central Park West, on the evening of Wednesday, February 11th, 1914. It was very well attended and proved to be a complete social success. The elegant ball room was profusely decorated with the electric signs of the fraternities, flags and pennants. Music was furnished by Van Baar's Orchestra, which is one of the best dance music bands of the greater city. Among those present, we noted the following: Mr. and the Misses Mayo, Mr. and Mrs. Frank N. Pond, Mr. and Mrs. N. S. Kirk, Mr. and Miss Kantrowitz, Dr. and Mrs. Wimmer, Mr. and Mrs. Goodman, Mr. and Mrs. Hostmann, Mr. and Mrs. L. Weiss, Mr. and Miss Propper, Mr. and Miss Rothstein, Dr. and Miss M. Weil, Drs. Weinstein, Ballard, Schaefer, Messrs. DeZeller (who brought the snakes along), McCartney, Starr, Wall, Berning, Hohmann, Roon, and many others. There was general expression of regret when the orchestra played "Home, sweet home," at about 3 A. M. Thanks are due to the committee which was headed by Mr. Hostmann.

SIDE SLANTS AT THE ALUMNI BALL

BY GEORGE HOHMANN

DANCING THE PHARMACEUTICAL TANGO TO THE TUNE OF THAT RIGGERTY RAGGERTY SACCHARINE RAG

THE LATEST STEPS WERE ALL THE RAGE

DOC BALLARD AIN'T MUCH ON THE TANGO, BUT WHEN IT COMES TO THAT SLIP KELLY SLIDE STUFF HE IS RIGHT THERE WITH A TOUCH DOWN

CHAIRMAN DOC HOSTMANN WAS THERE WITH THE GLAD MITT HANDING OUT THE CHATTER

SOME FELT FOOLISH WEARING THEIR FIRST DRESS SUIT

- THE PROFS MADE A GOOD SHOWING -
(PHARMACEUTICAL HELMETS WOULD DISTINGUISH THE DIFFERENT DEPARTMENTS)

A PROBLEM IN PHARMACEUTICAL MATHEMATICS "WHERE WILL I HAVE MY DAIRY EATS THE NEXT THREE WEEKS.

THE "COSY CORNERS" WERE OCCUPIED IN THE EARLY MORNING HOURS WITH COUPLES CONBOWING EACH OTHER WITH THE HISTORY OF THEIR PAST LIFE.

SPACE RESERVED FOR THOSE WHO WERE PROMINENT BY THEIR ABSENCE.

SMOKER.

Fine Talent
Excellent Smokes
Goods Eats
Everything Free

On the evening of Wednesday, March 11th, the Alumni Association will give a SMOKER for its members, friends and the students of the Classes '14 and '15. The Committee has arranged an elaborate programme which includes high-class talent, free cigars and cigarettes and good drinks. This being the initial event of the new Committee, they ask you one and all to participate in the festivities of the evening. There will be a short alumni meeting at 7 P. M., after which the cry will be: On with the fun!

Those of our members, who have been inactive, will have an excellent opportunity of taking in two affairs in one evening, as well as meeting some of their classmates and discussing reminiscences of their checkered careers.

If you cannot arrive at 7 or 8 o'clock come when you can, as we will have open house until midnight, and don't let the clothes bother you, we would rather have you clothed only in your bathing suit than be conspicuous by your absence.

Minutes of the Stated Meeting of the Alumni Association of the College of Pharmacy held Wednesday evening, January 14, in the Alumni Room at 9 o'clock.

President Weinstein in the chair.

Present:

S. F. Brothers,	'85
F. A. Leslie,	'04
E. Windt,	'13
S. Chanowitch,	'12
C. P. Wimmer,	'02
A. Henning,	'76
A. C. Steinach,	'00
J. A. Steffens,	'09
J. Weinstein,	'06
A. B. Daub,	'13
J. Hecker,	'08
W. A. Hoburg, Jr.,	'03
A. Vorisek,	'08
G. Hohmann,	'08

The minutes of the previous meeting were read by the Secretary and approved.

Treasurer's Report.—This report was accepted as read and ordered placed on file.

Dinner Committee.—This Committee reported progress. Motion was made, seconded and carried that a vote of thanks be extended the Committee for its splendid work, in making the dinner a social success.

Ball Committee.—Reported progress.

Correspondence. — Mr. Thomas F. Main, Secretary of the College invited the members of this Association to attend a lecture on Commercial Pharmacy by Harry B. Mason in the College Lecture Hall on the evening of January 20. Upon motion, duly seconded and carried, the Secretary was requested to notify all members by postal of this interesting lecture.

George F. Clayton, Class of 1910, is now located in the Microchemical Laboratory, U. S. Department of Agriculture, Washington, D. C., and wishes all future communications so addressed.

M. J. Slaven, of Whitesboro, N. Y., expresses his intention to be present at the coming Alumni Ball.

Dr. C. W. Ballard tendered his resignation as Registrar for acceptance. Motion was made, seconded and carried that his resignation be accepted with regrets.

Mr. Nelson S. Kirk, '94, presented the Association with a framed picture of the late John Niven Hegeman, former President and Secretary of the New York College of Pharmacy which was received with a motion to extend a vote of thanks to the donor, and the Secretary was requested to place the obituary notice on file.

New Business.—The Chair appointed the following nominating committee for the year 1914:

A. Henning, Chairman. G. C. Diekman. W. A. Hoburg.
H. Binder, Jr., C. P. Wimmer.

Resolution.—Upon motion duly seconded and carried, $1.00 of the yearly membership dues shall be turned over to the Editor of the New York Journal of Pharmacy as a yearly subscription for this publication.

Motion made, seconded and carried that the regular Stated Meeting for February be held on the 4th (the first Wednesday) instead of the 11th, the latter date being the one set for our annual ball.

New Members. — Morris Dimiceli, Class '13, having qualified, was elected a member of the Association.

There being no further business, it was moved, seconded and carried to adjourn.

GEORGE HOHMANN,
Secretary.

Minutes of the Stated Meeting of the Alumni Association held Wednesday evening, February 4th, in the Alumni Room at 8:15 o'clock.

President Weinstein in the Chair.

Present:

H. J. Binder, Jr.,	'98
S. F. Brothers,	'85
W. Taylor,	'13
E. Windt,	'13
S. Hlavac,	'12
F. A. Leslie,	'04
H. J. Hecker,	'08
M. Dimicelli,	'13
S. Weinstein,	'13
J. Hostmann,	'96
E. C. Steinach,	'00
A. Henning,	'76
J. Weinstein,	'06
J. A. Steffens,	'00
G. Hohmann,	'08

The minutes of the previous Executive Board and regular stated meetings were adopted as read.

Treasurer's Report. — The Treasurer submitted his report, which was adopted as read and ordered placed on file.

Committee on Collections.—Reported progress.

Dinner Committee.—In the absence of the Chairman no report was rendered.

Ball Committee. — This Committee, which consists of the following members, reported progress.

J. Hostmann, Chairman.

A. J. Bauer, C. W. Ballard,
V. Calcagno, H. H. Butler,
Leo Roon F. A. Leslie,
J. Scavo, H. H. Schaefer.
M. H. Weil.

Correspondence.—G. Arthur Palmer, of Unadilla, N. Y., Class '86, after being stranded from the Association for a number of years, through a faulty address on our books, expresses his desire to again keep in active touch with Alumni activities.

Nelson S. Kirk, Class '94, expresses his intention of being with us to-night, but something unforseen made its appearance at the eleventh hour, which prevented his presence.

Election.—Dr. C. P. Wimmer upon nomination, duly seconded, was unanimously elected to the office of Registrar, to fill the unexpired term of Dr. C. W. Ballard.

There being no further business to conduct, it was moved, seconded and carried to adjourn.

GEORGE HOHMANN,
Secretary.

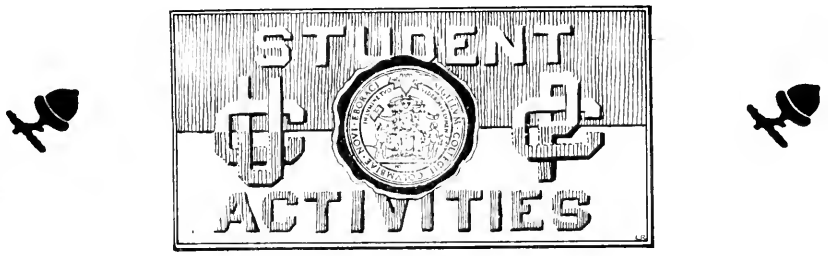
A "CHEMIST'S MENU."

At a recent dinner of the class of 1892, Arts and Mines, held at the Chemists Club, 50 East 41st St., the following novel menu was printed:

Oyster Cocktail (minus $CaCO_3$)
Strained Gumbo Soup (strain unknown)
Filet of Sole
Spring Chicken (Cx Hy O_2 Ns) P-q
Asparagus vinaigrette
(Asparagin—$C_4\ H_8\ N_2\ O_3$)
(Acetic Acid—$CH_3\ COOH$)
(Olein—$C_3\ H_5$) $(C_{18}\ H_{33}\ O_2)_3$
Ice Cream
Ice=H_2O 32° F.+m (O-t)?
Milk Fat+$C_3\ H_5$ $\left\{ \begin{matrix} C_{18}\ H_{33}\ O_2 \\ C_{16}\ H_{33}\ O_2 \\ C_4\ H_7\ O_2 \end{matrix} \right\}$
Casein=$C_{127}\ H_{274}\ N_{44}\ SPO_{55}$
Sugar=$C_{12}\ H_{22}\ O_{11}$
PV=RT, etc., etc.
Coffee: Tannin, $C_{27}\ H_{22}\ O_{17}$
Caffein, $C_8\ H_{10}\ N_4\ O_2$
Essential Oil Trace
Water, H_2O
Liquid Refreshments, $C_2\ H_6O$; but no CH_3OH
Speed limit strictly enforced by Hewlett, Sergeant-at-Arms.
Aqua pura distillata ad libitum.
CO_2 etc.
Cigarettes and Cigars
$C_{10}\ H_{14}\ N_2$
$(C_6\ H_{10}\ O_5)x$

Restrained From Claiming That Its Product Is Identical With Ichthyol.—According to the "Chemist and Druggist" for December 27, 1913, the Ichthyol Company (Cordes, Hermanni & Co.), of Hamburg, has again been successful in court in demonstrating that still another article offered as a complete substitute for ichthyol is far from being identical with it. The Ichthyol Company's action was against the Chemical Factory of Westend Alwin Löwenthal, Charlottenburg. The Supreme Court in Berlin on September 26, 1912, ordered, under severe penalty, that the Löwenthal Company be restrained from publishing any statement to the effect that its product is a substitute of equal value for ichthyol, or that it agrees in all its chemical and physical properties with ichthyol, or that it can be designated as chemically equivalent, and therefore of equal value, or that it is identical with the original product, both chemically and physically.

The Löwenthal firm appealed against this decision and the Supreme Court of Judicature (Kammergericht), having heard the appeal, dismissed it. In the course of its judgment the Court stated that the incorrectness of the firm's statements had been proved.



EDITORIALETTE.

Spiritus Collegii is a rare and complex substance found, strange to say, even in the N. Y. College of Pharmacy.

True—there is not an over-abundance of it, and whatever there is of it, is not strong. Repeated rectifications, however, will fortify it until it is of such power that if imbibed even in traces by any collegian with real red blood, coursing in his veins, marvelous things will result.

So wonderful is this substance that it sends vigor, vim and energy throbbing through your veins. It intoxicates you so that you do things for the general good that you never dreamt of doing before. It is habit-forming. If it once gets into your system you **can't** get rid of it! You will want **to do** things; you **will do** them, and you will **continue doing** them!

Take this spirit ad libitum, you can't get too much of it—it will be a moral uplift and not a degradation.

Let's have a round of spiritus collegii, boys, we need it badly!

COLLEGE SPIRIT.

I'M PATIENT, and I've listened to innumerable orations
I've spirit and so I obey the speakers' exhortations
But a habit very firmly fixed appeals to me as funny—
At the start they want but Spirit—at the end they ask for money!

They tell us that our spirit's bad, far less than e'er before
They urge us on with ringing words to get a little more
They utter mournful prophecies—our spirit's gone to smash,
They wail and rail a little—and then they ask for cash.

Still, a love that leaves the purse-strings tied cannot be very strong,
And all who turn away unmoved must feel they're doing wrong;
As for me, at every crisis I will do as each one ought ter—
When they ask me for another dime I'll hand them out a quarter!

Columbia Jester.

THE STUDENTS' DANCE.

After many trials and tribulations, delay and disappointment, the First Students' Dance was launched upon the turbulent sea of student activities, and, strange to say, it survived.

In the minds of those who were present, there is no doubt of the success of the affair. Everyone enjoyed themselves immensely, and Saturday, January thirty-first, will find a place in the mental diary of all the tango-artists present.

"Doc" Leslie went through the "Separation Glide" with one group, but no amount of persuasion could induce him to tackle the other five.

The success of the affair is due to the untiring effort of the committee composed of J. Paulonis, Chairman; B. Maslon, B. J. Davis, M. Levine, D. Franceschi, L. V. Mango, F. A. Frawley, J. Mendiola, J. Friedlieb, J. Sesta, H. Hammer and M. Stewart.

Dean Rusby personally took great interest in the affair and appointed Drs. Wimmer and Leslie as a faculty committee to give whatever aid was possible to the students.

The Library Committee, which was to receive the proceeds for the purchase of books, will, no doubt, commend the good intentions of the Dance Committee.

S. G. F. SMOKER.

The Society of Good Fellowship, an organization started by the senior university men, is living up to its name—it is going to promote a Smoker to put the G. F. in S. G. F.

President Mango called a special smoker meeting for making final arrangements.

Mr. Jones, '14, was appointed a committee of one to speak to the members of the Junior University Class and extend to them an invitation to the Smoker.

Mr. M. H. Dixon was appointed Chairman of the By-laws and Constitution Committee, and Mr. Frawley Chairman of the Social Committee. M. Levine, J. Martus and L. N. Brown were chosen on the Social Committee by Mr. Frawley.

STUDENTS' NIGHT.

Look forward for the time of your life.

College Songs
College Cheers
Speeches
Music

Everything except fireworks!!!
First or second week in March!
Watch the posters!

ATHLETICS.

Athletic prowess seems to be popping up on all sides in our good old college.

J. Martus, '14, made the varsity swimming team and swam in the meet with Yale on Feb. 13th. He got third place in the 50-yd. swim, and swam in the 200-yd. relay.

W. A. Smith, '15, reports progress with his work on the crew. Keep it up, Walter.

Mr. Simon, '14, was entered to run against Kohlemainen and other fast company in the 3 mile in the N. Y. A. C. meet, Feb. 11th, but was held out on a technicality in A. A. U. rules.

The managing editor was appointed by the Dean to investigate our status in athletics at Columbia.

Report in March Journal.

GLEE CLUB.

This organization has as its object, primarily, the introduction of Columbia songs and cheers to the student body with the ultimate object of increasing college spirit and pride.

Between eighty and ninety men, imbued with more or less college spirit, started the "ball rolling," and, with constant practice, the committee hopes to have the "yellers' union" in shape for the Students' Night racket.

Mr. Harry Wirklich, '14, sang two solos at the Alumni Ball, and a double quartette, composed of Messrs. Kinane, Marashban, Fletcher, Ligorio, Galatera, Troy, Odell and Horowitz, rendered college songs.

"Take a lesson from the fire engine," remarked an old Professor, "it must work or it can't play."

Members of the Glee Club are requested to take this to heart.

THE MANDOLIN CLUB.

Under the direction of Mr. Galateria, '14, the five mandolin artists and three guitar-wielders are progressing well.

Naturally, they, as well as their comrades in the Orchestra and Glee Club are getting in shape for THAT STUDENT NIGHT.

ORCHESTRA.

With about twelve experienced players, two of which are cornetists, one trombonist, five violinists, one pianist, a clarinet artist, a celloist and a drummer, the orchestra is on the fair road to success.

The men are rehearsing three days a week and are wearing down the rough spots in preparation for the gala night.

1915 ELECTION.

The Class of 1915 held its first official meeting Jan. 22, 1914. At this meeting the following officers were elected for the ensuing year:

President, Mr. Young; Vice-President, Mr. Chapman; Treasurer, Miss Roudin; Secretary, Miss O'Connor. Some Class Meeting! Divert that spirit into the proper channel, then we'll have some College!

On January 27, 1914, the 1916 University Class chose the following men to represent them:

President, Mr. McBride; Vice-President, Mr. Miller; Secretary, Mr. O'Hagan; Treasurer, Mr. Strongin.

The

GLEE CLUB,
ORCHESTRA,
MANDOLIN CLUB,
ATHLETICS.
STUDENTS' NIGHTS.

need your aid! Are you ready? COME OUT!

FRATERNITY NOTES

PHI DELTA CHI.

Gamma Chapter.

Gamma Chapter held an initiation, Jan. 12th, when Bros. L. N. Brown, '14, D. L. Rose, '14, A. Young, '15, G. C. Aronstamm, '16, Chas. Dougherty, '15, were taken into the fraternity.

The annual convention was held with the Xi Chapter at Columbus, Ohio, Feb. 6th, 7th, 9th. Bros. Brooke J. Davis and J. Ackerman represented Gamma Chapter and reported a splendid time. Delegates were present from chapters situated in all parts of the country, and it turned out to be one of the most successful conventions of Phi Delta Chi ever held.

Bro. Frawley represented Gamma Chapter at the Annual Banquet of the Epsilon Chapter of the Philadelphia College of Pharmacy, held at the Hotel Walton, Philadelphia, on the evening of February 12th.

KAPPA PSI.

Gamma Chapter.

Since the last issue of the Journal, Cragg and Graystone have become acquainted with the Kappa Psi goat. They met their fate bravely. After a royal entertainment and "eats," the initiates were properly escorted home at an early hour.

The next event of importance was the smoker which was held on the night of Feb. 9th at the Frat house, 115 W. 64th St.

A large number of graduate members were present, and to their lot fell the duty of entertaining for the evening, and they did entertain.

An exceptionally fine speaker was Bro. Dr. Hill, a graduate of Gamma Chapter, but now stationed at San Antonio, Texas.

Next scene — bowling alley. Actives against "Grads"— Youth again victorious. Bros. Schaefer and Baldwin roll high for Actives, while Bros. Short and Noble carried the honors for the "Grads."

TAU EPSILON PHI.

Alpha Chapter.

Since the début of the Journal in January, many things have kept the Alpha Chapter on the "go."

The Epsilon Chapter at Fordham University was installed on January 31st. The installation was attended with a banquet at Colaizzi and visits to several other places on the "White Way." Good work is expected from this chapter, as they will have the experience of the Alpha Chapter to guide them.

The Theta Chapter at Bellevue Medical College is progressing rapidly and will soon receive their charter.

The annual banquet and ball given to "honor men" is scheduled for some day in the first week of April. The committee is trying hard to make it a huge success.

At the last initiation J. Ettinger, '13, E. Bellis, '13 and B. Wallach, '15, furnished the "music." Future victims are D. Svigelsky, '15 and H. F. Strongin, '16.

GREEK AND NON-GREEK.

During the past year the Legislature of the State of Wisconsin undertook to abolish the fraternities which existed in that State. The bill was introduced by an ex-student, backed by several hundred others who were carefully organized. By strenuous work of the various fraternities of the State, who worked in unison, the bill was killed. The Legislature threatens to take the matter up again in a couple of years.

The main reason for anti-fraternity legislation seems to be that the purpose of fraternities is not well understood. The reason probably is that because fraternities are secret, non-members believe they are harmful. Another argument is that fraternity members are given to snobbishness, poor scholarship, immorality, etc., therefore, because there happens to be one member who fell by the wayside, all the others are judged the same.

Stop to consider the prominent men of to-day who are members of fraternities; Ex-Pres. Roosevelt of Alpha Delta Chi, Ex-Pres. Taft of Psi Upsilon and Ex-Vice-Pres. Sherman of Sigma Phi. In fact a list could be compiled which would make a book in itself.

If the non-members could only become acquainted with the good that a fraternity does, how many young men when gathered together in the fraternity house have heard talks on morality and scholarship from men of business, and of affairs which carry more weight than if coming from father to son. The student needs a home and advisors while at college, and this the fraternity supplies to a few. A large per cent. of fraternity men are self-supporting and to these especially the fraternity lends a hand.

I hope that in a few years the true value of the fraternity will be fully recognized and not "knocked" the way they are during the present day.

H. C. OEHLERS,
Phar.D.

Auto-Toxicology.

Q.—"What is the poisonous action of physostigmine?"

A.—"Stalls the motor."

F. F., '14.

Messrs. Klein and Kirschner beg to inform the readers of the Journal of the change in their repertoire. They will present the one-act tragedy entitled "20 minutes at the Faculty Meeting."

Sad, but true!

Zoology Teacher.—"Edgar, what is the highest form of animal life?"

Edgar.—"The giraffe."

(600 grains of Jalap, please!)

A. Z., '14.

Prof.—"What is the hardest soap "

Stude.—"Cast steel" (Castile).

R. T., '14.

Mr. H————————nn.—"What is a vacuum?"

Student, with much show.—"A space filled with nothing."

Significant glance from aforesaid instructor.

Up A Tree.

Prof.—"From where are benzoates obtained?"

J. T.—"Benzoates grow on trees."

(Is it possible?)

"Have you any five-cent cigars?"

"No, but we have something just as good. Here's a ten-cent cigar."

While the jaded pen-pusher of these "colyums" was poring over odds and ends, a fair co-ed enters with militant body-guard.

Q.—"Do you run a matrimonial bureau here?"

A.—"? ! ; ? ! ! !" (Speedy recovery is expected.)

Please address communications of this kind to Miss Cairax hereafter. We thank Jester for helping us out below.

ADVICE TO THE SHOPWORN.

Dear Miss Cairax:—

I have two young men calling on me, Mutt and Jeff, and can't make up my mind which to choose. They're both alike, especially Mutt. Neither smokes, drinks, or chews, nor are they paralyzed. How to decide!!!!! Oh! How to decide!!!!!!

By the light of the moon.

BEAME.

Answer:—Come out of the moon—you'll be sunstruck. Toss up a Canadian dime, and if not, write why.

PERSONALS.

We are sorry to report that through ill health both Miss Lora and Miss Schimansky have been forced to leave our midst.

Mr. Blomeier is also among the missing.

We have just heard that J. E. Davis. '16, is making good on the freshman crew.

The plot thickens: The air of the wedding strain is old to "Artie" Burnett; we also learn other heirs (airs) are old; will wonders never cease? All "Art" does is blush. Co-eds, please note! For full information write Miss Cairax, Matrimonial Bureau, N. Y. J. P.

EXCHANGES.

"The baby ate some worsted,
Don't worry; said his pater
He'll likely swallow all the yarns
He hears a little later."

—Cornell Widow.

And They Get Away With It.

It was in the conservatory.

"Won't you let me hug you," he murmured ardently.

"Not here," she replied. "It wouldn't be proper."

Going out on the dance floor they engaged in a clinch and tangoed under the scrutiny of staid chaperones.

—Jack-O'-Lantern.

Luther.—Yes, I live in Brooklyn, now.

Lois.—Is it possible?

Luther.—Oh, sure; some of the inhabitants have done it for years.

—Widow.

Fashion Hint.

SUGGESTION is nine points of the Raw.

—Dartmouth Jack-O.

Naughty.

Percy.—Heavens! I got a zero today.

Swart.—That's nothing.

—Purple Cow.

HIS IDEA OF HEAVEN.

The druggist approached the Celestial gate. St. Peter opened the portal for him and bade him enter and join the heavenly choir.

"Not so fast," admonished the compounder of pills. "Before I go in there I want to ask a few questions. Have you any city directories in Paradise?"

"No," replied St. Peter.

"Any remedies for growing hair on bald heads and door knobs?"

"None."

"Any soda fountains?"

"We don't know what they are."

"Do you sell stamps?"

"We don't use them here."

"And last but not least, have you any telephones?"

"We have not"

"Then I'll go in, for I guess this is Heaven all right, all right."

FEMININE PHARMACY.

There in the corner pharmacy,
This lithesome lady lingers,
And patent pills and philters true
Are fashioned by her fingers.

Her phiz behind the soda fount
Is often seen in summer,
How sweetly foams the soda fiz
When you receive it from her.

When mixing belladonna drops
With tincture of lobelia,
And putting up prescriptions
She's fairer than Ophelia.

Each poison in its proper place,
Each potion is her chalice,
Her daedel fingers are so deft
They call her digitalis.

"We offer

A complete line of

Botanically Standardized Crude Drugs"

"J. L. HOPKINS & CO.,

Crude Drug Merchants,

100 William Street, New York City."


March
1914

New York College of Pharmacy

Columbia University

The Eighty-fourth Annual Term of Instruction of this College, open to men and women, began on Monday, September 22nd, 1913.

The College offers a course of two years, consisting of three days instruction weekly, open to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on fifteen Regents' counts or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and of other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College also offers a course of three, four and six years, of three days' instruction weekly through the academic year leading respectively to the degree of Pharmaceutical Chemist (Ph. Ch.), Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.) Any one of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

A Summer Preparatory Course of twelve weeks prepares students in special directions for the regular work of the term.

Those interested will please communicate with

THOMAS F. MAIN, Secretary,
115-119 West 68th Street, New York City.

Bacterial Vaccines

ARE YOU PREPARED TO SUPPLY THEM?

These scientific products are coming into extensive use in the treatment of bacterial diseases. We are actively promoting them among the medical profession. This means orders for the druggist.

Acne Vaccine.
Acne Vaccine, Combined.
Catarrhal Vaccine, Combined.
Colon Vaccine.
Combined Bacterial Vaccine (Van Cott).
Furunculosis Vaccine.
Gonococcus Vaccine.
Gonococcus Vaccine, Combined.
Pertussis Vaccine.
Pertussis Vaccine, Combined.
Staphylococcus Vaccine, Albus.
Staphylococcus Vaccine, Aureus.
Staphylococcus Vaccine, Citreus.
Staphylococcus Vaccine, Combined.
Streptococcus Vaccine.
Urethritis Vaccine, Combined.

LIST PRICES OF ALL VACCINES NOTED ABOVE
(SUBJECT TO DISCOUNT).

Rubber-stoppered glass bulbs of 1 Cc.,	package of four, $1.00
Graduated syringe containers,	package of four, 2.00
Graduated syringe container,	package of one, .50

Meningococcus Vaccine (Prophylactic).
Typhoid Vaccine (Prophylactic).
Typhoid-Paratyphoid Vaccine (Prophylactic).

LIST PRICES OF THE THREE VACCINES ABOVE LISTED.
(SUBJECT TO DISCOUNT).

Rubber-stoppered glass bulbs of 1 Cc.,	package of three, $0.75
Graduated syringe containers,	package of three, 1.50
Graduated syringe container,	package of one, .75
Hospital package,	30 bulbs, 3.50

SPECIFY "P. D. & CO." ON ORDERS TO YOUR JOBBER.

PARKE, DAVIS & COMPANY

Laboratories: Detroit, Mich., U.S.A.; Walkerville, Ont.; Hounslow, Eng.
Branches: New York, Chicago, Kansas City, St. Louis, Baltimore, New Orleans, Minneapolis, Seattle, Boston, Buffalo, Pittsburg, Cincinnati, U.S.A.; Montreal, Que.; London, Eng.; Sydney, N.S.W.; St. Petersburg, Russia; Bombay, India; Tokio, Japan; Buenos Aires, Argentina.

...The...

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CURT P. WIMMER, A. M., PHAR. D., MANAGING EDITOR

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Entered as Second-Class Matter, January 30th, 1914, at the Post-Office at New York, N. Y., under the Act of March 3rd, 1879.

Contents:

EDITORIAL.

The famous Blizzard Class, '88, has held another very successful dinner. For a number of years the members of that class have met annually to renew old friendships and exchange pleasant memories of their college days. We are very pleased, indeed, to hear that the class of 1894 is organizing for the purpose of having a reunion in the shape of a 20th anniversary dinner. Messrs. Herold, Pond and Kirk are the moving spirits, and the energy with which they are proceeding in their task promises much good. But where are all the other classes? Certainly there is no graduate who would not be glad to meet his classmates once more, to spend a pleasant hour with his fellow graduates. There is only a comparatively small amount of work involved in getting a class together. Two or three active men can start things going, and, once a start is made, such dinners will practically take care of themselves.

Get together, graduates, and hold your class dinners. The college office will gladly furnish the names and addresses of the members of your class.

20TH ANNIVERSARY, CLASS 1894, NEW YORK COLLEGE OF PHARMACY.

A committee of the class of 1894, New York College of Pharmacy, met recently and made plans to celebrate the 20th anniversary by having a dinner April 25th at 6 P. M. The following committee has the matter in charge:

Hieronimus A. Herold, 45 John St., New York.

Frank N. Pond, 226 Ninth Ave., New York.

Nelson S. Kirk, 168 Rutledge St., Brooklyn.

Walter A. Bastedo, M. D., 57 West 58th St., New York.

Frederik Schaefer, 242 Driggs Ave., Brooklyn.

Dr. Joseph Kussy, 82 Clinton Ave., Newark, N. J.

Fredrick Linnig, 231 Reid Ave., Brooklyn.

All of the members of the class are requested to communicate with the committee as soon as possible.

Any one knowing the present addresses of the following members of the class of 1894 please communicate same to Hieronimus A. Herold, 45 John St.

Harry Clinton Anness
James W. Bingham
August W. Brater
Oscar B. Chapman
Wm. H. Clinton, Jr.
Tunis F. Cook
Brevard Culp
Philip Eichler
J. Stewart Faulkner
John G. Froatz
Conrad Glogau
Frank J. Herbig
Harootin K. Hintlian
Albert Horne
Henry W. Johnson
Ernest Jordon
James Kaveny
John J. Kealy
John Keterly
Walter Koennemann
Felix Krombholz
Max A. Auerbach
William Boehme
August H. Bresloff
William L. Clarke
Samuel Cohen
Harry W. Crooks
Frank E. Eely
Sarah S. Emory
Meyor Frankle
William Girard
Peter J. Lalley
Fredrick T. Lewis
William O. Luttmann
Louis Marcus
Karl E. Meisner
Anthony H. Molina
Charles F. H. Muhl
Otto Neubert
George F. Phelps
Clarence W. Race
Charles H. Roberts
Mortimer W. Sargeant
Emil A. T. Schlichting
Peter Seagrist
James J. Skelly
Edwin G. Stiebling
George S. Tomlinson
Oscar I. Van Tassell
Alfred H. T. Walker
John P. Wilcox
Joseph R. Wood
Ernest K. Loveland
F. W. McCollough
Otto C. Marx
Charles Miller
Samuel Morris
Eugene W. Meyers
John Novarine
Charles B. Pryor
Carl H. Richter
George R. Sagar

Charles O. Grube	Ferdinand N. Sauer
Franklin G. Hills	Ralph W. Shaul
George Frank Holland	Charles Siemann
John P. Hutchinson	Frank S. Smith
George L. Johnson	Harry Terhune
Moses Katz	Charles L. Van Nuis
Cornelius D. Kay	Louis B. Wade
Frank J. Kellar	Frank L. Wilcox
Wm. Kirkpatrick, Jr.	Charles C. Wolff
Paul Koretzky	William C. Youngs

GOODFELLOWSHIP CLUB OF PARKE, DAVIS & CO.

Recent issues of Detroit newspapers give interesting accounts of a minstrel show, staged in the banquet hall of the Hotel Tuller, in the city mentioned, in which the Goodfellowship Club of Parke, Davis & Co. provided the talent. The performance, which was highly extolled by the authors of the articles referred to, was attended by the wives and friends of the club members and was followed by a dance, about three hundred persons participating.

There are 140 members of the Goodfellowship Club, comprising executives, heads of departments and their assistants, and scientific workers of Parke, Davis & Co. The association, which is now in its eighth year, meets once in three months. A dinner is always a feature of the meetings, and in the summer months the entertainments commonly take the form of outings. The club was organized with a view to bringing closer together the men in positions of responsibility at the laboratories—to promote friendship among its members It appears to have done more than this: directors at the big plant in Detroit say that it has been instrumental in increasing business efficiency.

DR. VORISEK'S NEW BOOK.

A complimentary copy of Dr. Vorisek's new "Qualitative Chemical Analysis" has just been placed into our hands. The book is intended to meet the needs of the student whose time devoted to the subject is limited. We note several striking novelties in the arrangement of the subject-matter. The study of the basic compounds is begun with the alkali metals, while the mechanism of the reactions in solution is placed at the end of the book.

Other instances of departure are: Reactions are represented by equations, arranged vertically and close together with their description. The mutually reacting acidic ions are enumerated. Cadmium nitrate is employed to separate sulphide, ferrocyanide and ferricyanide from the rest of the members of the second group of acidic ions, and to isolate tartaric and citric acids. Sulphur dioxide is identified with starch iodic acid solution; iodine in iodides with acetylene tetrachloride, exposed to its vapor on a gauze, and is thus separated from a bromide. Several gaseous products are absorbed by reagents exposed to them on a gauze. A procedure for the identification of the acidic ions which fully provides for interferences by other ions has been developed.

The book, in its entire arrangement, is evidently well suited to its intended purpose and is the result of practical laboratory experience. We congratulate Dr. Vorisek sincerely and hope that his new "Qualitative Chemical Analysis" will meet with the deserved approval of teachers of chemistry and with consequent adoption and success.

WHAT DOES "TRI-PROFESSIONAL" CO-OPERATION MEAN?

By Samuel F. Brothers, Ph. G., M. D., Brooklyn, New York City.

Corresponding Secretary, American Medico-Pharmaceutical League; Member, American Medical Editors' Association, etc., etc.

(Contributed to the New York Journal of Pharmacy.)

It seems odd, that among such intelligent men and women as our allied professions represent, it should be necessary—after seventeen years' growth of the American Medico-Pharmaceutical League—to answer the above question. But since the editor has been kind enough to ask the humble author for a short article on the subject, he will endeavor to cover the ground briefly, in the limited time at his disposal.

As stated in a post-graduate lecture before the convention of the American Association of Progressive Medicine, in Poughkeepsie (held on September 2nd to 5th, 1913), medico-pharmaceutical co-operation may be subdivided into "1, scientific; 2, practical; 3, material; 4, social; 5, fraternal; 6, financial; 7, legal; 8, political."

The great scientific advantage in the physician, dentist and pharmacist co-operating, is so apparent and self-evident, that further comment is almost unnecessary. The advantage of the pharmacist having all the materials and supplies convenient for the physician and dentist, is alone sufficient argument in its favor.

The advantage of practical co-operation, again, is none the less evident. Take up the single subject of the variable and uncertain dosage of medicines—crude drugs, tinctures, fluid extracts, etc.—and we need go no further.

Material co-operation may be considered of more immediate importance than the two preceding subdivisions, affecting, as it does, the home life of the professional man. We might associate with this, all the following subdivisions—social, fraternal, financial, legal and political co-operation. Every medico-professional man or woman, whether physician, dentist or pharmacist, must realize the vital importance to the future welfare of the rank and file, of honest and sincere co-operation, as represented in these various phases. The American Medico-Pharmaceutical League, the first medical association in America to take up this work, appeals to the members of the three allied professions to awaken, before it is too late.

To show how professional men are deceived, it is remarkable to observe the conduct of some, when approached on the subject. After having been informed that a certain member will vouch for him, if he desires to join, the prospective candidate turns around and insolently quizzes and cross-examines his would-be proposer, as if he were about to confer a great favor upon the medical association, by permitting the use of his dignified personality as a member. Others, again, are more modest—they only request some literature, or the personal call of a representative—as if a professional man did not know the character of a medical association. Still others, again, brazenly feign ignorance of its existence. The members of yet another class—the most contemptible of all—put it to the expense and trouble of

sending a representative by appointment, with the membership application, and then change their minds. It is an amazing fact, that not one per cent. of our college graduates, have the intelligent initiative and courage, to fill out an application form, and mail it to the secretary. Of course we would be imbecile not to understand, that all this is only the result of suicidal professional intrigue, libel and blackmail. "And so are they all, all, honorable men."

The executive committee of the American Medico-Pharmaceutical League representing as it does, the allied medical, dental and pharmaceutical industries and professions of the country, feels that it should receive the advice and encouragement from their representatives that it is justly entitled to. There is no denying the fact that most of the colleges, their alumni, and the various journals and associations representing them, have hitherto kept aloof from participation in its labors, and it only hopes that now all barriers will be removed, and a new era of fraternalism and goodwill inaugurated. We hope that all such, without further invitation, will send in the names of delegates at their earliest convenience, to represent them at the 17th annual convention, at the Hotel Astor in New York City, on the evening of May 25th, 1914.

96 New Jersey Avenue.

THE VITAL QUESTION OF PROFITS IN THE RETAIL DRUG BUSINESS.

By Harry B. Mason, Ph.G.

A lecture delivered at a meeting of the College of Pharmacy, held January 20th, 1914.

I have for fifteen years been observing the conditions under which druggists do business; I have visited them frequently in their stores; I have conducted a large correspondence with them; and the journal with which I am connected has examined and commented on hundreds of annual statements from druggists. I have discovered, beyond any question of doubt, that a lot of men —the majority of men—simply do not know how much money they are actually making, and have never taken the trouble to find out with any accuracy. There are hundreds of druggists in this country to-day who are losing money on their business and who will not discover it until they are forced into bankruptcy. There are thousands who, not deceived to quite this extent, are not making anything like so much money as they fancy; and every one of these men could work a radical improvement in his business if he only knew the facts and understood the necessity of correcting his faults.

Four Things Every Druggist Should Know.

Now there are a few things which it is absolutely essential that every last druggist should know about his business if he wants to conduct it intelligently:

1. He should know his percentage of expense.

2. He should know his percentage of gross profit.

3. He should know his percentage or net profit.

4. He should know his entire income from the business as a whole.

With this information a merchant can so price his goods and so conduct his business as to make a decent profit. without it he is simply groping in the dark and quite as likely to fail as to succeed. These four things are easily discovered. They do not call for any elaborate system of bookkeeping. They do not necessitate any great amount of work. They do not require mathematical or bookkeeping skill. They are all very simple indeed, like most things that are of vital importance—quite as simple as plain honesty or plain virtue.

The Necessary Records.

I propose to indicate, as briefly as possible, just what records are necessary in order to arrive at these four essential facts. Your ledger need cover only the following items:

1. Sales.
2. Purchases.
3. Expenses.

These three things are practically all you need, except that occasionally you will desire, if you are a wise druggist, to repeat this record of sales, of purchases, and of expenses with some particular department in your store. You will frequently want to know, for instance, whether your candy case, or your soda fountain, or your cigar department is yielding what it should, and you will then keep tab on the sales, purchases and expenses of these special departments. Waiving that for the moment, however, let us ask how shall you keep this ledger?

As for the original entries, these may be treated exactly as you treat charges or credits for or against customers. Make them in a day book if you use a day book; put them on slips if you use slips. Every time you buy a bill of goods, or pay out money for an expense, or figure up the day's sales, or do anything else falling within the scope of these business records, simply enter it as you would when a customer buys goods on credit. In posting from the day book or the slips carry the customers' accounts to the regular ledger, and the business records to the special ledger, giving totals only. If it takes you ten minutes every morning to do your regular bookkeeping, it won't take you three minutes more to include this special business bookkeeping. Is it not with this slight expense of effort? The advantages are great and far reaching.

An Annual Statement.

At the end of the year it is necessary for the druggist to get his facts together and to draw up some form of annual statement. Here is a simple method which will answer the purpose, and which I have already suggested on several occasions:

1. Total sales.
2. Purchases.
3. Stock increase or decrease as shown by the inventory.
4. Cost of goods sold.
5. Gross profits.
6. Expenses.
7. Net profits.
8. Total income.
9. Inventory of stock.
10. Inventory of fixtures.

Item No. 2, purchases, must have added to or substracted from it the increase

or decrease in the permanent stock shown by the annual inventory. We thus arrive at item 4, the cost of the goods actually sold during the year. Deducting this amount from the sales, we arrive at item 5, the gross profits. Deducting in turn the expenses from the gross profits we arrive at the net profits. The druggists's total income, item No. 8, is obtained by adding the proprietor's salary, taken from the expense account, to the net profits. Items Nos. 9 and 10 are self-explanatory.

Now, it would be possible, and doubtless profitable, to comment at some length on the various items in this schedule, but I shall pass over them very quickly. There is, for instance, a whole lecture possible on the subject of expense alone. Very few druggists know how to keep a proper expense account. They fail to put things in it which belong there, and thus they arrive at a low percentage of expense, which is very deceptive and which costs them hundreds of dollars annually. A proper expense account ought to include these things: (1) taxes, (2) insurance, (3) fuel, (4) light, (5) water, (6) rent, (7) proprietor's salary, (8) clerk hire, (9) advertising, (10) telephone, (11) telegraph, (12) office supplies, (13) postage, (14) repairs, (15) delivery service, (16) donations, (17) subscriptions, (18) depreciation in stock and fixtures and losses in bad accounts.

But you have drawn up your annual statement, let us say, and you have done it correctly. Very well, how shall you produce from it the facts you want to get at—in particular the four things which I have declared every druggist should know about his business? You will remember I said that every druggist should know his percentage of expense, his percentage of gross profit, his percentage of net profit, and his total income from the store.

Arriving at the Four Essentials.

Your percentage of expense is gotten by dividing total annual expenses by total annual sales. Suppose, for instance, you had annual sales of $12,000 and expenses of $3,600. You know at once, then, that your percentage expense is 30. The percentage of gross profit, on the other hand, is gotten by dividing the total gross profit for the year by the total sales. We have assumed annual sales of $12,000; we may go a step farther and assume gross profits of $4,800; and we, therefore, find a percentage of gross profit amounting to 40. What, next, is the net profit? The net profit is, of course, the difference between the percentage of expense and the percentage of gross profit, and in the present case we find this to be 10 per cent.

As to the fourth requisite, the total income from the business, this is easily gotten by merely adding the proprietor's salary, taken from the expense account, to the total net profits. If, for instance, the proprietor in this imaginary business of $12,000 a year pays himself a salary of $1,500, and makes net profits of $1,200, his total yield from the business is $2,700. This, then, represents actually what he has made from the store, without any possible chance of deception.

The Use of This Information.

In what I have said so far I have done little else but explain how a druggist may keep a simple series of business records so as to learn the import-

ant facts about his percentage of expense, his percentage of gross profit, and his percentage of net profit. I come now to the next phase of the subject: how shall these facts, so discovered, be used in the actual conduct of the drug business? What is their bearing? I have said that these things should be known by every druggist, that it is absolutely impossible to do business wisely without them, and that the druggist who ignores them is criminally negligent of his own welfare. Why is this so?

In answering these questions I say at the outset that the benefits of such information are almost innumerable. If the druggist's expenses are too great he can see the cardinal necessity of cutting them down. If his gross profits are too small he can likewise see the necessity of jacking them up. If he is *necessarily* selling too many things at a low yield of profit he can scratch his head and put in other lines that will bring up the general average. If he discovers that his prescription business isn't at all the profit-maker that he thought it was, he can charge more for his services—the big fellows do it, even if they *are* supposed to be cut raters.

The Actual Pricing of Goods.

To be more specific, I may say that the percentage of expense is something that a druggist should know accurately every time he fixes the price on an article. He should understand to a nicety just what it is going to cost him to sell that article—this hair brush, for example. The druggist who doesn't know his costs is the druggist who sells a lot of goods at figures so low that he doesn't pay expenses on them, let alone making any profit for his own pocket.

Now, suppose we know that our percentage of expense is 24, and we want to get a gross profit of 34 or 35 per cent. in order to make a decent net profit. This hair brush costs $1. What price, then, shall we put on it? You understand, of course, that all the figures I have given have been based on sales and not on costs. We must, therefore, make a gross profit on this brush of 35 per cent. of the selling price. How shall we arrive at this unknown selling price? Well, this price represents 100 per cent., of which 35 per cent. is profit and the remaining 65 per cent. cost. The problem may then be stated as follows: $1 is to 65 as X is to 100, and the answer is $1.54. Incidentally, this example teaches us that every article which costs a dollar must be sold at an average price of $1.54 to make a gross profit of 35 per cent. on the selling figure. Does every druggist in the audience to-night know this interesting fact? Does everyone know that to realize 35 per cent. on the selling price he has got to realize 54 per cent. on the cost price?

A Common Sense of Error.

This brings me incidentally to consider for a minute or two the confusion existing in the minds of many merchants between percentages based on costs and on sales. I have already touched upon this phase of the subject in an earlier portion of my address to-night. I have said that a druggist often takes a percentage calculated from sales and then applies it unthinkingly to costs, thus making a cruel mistake which robs him of his profit entirely. Some years ago the Burroughs Adding Machine Company published an advertisement in one

of the national magazines requesting answers to the following question: "A certain article costs $1 wholesale. What will it have to be sold for to allow a net profit of 10 per cent., after allowing 22 per cent. for the cost of doing business?" Something like 1,000 replies were received, of which 750 were wrong. The answers ranged all the way from $1.10 to $1.60. The majority gave the selling price as $1.32, notwithstanding the fact that an explanation was printed at the bottom of the advertisement declaring this answer to be incorrect. The very common mistake was made by these men of basing their percentage expense upon the selling price, their percentage of profit on the cost price, and expecting they would get accurate results. This was the whole source of the trouble.

Here is the proper way to tackle a problem of this character: The article costs $1. Your cost of doing business is 22 per cent., and you want to make a net profit beyond that of 10 per cent. —a total of 32 per cent. The cost of $1, therefore, represents 68 per cent. of the final selling price. Is this perfectly clear? Suppose, again, your expense is 40 per cent., and you want to make a net profit of 10 per cent. You would then have to realize a total profit on the selling price of 50 per cent. Now, considering 100 per cent. as the final price you get, and subtracting 50 per cent. of this for profit, you have left a residuum of 50 per cent. for cost, and the $1 which you pay for the article, therefore, represents 50 per cent. of your selling price. You must consequently double the cost and sell the article for $2 if you want to realize your 40 per cent. of expense and your 10 per cent. of net profit.

Cost vs. Selling Price.

It is because of this confusion that I have recently advocated the basing of all percentages on the cost instead of the selling price. The cost method is the one invariably given in all of the arithmetics, the one taught in all the schools, and the one followed by all the manufacturers in every line of trade. Most retail merchants, however, use the selling method. It really doesn't make very much difference which method is employed so long as it is employed intelligently. But I want to emphasize the principle that both the percentage of expense and the percentage of profit be calculated from the same base. If you figure everything in the selling price, *then see to it that you consider nothing else but selling figures.* Never do any calculating at all from the cost prices. Ignore costs entirely as a settled policy.

In putting a price on a new article do not figure your profit from the cost, but figure it exclusively from the selling price. It is just because it is rather difficult to figure from the unknown selling price, and because it is much easier to calculate from the known cost price, that in the recent address to which I have referred I recommended using the cost method. Nevertheless, however, in this address to-night I have used selling figures entirely, because it is the general practice of druggists to employ them, and I want to make it clear that all the percentages I have given have been based upon sales and not upon costs. Please do me the kindness to keep this fact constantly in mind.

The Great Difference Between Druggists.

Now, as I get along toward the end of my address I want to hark back to my statement that the great majority of druggists are failing to make as much money as they should, and that they could do far better if only they had the facts upon which to base some improvement. To prove my point let me tell you something about the differences I have discovered in the profit making capacity of druggists. Two or three years ago, in an address delivered out in Iowa, I gave the facts about twenty-five druggists and their incomes. I found that in these twenty-five stores the percentage of gross profit ran from 31 per cent. to 51 per cent! Let this sink in, gentlemen—gross profits ranging from 31 to 51 per cent.! Think of it! The percentage of expense, in the meantime, ran from 18 to 35! Thus the percentage of profit realized by some druggists was less than two-thirds that of their neighbors, while it cost some of them twice as much to do business as it did others!

There is no excuse for wide variations of this character. It is true that some druggists have to meet more competition than others; that prices vary in different localities; that as a rule expenses are higher in the city than in the country; but with a full realization of such conditions I am nevertheless convinced that these things do not explain except in part the widely varying incomes which different druggists derive from their stores, and that in the last analysis the results can be traced directly to the druggists themselves.

Is it possible to say with any degree of accuracy what the percentage of expense and the percentage of gross profit ought usually to be? In collecting the facts about the twenty-five druggists to whom I have just referred I discovered that the average gross profit of these men was 38⅔ per cent. The average expense, on the other hand, was 24½ per cent. My experience leads me to believe, after studying the statements of many other druggists beside those represented in this case, that these averages are pretty nearly typical of what you will find the country over. I have often said, for instance, that the usual percentage of expense was 25 and the usual gross profit from 35 to 40.

Knowledge Is Power!

I believe that every druggist ought to hold these average figures before him, and strive, in every possible way, to attain them. He will do this if he knows the precise facts about his business, and this is the prime reason I have for advocating such a series of records as I have proposed. Knowledge is power. If the druggist realizes that things are not as prosperous with him as he supposed, and if he understands the necessity of reform, action will be forthcoming.

"Is it true, doctor," asked the summer girl, "that eating cucumbers will remove freckles?"

"Of course," replied Dr. Kidder, "under certain circumstances."

"Really! What circumstances?"

"Well, provided the freckles are on the cucumbers."—*Philadelphia Ledger.*

Professor George C. Diekman

A New Reaction for Acetyl-Acetic Acid in Urine

is described by W. H. Hurtley (Lancet, 1913) as follows: To 10 Cc. of urine are added 2,50 Cc. of concentrated hydrochloric acid and 1 Cc. of a 1-100 solution of sodium nitrite. The mixture is shaken thoroughly, and set aside for a period of 2 minutes.

After this 15 Cc. of stronger ammonia water and 5 Cc. of 1-10 solution of ferrous sulphate, or an equivalent quantity of solution of ferrous chloride are added, and the mixture again thoroughly shaken.

The mixture is then poured into a 50 Cc. cylinder, preferably without filtering. The appearance of a violet or purple color indicated the presence of acetyl-acetic acid.

If small quantities of this acid be present, the reaction is apt to be tardy. The rapidity with which the color change takes place is an indication of the quantity of the acid present. The reaction is negative for aceton. Acetyl-ethyl keton, if present, imparts a blue color to the liquid, but only when considerably larger quantities of sodium nitrite solution are employed.

The reaction may be employed for the quantitative estimation of acetyl-acetic acid, upon comparing the color produced with that obtained from solutions of the acid of known strength.

Berlin. klin. Wochenschr, 1913, 1028.

The Detection of Albumin in Urine by Means of Eschbach's Reagent in Presence of Hexamethylentetramin.

There has been much discussion concerning the matter of an accurate determination of albumin in urine, by the Eschbach method, if the urine contains at the same time quantities of hexamethylentetramin, or other similar bodies.

Schmiz, a pharmacist of Brakel, in Phar. Zeitung, 1913, 58, after studying the question, arrives at the following conclusions:

(1) That the Eschbach method for determination of albumin in urine cannot be employed if correct results are desired, if the urine contains, besides albumin, hexamethylentetramin, or other allied bodies.

(2) That all samples of urine should first be tested with a view of establishing the presence or absence of such chemical substances.

H. Pfau, of Basel, in Phar. Zeitung, 1914, No. 10, page 103, as the result of

considerable experimentation, arrives at conclusions differing materially from those of Schmiz. He states that he has had numerous samples of urine containing both albumin and hexamethylentetramin, or allied bodies under observation, and that he has found no difficulty in determining accurately the quantity of albumin contained in such samples by the Eschbach method.

All determinations were made in the standard Eschbach tube and with the standard reagent in exact accordance with directions.

Pfau states that it is highly improbable that the urine of patients having taken urotropin or other similar bodies, will contain more than 0.3% of these. Such drugs are generally given in ½ to 1 gramme doses, repeated three times a day, and, of course, are not completely eliminated. Pfau claims that not more than ¾ of the amount of drug ingested is eliminated in the form of decomposition products. Again this amount is not eliminated necessarily during any given 24 hours. Under the least favorable circumstances therefore not more than 0.3% of hexamethylentetramin, or its decomposition products will be found in the urine.

Urine, free from albumin, fails to react entirely with Eschbach's reagent, when it contains about 0.3% of such decomposition products, as is shown by the following experiments:

Sample 1, containing 0.1% of hexamethylentetramin remained perfectly clear with Eschbach's reagent, even after prolonged contact.

Sample 2, containing 0.3% of hexamethylentetramin, remains perfectly clear. After contact of 12 hours, a scant crystalline precipitate was noted. This consisted of uric acid.

Sample 3, containing 0.5% of hexamethylentetramin, behaved same as sample 2, excepting that the crystalline precipitate formed after a contact of only 3 hours.

Sample 4, containing 1% of hexamethylentetramin, a quantity very unlikely to be found in practice, remained perfectly clear when first mixed with Eschbach's reagent. After a period of five minutes, however, yellow needle-shaped crystals appeared. These sank rapidly to the bottom of the tube. From time to time a further crop of these needles appeared. At no time did these needle-shaped crystals resemble material which separates when an albumin urine is brought into contact with Eschbach's reagent.

The experiments were further continued with samples of albumin urine, containing hexamethylentetramin, as follows:

1. Sample containing 0.1% of albumin and the same amount of hexamethylentetramin.

2. Sample containing 0.1% of albumin and 0.15% of hexamethylentetramin.

3. Sample containing 0.1 % of albumin and 0.3% of hexamethylentetramin.

4. Control sample, containing only 0.1% of albumin.

Upon addition of Eschbach's reagent to each of the four samples, an immediate separation of the albumin throughout the entire volume of the liquid took place. In each sample the quantity of albumin found corresponded to 0.1%, the quantity which had been added to the sample.

The same experiments were made repeatedly, always with the same result. Pfau, therefore, arrived at the conclusion that under ordinary circumstances the Eschbach method is a perfectly safe procedure for the determination of albumin in presence of hexamethylentetramin.

In presence of quantities of hexamethylentetramin above 0.5%, the method may fail, as in such cases it has been shown by Moschatos and Tollens, Liebig's, Annalen, 272, that hexamethylentetramin is capable of forming a double salt with tri-nitro-phenol.

Cod-Liver Oil With Iodine.

K. Tschanter, in Phar. Zeit., 1914, 9, reports the following: An examination of numerous samples, obtained from different sources, show the presence of more than traces of free iodine. This was found to be so, quite independent of the manner in which the sample had been kept. It is necessary that the solution of ferrous iodide before mixing with the oil, be tested for free iodine, with starch, in the customary manner. The combination of iodine with iron takes place much slower in alcoholic solution than in aqueous solution, requiring hours for completion of reaction. Application of heat does not materially influence the rapidity of the combination. Such solutions of ferrous iodide are rarely green, but usually are yellow-green. The usual directions to allow the reaction to proceed until the mixture has acquired a green color are stated by Tschanter to be at fault, they should read: Allow the reaction to proceed until free iodine is no longer found present.

In order to produce an oil which will remain permanently clear, cod-liver oil which has not been exposed to air must be selected. This is imperative, as otherwise a decomposition of the product may be soon expected. As is known, cod-liver oil has the property of absorbing oxygen in considerable quantity, and this in turn will react with the ferrous iodide.

It is suggested that the required quantity of cod-liver oil be withdrawn from an heretofore unopened package, and be immediately mixed with the required quantity of the solution of ferrous iodide. The latter is usually 5% strong, and is known under the title of Iodurol. The resulting mixture is transferred to containers of proper size, which in turn are well-stoppered.

The preparation obtained in this manner is perfectly clear and will remain so for years.

If it is desired to add a sweetening agent, this must not be added to the finished product, but rather to the solution of the ferrous iodide, before this is added to the cod-liver oil. It was formerly customary to employ an excess of iron and likewise to place a small quantity of reduced iron or iron filings in each container of iodurol.

The commercial article at present, however, is furnished without such excess or addition. It represents a light green, perfectly clear liquid, and like solution of ferrous iodide, it contains 5% the salt.

Four parts of iodurol are mixed with 96 parts of cod-liver oil, thus producing a mixture containing 0.2% of ferrous iodide.

Misbranding.

It would seem that in foreign countries, including Germany, in spite of stringent laws and regulations to the contrary, misbranding it not at all un-

common. Many such instances are noted in the current numbers of foreign publications (pharmaceutical). In most cases an analysis of the article shows that it is offered for sale under a name or title, which, to say the least, is misleading.

The following two cases will serve as illustrations:

Parinol-wax is the name of an article marketed by the Tokalon Manufacturing Company, Ltd., London, Eng.

An analysis by S. Kroll shows that it consists of a perfumed, ointment-like mass, containing 95.7% of fats, 2.80% of zinc oxide and 1.40% of water. The acid number reveals the fact that the preparation does not contain any wax The fatty substance found consists of Cacao fat, with addition of paraffin and spermaceti. The odorous principle was found in some samples to consist of oil of rose, in others of oil of geranium. The name Parinol-*Wax*, therefore, is misleading.

Phar. Ztg., 59, No. 1.

Under the name of Boranium Berries, the Dearborn-Gesellschaft, of Berlin, markets a preparation, the chief property of which it claims is an anti-fat. The directions for use are as follows:

Take one berry after each meal and one before retiring, or four berries each day. The price per box is 7.50 M.

Upon request of the Deutscher Apotheker Verein of Berlin, Von C. Mannich and G. Leembuis examined this preparation and report as follows:

Each box (paste-board) contained 120 pastilles, brown in color. Many of the pastilles were spotted owing to crystallization of sugar on their surface. They are of soft consistence, have a sweet taste, peppermint taste.

The weight of the individual pastilles or berries ranged between 1.27 and 2.25 grammes.

The basis of the mass consists of invert sugar, which reduces Fehling's solution rapidly in the cold.

The mass dissolves in water, with the separation of a yellow-white crystalline powder, which melts at 253° C., and which dissolved readily in solution of sodium hydroxide, forming a deep-red solution (Phenolphthalein.)

The quantity of phenolphthalein in each "berry" ranged from 0.061 to 0.108 grammes.

In a previous analysis it was stated that the "berries" contained potassium bitartrate. The present sample, however, did not contain this in any appreciable quantity. The aqueous solution reacts acid with litmus, 10 grammes of material, however, when dissolved in water, required for neutralization only 2.30 ccm. of N/10 NaOH, V. S. This calculated as potassium bitartrate would show the presence of only 0.43%.

Matter volatilized at 100° C. (water and volatile oils), amounted to 19.6%. Ash equalled 1.30% and was of an alkaline reaction. Iodine and alkaloids were not present.

The name "Boranium Berries" is misleading, in that it might be supposed that the article in question was a natural berry, when in fact it was shown that the "berries" consist of a mass of sugar, to which has been added phenolphthalein (average of 0.07 gm. to each "berry"), oil of peppermint and a fruit gelatin.

Phar. Ztg. 59, 1914, No. 8.

IN MEMORIAM.

Timothy Lester Woodruff *

Born in New Haven, Conn.,
Aug. 4, 1858.

Died in New York City,
Oct. 12, 1913.

was the son of John and Harriet Jane Lester Woodruff. His father served as member of Congress during the civil war and was a personal friend of President Lincoln.

His early education was acquired at the Riverview Military Academy, Poughkeepsie, Russells Military Institute at New Haven and the Betts School at Stamford. He was prepared for college at Phillips Exeter Academy and graduated from Yale in the class of 1879.

After a course in the Eastman business college at Poughkeepsie, he entered the employ of Nash and Whiton, wholesale salt and fish merchants on Warren St., New York City, a considerable part of whose business consisted in selling round lots of goods for delivery from warehouse and young Woodruff developed this end of the business to such an extent and made himself so indispensable that in a little more than a year he was admitted to the firm which was then named Nash, Whiton & Company. As the business of the company grew, Mr. Woodruff developed a warehouse department of the firm which became proprietors of the Franklin stores, the Commercial stores, the Waverly stores, the Nye stores and two grain elevators on the Atlantic dock. Later Mr. Woodruff was one of the founders of the Empire Warehouse Co., which consolidated under one management the piers and warehouses on some nine miles of Brooklyn water front and was a director and member of the Executive Committee of this corporation and also of the Brooklyn Grain Warehouse Co.

Meanwhile Nash, Whiton & Company had been succeeded by the Worcester Salt Co. in which Mr. Woodruff was treasurer and a director. This company became the largest individual manufacturers of salt in the United States and was the first to market a fine table salt under a trade marked name, the idea of doing so being Mr. Woodruff's.

Mr. Woodruff's connection with the drug trade came in 1888 when he purchased the Maltine Manufacturing Co. which was then in a bad way owing to faulty methods of manufacture and bad financeering. Mr. Woodruff attacked these problems with his customary energy and when he had satisfactorily solved the manufacturing problem he exchanged stocks of the old article wherever it was found throughout the United States, for his improved and stable product, and then so presented the merits of his article to the medical profession that the business was established on the sound financial basis in which he left it at his decease.

Mr. Woodruff's great business ability was by this time generally recognized in the mercantile community and he was constantly solicited to connect himself with other business enterprises.

He became a director in the Merchants' Exchange National Bank of New York, the Kings County and Hamilton Trust Companies of Brooklyn and the Hudson River Paper Co. He was president of the Smith Premier Typewriter

*Read by Mr. Thos. F. Main, at the College Meeting, Jan. 20th, 1914.

Co., which was later merged into the Union Typewriter Co. and finally into the Remington, in which Mr. Woodruff was a director.

He was president of the Pneumolectric Co. of Syracuse, manufacturers of electric drills, and of the Jamaica and Garden City Estates, a corporation devoted to the improvement of outlying suburban property.

Mr. Woodruff's ancestry and training made him republican in politics and a strong believer in American institutions and in the duty of every citizen to take an active interest in the government of his City, State and Nation and so, shortly after he became a resident of Brooklyn, he joined the young republican club which worked to rescue the city from ring rule, and had much to do with the election of Seth Low as mayor of that city. He continued to work actively in the ranks of his party until Mayor Wurstor appointed him Park Commissioner. To the duties of this office he brought his ripe education, his knowledge of business affairs and enthusiasm for anything approaching country life, and during his administration he made the public parks of Brooklyn not only things of beauty, but veritable playgrounds of the people so that at the close of his term, he had become one of the most popular men in the city and the acknowledged leader of his party in Kings County. From this time on he was Chairman of the Kings County delegation to the State conventions in which his abilities and popularity were recognized by his nomination for, and election to, the office of Lieutenant-Governor under Governor Black. He filled the duties of this office with the same energy and thoroughness that distinguished him in business life and by the close of his term, had won such state wide popularity that he was re-elected to the office of Lieutenant-Governor for the two following terms, serving under Govs. Roosevelt and Odell, a record unprecedented in the history of the State.

After his retirement from official life he continued to take an active interest in political affairs and was delegated to attend the national conventions of the republican party. At the Chicago convention of 1912 however, he found himself unable to accept what he considered the reactionary policies of the party of his life long allegiance, and joined the Progressive movement inaugurated by Theo. Roosevelt.

Despite of the activities of his business and political life Mr. Woodruff took an active interest in educational affairs. He was President of the Board of Trustees of the Adelphi College of Brooklyn and raised for it the sum of $250,000. He became a member of the College of Pharmacy in 1897 and a life member in 1908.

Mr. Woodruff was a member of the Masonic fraternity and the Royal Arcanum. He was also a member of the Union League Lotos, University, Hardware and Republican Clubs of New York, and President of the Montauk Club of Brooklyn.

In his vacation seasons Mr. Woodruff was an ardent sportsman. He loved wild life and was a good shot and angler. He developed Kamp-Kora in the Adirondack region where he always spent several weeks both in the summer and winter seasons.

Mr. Woodruff was a member of the Memorial Presbyterian Church, 7th Ave. and Sterling Place, Brooklyn, and was at one time a teacher in the Sunday School.

In early life he married Cora Eastman of Poughkeepsie, who died in 1904. He later married Miss Isabel Morrison of New York, who with a son John E. Woodruff survive him.

Mr. Woodruff was stricken with the illness which terminated fatally while speaking at a meeting of the Progressive party in favor of the fusion candidates for city offices, which were triumphantly elected shortly after his decease.

Funeral services were held at the Central Congregational Church, Hancock Street, Brooklyn, where the large auditorium was crowded to the doors by friends and associates in business and political life and citizens of Brooklyn who had learned to know, love and respect him during his residence among them.

Later a mass meeting was held at the Brooklyn Academy of Music to do honor to his memory which was attended by members of the Progressive and Republican parties and prominent citizens. At this meeting eulogies of his life and works were pronounced by many speakers, among whom were Justice Jenks of the Superior Court, who had been his life long friend, by whom he was pronounced a loving and beloved man; a man of action, of energy, with an intense desire to achieve, strong in his convictions, an earnest and constant friend, a good American who knew his country and its institutions, and was proud of them.

To few men is it permitted to accomplish so much in 55 years of life as Timothy Lester Woodruff did, but we can see that by his careful training and liberal education he was well fitted for the positions in the business world and political life that he was destined to fill, while his geniality, his sturdy common sense, strong convictions and many engaging personal qualities, attracted men to him, and made him one of the most popular men in the community which he served with singular ability during his all too short life.

NOTICE.

ELECTION OF OFFICERS

OF THE

ALUMNI ASSOCIATION

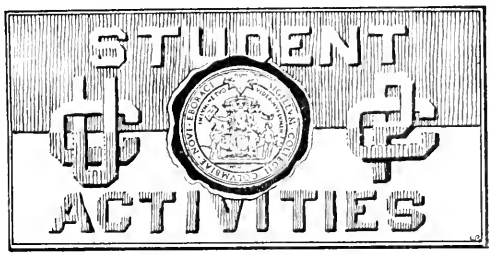
WILL BE HELD ON

Wednesday, April 8th, 1914

BE SURE TO ATTEND

REPORTERS

L. N. Brown, '14.
F. Fletcher, '14.
B. E. Graystone, '15.



REPORTERS

Miss. M. O'Connor, '16.
J. J. Rampulla, '15.
A. Ziperowitz, '14.

Edited by Leo Roon, Ph. Ch.

EDITORIALETTE.

Yes, that's right, all right. We have actually come to the conclusion that there is a thing in our midst that may pass as college spirit of the 100 per cent. variety.

The interest of the student body has been aroused—that college spirit can bring men closer together socially is now an acknowledged fact. A mistake has been made. Many of us thought that college spirit was lacking and unnecessary in C. U. C. P.—it was not lacking, it was dormant. A vigorous prodding and you see it is popping up on all sides, and truly does it not make you feel proud to hear

"—— hoary walls and ancient halls
Ring back our tones of cheer?"

Is all this necessary? Why, it is as necessary for the overcrowded mind of the college student to have a little diversion, as it is necessary for a plant to have a little sunshine in a stretch of continuous rain.

College spirit will strengthen our bond with our Alma Mater, and our Alumni Association of the future should not be a ten-man affair it is now, but it should be a large, interested, powerful organization.

Cheer up, we'll get there yet.

STUDENT NIGHT.

On Wednesday night, March 11th, was ushered in the first of a far-heralded series of Student nights.

With advent of the new Journal in January the editors conceived the idea of promoting college spirit and strengthening the bond and ties between the students and their Alma Mater.

The Student night was to be the means, and Wednesday night showed the possibilities.

About 300 students, Alumni and friends were present and the prevailing good feeling helped toward the success of the affair.

Professor Crampton of the University spoke on "Academic Spirit," Mr. Lush, coach of the C. U. baseball team, told us about college baseball.

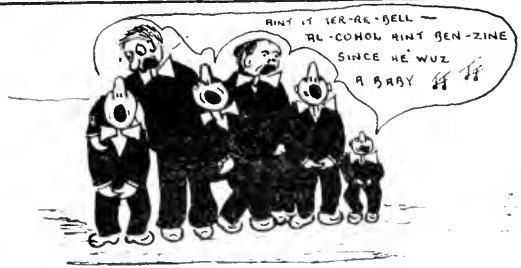
Columbia yells and cheers and spirit filled the air.

Several selections were given by the Orchestra, Glee Club and Mandolin Club.

Recitations by Mr. Hochberg of Fordham and L. Roudin delighted the crowd, while the Illustrated Columbia Songs by H. Wirklich brought down the house.

Prof. Vorisek brought his ready wit into play when called upon by the students to make a speech.

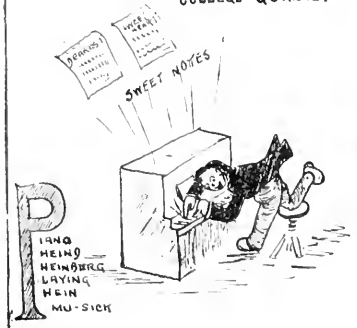
COLLEGE NIGHT AT THE C.U.C.P. AS SEEN BY GEORGE HOHMANN



COLLEGE QUARTETTE

"THE KIDS LAST FIGHT" - BY HOCHBURG

DISTILLING COLLEGE SPIRIT



E.(EMBRYO) KUBELIK BALWARD

"NELLIE" KIRK WAS BUSY
HANDING OUT THE "ROPES"

JUST FOR THAT—
MRS. HOSTMANN

THE BAND MADE A GREAT SHOWING
SO WHY HIDE.

TO TEACH MATERIA MEDICA,
IS NOT SO VERY GRAND—
SO HE TOOK UP SOMETHING INTERESTING,
AND JOINED THE COLLEGE BAND.

DOC HOSTMANN WAS DOING SOME
"REEN" WORK FOR A CHANGE

THE EVA TANGLEFOOT ACT WAS THE ONLY
THING "MISSING" TO COMPLETE THE EVENING'S
ENTERTAINMENT. (RESERVED FOR JUNIOR NIGHT)

The Instrumental Trio and a tenor solo by George Leich were also on the bill, which finished up about 10:45. Mr. N. S. Kirk passed out free smokes in the Alumni room.

The orchestra then moved to the main floor, and dancing held sway in the library until after midnight.

The general atmosphere about college has changed, spirit prevails and asserts itself on all sides. Old C. U. C. P. is taking on the aspect of a REAL COLLEGE. COLLEGE SPIRIT is doing it.

The S. A. editor begs to acknowledge the kind help, the perseverance and good work of the members of the Orchestra, Glee and Mandolin Clubs and other volunteers, without whose aid this affair would have fallen flat.

THE BIOLOGY CLUB.

S. G. F. SMOKER.

The Biology Club, which seems to have as its subsidiary the Society of Good Fellowship, held a smoker on the night of Tuesday, March 10th, at the University Common, and "some" smoker it was.

Members of the Senior and Junior University classes, Post Graduate class, and Prof. Mansfield, Mr. Simpson and Mr. Roon were present. All received as souvenirs dandy cherry-wood pipes, leather cigarette cases fitted with all the necessary "makin's."

That's not all, "eats" and drinks were there galore. And somehow in between the jokes and talks, a professional four-round bout was thrown in, to be followed later by a bout between Hammer, '14, and Wanderman, '14.

The college orchestra furnished the music. Everybody had a fine time.

The grand finale of the smoker was held at the "Pekin" and all of the men got back in time for the first lecture in the morning. This affair was another evidence of a rising college spirit. Keep it up, 1916.

Prof. Mansfield chaperoned the affair. Committee consisted of J. Martus, M. Levine, F. A. Frawley and L. N. Brown.

1914 VALEDICTORIAN. HISTORIAN. REPORTER.

The Senior class held a meeting on March 13th for the purpose of choosing men for the above positions. The following were elected and their names respectfully submitted to the faculty for approval:

Valedictorian—Wanderman, Williams, Jones.

Historian—Stewart.

Reporter—L. N. Brown.

ATHLETICS.

The annual inter-class relay meet of Columbia was held at the athletic games of Fordham University on the eve of February 28th.

The Freshman team, of which A. Synder, '15, was a member, took first place, just beating out the Senior team. L. N. Brown, '14, was a member of the Senior team this year and one of the four on the Junior team last year. You see our good material has not been exhausted as yet.

VANILLA BEAN.

By Francis A. Frawley, '14.

Vanilla, one of the most valuable articles of commerce, is also one about which the average person is unfamiliar. It is a flavoring agent being used in the manufacture of pastries, confectionery and perfumery. There is no article sold which is more subject to fraud and impurity than vanilla extract.

Vanilla is the product of the orchid, vanilla plantifolia. The plant has a long, fleshy stem and attaches itself to trees and shrubs and appears to be little dependent on the soil for nourishment. The leaves are alternate and oval in shape. From each blossom a little pod springs which grows rapidly. On a mature plant it is about the size and shape of a banana. The blossom, which is white, gives off at night an exquisite fragrance.

This plant, so valuable for its product, is a native of the South American countries, Mexico and the West Indies. The best varieties are found in Mexico where it is cultivated very successfully.

The method of cultivating the vanilla plant differs in various countries. To cultivate the plant successfully, it is necessary to have a warm climate; a temperature from seventy to ninety degrees; frequent rains, when the plant is growing and a dry season at the end to develope the flower. Coast regions are found to be best suited for the cultivation of this plant.

In Mexico, when a vanillary is to be established, a clearing is made in the forest, where a few young trees are set out about fifteen feet apart to serve as a support for the climbing plant. The plants are set out at the foot of these trees which, in the course of its growth, it climbs. The plant does not bear fruit until its third year. After about two years' growth, the plant is ready for cropping; that is, the growth must be stopped until the flowers appear. The usual length of time for flower development is six months, if the conditions are favorable.

Next in the process of cultivation is the fertilization. The vanilla plant is strictly of the pollen species, male and female flowers growing on different plants. In former times the Indians depended on the winds to interchange the pollen, but now it is usually done by artificial means, a small wooden instrument being the successor of nature.

After this is done the fruit attains its full size in five or six weeks, but it ripens very slowly. When mature, the pod is yellow, but it is usually collected just before it ripens.

The curing of the vanilla bean is a most arduous process, each bean being handled over one hundred times. The fruit is first spread on a drying frame for a day, then sun dried for twenty or thirty days. During this process it is sweated repeatedly by being placed between blankets, then unwrapped and exposed to the air. When this part is done it is left for the sun to brown for twenty days. Then it is dried for another period of time indoors. All through this process each bean is carefully watched to determine the length of time necessary to cure it on account of the different lengths.

There are other methods of curing the bean, yet none are as successful as this, the natural way.

After about ninety days, the bean is ready for market and they are put in tins, each tin weighing about a pound.

The great enigma of many years was in regard to the source of the bean's fragrance, as this odor is not found in the plant. This, at last, was found to be the result of the curing process and is a sweet-smelling, white, crystaline substance which is known as vanillin. This substance is secreted inside the pod and is sometimes taken out by means of a long needle stuck through the pod from one end. This fraud is practiced to lower the trade price of the bean.

In the past few years many new compounds have been discovered, similar in appearance and action, to natural vanillian. The most important of these is vanillin, a coal tar product from which vanillin compound, or artificial extract of vanilla, is made. This compound has a similar odor and taste as real extract of vanilla, and is really better for some uses as a flavoring extract, as its flavor better withstands the action of heat in cooking.

"A PROBLEM."

From a bushel of corn the distiller gets four gallons of whisky, retailing for $16.00.

The Government gets $4.40.

The Railroads get $2.00.

The Manufacturer gets $9.40.

The Farmer gets 20 cents. (He raises the corn.)

The Retailer gets "Hell."

The Consumer gets "Drunk."

GLEE CLUB.

H. Wirklich, '14, Director.

1st Tenors:

S. R. Drapkin, - - - - - - '14
F. A. Frawley, - - - - - - '14
W. A. McBride, - - - - - - '16
T. E. Kinane, - - - - - - - '14

2nd Tenors:

E. A. Baldwin, - - - - - - '14
B. Geiger, - - - - - - - - '15
E. L. Moadinger, - - - - - '14
J. J. Troy, - - - - - - - - '15

Baritones:

F. Fletcher, - - - - - - - '14
D. W. Odell, - - - - - - - '14

Basses:

M. Markowitz, - - - - - - '14
G. Portoghese, - - - - - - '14

Meets Wednesday nights.

MANDOLIN CLUB.

A. Galateria, Director.

Mandolins: D. Franceschi, E. Franceschi, J. J. Green and Wu.

Guitars: J. Lione and M. DeLalla.

Meets every Friday night.

ORCHESTRA.

E. A. Atwood, - - - - - - - Piano
F. E. Ambrose, - - - - - 1st Violin
S. Anzalone, - - - - - - 1st Violin
A. Weinstein, - - - - - - 1st Violin
J. Martus, - - - - - - - 1st Violin
J. Windt, - - - - - - - 2nd Violin
A. Lambert, - - - - - - 2nd Violin
Dr. C. W. Ballard, - - - - Cello
J. Sciacca, - - - - - - - 1st Cornet
A. M. Dixon, - - - - - - 2nd Cornet
T. E. Kinane, - - - - - - Trombone
T. McGranaghan, - - - - - Drums

Meets every Monday night.

FRATERNITY·NOTES

KAPPA PSI.

Gamma Chapter.

Messrs. Madden, Boehlert, Reichardt and Virden, all of the Class of 1915, went through the "mill" in the early part of the month and are now K. P. brothers. After the business and initiation the usual "feed" and bowling contest took place.

Bro. McBride was delegate to the District Convention held at Springfield, Mass., and, besides holding down Gamma's end, reports a glorious time.

Bro. Baldwin has just returned from the banquet of the Eta Chapter (Philadelphia C. P.), and he is still talking of the eats, the place and the not-to-be-forgotten time.

PHI DELTA CHI.

Gamma Chapter.

The Annual Banquet will be held at Healy's on Wednesday, March 25th. As this is the Fifteenth Anniversary of Gamma Chapter, it is our endeavor to make this the best ever. A great many of our alumni have signified their intentions of coming, and we hope to have as guests a number of our honorary brethren.

An initiation will be held on Monday, March 16th, when a number of Junior pledgees will be taken in.

Among recent callers at the "house" have been Brothers Roediger, Thode, Buck, Rodgers and Ziegler.

TAU EPSILON PHI.

Alpha Chapter.

The Committee on the Banquet and Ball to be given to the honor men of last year has been hard at work, and they have hopes for a huge success.

The honor men of Alpha Chapter are (1) I. A. Solomons, Jr., '13; first man on the honor roll and recipient of the Alumni gold medal, Kappa Psi gold medal and the $200 Max J. Breitenbach prize; (2) J. H. Wiener, '13, seventh on the roll of honor and winner of the $100 Alumni prize in Analytical Chemistry.

Messrs. B. Geiger, '15, J. Friedlieb, '15, E. Windt, '13, have only been pledged to the fraternity—the worst is yet to come.

Dr. W.—"Miss R——, how long should you percolate this drug?"

Miss R.—"Until completely exhausted." What d'ye mean?

THERE'S A REASON.

We always laugh at Vorisek's jokes,
No matter how bad they "be,"
Not because they're funny jokes,
But because it's policy.

A. Senior, '14.

The Senior class is going on a hunt for Anthony Van Leewenhoeck, the man who discovered the microscope. Reward, dead or alive!

Prof. A.—"Just to prove that an acid is sour, I am going to ask a student to taste this weak solution of sulphuric acid."

Voice in the Distance—"Just a minute, doctor, that fellow owes me a nickel."

L. W. S., '15.

Prof.—"What are you doing? Learning anything?"

Stude.—"No, sir; I'm listening to you."

L. W. S., '15.

Pharmacy Quiz.—"Name a primary source of heat available to pharmacist."

"Steam heat."

A SUBSTITUTE.

He breathed his last, one balmy day,
This pilot of the ship of pills,
And to the heavens sped straightway
Away from all the aches and ills.

"I fain would gain admittance here,"
St. Peter heard this mortal say,
"That I may know no more of fear,
And that in peace my soul may stay."

St. Peter scanned the book of life,
And then, in melancholic mood,
Directed this poor son of strife
To some place "just as good."

Ph. Hirsch, '15.

POPULAR BRANDS.

MOGUL—Prof. Rusby.
DEITIES—The Faculty.
PRETTIEST—(?)
TROPHIES—What we are after.
MUR-ADS—What this paper wants.
LUXURIES—Vacations.

H. A. G., '15.

EXCHANGES.

Mermaid—"Saw something scandalous to-day. A mail steamer resting on the bosom of the ocean."

Mere Man—"That's nothing. I saw one hugging the shore."

—*Northwestern.*

Life is one damn thing after another,
Love is two damn things after one another.

—*California Pelican.*

HEARD IN GYM.

"Tie up your shoe, Binder; your tongue's hanging out."

—*Ohio-Micrometer.*

New York College of Pharmacy

Columbia University

The Eighty-fourth Annual Term of Instruction of this College, open to men and women, began on Monday, September 22nd, 1913.

The College offers a course of two years, consisting of three days instruction weekly, open to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on fifteen Regents' counts or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and of other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College also offers a course of three, four and six years, of three days' instruction weekly through the academic year leading respectively to the degree of Pharmaceutical Chemist (Ph. Ch.), Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.) Any one of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

A Summer Preparatory Course of twelve weeks prepares students in special directions for the regular work of the term.

Those interested will please communicate with

THOMAS F. MAIN, Secretary,

115-119 West 68th Street, New York City.

...The...

New York Journal of Pharmacy

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CURT P. WIMMER, A. M., PHAR. D., MANAGING EDITOR.

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Contents:

THE ISAAC PLAUT FELLOWSHIP.

Announcement was made at the April meeting of the Board of Trustees of the establishment of a Fellowship in our College. Mr. Albert Plaut is the generous donor. This Fellowship is to be awarded to the Bachelor of Science in Pharmacy of our College who in the opinion of the Faculty is worthy and qualified to pursue studies at a foreign university. The detailed conditions of the award of this Fellowship may be found on another page of this issue under College Notes. In this connection, it may be of interest to know something about the gentleman whose name this Fellowship bears, and we reprint the following from the American Druggist:

MR. ALBERT PLAUT.

The Fellowship is to be known as the "Isaac Plaut Fellowship in Pharmacy," in memory of Mr. Plaut's father, who was many years ago in the drug business in New York City and subsequently connected for years with the house of Lehn & Fink. Many men now leaders in pharmacy can recall the eagerness with which the elder Mr. Plaut's visits were looked forward to during their student days, as he was the first man to show samples of crude drugs to the retail druggists. These samples were of unusual excellence and Mr. Plaut's knowledge of them was so thorough and accurate that many a student pharmacist has learned more of practical pharmacognosy from a visit by Mr. Plaut than he had learned in a week's lectures at the College. Mr. Plaut was also deeply interested in educational matters and was for many years a school trustee. It is eminently fitting, therefore, that his name should be associated with so liberal an endowment as that which is now provided by his son. The establishment of the Fellowship does credit alike to the filial piety and to the public spirit of the founder. We have resident scholarships and fellowships in several institutions, but this is the first foundation to provide for the establishment of a foreign Fellowship in pharmacy, and the New York College of Pharmacy is to be congratulated on having among its officers a man gifted with the imagination to see the need of such a Fellowship, the means to provide it, and the generosity to found it.

THE ANNUAL ELECTION.

The meeting of the Alumni Association, held on Wednesday, April 8, 1914 was exceptionally well attended. It was the occasion of the election of officers and a considerable amount of Association business was transacted. President Weinstein read a very interesting ad-

dress on his experiences as president of the Association which is printed below The officers elected are:

President, Jeannot Hostmann; first vice-president, J. A. Steffens; second vice-president, M. W. Weil; third vice-president, P. Gaetano, honorary president, T. F. Main; secretary, G. Hohmann; treasurer, F. A. Leslie; registrar, C. P. Wimmer.

Members of the Executive Board—J. H. Hecker, H. H. Schaefer, A. J Bauer.

The president-elect, Mr. Hostman, was born in Jersey City on December 27, 1876, and received his education in the German-American School and in the high school of that city. He entered the drug store of F. A. Bongartz as apprentice in 1890 and, enrolling as a student at the College of Pharmacy, received his degree of graduate in pharmacy at the commencement held in the spring of 1896.

The following eleven years he was engaged in the retail drug business as clerk and proprietor. Deciding to take up a chemical career, he enrolled in the Food and Drug Class of 1907-'08, receiving at the end of the course a certificate of proficiency.

He was city chemist of Hoboken from 1908 to 1910, when he became lecture assistant to Professor Coblentz. He remained in the position when Professor Arny came and is now instructor in physics, conducting the university physics laboratory course and quizzes.

The president-elect is a genial energetic gentleman, and under his administration the Alumni Association will live up to its reputation for progress and efficiency.

THE USE OF METHYLENE BLUE AS AN INDICATOR.

By Frederic E. Niece, Phar.D.

Some four years ago the writer was engaged in the determination of the phenol co-efficient of all the best known American brands of coal tar disinfectants. Considerable difficulty was experienced in getting an absolute phenolic control. Controls were usually made up fresh in small quantities and estimated for their phenol content by using the well known solution of Koppeschaar.

In order to expedite this part of the work, a strong phenol solution was kept on hand, from which the weaker solutions were made. Weaker solutions made up from time to time for controls all varied more or less, notwithstanding the extreme care exercised in their preparation. It was soon discovered that two factors were responsible for these obscure variations. One was the power of the weaker solutions to change their control titre on standing, and the unreliability of the exact end reaction when standardizing with the Koppeschaar solution according to the method as given in the U. S. P. VIII was the other and all important one. In this work the whole method depends upon an absolute standard control, and to this end every care must be exercised, since the least difference in dilution and the faulty technic in its phenol estimation enlarges the discrepancy in which there is no alternative other than a re-examination which is both tedious and time-consuming. The principal trouble was found to be with the iodine in the process of titration, since it was observed that no two operators could agree upon the end point, or at just what moment the iodine was ab-

sorbed by the thiosulphate. Realizing the importance of simplifying this part of the work, since an absolutely known control was necessary, I endeavored to make use of starch solution, which was found to be impracticable. Several other forms of indicators were used without success, until the thought occurred to use methylene blue. This proved to be a decided innovation and succeeded in eliminating this obstacle, which at first seemed almost impossible. By the use of methylene blue as an indicator in all subsequent control determinations, concordant results were obtained by independent workers. In this manner the so-called "personal equation" or neutral persuasion is reduced to a negligible amount.

In order that further work in this direction may be encouraged, the following detailed example will give an idea as to what to expect, throughout the method of determination, when using methylene blue as an indicator. An example in standardizing the concentrated carbolic acid solution follows:

Take 5 c.c. of the above; add 25 c.c. of water and 60 c.c. of the bromine solution This gives a clear solution. Next add 10 c.c. of HCl, which produces a whitish magna of tribromophenol, which floats to the top of the solution, which solution is of a yellowish color. Shake the vessel occasionally during a half-hour, add 15 c.c. of distilled water for washing the stopper, etc., which is carefully followed with 10 c.c. of a 20% solution of potassium iodide in water.

This is again shaken for about ten minutes. A reddish brown solution ensues with a light brownish precipitate which floats to the top of the fluid, indicating the presence of free iodine. Two c.c. of chloroform are next added which dissolves the above precipitate and takes on a violet color by absorbing the iodine present and falls to the bottom of the vessel.

One cubic centimeter of a saturated aqueous solution (6%) of methylene blue is now added to the above mixture. This immediately produces a dark yellowish brown, to a greenish brown color (precipitate in colloidal suspension), depending on the amount of free iodine present. The solution is then titrated with the standard thiosulphate solution using one c.c. portions at first and later on in tenths of a cubic centimeter, carefully added, and the solution vigorously agitated for one minute after each addition. The following color phenomena will be observed: As the end point is approached, a clearer greenish color is imparted to the solution and the chloroform is observed to give up its violet color produced by the iodine, and takes on a faint blue; the solution turning to a steel blue color, when suddenly the entire solution turns from a greenish gray to a light blue as the end reaction is reached. The end reaction is strong and distinct. Vigorous agitation is essential throughout the entire titration. A perfect end reaction is one in which the chloroform is of a pure white nature, or has a bluish-white tinge, and the solution is clear with a light blue color. The chloroform not only clears the solution for titration by dissolving the precipitated tribromophenol, but in this instance it assists as an indicator, both as to the elimination of the iodine and the production of the blue color, since it dissolves out of solution both of the above, leaving it greenish in appearance until the reaction is completed.

In conclusion the following reasons are submitted for the purpose of offering

methylene blue as an invaluable adjunct as an indicator, to the pharmacopoeial process for the estimation of phenol with Kopperschaar's solution.

First, as an indicator it is cheap, stable, sensitive, easily prepared and without false side reactions.

Second, it fills a gap in the above process which is without delicate means of detecting the end reaction.

Third, the end reaction is sharp and unmistakable, being unlike starch, by reacting in an opposite direction.

Fourth, its strong affinity for iodine allows it to readily react with iodine when present in traces, when used as an indicator.

A COLORIMETRIC METHOD FOR THE ESTIMATION OF PHENYL SALICYLATE IN MIXTURES WITH ACETPHENETIDIN, ACETANILIDE, ETC.

By Raymond C. Flett, Ph. Ch.*

The usual assays of these preparations are rather lengthy and cumbersome. I have devised the following method which involves considerable less time, and is in no less degree accurate. In principle it depends on the intensity of the violet coloration produced when a salicylate is caused to react with a ferric salt. And from the degree of intensity of color produced by the sample, and by matching it against a series of color standards of Phenyl Salicylate of known strength, the per cent. of Salol in the sample may be calculated. As in every means of estimation, by colorimetric methods it is wanting in that various operators differ in ability to distinguish between various shades of the same color

*Mr. Flett is a candidate for the degree of Phar.D.

As the reagents used are relatively small, weighing and measuring must be carried out with the greatest accuracy; as any error introduced multiplies itself, many times, in the result. It is important, too, that the standards and the sample be prepared at the same time since the colors are prone to change rapidly. This method may be used also for the estimation of any soluble salicylate.

The Preparation of the Sample: Extract a suitable quantity (accurately weighed) of the sample with alcohol. Filter, and wash with alcohol a sufficient quantity, so that 10 cc. of the liquid represents 100 milligrams of the sample.

Phenyl Salicylate Standards: Dissolve 1 gram of pure (U. S. P.) Phenyl Salicylate in a sufficient quantity of alcohol to measure exactly 100 cc. (Each cc. therefore represents 10 mgms. of Phenyl Salicylate.)

Ferric Chloride Solution: Dilute 8 cc. of Ferric Chloride Test Solution (U. S. P.) with sufficient alcohol to measure 30 cc.

Apparatus Required: 1-1 cc. pipette, graduated in hundredths; 1-50 cc. burette, all glass; 11-10 cc. Nessler tubes.

DETERMINATION.

Part A.

From a burette, run into ten Nessler tubes the standard Phenyl Salicylate Solution, so that each succeeding tube will increase in amount one cc. That is, into No. 1 Nessler, run 1 cc., into No. 2 Nessler, run 2cc., etc. Fill each to the mark with alcohol. To the 11th Nessler add 10 cc. of the solution of the sample previously prepared. Now to each of the eleven tubes add 1 cc. of the Ferric Chloride Solution. Match the colors of the standards with that of the

sample and note the comparate which is nearest, but lighter in color, to the sample. If it compares exactly, the per cent. of salol may be computed here by multiplying the number of the standard by ten. If it does not compare *exactly*, continue in part B.

PART B.

Clean the tubes and add to each the same number of cc. of the standard Phenyl Salicylate Solution as was the number of the nearest comparate in part A. Then to No. 1 add 1-10 cc. of the standard Phenyl Salicylate Solution; to No. 2, add 2-10 cc.; to No. 3, add 3-10 cc., etc. Fill to the mark with alcohol. To the eleventh tube, add 10 cc. of the solution of the sample. To each of the eleven tubes, now add 1 cc. of the Ferric Chloride Solution. Note the number of the comparate of the sample. The number of the comparate in part A, times ten, plus the number of the comparate in part B, gives directly the per cent. of Phenyl Salicylate in the sample.

PRESIDENT WEINSTEIN'S ADDRESS AT THE ANNUAL MEETING OF THE ALUMNI ASSOCIATION, APRIL 8, 1914.

It is my extreme pleasure this evening to bring before you in a brief way a summary of my experience as president of the Alumni Association. When I was elected two years ago to-night I felt highly honored. Immediately many thoughts passed through my mind as to what might be done to interest the members in Alumni matters. I felt the responsibility of my position and I proceeded to carry out the ideas I had in my mind with a quiet propaganda of my own to see if I could not stimulate greater interest amongst members of this Association in Alumni doings.

During my administration many changes have taken place which I think have proven advantageous, both in building up the Alumni and stimulating interest among its members in general.

The introduction of our money collecting system deserves consideration, although I am unable to state at this time what progress, if any, has been made, as no report has been rendered to date.

Several amendments to our By-Laws have recently been made. One in particular which provides that the major portion of the business to be transacted shall be carried out at the stated Executive Board meetings which meets one week prior to the regular meeting. This leaves little business to be conducted at the regular meetings and thus the remainder of the evening can then be devoted to some sort of entertainment. Our recent consolidated Alumni Smoker and College Night proved a big success. It brought out many old members who have not attended meetings in years. I feel that entertainment of this sort will do silent propaganda work in channels where correspondence will never reach.

A most notable change in the By-Laws was the introduction of the Nominating Committee. You have all read it and know its value. Its result is displayed here this evening. Many new faces are present who were no doubt attracted by this newly instituted method of electing the Association's officers.

In looking over our records I find that the attendance at meetings for the last two years has been larger than for a long time previous. I trust that in the future a steady climb of figures will be attained.

Our annual dinners and balls were successful affairs socially, and with a little more interest displayed by the members

those events can easily be made financially profitable as well.

Our finances have been a matter of concern to me ever since I found out that the disbursements exceed the income. With the large membership on our books and if the treasurer takes proper care of same there should apparently be no deficit and no need to draw money from the reserve fund for the purpose of meeting the current expenses. I trust that my successor will be able to diagnose correctly the case and to prescribe the proper treatment.

One of the pleasant surprises of my administration was the conversion of the Alumni Journal into the N. Y. Journal of Pharmacy. The name is not at all a new one, for the New York College of Pharmacy issued a publication under the same name some sixty years ago. The publication was discontinued two years after it started on account of lack of support.

Times have changed. The College and the Alumni Association now occupy first positions in the country, and I am confident that support will not be lacking to our new Journal, especially so when the members will once forever make up their mind that the official organ of the Association is not to be looked upon as a separate outside business enterprise, but is an integral part of the Alumni activities and is part and parcel of the Association itself. Dr. Wimmer, the present editor, has shown to us what he can do with a Journal, but I am assured that he faces a heavy deficit if he continues to publish the Journal on the present scale. It is our duty to help him and do so at once. But the question is, how? On going over the matter with him he stated to me that about 10 more pages of advertisements would make the Journal self-supporting. It seems to me that it is up to us to get these advertisements for him or at least use our influence as an Association for that purpose. I recommend that a committee of 10 influential members of the Association be appointed under the chairmanship of the editor, for the purpose of getting advertisements for our Journal. By means of interviews or correspondence with the advertising managers of different firms their advertisement can be obtained. This, it seems to me, is the very least we can do at the present time.

Before closing my remarks I wish to express my regrets at the loss we sustained in the last two years in the death of men whom we loved and esteemed and who were at the head of the Association's government in years past. It is with deep sorrow that I mention the names of Ewen McIntyre, Chas. S. Erb, Wm. H. Ebbit.

May their ashes rest in peace.

In conclusion I wish to thank you all and the officers of the Association for the loyal support and fraternal feelings shown to me throughout my incumbency in office. I trust that the new administration will be successful in raising the standard of our Association socially and financially, and I hope that the time is not remote when we will rank with the best of fraternal organizations, both in spirit and number.

DINNER OF THE CLASS OF 1894.

The arrangement for the Twentieth Anniversary Dinner of the Class of 1894 are now complete and a good attendance is assured. The dinner will be held at Cavanagh's, 258 West 23rd St., on Saturday evening, April 25th, 1914. There will be a reunion at 7:30 P. M. and the dinner will be served at 9 o'clock sharp Tickets are $2.50 each.

ALUMNI NIGHT.

At the last meeting of the Alumni Association it was decided to hold the usual Alumni Night, given to the Junior Class on the evening of May 13th, 1914 The usual prizes will be given to the men at the head of the class and an entertainment will be provided. The College Orchestra and Glee Club will be in evidence.

ALUMNI NOTES.

Chas. M. Driesen, '12, is doing a very fine business at 143rd Street and Broadway. We also congratulate him on the arrival of a Miss Driesen.

Prof. John Oehler, '79, attended the last Alumni meeting. The boys gave him a fine reception, and it is hoped that the charms of Carlstadt, N. J., will not again keep him away for a period of years.

Hugo Schaefer, '13, is assisting Mr. Hostmann. He is especially active in the new "Chemical Feed-Club" recently established. A picture of him engaged in a pressing activity has been submitted to the editor for publication. It will be published in one of the next issues.

Edwin C. Steinach, 1900, is still with Lanman and Kemp.

M. Heldt, '10, has purchased Wernert's drug store, 1272 Boston Road, N. Y.

Harry N. Butler, '04, is an inspector for the Board of Pharmacy.

James H. Chafey, '13, is working for L. A. Taylor, Lakewood, N. J.

Samuel Goodman, '13, is studying medicine at Fordham University.

Saul E. Bellis, '13, is employed by Mr M. Womow, 940 Logwood Ave., New York City.

Reuben J. Botkin, '13, is working for the Physician's and Surgeon's Aseptic Manufacturing Company.

Ernest Windt, '13, is with Mr. F. G Shibley, 3900 Broadway.

M. S. Bender, '13, is at Bellevue, studying medicine.

William Taylor, '13, is employed by Messrs. Schieffelin & Co. as an analytical chemist.

ANNUAL DINNER OF THE "BLIZZARD CLASS."

The annual dinner of the famous "Blizzard Class" of the New York College of Pharmacy was held on the twenty-sixth anniversary of the 1888 blizzard, namely on March 12th, 1914. The dinner was held at Terrace Garden, and was in commemoration of examination days, twenty-six years ago.

The president of the Class of 1888, Walter B. Reed, presided as usual, and Professor Chas. F. Chandler honored the class by his presence.

The guests of the evening were the following named: Felix Hirseman, S. V. B. Swann, Fritz Schaeffer, Louis N. Brown and Francis A. Frawley, the latter two are sons of members of the Blizzard Class, and are now members of the Senior University Class of the College.

Addresses were made by the following named: Felix Hirseman, David Strauss, Walter B. Reed and Professor Charles F. Chandler, who is an honorary member of the Class.

The class members in attendance were as follows: C. W. Bartlett, Arthur T. Brown, August Diehl, Leopold Freiberger, F. E. Kalkbrenner, Wm. G. Kugler, Philip Matty, William Oettinger, Fred. H. Plump, Otto Raubenheimer, Walter B. Reed, J. G. Reeves, Chas. A. Shine, A. G. Slonaker, David Strauss, C. W. Trautmann, Frederic P. Tuthill, August Volland, G. F. von Kummer and Emil Weiss.

Regrets were received from the following named members: Chas. F. Antz, Emil A. Bischof, Rose Brunner, J. D. Crosby, J. S. Dickert, George C. Diekman, H. F. Eisentraeger, August Frank, Andrew Guerin, Chas. S. Keale, William W. Keyler, J. F. C. Luhan, Harry S. Miles, W. Pitt Rich, Chas. B. Sears, Louis Wedel and Leon Wernert.

A committee consisting of Messrs. Reed, Tuthill, Matty, Diehl and Diekman was upon motion elected. This committee is empowered to make arrangements for a permanent class organization.

The dinner was a success in every way and the members of the class are looking forward to the year 1915, when another reunion and dinner will be held.

The following named constituted the Dinner Committee: August Diehl, Chairman; Philip Matty Otto Raubenheimer, David Strauss, Emil Weiss, Frederic P. Tuthill, W. Pitt Rich and George C. Diekman, Secretary-Treasurer.

The Eighty-fourth Annual Commencement of the New York College of Pharmacy will take place on Thursday, May 14, at Carnegie Hall. This year Nicholas Murray Butler, president of Columbia University, will make the address to the graduating class. The Commencement of Columbia University will be held on June 3, and A. J. A. Traub of the Post Graduate Class and Edward M. Cole of the Senior University Class have been appointed as marshals.

The Phi Chi Fraternity held a dinner at Healy's on March 31, at which Dr. H. H. Rusby was the chief guest of the evening, and Dr. Fred Leslie acted as toastmaster. The Kappa Psi dinner on April 2 was held at the Chemists' Club, and among other guests was Professor Charles F. Chandler. Mr. Jeannot Hostmann of the Department of Chemistry acted as toastmaster. Professor Chandler told the boys of the old days of the College of Pharmacy. He has been a teacher for over 50 years and directly connected with this institution for 47 years. Professor H. V. Arny attended both affairs and told interesting anecdotes of his days at Goettingen, telling particularly of the customs in the Chöre, which correspond to the fraternities of American colleges.

The Eighty-fifth session, which begins next September, promises in point of attendance to surpass even our present large class. Matriculation has commenced and already we have assigned over sixty seats to members of the Class of 1916.

The student activities at the College, under the leadership of Mr. Leo Roon of the Department of Pharmacy, promise successful results. On Junior Night, the entertainment will consist mostly of music rendered by the College Orchestra and the Mandolin and Glee Clubs.

At a recent meeting of the Board of Trustees it was announced that Vice-President Albert Plaut had founded a Fellowship in memory of his father, the late Isaac Plaut. The terms of this Fellowship are as follows:

For the encouragement of graduate study and original research, this Fellowship has been founded by Mr. Albert Plaut, in memory of his father, Isaac Plaut.

It consists of the payment annually of the sum of $500, to provide for a year of study at a foreign school or university, by that Bachelor of Science in Pharmacy of this College, who shall have shown, during his course of study here, the greatest taste and aptitude for original investigation, among the members of his class. Should no member of a class be deemed worthy of the award, it will be withheld, and the money retained for this or other cause shall be used for the formation of a fund, the income of which shall be annually added to the Fellowship payment for the respective year.

The Fellow shall be appointed by the Council of the University upon the nomination of the Trustees of the College of Pharmacy. He shall attend a foreign institution to be selected by himself and approved by the Faculty of the College of Pharmacy and shall pursue a course of study approved by the Faculty. At the close of his incumbency he shall present to the Faculty a written report of his work.

The Fellowship payment shall be made in three equal installments, one on June 15, one on November 1, and one on March 1, provided that the Fellow continues faithfully to pursue the work undertaken. In case of failure so to do, he shall forfeit all further privileges and emoluments conferred upon him by his appointment to the Fellowship, and the Trustees of the College of Pharmacy may declare the Fellowship vacant.

The terms of the Fellowship will become effective in June, 1915.

CAUTION.

"Ain't you rather young to be left in charge of a drug store?"

"Perhaps; what can I do for you?"

"Do your employers know it's dangerous to leave a mere boy like you in charge of such a place?"

"I am competent to serve you, madam, if you will state your wants."

"Don't they know you might poison some one?"

"There is no danger of that, madam; what can I do for you?"

"I think I better go to the store down the street."

"I can serve you just as well as they can and as cheaply."

"Well, you may give me a 2-cent stamp, but it don't look right."

Professor George C. Diekman

Scientific Investigations Reported from the Pharmaceutical Laboratories of the University Goettingen.

C. Mannich and S. Kroll, in Apotheker Zeitung, No. 18, 1914, page 185, report as follows:

Salicol—Under this title, Dr. M. Weitemeyer, of Erfurt, placed on the market a medicinal substance, in tablet form, said to contain aceto-salicylic and citro-salicylic acids. Investigations made as far back as 1912, by Von C. Mannich and L. Schwedes, Apotheker Zeitung, 1912, No. 55, showed that Salicol was nothing more than an impure aceto salicylic acid. Later investigations undertaken upon request of the German Apothecaries Society, seem to confirm the earlier findings.

The tablets are furnished in glass tubes, sealed, and each tube containing 20 tablets, averaging 0.55 gm. in weight Each tablet was found to contain alcohol-insoluble matter, chiefly starch, weighing 0.08 gm. The residue after ignition equalled 2% and consisted of compounds of aluminum.

The presence of acetyl-salicylic acid was shown by allowing the alcoholic extract to vaporize spontaneously. The crystals thus obtained were identified as impure acetyl-salicylic acid. The acid thus obtained did not meet the requirements of the Arzeneibuches as far as the melting point and the ferric chloride reaction are concerned.

The investigators were unable to demonstrate the presence of any substance corresponding to citro-salicylic acid; in fact, they remark that to their knowledge no such substance has been prepared. They nevertheless attempted to ascertain whether or not citric acid was present, either free or combined. For this purpose they extracted a number of the tablets with alcohol, removed the alcohol by evaporation, and treated the residue with water for several hours. This solution was then concentrated, salicylic acid separating out. They were unable by any of the known characteristic tests to show the presence of citric acid in the mother liquor.

The authors, as a result of their investigations, have arrived at the conclusion that the tablets of Salicol, consist entirely of acetyl-salicylic acid, and the statement that they contain also citro-salicylic acid is therefore false and misleading.

C. Mannich and G. Leemhuis, in Apotheker Zeitung, No. 19, 1914, page 194, report on the examination of Codeine tablets as follows:

The investigation was undertaken in response to the request of the German Apothecaries Society. The tablets were claimed to contain 0.05 gm. of codeine phosphate each, and had been obtained by a physician through agency of a mail order concern. Upon examination the tablets were found to be uneven in size and thickness, this variation was very material.

In weight these tablets varied between 0.16 and 0.25 gm. For purpose of ascertaining the codeine content the following procedure was employed: Ten tablets, weighing 2.07 gm., were treated with 10 gm. of diluted solution of sodium hydroxide, until they disintegrated. The mixture was then shaken out with 100 ccm. of ether. Forty ccm. of the ether containing the basic codeine were allowed to vaporize at low temperature, and the residue (codeine) dried at 100° C. and weighed.

The residue thus obtained was found to weigh 0.1829 gm. for the 10 tablets, which equals 0.01829 gm. for each tablet. As a control, a determination of the phosphoric acid, by the ammonium molybdate method was carried out. The amount of phosphoric acid found corresponded closely to the amount of codeine found. Calculation shows that each tablet contained 0.015 gm. of codeine phosphate, instead of 0.05 gm. as claimed.

It would therefore seem that the quantity of codeine phosphate was misstated, and that each tablet contained only about one-third of the quantity claimed.

The same authors had occasion to examine a collyrium known as M. Pawlewskis's Eye-Water. This article is placed on the market by M. Pawlewskis, Posen, Kopernikusstr. 4 II. It is claimed that this article will strengthen weak eyes, cure cataract and glaucoma, heal inflamed eyelids, granulated eyelids, cure scurvy and bleeding of the gums. Exhaustive directions for the use of the eye-wash accompany each package.

The article was found to consist of a clear, colorless liquid, without odor. It is furnished in an ordinary glass container and 55 gms. of liquid are found in each container. The liquid possesses an acid reaction and has a saline, metallic taste. Its specific gravity is 1.017.

A qualitative examination shows presence of the following: Zinc, Sodium, Sulphuric Acid, Hydrochloric Acid and minute quantities of Aluminum. A quantitative estimation showed that 100 gms. of the eye-wash contained the following: 1.25 gm. of Zinc Sulphate and 1.32 gm. of Sodium Chloride. Alkaloids and other organic substances were absent

This highly prized specific therefore contains 1.25 gm. of Zinc Sulphate and 1.32 gm. of Sodium Chloride, dissolved in about 97 gms. of water. It is unnecessary to say that a liquid of this composition can hardly possess all the virtues attributed to it.

C. Mannich and S. Kroll, in Apotheker Zeitung, No. 18, 1914, page 186, report on the examination of an article known as Schumacher's Cell Regenerator. This as well as other examinations were made at the request of the business management of the German Apothecaries Society.

Schumacher's Cell Regenerator, No. 13, is placed on the market in small pasteboard cartons, each bearing the signature and the likeness of its inventor.

Each package examined was found to contain 10 gms. of a white odorless powder, tasting like milk sugar. The powder was quite soluble in water, forming a perfectly clear solution.

The aqueous solution was neutral in reaction and quickly reduced Fehling's solution. The investigators were unable to demonstrate the presence of salts. Incineration showed 0.18% of mineral matter. Organic substances other than milk sugar were absent. An attempt to show the presence of alkaloids was negative in result.

A quantitative determination of the substance by the polariscopic method showed that it consisted of a very high grade of milk sugar, practically 100% pure. The product is thus found to be purer than the milk sugar of the D. A. B., which permits an ash content of 0.25%.

The analysis therefore shows that Schumacher's Cell Regenerator consists of nothing else than a nearly chemically pure sample of milk sugar. It was suggested that the article might consist of a highly diluted homoeopathic trituration; this, however, is not claimed by the inventor, nor is it shown by the analysis.

A physiological determination of the value of certain Digitalis preparations: Von Dr. Anton Lehnert, Bad Duerkheim and Professor Oswald Loeb, Goettingen:

The authors have examined a number of well-known Digitalis preparations with a view of establishing their therapeutic value in a physiological way. They employed the method of Frankel-Gottlieb, comparing the results found in case of the examined preparations, with the results found upon using an infusion of digitalis prepared from titrated Digitalis leaves obtained from the firm of Caesar & Loretz.

The Folia Digitalis titrata of Caesar & Loretz was found to show a constant therapeutic value when tested from year to year, which the authors state to be as follows: Each 0.1 gm. of the substance is the equivalent of 5 Gottlieb units.

As a Gottlieb unit is designated the smallest quantity of substance required to produce a systolic cessation of heart action in a frog, weighing from 29-32 grammes, with certainty within 30 minutes.

Digitalis dialysata Golaz: The preparations intended for intravenous injection showed only from 16 to 40% of their claimed value. The preparations intended for internal medication were found to correspond to their declared value.

Digifolin: This preparation is placed on the market, both in solution and tablet form. Its activity conformed closely to the claimed values, and the contents of the packages were found unchanged after 11 months.

The authors claim that their results have been confirmed by other investigators.

Concentrated Ipecac Infusions.

Von C. Mannich and W. Duehr, in Phar. Zentralhalle, 1914, No. 11, page 249, report as follows:

The authors call attention to the voluminous literature concerning the preparations of ipecac. Many of the articles

dealing with this subject merely attempt to show improved methods of preparation, while others take up the advisability of furnishing concentrated preparations of a stable nature, so that the work of the prescriptionist may be made easier. There are, of course, different opinions concerning this, some authors claiming that such concentrated preparation may properly be used for dilutions, while others condemn them in no uncertain manner.

Because of the importance of ipecac as a medicinal agent, Von C. Mannich & Duehr have made investigations of a number of ipecac preparations on the market with a view of determining their relative values and relative stability. The results obtained are based on the alkaloidal content of the various preparations examined.

The authors state that in a properly prepared infusion of ipecac there will be found not over three-fourths of the alkaloidal content of the drug which was infused. This result is confirmed by the previous investigations of G. Frerichs

The result of the investigation is interesting as well as instructive and is as follows:

Infusion of Ipecac 1-200, contains:

(a) When prepared lege artis, from a root which contained 2.33% of alkaloids.0.018%

(b) When prepared from the concentrated infusion (1:20 Dieterich).....0.011%

(c) When prepared from a concentrated infusion (1:20) acidulated with nitric acid 0.0033%

(d) When prepared from Pervacuatum Ipecacuanhae (fluid 1:1).....0.0098%

(e) When prepared from Infusum Ipecacuanhae sicc. °K° (1:1).....0.006%

(f) When prepared from Infusum Ipecacuanhae sicc. °K° (1:1), other manufacturer 0.003%

(g) When prepared from Infusum Ipecacuanhae sicc. °K° (1:1), still another manufacturer 0.001%

The authors as a result of their investigation have arrived at the following conclusions:

(1) That a properly prepared infusion of ipecac contains only about three-fourths of the alkaloidal value of the drug employed.

(2) That an infusion prepared with the aid of a concentrated infusion (1:20) formula of Dieterich contains only two-thirds the quantity of alkaloid, as will be found in a properly and freshly prepared infusion.

(3) That alkalies should under no circumstances be added. This is sometimes done in order to impart a deeper color to the product.

(4) That the concentrated preparations of the market are unreliable, and that they always contain a much lesser quantity of alkaloid than an infusion properly made.

Coincident with the investigations outlined above, the authors undertook an examination of the article known as Riopan, which is claimed to consist of a concentrated ipecac preparation, contain-

ing 50% of ipecac bases as hydrochlorides, and the acids characteristic to ipecac. It is a preparation to be used as such and not a concentrated product to be diluted before dispensing. This article appears in the form of a light-brown powder, readily soluble in water. An alkaloidal content of 43.7% was ascertained, which would be the equivalent of at least 50% of the hydrochlorides.

The authors state that from a pharmaceutical standpoint this article is entirely unobjectionable in contradistinction to the inferior articles named above.

Edward Kemp.*

Of Lanman & Kemp, New York City.

Born in 1830; Died December 24th, 1901, President of this College of Pharmacy 1896 to 1900.

Edward Kemp was born in Ireland and brought to New York when an infant by his mother and received his education in the public schools of this city. He commenced his business career at an early age with Hussey & Murray, located at Old Slip and in 1847 was employed by W. H. Halsey of Burling Slip, who was engaged in the East Indian trade, in which branch of business Mr. Kemp rapidly became an expert.

In 1872 in company with his brother William, he entered the wholesale drug firm of Lanman & Kemp, of which his brother George was at the time sole proprietor. Mr. Kemp's intimate knowledge of the import and export trade enabled him to rapidly increase the business of his firm until it extended to all parts of the world, and its name became almost a household word throughout the East and West Indies, Central and South America. Mr. Kemp continued actively engaged in business up to the time of his last illness.

He enlisted in Company F, Seventh Regiment of the National Guard of the State of New York in 1853, remaining in active service for ten years and retaining an active interest in the regiment during his lifetime. He would never accept military promotion and always preferred to be known as "private" Edward Kemp. He was one of the promoters of the building of the Seventh Regiment Armory, towards which he contributed liberally himself, and by his personal influence materially aided the raising of funds for the completion of the building.

While adverse to publicity, Mr. Kemp was a very public spirited citizen, a man of strong and commanding personality, who would work energetically and contribute liberally for any project in which his sympathies were aroused, or for which his influence could be secured. Owing to his unassuming methods, Mr. Kemp's liberality was known only to the beneficiaries and those intimately connected with him, but after his decease it was found that he had by will provided for the distribution of over one hundred thousand dollars to his business associates and employees.

He was a member of St. Thomas Protestant Episcopal Church in New York City, and his funeral service, held in the church building, was attended by representatives from the wholesale and

*Read by Mr. Thos. F. Main, on the occasion of the presentation of Mr. Kemp's oil painting, Jan. 20th, 1914.

retail drug trade, the Seventh Regiment, the College of Pharmacy, etc. Mr. Kemp left a wife, but no children.

While Mr. Kemp's most enduring monument is perhaps the business which he so largely created and through which he made American business methods and American goods known in the Central and South American markets, his connection with this College of which he became a member in 1887 and in which he always took a keen interest, is worthy of special remembrance. He accepted the Presidency of the College in 1896 some four years after the completion of the new building and at a time when its equipment was far from complete. He at once took a keen interest in the work of the institution and made many additions at his own expense to the apparatus used in the various departments of study, crowning his gifts by the donation of a very complete set of physical apparatus. Mr. Kemp served us as President for four years, during which the College made a constant increase both in attendance of students and in educational facilities and his personal, active and intelligent interest in promoting the usefulness of our Institution will always be gratefully remembered.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, ETC.

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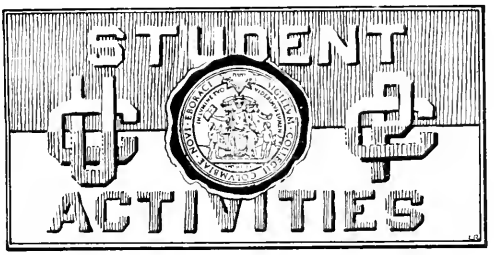
Sworn to and subscribed before me this 17th day of March, 1914.

LOUIS BENNETT,
[SEAL]. Notary Public, N. Y. Co., 372.

(My commission expires March 30th, 1915).

REPORTERS

L. N. Brown, '14.
F. Fletcher, '14.
B. E. Graystone, '15.



REPORTERS

Miss. M. O'Connor, '16.
J. J. Rampulla, '15.
A. Ziperowitz, '14.

Edited by Leo Roon, Ph. Ch.

EDITORIALETTE.

FOR MEN ONLY.

SENIORS—You are about to commence a "rough and tumble" fight for your sheepskins. The exams are here. It is a case of the "survival of the fittest."

Surely 75 per cent of you will survive the breakage bill and the exams, and on May 14th bring to a close a two-year plug and grind. No doubt every man has formed pleasant associations among his fellow-workers and the faculty; he has had some good times mixed in with the work; here and there lies a fond recollection.

Are you going to take your diploma and then deliberately turn your backs forever on the institution that started you on your career and put you on the good road to opportunity?

Of course, you should not!

One of the first essentials of college spirit teaches love of Alma Mater. If you haven't that love now, it will come to you surely when you realize what a great debt you owe C. U. C. P. Don't let the old memories fade! Join the Alumni Association which will be under the able and active leadership of Bro. Hostmann. You will now be able to pass a pleasant evening once a month in the company of your old pals. *Obey that Impulse! Do it now!*

JUNIORS—It is up to you to keep the pot of college spirit aboilin' and your cup of college life will overrun with pleasure.

Since this editorial is headed "for men only" no doubt all of the co-eds have carefully perused it. Please remember, young ladies, all this lingo applies to you as well as to the men.

THE CHEMISTRY BALL.

By H. A. G., '15.

A reception and ball was held in the Chemistry Lab. on Sunday evening. Those present were: The Misses Chloe Rine, Silvia Nitrate, Ethyl Acetate, Effie Threeofour, Ester Salt, Flu Orine, Mol Ybdenum, Iri Dium and Sal Volatile. Also the Messrs. Hi Drochloricacid, Al Kali, Pete Roleum, Ben Zine, Cal Cium, Cy Anide, Plat Inium, Pal Ladium, Sam Arium, Nic Kel and the patroness, old A(u)nt Imony. The excitement was so great and the noise so loud that it was heard outside and made the policeman out in the cold, Copper Sulphate, feel awfully blue.

One unfortunate incident occurred. Miss Effie Threeofour had the iron nerve to dance a grizzly bear with Mr. Al Kali. They were asked to stop, but Mr. Kali, making some caustic remarks, refused to do so. The janitor "Red" Litmus, was then summoned. Litmus attempted to argue with Al, but Kali gave Litmus one glance which caused "Red" to change color. Mr. Ben Zine almost exploded with rage, while Mr. Cal Cium glared speechless. Old A(u)nt Imony seeing the turn of the affair broke up the dance.

Extra!!! **Extra!!!**

COPS WIN BIG BALL GAME

69th STREET PRECINCT vs. C. U. C. P.

FEINBERG STEALS HOME WITH SUMMONS.

GAME IN DETAIL.

The game opened with Glue at the stick and Small Pox catching. Cigar was in the box, Strawberry Short Cake played short and Corn was in the field. Egg was umpire, and he was rotten. Cigar let Board walk. Song made a hit and Sawdust filled the bases. Then Soap cleaned up. Cigar went out and Balloon started to pitch, but went up in the air. Cherry tried it, but was wild. Ice went in, and kept cool until he was hit by the ball. Then you ought to have heard Ice Cream. Lightning finished the game and struck out six men. Lunatic was put out because he was off his base. Bread loafed on third and light was put out on first. Crooks stole second. (Cabbage was manager, because he had a good head.) Knife was called out for cutting first base. Grass covered lots of ground and the crowd cheered when Spider caught a fly. Steak was put out on the home plate. Clock wound up the game by striking out. If Door pitched he would have shut them out.

THE PHARMACIST AND POTATO.

By Max Breitbart, '14.

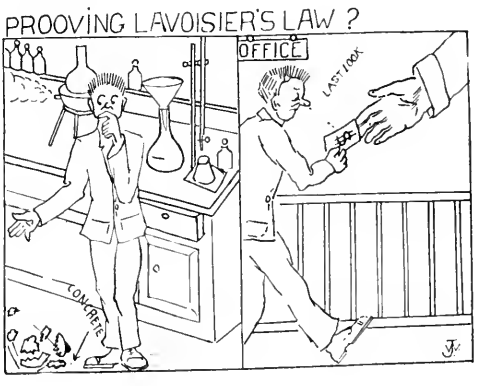
It is not more than 100 years ago that potatoes were almost an unknown food and a despised tubercle; it was a food for the hogs.

Parmentier, a pharmacist, found out first by accident and then by experiment that the potato, when properly cooked, was one of the most excellent of all vegetables.

Few would believe him until he tendered a dinner to Franklin and the famous chemist Lavoisier. By showing them the results of his chemical analysis, they consented to try the new food at his table.

Parmentier succeeded in getting King Louis XVI to give him a large patch of ground in Paris to raise potatoes. They became a rage in 1786.

Napoleon saw the enormous value of Parmentier's discovery, encouraged him in every way, and finally made him a baronet. In the meantime the rest of the world was learning to eat potatoes. Their culture spread everywhere. Such is the romance of a pharmacist and the potato. The Anniversary of Parmentier's death has recently been celebrated in France.



During the latter part of March the musical clubs were turned over to the students for student management in place of faculty management. The results are as follows:

ORCHESTRA.

T. E. Kinane, '14, manager.

E. A. Atwood, '14, director.

F. Ambrose, '15, assistant director.

T. McGranaghan, '15, librarian.

The other active members are Dr. C. W. Ballard, S. Anzalone, A. Weinstein, J. Martus, J. Windt, A. Lambert, J. Sciacca and A. M. Dixon.

A meeting and rehearsal is held every Monday night. The manager is endeavoring to place the orchestra for the summer months at one of the popular summer resorts.

GLEE CLUB.

E. M. Baldwin, '14, president.

H. Wirklich, '14, director.

W. A. McBride, '16, sec'y-treasurer.

Other active members are Miss R. Fried, pianist; S. R. Drapkin, F. A. Frawley, T. E. Kinane, B. Geiger, E. L. Moadinger, A. Galateria, J. J. Troy, F. Fletcher, D. W. Odell, M. Markowitz, G. Portoghese, C. Boehlert and G. Reichardt.

Rehearsals and meetings are held Wednesday nights.

MANDOLIN CLUB.

A. Galateria, '14, president-director.

E. Franchesci, '14, sec'y-treasurer.

Active members are D. Franchesci, J. J. Green, H. Wu, J. Lione and M. De Lalla.

This club meets every Friday night.

UNIVERSITY CLASS NOTES.

On February 3, 1914, the University Class of the College of Pharmacy held a meeting and the following students were elected to office:

Chas. Weinreb, president; Harry Wirklich, vice-president; Morris Levine, treasurer; Rose M. Fried, secretary.

Resolution—Motion made, seconded and carried that each member of the University Class be assessed fifty cents as total dues, which amount shall go toward some trophy or decoration to be left to the College of Pharmacy upon graduation.

ROSE M. FRIED, Sec.

CHEMICAL CLASSICS No. 1.

Silas Smith and Ida Smith
Lived on the Palisades,
The insects there were populous
And made their nightly raids.

Said Si to Ida, "We will go
To N. Y. by the boat
And buy some dope to kill the bugs
Before they get our goat."

So then the pair to Gotham went
And bought some cyanide;
But, coming back, they found no ship
To ferri-cyanide.

T. M. C., JR.

FRATERNITY NOTES

KAPPA PSI.

Gamma Chapter.

The Seventeenth Annual Banquet of Gamma Chapter was held on the evening of April 2d at the Chemists' Club, a place of perfect appointments.

As the guests and brothers were ushered into the banquet hall, a host of surprises were unfolded to them—the attractive floral decorations on the tables, the arrangement, the ash-tray favor and the plain but impressive menu.

After an elaborate and very tasty dinner, Dr. Hostmann was announced as toastmaster and as they say in French, "he was right there." Prof. Chandler gave a typical, interesting and impressive talk, abounding with good advice. Of the faculty, Prof. Arny, Dr. Ballard, Messrs. Simpson and Roon responded. Past Grand Regent Holstein and P. G. H. & E. Groeckel were likewise guests and spoke on Kappa Psi history. Dr. Schaefer's talk was interesting and his tilt with Toastmaster Hostmann exciting. Toasts by Bros. Hergert, Baldwin and Madden finished up a most pleasant and enjoyable evening during which true Kappa Psi spirit reigned.

The Dinner Committee consisting of Bros. Baldwin, Moadinger and McBride is to be highly commended for their success.

At the last regular meeting officers for the ensuing year were installed. They are J. E. Madden, Regent; H. E. Miller, Vice Regent; Wm. A. McBride, Secretary; B. Graystone, Treasurer; F. J. Andrews, Chaplain; L. Feltus, Historian.

Four more worthy juniors, Hagaman, Bankert, Gurry and Blake, have become Kappa Psi brothers.

PHI DELTA CHI.

Gamma Chapter.

The annual banquet which this year served to commemorate the fifteenth anniversary of the founding of Gamma Chapter was held at Healy's on March 25th. The Committee endeavored to make this P. D. C. dinner the best ever and they evidently succeeded in doing so.

This occasion seemed to attract a great number of Alumni who came considerable distances to pay their respects to their Alma Mater and their fraternity.

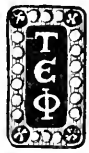
Gamma Chapter had the pleasure of entertaining a number of the Faculty and representatives from other chapters. Responses to toasts were made by Dean Rusby, Prof. Arny, Prof. Weimer, Messrs. Hostmann, Simpson and Roon. Brother Carr of Epsilon, Philadelphia C. P.; Bro. Shangrew of Eta, Boston C. P.; Bro. Loeffler of Xi, Ohio State University, and Bro. Frawley of Gamma were among the guests and were heard from. Dr. F. A. Leslie held the toastmaster's chair most fittingly and kept the "ball rolling" all the time.

The entertainment, the most excellent dinner and the good-fellowship made this evening one to be remembered.

Recent initiates are Brothers Cairoli, Neergaard, E. J. Smith, Knevitt, 1915, and Esperson, 1916.

TAU EPSILON PHI.

Alpha Chapter.



The annual dinner and dance which heretofore were separate functions were held jointly at Carlton Hall on the evening of April 3d.

A considerable number of alumni were present together with the active members of the other chapters.

When the first half of the dance program had been gone through, the couples adjourned to the dining-room where a pleasing banquet awaited them. Several prominent men such as Mr. J. L. Lascoff and Dr. J. L. Mayer of Brooklyn C. P. were present and these together with several other speakers responded appropriately to toasts offered.

The object of the banquet was to do honor to the members of the fraternity who had attained special honors in scholarship at their respective schools. Two of them were C. U. C. P. men, namely, J. Wiener and I. A. Solomons. Two other men had been elected to the honorary Phi Beta Kappa fraternity. After the dinner the dance continued and joy was unconfined.

THE CUSTOMER KNEW BEST.

"Generally run down, sir?" queried the druggist; "slightly seedy and want a good toning up?"

The pale-faced customer nodded.

"Well, I've the very thing for you—Jenkins's Juvenator. Three doses a day and more if necessary. Fifty a bottle."

"No, thanks," said the pale patient.

"But, my dear sir, it's the rage of the day. Jenkins's Juvenator is the greatest discovery of modern medicine. It's the rage of the season. Every one is—rejuvenating, you might say."

"Yes, but I think I'd rather try something else," replied the customer.

"Nonsense," pressed the chemist. "I tell you Jenkins's Juvenator will have more effect on you in a single day than any other medicine could have in a month. It cures everything from coughs to corns. What is your objection to it?"

"Why nothing, only I'm Jenkins."

IN MANY CASES IT IS.

A young man who was a good investigator, but who seemed to be devoid of common sense, was under examination in the study of medicine, and was asked: "What should you regard as the most unfailing premonitory sign of death in any serious case?"

The student meditated thoughtfully for a moment, and answered: "The arrival of the attending physician."

SOME POPULAR SONGS.

"Good-bye, Boys"—(Those who flunk).
"Here Comes My Daddy Now"—(Dean).
"I'm Going away"—(Graduates).
"You Are the Ideal of My Dreams"—(Diploma.)

H. A. G., '15.

SOME GOOD BOOKS.

"Closing Net"—(Exams.).
"Cease Firing"—(Articles before Lectures).
"Great Expectations"—(Seniors).
"Spiritual Unrest" — (Everybody at 12:45).
"I'll Be Hanged If I Do"—(Study 5 hours a day).
"Port of Missing Men"—(Analytical Lab.).
"Only An Irish Boy"—(Sam Cohen).
"The Iron Trail"—(Two years at Cu C. P.).

H. A. G., '15.

BRINGING HER UP.

Little Willie, tired of play,
Pushed sister in the well one day,
Said mother as she drew the water,
"'Tis difficult to raise a daughter."

—*Harper's Weekly.*

Mercury is so light, it floats! hence easy to detect in Second Group,
Evidently Dr. V. did not include this in his new book.

CATCHING.

Jennie kissed me, lip to lip,
When she met yester morning;
Now I'm laid up with the grip,
Failed to heed official warning.
Say I went out summer clad
And pneumonia just missed me:
Say "I told you so," but add
Jennie kissed me!

Fellows, a word to the wise.

To whom it may concern:
Is there a man in this broad land,
Who never to a customer has said,
Old man, I have a remedy
That'll cure that cold in your head?

—*Life.*

HE KNEW.

Teacher—"What is bread made of?"

Small Boy (Baker's Son)—Alum, potatoes and plaster of paris.

Prof. D.—"What occurs when solution of Calcium Hydroxide is left exposed to the air?"

Student—"Calcium precipitates out. Oxygen of the air oxidized the carbon and so turns it a dark color, therefore we get a precipitate of Calcium Carbonate."

O, you, Lavoisier! How do you like our modern chemistry?

FAMILIAR MAGAZINES.

"Everybody's"—N. Y. Journal of Pharmacy.
"Review"—Flunkers.
"Popular"—Young.
"Traveler"—Dr. Army.
"The Scrap Book"—Our note books.
"Smart Set"—University men (?).

H. A. G., '15.

IN THE SPRING.

The curfew tolls the knell of parting youth,
The quaking herd files slowly throu' the room,
The 'zamination starts—the students, forsooth,
Are soon engaged in struggling 'gainst their doom.
Now fades all trace of smile from struggling face,
And all the air a solemn stillness holds
Save where the angry 'fessor with scant grace,
The luckless aim of artful cribber's scolds.
With anxious thoughts the pencil quick they wield,
With groan and sigh the stillness they relieve,
How doth the paper to their onslaught yield!
How—o'er their task they sorrowfully grieve!
Out of the room at length the students file,
O'ercome by stern examination's power,
Can stoned urn or monumental pile
Recall the suffering of that direful hour?
Let not ambition mock their useful toil—
Their minds bewildered and their sufferings sad,
Nor teacher read with a disdainful smile,
The SHORT and muddled writings of the lad.

SHAKESPEARE MODERNIZED.

Who steals my purse steals cash,
But he who robs me of my good name—
Well, there's the wife's!

—*Columbia Jester.*

PERSONALS.

Mr. L. Williams has been chosen valedictorian of the Class of 1914.

Brotherton '14 has been carrying a string of Job's tears with him lately. Must be cutting his wisdom teeth.

D. K. Gritz '14 gets "hitched up" on July 25th. Good-bye, Boys.

J. W. Brown '14 is to manage C. W. Dare's store in Port Jefferson, L. I., this summer.

F. A. Frawley '14 will manage the drug store of Bangor, Me. Says it will require a silk hat, a gold-headed cane and a Prince Albert to "hold the job down."

McBride '16 is an expert in catching cray-fish—picture "Mac" chasing up a cray-fish.

HER TERRIBLE MISTKAKE.

"What caused the coolness between you and that young doctor? I thought you were engaged."

"His writing is rather illegible. He sent me a note for one thousand kisses."

"Well?"

"I thought it was a prescription and took it to be filled."

A. Z., '14.

An undertaker's shop on Broadway, near 68th Street, displays this sign on a side door.

"Senior Undertaker Upstairs."

May be of some use after May 6th.

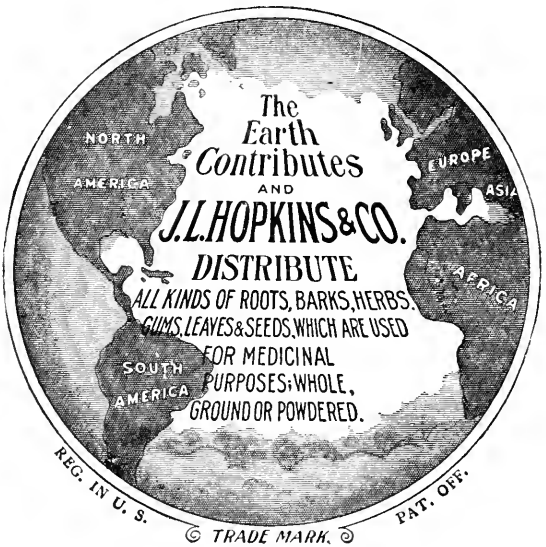
W. K., '14.

Consolation for Non-Frat men: The fact that a man is a pin-cushion is no cause for him to get stuck up.—Spec.

"We offer

A complete line of

Botanically Standardized Crude Drugs"



"J. L. HOPKINS & CO.,

Crude Drug Merchants,

100 William Street, New York City."

New York College of Pharmacy

Columbia University

The Eighty-fourth Annual Term of Instruction of this College, open to men and women, began on Monday, September 22nd, 1913.

The College offers a course of two years, consisting of three days instruction weekly, open to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on fifteen Regents' counts or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and of other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College also offers a course of three, four and six years, of three days' instruction weekly through the academic year leading respectively to the degree of Pharmaceutical Chemist (Ph. Ch.), Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.) Any one of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

A Summer Preparatory Course of twelve weeks prepares students in special directions for the regular work of the term.

Those interested will please communicate with

THOMAS F. MAIN, Secretary,

115-119 West 68th Street, New York City.

...The...

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Published Monthly by the Alumni Association

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CURT P. WIMMER, A. M., PHAR. D., MANAGING EDITOR

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Contents:

ADDRESS TO THE GRADUATES.

By Nicholas Murray Butler,
Ph. D., L.L.D.

It is my pleasant duty to offer this evening to the members of the graduating class, a few observations and reflections on behalf of their elders. I am to speak for a few moments from the standpoint of those who are already engaged in the active practical work of life to this company of ardent and ambitious youth who are about to enter upon it.

There is something in the Commencement of the College of Pharmacy that always touches me very much indeed and that makes a strong appeal to my sentiment and my imagination. There is something which seems to mark off the work of this College from that of any other educational institution with which I am familiar. Here you see represented what I think must be said to be the most satisfactory and the most helpful relationship between master-workman and apprentice that exists in any of our callings or professions. This College is maintained, governed and supported by pharmacists, by men of science, who day by day are associated with the work of this particular calling. They have not delegated to others the task of preparing their apprentices and students, but have claimed it for themselves, and after the fashion of the old trade guilds of the Middle Ages, they offer the best they have, the most they know, to the service of the younger generation; and to-night these elders extend to their juniors the right hand of fellowship and invite them by the terms of this degree—Graduate in Pharmacy—to cross the line which divides the apprentice from the master-workman.

It would be fortunate indeed, my friends, if every other profession and every other calling were so organized. It would be fortunate indeed and would go far toward solving very many of the perplexing problems that confront us to-day if the relationship between those who work at a profession, a calling, a trade, and those who are preparing to enter upon it were as close, as intimate and as satisfactory as the relations between the trustees and members of this College of Pharmacy and those who study under their zealous and protecting care.

These young men and young women have chosen a calling which rests upon a scientific foundation. They have chosen a calling which is not a mere matter of rule of thumb or indication of some other's technique, but a calling which rests upon principles definitely ascertained facts, laws and a knowledge of which gives to these young students an insight into the way in which nature and its work is organized and carried on. That is why it is that these young men and young women, while preparing for a calling, a career, a profession have also been acquiring most valuable training and discipline. They have been taking apart delicate substances in the laboratory to see of what elements they are composed. In many cases they have been putting elements together to see what the result will be. They have been studying laws of cause and effect, they have been making minute and accurate measurements and tests. They have been sounding nature at a hundred points and at every touch they have been gaining not only knowledge, but discipline. And

Nicholas Murray Butler

therefore it is that the College of Pharmacy, in preparing these young apprentices to be journeymen and master workmen, has been performing an educational service not only to these students but to the city and the state of which they form a part.

One could almost write the history of civilization itself in terms of this calling of the pharmacist. It is one of the oldest occupations of man, preparing from natural objects the remedies that will check and cure disease. If you were to go back to the very beginning you would find it wrapped up in mystery, in magic, in superstition, in a thousand and one theories which now seem to us unsatisfactory, but which one day were a comfort and satisfaction to millions of men When herbs were first used as the basis of drugs, their curative power was supposed to be due to some magical element, perhaps some curious spirit which resided in them; and from that far-off day to the present you could come down step by step and trace in the history of pharmacy which our College represents, the development of man's understanding of magic and mystery to scientific knowledge and tested skill. And just as we have put behind us forever the superstitions that pharmacy has outgrown, so we have set our faces squarely and soberly toward the scientific method, the scientific skill and the practical power that the pharmacy of to-day represents.

These young students are therefore going out into no new occupation. They are not about to enter upon a practical career that sprung up yesterday. It has a long, a curious and an honorable history. It is bound up at every point with the history of the science of medicine and they take their places side by side with the physician and the sanitarian as a part of the great protecting agency of the body politic, and they have added to the study of remedies the study of preventatives. We have now learned the significance of the science of chemistry as an aid to the acts of everyday life. The chemist in his laboratory has revealed to us the constituents not alone of our drugs, but of our foods. We have learned much of the science of nutrition; we have learned much of the science of body building, health making and protecting the public from the ravages of unnecessary and preventable disease. At all of these points the student of pharmacy joins hands with the student of medicine and the student of sanitary science and together the three make a strong, powerful chain on which so much of our comfort and happiness depends. We have only lately learned—perhaps within a generation—what a fundamental matter health is—bodily health, mental health, moral health, and we have only just now learned how to spread a knowledge of it abroad and carry its blessed message of happiness and relief, to not only thousands or tens of thousands, but to millions of our citizens. That may be said to be in a moral sense the calling of the profession of pharmacy to the ambitious young man or young woman who enters upon it. It is not a mere task, important as it is, of doing the day's work bit by bit, but it is the larger relationship of that task to the public welfare, the larger relationship of that task to medicine and to sanitary science, the larger relationship of a task to the service of the public welfare.

And then there is one more word that one must say to the young graduate of

the College or professional school. There is another call that life makes to every one of them. There is this imperative call of the profession, the career, but there is another call which life makes, the call which society makes, the call which duty makes to every one of them so to perfect and develop himself that when the sum total of his achievement is estimated the balance will be found on the side of high intelligence and sound character.

We rate the obligations of an American youth in terms of his opportunity. If he has had little chance for preparation, we must not bear down too heavily upon him in estimating his achievement, but if he has had opportunity for a sound discipline in the profession, if he has had opportunity for association with noble, learned and devoted teachers, if he has had opportunity to come under the influence of the leaders and guides of a fine profession, then we have a right to demand something exceptional from him. And you will be required to account for the one talent, but for the ten here which the College of Pharmacy has placed in your possession. You will be required to give account of these ten talents not alone as pharmacists, but as men and women. You will be judged by the place that you take in your community. You will be judged by the standards that you set for your associates. You will be judged by the acts to which you rise in the society of which you are a member and there is no possible way through which, by which that obligation can be escaped. The talents are yours; they have been given with freedom and devotion; the accounting must be yours. And because of the confidence which your elders have that you have been carefully selected for this work by an entrance test, that you have completed the rigorous scientific course of study with success, as a result of which they are willing to certify to their confidence in your future.

The School of Pharmacy cannot be manned forever by those who guide its destinies to-day. They pass and successors come to take their places. These successors will be chosen from your ranks and from those who have preceded and who will follow you. The reputation of this College is now nearly a century old, the work that it has been doing and hopes to continue to do is your work and the obligation, the opportunity and the ambition to continue the New York College of Pharmacy and its plans must be yours. You have received your degree, you have received your certificates because of the confidence of this body of elders that up to that obligation and up to that opportunity you will certainly live. I wish to add my word of confidence to theirs and to bid you God-speed and all success in putting your hand to the practical work of life.

THE EIGHTY-FOURTH COMMENCEMENT.

The Eighty-fourth Annual Commencement of the College of Pharmacy was held at Carnegie Hall, on Thursday evening, May 14th, 1914.

The stage of Carnegie Hall was beautifully decorated with flowers and palms and Van Baar's Military Band, dressed in uniforms of white and gold, added to the beauty of the picture. At eight o'clock sharp the orchestra started the proceedings with the Jubel—Overture by Weber. President Butler, the Trustees

and Faculty of the College took their seats upon the stage and immediately afterwards the graduating class, conducted by Dr. Henry J. Lovis, Chairman of the Examination Committee, marched slowly down the main aisle of the Auditorium and upon the stage. The Rev Raymond C. Knox, Chaplain of Columbia University, opened the exercises with prayer, whereupon President Butler arose and extended the following welcome:

We are assembled to mark and to witness the Eighty-fourth Annual Commencement of the College of Pharmacy in the City of New York. In the name of the Trustees and members of the College, in the name of those young men and young women who are to-night to go out from it, I bid you welcome. I bid you welcome to witness the conferring of degree, the mark of academic distinction and the final act by which the youth here assembled on the stage are to be made members—certified and accredited members—of an honorable and a useful profession. To these exercises, to all that they signify, to all that they mean to this College, to the University of which it is an honored part, to the community and the State, I bid you a hearty welcome.

Mr. Thos. F. Main presented the following graduates, who arose as their names were called:

Ajamian, Charles.....514 W. 50th St., N. Y. C.
Andreola, Nicholas.....212 E. 45th St., N. Y. C.
Arcabasso, James C....13 St. Luke's Pl., N. Y. C.
Archer, Ward F.,
29 Lawn Ave., New Rochelle, N. Y.
Arguello, Jose Evenor.....Managua, Nicaragua
Aronsohn, Harry S.....326 W. 18th St., N. Y. C.
Augsbury, Theodore Byron....Hempstead, N. Y.
Baldwin, Earl Milton.....State Line, Mass.
Barenzano, Joseph N.....219 Mott St., N. Y. C.
Berner, Frank.....159 Norfolk St., N. Y. C.
Bounin, Isaac.....66 Avenue D., N. Y. C.
Bowen, John...658 So. Main St., Wilkesbarre, Pa.
Breitbart, Max.....29 Clinton St., N. Y. C.
Bretter, Bernerd.....63 W. 143rd St., N. Y. C.
Brotherton, Harold Taylor,
241 Union Ave., Peekskill, N. Y.
Brown, Joel Woolsey.....Pt. Jefferson, N. Y.
Brown, Lewis Nathan.....Sag Harbor, N. Y.
Callahan, Francis Aloysius.....Piermont, N. Y.
Carfora, Benedetto.....625 Morris Ave., N. Y. C.
Cavallo, Gaetano.....2295 First Ave., N. Y. C.
Chasan, David.....1451 Crotona Pl., N. Y. C.
Cianciulli, Camillo.....229 E. 14th St., N. Y. C.
Cogswell, George Randall,
515 No. Washington St., Rome, N. Y.
Cole, Edward Martin,
509 No. Washington St., Rome, N. Y.
Colley, Robert R.,
651 So. Main St., Wilkesbarre, Pa.
Concialdi, Lewis.....Rockaway, N. J.
Crystal, Benjamin Herman,
21 Morrel St., Brooklyn, N. Y.
Cunradi, Rudolph Herman,
582 E. 138th St., N. Y. C.
Davis, Brooke John.320 State St., Brooklyn, N. Y.
Decaro, Peter.....522 E. 16th St., N. Y. C.
De Maio, Miss Henrietta,
2095 Second Ave., N. Y. C.
De Lalla, Michele.....21 Albany St., Utica, N. Y.
Dennis, Clarence Francis.....Augusta, N. J.
Dixon, Aaron Maxfield.....Butler, N. J.
Drapkin, Samuel Raphael,
162 De Kalb Ave., Brooklyn, N. Y.
Dwork, Louis.....246 W. 38th St., N. Y. C.
Eichacker, Edward George,
382 Covert Ave., Brooklyn, N. Y.
Emanuel, Meyer.....59 Avenue D, N. Y. C.
Embree, Carlton S.249 South St., Stamford, Conn.
Fasano, Jr., Emidio,
239 Summit Ave., Jersey City, N. J.
Ferber, Samuel.,
647 Steinway Ave., Long Island City
Ferro, Edward.....307 E. 74th St., N. Y. C.
Fletcher, Thomas Francis,
152 Elm St., Utica, N. Y.
Forman, Julius.....329 Madison St., N. Y. C.
Frawley, Francis A.....84 Ohio St., Bangor, Me.
Fried, Miss Rose.....1400 Second Ave., N. Y. C.
Ghirardi, Fortunato Omorino,
136 Third Ave., N. Y. C.
Gittleman, Harry.....166 E. 119th St., N. Y. C.
Godes, Herman Jacob,
363 Bronx Park Ave., N. Y. C.
Goldstein, Joseph.....312 Madison St., N. Y. C.
Gourin, Boris .....489 E. 183rd St., N. Y. C.
Greene, Frank A.....Suffern, N. Y.
Green, Jr., John Joseph,
536 No. Sumner Ave., Scranton, Pa.
Gritz, David Kendall....117 Ludlow St., N. Y. C.
Gurry, Edward Anthony,
36 Huntington S., Utica, N. Y.
Hammer, Harry J.,
1488 Washington Ave., N. Y. C.
Hartman, Eugene E.,
2240 82nd St., Brooklyn, N. Y.
Hergert, Carl Henry,
110 Trumbull St., Elizabeth, N. J.

Hertz, Orrin.....123 Maple St., Norwich, Conn.
Hoagland, Vebber C.....Cobleskill, N. Y.
Hodes, Harry Herman,
1438 53rd St., Brooklyn, N. Y.
Iskenderian, Harontune G.,
2826 Park Ave., N. Y. C.
Jacobs, Jacob Mortimer,
313 Hamilton Ave., Paterson, N. J.
Jacobson, Nicholas Morris,
463 Nepperhan Ave., Yonkers, N. Y.
Jarvis, Harold Lee.....Ilion, N. Y.
Jones, Rosco Smith.....Suffern, N. Y.
Kaplan, Samuel,
172 McKibben St., Brooklyn, N. Y.
Kassner, Arno W. C.,
201 Hillside Ave., Jamaica, L. I.
Kanner, Leon.....1851 First Ave., N. Y. C.
Katzen, Herman.....425 E. 65th St., N. Y. C.
Kinane, Thomas E.1468 Amsterdam Ave., N. Y. C.
Kirschner, William Lee...80 W. 82nd St., N. Y. C.
Klein, Samuel M.....151 W. 103rd St., N. Y. C.
Kodet, Edward Joseph...1436 First Ave., N. Y. C.
Kohn, Albert.....78 East 22nd St., Bayonne, N. J.
Kramer, Miss Kate.....403 W. 49th St., N. Y. C.
Lambert, Albert Joseph,
1 Silver St., Brooklyn, N. Y.
Lent, Everett.....Montrose, N. Y.
Lerner, Benjamin...508 Grand St., Hoboken, N. J.
Levine, Morris R.....9-11E. 107th St., N. Y. C.
Ligorio, Cosimo.....34 Downing St., N. Y. C.
Lovece, Nicholas.....193 Grand St., N. Y. C.
McSheehy, Frank B.....59 W. 65th St., N. Y. C.
Mango, Louis V.....331 E. 34th St., N. Y. C.
Marianowsky, Jacob,
310 So. 4th St., Brooklyn, N. Y.
Markowitz, Murray....943 St. John Ave., N. Y. C.
Michaels, Jacob A.....210 E. 3rd St., N. Y. C.
Moadinger, Edgar L.....Walden, N. Y.
Moskowitz, Nathan.....317 E. 4th St., N. Y. C.
Munn, Samuel Augustus,
99 Myrtle St., Yonkers, N. Y.
Murray, Edwin T.,
159 Park View Ave., Bangor, Me.
Needles, George Arthur..153 W. 14th St., N. Y. C.
Niemetz, Harry D....2304 Seventh Ave., N. Y. C.
Nodelman, Nathaniel.....221 E. 70th St., N. Y. C.
Parotzky, Julius.....54 E. 120th St., N. Y. C.
Passannante, Orlando...306 E. 115th St., N. Y. C.
Picozzi, Salvatore,
461 Atlantic Ave., Brooklyn, N. Y.
Podolsky, Reuben.....230 E. 4th St., N. Y. C.
Portoghese, Gaetano...2064 Second Ave., N. Y. C.
Posin, Shalem Elihu,
32 Murrell St., Brooklyn, N. Y.
Propper, Miss Ruth...643 Prospect Ave., N. Y. C
Rabinowitz, Isadore.....167 Eldridge St., N. Y. C.
Reiss, Louis.....110 E. 90th St., N. Y. C.
Richmond, Irving Frederick.....Ellenville, N. Y.
Rinaldi, Alfred.....403 E. 12th St., N. Y. C.
Ritter, Isadore.....243 W. 122nd St., N. Y. C.
Rosen, Max.....153 Orchard St., N. Y. C.
Rosenfeld, Abraham.....72 E. 4th St., N. Y. C.
Rosenfield, Abraham Jacob,
159 W. 143rd St., N. Y. C.
Rosenthal, Jacobus Myron,
767 Dawson St., N. Y. C.
Ruderman, Morris David,
2231 Fifth Ave., N. Y. C.
Sanchez, Mignel Silveira.....Niquero, Cuba
Sciacca, John.....235 Second Ave., N. Y. C.
Sheinaus, Louis.....506 W. 179th St., N. Y. C.
Shwalb, Harry,
607 Summit Ave., Jersey City, N. J.
Simon, Manfred.....189 W. 136th St., N. Y. C.
Spitale, Gaetano Joseph,
123½ Christie St., N. Y. C.
Stern, Joseph.....93 Monroe St., N. Y. C.
Stewart, Mason.....504 W. 131st St., N. Y. C.
Storm, Charles Meyer.....Matteawan, N. Y
Tell, Joseph Julius.....74 Columbia St., N. Y. C.
Trainor, Joseph Aloysius,
128 Bay St., Peekskill, N. Y.
Trotta, Remo.....68 McDougal St., N. Y. C.
Twersky, Morris Boris,
306 Hopkinson Ave., Brooklyn, N. Y.
Unterman, William.....122 E. 113th St., N. Y. C.
Venetucci, Justin.....2310 Belmont Ave., N. Y. C.
Vitale, Nicholas J.....330 E. 117th St., N. Y. C.
Wanderman, Simon.....119 E. 11th St., N. Y. C.
Weinreb, Charles.....43 W. 112th St., N. Y. C.
Wiener, Nathan.,
12 Harrison Ave., Brooklyn, N. Y.
Williams, Lucius Angus.....Brockport, N. Y.
Windt, Joseph.....153 E. 92nd St., N. Y. C.
Wirklich, Harry.....136 Attorney St., N. Y. C.
Wodicka, Mrs. Florence V. G.,
72 East End Ave., N. Y. C.
Zibulsky, William,
363 So. Fifth St., Brooklyn, N. Y.
Ziperowitz, Abraham Herman,
1471 St. Marks Ave., Brooklyn, N. Y.

The degree of Graduate in Pharmacy was formally conferred upon them by President Butler. The following received certificates as Food and Drug Analysts:

McIndoe, Jr., John G.....Lonaconing, Md.
Ettinger, Jerome Edward,
516 Morris Ave., N. Y. C.

The address to the graduates delivered by President Butler made a very deep impression. This address can be found on another page of this issue. Dr. Joseph Weinstein awarded the Alumni Prizes to the following:

Gold Medal to Mr. Edward J. Kodet

Silver Medal to Mr. Jacob Marianowsky.

Bronze Medal to Mr. Boris Gourin.

The Roll of Honor was read by Dr. George C. Diekman. He spoke as follows:

Mr. President, Members of the Board of Trustees, Faculty and Members of the Class of 1914:

Ladies and Gentlemen:

I am accorded the honor and the privilege to present to you the names of the members of the Class of 1914, who, by virtue of their scholarship, as evidenced by the results of the recent examinations, are entitled to a place on the Roll of Honor.

This Roll of Honor consists of the names of the thirteen students who have obtained the highest number of marks in their final examinations and in their term work.

The members of the Board of Trustees and the members of the Classes and the Faculty are of course thoroughly familiar with the courses of instruction, and the methods of instruction prevailing at our school. There may, however, be present in this assemblage, some persons who are not familiar with this work, and who do not know how severe and difficult the examinations these students have to undergo, are, and for their benefit I will briefly summarize as follows:

There are twelve subjects in all, seven of them being theoretical and five of them practical in nature. Among the practical subjects we have Commercial and Microscopical Pharmacognosy, Analytical Chemistry and Dispensining Pharmacy and Pharmacy Laboratory work The theoretical subjects are as follows:

Chemistry, Organic Chemistry, Analytical Chemistry, Materia Medica, Toxicology, Pharmacy and Dispensing Pharmacy.

Each of these subjects is valued at 100 points, thus making a possible total of 1200 points.

You have already been informed concerning the standing or position of the first three Honor students, as follows:

Edward J. Kodet, 1090 points equals 90.83%.

Jacob Marianowsky, 1087 points equals 90.58%.

Boris Gourin, 1037 points equals 86.42%.

The other ten names comprising this Honor Roll are:

Godes, Herman J., 1036 points equals 86.33%; N. Y. C.

Gittleman, Harry, 1030 points equals 85.33%; N. Y. C.

De Lalla, Michele, 1026 points equals 85.50%; Utica, N. Y.

Davis, Brooke J., 1025 points equals 85.42%; Brooklyn.

Zibulsky, William, 1019 points equals 84.92%; Brooklyn.

Ligorio, Cosimo, 1018 points equals 84.83%; N. Y. C.

Reiss, Louis, 1015 points equals 84.58%; N. Y. C.

Hertz, Orrin, 1012 points equals 84.33%; Norwich, Conn.

Kaplan, Samuel, 1011 points equals 84.25%; Brooklyn.

Chasan, David, 1008 points equals 84.00%; N. Y. C.

At this time I desire to be permitted to call attention to the continued high standing of each successive class. The final examinations this year were more difficult than those of any of the preceeding years, and yet the percentage of the man first on the Honor Roll this year, as compared with the percentage of the

man first on the Honor Roll of last year, shows a difference of only .17% in favor of last year. The percentage of the thirteenth man of Honor Roll this year is, however, 2.25% higher than was obtained by the man occupying the same position on the 1913 Honor Roll.

You will therefore see that the general average is considerably higher this year, this in spite of the severer examinations.

In congratulating these young men, whom we are glad to call our colleagues, I will refrain from giving the advice which it is customary to give on occasions like this.

I have had the opportunity of studying each of them at close range for the past two years, and am confident, as I believe we all are, that each will continue to be a useful member of the community, a conscientious and ethical pharmacist and a credit to our school.

Professor Chandler awarded the Trustee's Special Prizes. He explained that these prizes consist of $100 cash each for the best practical examination passed by the students on the Roll of Honor. The prize in Pharmacy was won by Herman J. Godes, the prize in Chemistry by Boris Gourin and in Materia Medica by Herman J. Kodet. The prize of the Italian Pharmaceutical Association for highest standing during the entire term in practical exercises was awarded by Dr. William Mansfield to Mr. Jacob Marianowsky. The Valedictory Address was delivered by Mr. Lucius Angus Williams and the Benediction was pronounced by Rev. Raymond C. Knox.

There can be no doubt that the commencement exercises of our College are popular, for there was not an empty seat in Carnegie Hall, even the uppermost galleries were crowded to overflowing.

A meeting of the College of Pharmacy was held on Tuesday evening, May 19th, 1914.

Mr. Jacob Weil informed the meeting that a public hearing would be given before the Committee on Health of the Board of Aldermen at the Aldermanic Chambers, on Thursday, May 21, to consider the Ordinance introduced to regulate the sale of wood alcohol in the City of New York. Mr. Weil explained very fully the objects of this Ordinance and gave the results of the investigations which had been carried on by various associations and individuals which showed that many cases of blindness had resulted from the ignorant use of wood alcohol.

An amendment to the By-Laws was published, proposing to reduce the membership fee to one dollar per year. It was reported that the Commissioner of Health has appointed, for the first time in the history of New York City, an

Advisory Committee consisting of members of the pharmaceutical profession. Among the appointees are the following: Dr. H. H. Rusby, Dr. Wm. J. Schieffelin, Dr. Wm. C. Anderson, Dr. Jacob H. Rehfuss, Mr. J. Leon Lascoff and Mr. Thomas Lamb.

Mr. Mayo introduced Mr. Charles W. Holzhauer of the Class of 1906, who presented a paper on "Profit Making Window Displays," showing lantern slides of those windows which he has found profitable and laying down the principles which govern successful window display advertising. Mr. Holzhauer was followed by Mr. N. Zimmerman of the editorial staff of Printers' Ink, who presented the results of investigations made by him of window displays in various lines. Mr. Thomas Lamb and Mr. John Ferrier gave their personal experiences which clearly demonstrated that the style and method of window dressing depended entirely upon the locality and the class of customers.

Before adjournment, a standing vote of thanks was extended to Mr. Holzhauer and Mr. Zimmerman.

Professor George C. Diekman.

In the reports of the committee on the culture of medicinal plants in Austria, Emanuel Senft takes up the matter of a peculiar diseased condition of the leaves of Datura Stramonium, during the years 1911 and 1912, and in certain localities, even before this time.

Climatic conditions cannot be held responsible, as these were entirely different during these two years. The year 1911 noted for a long continued drought, while in the year 1912, an excessive quantity of moisture prevailed. During the year 1911, the leaves of this plant were infested with a great number of a kind of leaf louse, while in the year 1912 another parasite, in the form of a red spider, made its appearance in great numbers. Neither of these, however, could be connected with the diseased condition of the plant.

It first appeared as if the leaf of the plant had been destroyed by an insect. In many leaves only the network of ribs remained, while the parenchyma was practically entirely destroyed. The disease, however, is caused by the deposition of eggs by an insect on the lower side of the leaf, and its gradual destruction results. Other plants affected in the same manner were the following: Artemisia Absinthium, Hyoscyamus niger, Althaea rosae var. nigra, Carduus benedictus, and others.

A. Bellet, in Journ. Phar. Chim. 1913, 21, describes the following method for determination of lactic acid in blood, urin, or other organic liquids.

After removal of alchols and volatile acids by means of prolonged heating, and removal of albumins by means of phospho-wolframic acid, the liquid is evaporated to dryness with addition of dehydrated sodium sulphate. The dry residue is extracted by means of ether in an apparatus closely resembling a Soxhlet extraction apparatus. The ether will remove besides the lactic acid, succinic acid, beta oxy-butyric acid, oxalic acid and others, if present.

After complete removal of the ether by vaporization, the residue is dissolved in water, and the solution so obtained used for the determination of the lactic acid. In a specially constructed glass apparatus the lactic acid is oxidized into acetone by means of potassium permanganate. Succinic acid is not affected by this procedure, while the other acids are converted into carbon dioxide. The acetone produced is collected in a solution of ammoniacal silver nitrate, and the quantity of reduced silver estimated by the Charpentier-Volhard method. From the quantity of reduced silver found, the quantity of acetone, respective lactic acid, can readily be calculated.

O. Hildebrand, in Phar. Ztg. 1913, 982, recommends the following non-poisonous substitutes for Paris or Schweinfurth Green:

(a) A mixture of 10 grammes of borax, 15 grammes of powdered sugar, 70 grammes of flour and 5 grammes of Victoria-green. The later substance is non-poisonous, and in the quantity given will produce a color similar to that of paris green.

(b) A mixture of borax, 10 grammes, and 100 grammes of insect powder, colored green by means of an alcoholic solution of Brilliant-gruen, the alcohol being allowed to vaporize.

Kobert was able to show that infusion of Ipecac to which syrup had been added, often, even after the short period of 24 hours, showed a pronounced sediment, had an acid reaction, and contained innumerable micro-organisms. He attributes this to the fact that the syrup employed was not sterile, and recommends that all syrups be sterilized as is required in Austria. He also suggests that the syrup be added to the drug before the latter is infused, thus in a sense, sterilizing the syrup. Kobert likewise for many years has advocated the non-use of the infusion of Ipecac, and the use in its stead of tincture or fluidextract of Ipecac.

Dr. L. Pulir, in Zeitschr. f. Unters. d. Nahr, u Genussm., 1913, reports on the examination of a number of samples of saffron. A number of these samples, all obtained, however, from the same source, were found to yield a peculiar irritating odor, when heated for the purpose of ascertaining their water content. Distilling these samples after addition of water, showed that the distillate contained formaldehyde. This was proven beyond a doubt by application of a number of the formaldehyde reactions.

A number of other samples were weighted by addition of glycerin, which also gives the sample a peculiar moist appearance and feeling. Other substances used to increase weight were found in the following: Borates, sul-

phates, cane sugar and invert sugar. Bulir reports that 97 per cent. of the samples examined contained adulterants.

H. Yanagisawa and H. Saito recommend the following method of procedure for the detection of beta-naphthol when used as a preservative in food stuffs: The reagent required is prepared as follows: A mixture of 1 ccm. of hydrochloric acid and 5 ccm. of distilled water is gently heated and enough para-nitroanilin added so that the resulting solution will contain .50 per cent. of the salt.

To this solution after it becomes cool, is added a solution of 0.3 gm. of sodium nitrate in 45 ccm. of ice cold water and the mixture allowed to stand for one-half hour, when if necessary it is filtered. The reagent has a yellow color and must be perfectly clear.

A few drops of the reagent added to a diluted solution of beta-naphthol will produce at once a scarlet-red precipitate. In the presence of only minute quantities of beta-naphthol, the solution turns scarlet-red, a precipitate however does not form, until after heating gently or setting aside for one-half hour. The reaction is sensative 1:100,000.

C. Mannich and S. Kroll in Apoth. Ztg. 1914, 29, 309, report the following as a result of an examination of Kalamax. Under this title the International Druggists and Chemists Laboratories, London-Paris-New York, markets a liquid preparation, which is claimed to restore the color and natural gloss of white, grey or bleached hair. The preparation is claimed to be free from mercury, copper or silver salts, which claim, according to the examination made, would seem to be substantiated.

Each container of Kalamax holds 62.0 grammes of a yellowish liquid, having an ammoniacal odor and an astringent taste. Its specific gravity was found to be 1.0342.

The residue after evaporation and drying at 100° C., was found to weigh 6.06 gm. Ignition of the residue resulted in the production of ammoniacal vapors and an order resembling that of caramel. Ash equalled 2.50 per cent.

Extraction of the ash by means of hot water produced a liquid which was found to contain potassium, sulphuric and hydrochloric acids. The water-insoluble material dissolved readily in diluted hydrochloric acid, and was identified as bismuth oxide, containing a trace of iron oxide. Quantitatively 0.68% of bismuth oxide and 0.056% of chlorine were found.

The presence of tartrates was further demonstrated, and the authors claim that the chief constituents of Kalamax is bismuth tartrate, together with small amounts of potassium and ammonium tartrate. The article was also found to contain small amounts of benzoin. The iron and chlorides found present may very likely be considered in the light of impurities.

Our German friends are still engaged in recommending methods and procedures having for their purpose the restoration of Tincture of Iodine, after the Iodine has been more or less converted into Hydriodic acid. Some time ago Droeste attempted to show that Hydrogen dioxide might be employed with success for this purpose, and now Roques, in Journ. der Phar. et Chim., 1914, No. 6 recommends the use of

Iodic acid for the same purpose, in accordance with the following reaction:

$$HIO_3 + 5HI = 6I = 3H_2O$$

It is necessary that the Iodic acid be added in excess and in a finely subdivided condition. The method of procedure recommended is as follows:

The Iodic acid is dissolved in a minimum quantity of distilled water, and this solution then added to a sufficient quantity of strong alcohol. The Iodic acid is thus precipitated in the form of a very fine powder. After thorough drying it is recommended that 10 grammes of this powder be added to each liter of the decomposed tincture.

The mixture is now thoroughly shaken, when the reaction as before indicated will take place. Any excess of Iodic acid will separate out, and can be removed by filtration, or may be allowed to remain for the purpose of decomposing any further hydriodic acid which may form.

It must be noted that the amount of iodine obtained by this procedure is larger than that contained in the hydriodic acid present. The author therefore recommends that a tincture in which much hydriodic acid has been formed should first be diluted with alcohol in required quantity.

Dr. W. Stuewe, in Phar. Ztg., 1914, No. 21, reviews the "Rupp" method for the examination of sublimate pastilles, as official in the D. A. B. As is known, the mercury is precipitated or reduced to the metallic form by means of formaldehyde, after which it is dissolved in a solution of iodine. Most operators gave complaint about the difficulty of effecting this solution. Struewe recommends that before the reduction is attempted, a small quantity of acacia be added to the liquid. This causes the reduced mercury to be held in suspension, and facilitates its solution to a great extent.

ADULTERATED CACAO BUTTER.

Dr. Cl. Grimmer in Hamburg has recently subjected a number of samples of cacao butter to a critical examination, with a view of determining the substances used as adulterants.

He reports that recently a number of brands of this article have been received in Hamburg from Holland, which were so scientifically and skilfully adulterated, that the usually employed physical and chemical methods of determining purity, failed entirely. According to these the articles under investigation were reasonably pure and corresponded to the requirements demanded by the D. A. B. The low price at which these samples were offered to the trade, however, excited suspicion, and subsequent examination proved this suspicion to be well founded.

His suspicion was first aroused by the lower congealing point of the fatty acids in the Holland sample as compared with a sample of known purity, namely 44.9-45° C., for the former compared with 48.8-49.2° C of the latter. Again the fatty acids of the pure sample formed light yellow crystals compared with brown crystals of the adulterated sample.

As all at present known adulterants of Cacao butter, influence the physical and chemical constants of the sample in some material manner, and as the substance or substances used to adulterate

the samples under investigation failed to do this to any appreciable or material extent, methods other than the usual ones had to be employed.

It was at first supposed that an oxidized and thus hardened fixed oil had been employed. The most searching examination, however, failed to find even a trace of nickel, which in the form of nickel dust or nickel oxide is usually employed as a catalytic agent in the oxidation of oils. Neither was any other metal found to be present and which might have been employed in a similar manner.

The author, after numerous trials preliminary, finally decided to ascertain the solubility of the substances (pure and adulterated), in absolute alcohol and glacial acetic acid. The former was determined in a sealed tube, in accordance with the method of Lewkowitsch. In the latter case it was found advisable to subject the mixture of glacial acetic acid and liquid cacao butter, to constant stirring during the entire operation.

The author states that he will furnish the exact details of the methods employed, in the near future, for publication in the columns of the Chemischen Revue ueber Fettund Harzindustrie. Both the temperature of solution and that of beginning congelation were carefully read and are given in a table.

From the figures obtained, it may be deduced that without doubt some foreign glyceride was employed as the adulterant. This deduction was further verified by determining the melting point of the glycerides obtained by fractional crystallization, from a mixture of 3 parts of absolute ether and 1 part of absolute alcohol. The glyceride obtained from the spurios samples possess a melting point of 39.5-40° C., while that of the glyceride obtained from a pure sample, and in a like manner, melts at 50-57.4° C.

NOTICE

NEXT MEETING OF THE

Alumni Association

TO BE HELD ON

Wednesday, June 10th, 1914.

1914 GRADUATES

Are Urged to Make Application for Membership Without Delay.

THE WASSERMAN REACTION.

By Hannah C. Mayer.

Aside from scientific interest, the Wasserman reaction in the diagnoses of sypilis, affords us a method by means of which accuracy in diagnoses may be increased and the subsequent treatment better regulated. The reaction is a complicated biological one based upon complement fixation.

In the serum of a syphilitic patient an antibody is supposed to be present and it is the absence or presence of this syphilitic antibody that we seek in the serum diagnoses of the disease.

The reagents used for the reaction are complement, saline solution, antigens, red corpuscles from a normal sheep and amboceptor.

The complement is the serum obtained from a normal guinea pig and then diluted to the desired strength by saline solutions. The amboceptor is a product which may be present in any normal serum but can be produced artificially in the serum of an animal by repeated injections of substances for which it has no natural amboceptor. Its function is to prepare the red blood cells for the action of the complement.

The complement amboceptor and sheep corpuscles constitute what is known as the hernolytic system.

In most cases the patient's blood is most easily obtained from an arm vein. An ordinary hypodermic needle which has previously been sterilized is most suitable for this purpose. The arm is first washed with alcohol. The needle is inserted into a distended vein and the blood allowed to drop into a test tube. Blood may be obtained by pricking the toes or fingers or from the ear. Five c. c. is about all that is necessary for the entire reaction. After the blood has been allowed to stand at the room temperature, or, if necessary in the ice-box, the clear serum is separated from the clot, the latter then being discarded.

The patient's serum is heated to 55-60°C for half an hour in order to destroy all native complement, which is usually present to a more or less degree. A specific complement is supplied by serum obtained from a normal guinea pig. After the addition of the complement the antigens are added, and the latter unite with the antibodies and acquire the property of fixing the complement in such a way that if red blood cells and their specific amboceptor be added later, no hemolysis will occur.

After all the reagents have been added in the proper ratio, the tubes are placed on the water bath and allowed to incubate for one hour at 37½°C. The absence or presence of hemolysis at the end of this time determines whether or not the reaction be positive. The positive reaction is indicated by the absence of hemolysis. A negative reaction is indicated by complete hemolysis in all the tubes used. The latter result appears as a perfectly clear red fluid.

When the blood of a patient proves to be positive he is given immediate and regular treatment of Salvarsan which, if given during an early stage of the disease and with proper care may render the blood of that patient negative after a certain period of time.—Read before the American Women's Phar. Ass'n.

THE GREAT PRACTICAL ADVANCE IN SEROTHERAPY AND IMMUNIZATION BY MEANS OF SERO-BACTERINS.

Serobacterins are sensitized bacterial vaccines or suspensions of killed sensitized bacteria. In the language of the laboratory, they are produced by saturating bacteria with the specific antibodes found in the serum of an immunized animal, removing the excess of serum by centrifuging and suspending the bacteria in a saline solution. According to the trustworthy reports of bacteriologists and clinicians, they are destined in great measure to supplant other means if immunizing against and treatment of many infectious diseases.

The method of sensitizing is, in brief, the treatment of killed bacteria with specific immune serum whereby the bacteria unite with the immune bodies present in the serum, so that upon injection the combination is ready for immediate attack by the "complement" in the patient's blood.

There is thus secured a great gain of time over the older methods of bacterial therapy, and whether in prevention or treatment this immediacy is of the utmost value. In a few days, for instance, by typho-serobacterin, the practitioner may now secure for his patient immunity against typhoid as formerly in nearly a month with the old typhoid vaccine.

Other advantages are that there is no local irritation at site of injection and little or no lassitude or sickness. More important, still, is the fact that there is no negative phase. The size of the doses may also be greatly increased, even quadrupled, thus assuring rapidity of production and strength of immunity.

Of interest in this connection are the laboratory results of Theobald Smith and the work of Von Behring in combining diphtheria toxin and antitoxin for immunization against diphtheria. By making mixtures containing varying amounts of toxin and antitoxin they were able to secure any degree of immunity — from a short passive immunity due to the serum, to an active immunity of long duration, resulting from the action of the toxin.

To the foregoing advantages of the uses of serobacterins it may be added that in very late stages of the disease, when the bacterial vaccines and even serum treatment is ineffective, successful results are sometimes obtained and life is saved.

Besredka, of the Pasteur Institute, authoritatively summarizes the matter by saying:—

"Whatever the nature of the virus, whether the microbe of plague, dysentery, cholera or typhoid fever, or whether the virus of rabies or the toxin of diphtheria, whether the microbes are killed or living, sensitization confers upon them properties which convert them into vaccines of the first order, possessing an action which is sure, rapid, inoffensive and durable."

The results of the clinical use of serobacterins in actual practice give, of course, the final and convincing test. Of such reports one notices that of Gordon, on the successful use of strepto-serobacterin (sensitized strep-

tococcus vaccine) in erysipelas, emphasizing the fact that when the treatment did no good it did not do the slightest harm; that prophylactically in the face of epidemics it should have a great future; that in hospitals the resistance of the patients may be raised to bacillus coli, streptococcus pyogenes, or the pneumococcus before operations on the alimentary tract or other infected area; for preventing secondary infections and possibly in cases of difficult labor. He says that in cases already infected, the evidence shows that in a proportion of instances it is possible by this method to promote materially the patient's recovery. "By administering a sensitized vaccine to these patients, we appear to bring into action available reserves in that complex and still incompletely defined entity, the patient's specific resistance."

As to the dosage, Gordon, in erysipelas, gave as the first dose 500 million; 24 hours later the second dose was 1,000 million; the third, in 24 hours, was 2,000 million.

Broughton-Alcock found that in acute and chronic gonorrheal urethritis the injections were of little value, but that good results were almost invariable in gonorrheal orchitis, epididymitis, arthritis and periarthritis, tenosynovitis, acne, furunculosis, impetigo, seborrheic eczema.

Boinet found that the goods results in typhoid fever were in accordance with its use nearer the beginning of the infection, diminishing the gravity and shortening the duration of the disease.

In gonorrhea Cruveilhier found that in all cases the duration of the disease was sensibly modified; in acute gonorrheal rheumatism he reports a number of cures. In chronic gonorrheal rheumatism, and metritis favorable results are reported.

Speaking generally, serobacterins give active immunity within 24 hours after the first injection, with marked improvement in the patient's condition. They produce no opsonic or clinical negative phase—and, therefore, will do away with this cause of solicitude on the part of physicians using the ordinary bacterial vaccines in the past.

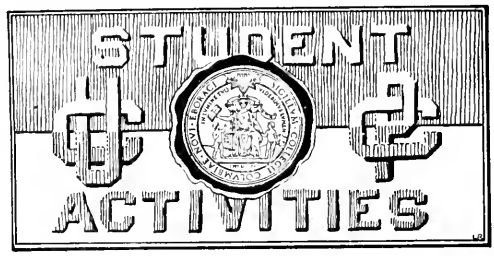
To insure that the serobacterin is properly sensitized careful complement fixation tests are carried out to ascertain the extent of antibody absorption by the bacteria. As a further safeguard guinea-pigs are injected and the action of the serobacterin is followed by means of a series of tests made with the blood serum of the treated animal.

Great care is advisable in the selection of a sensitized vaccine, or serobacterin — the product only of that manufacturer should be chosen of the highest professional character.

A complete review of the Literature on Serobacterins appears in the Mulford Digest for December, and we suggest that those who have not received a copy of this issue request one, to be read and kept on file for future reference.

REPORTERS

L. N. Brown, '14.
F. Fletcher, '14.
B. E. Graystone, '15.



REPORTERS

Miss. M. O'Connor, '16.
J. J. Rampulla, '15.
A. Ziperowitz, '14.

Edited by Leo Roon, Ph. Ch.

ALUMNI JUNIOR EXERCISES.

In accordance with its custom, the Alumni Association tendered its annual entertainment to the successful Juniors of the Class of 1915 on Wednesday night, May 13th, in the Auditorium of the College.

The Juniors and their many friends filled the Auditorium to overflowing—and a right jolly crowd it was.

A stage had been erected over the lecture platform and this suitably decorated with college pennants, banners, etc., so that the lecture room (usually a place of torture for the students) was transformed to give the scene the proper college atmosphere.

The first number on the program consisted of selections very well rendered by the College orchestra. Then Mr. Roon, Chairman of the Committee, in a short talk, introduced Mr. Thomas F. Main, Secretary of the College, founder of the Alumni Association and its Honorary President, who gave a very interesting talk on the old college days and the new. Dr. H. H. Rusby, who had contracted a cold, was unable to attend and telephoned his regrets.

The entire program is herewith reproduced.

PROGRAMME

PART ONE

1—Selections.....College Orchestra
2—Address.....Dr. Henry H. Rusby
3—College Songs.....Glee Club
4—Instrumental Trio.....E. A. Atwood, '14
T. E. Kinane, '14
J. Sciacca, '14
5—Irving Berlin's New Song Hits.James Flynn*
a. "While the Angelus is Ringing"
b. "They're on Their Way to Mexico"
6—Impersonations.....Nat Hochberg
7—Ballads, Old and New
Miss Marjorie Townsend
H. Wirklich, '14
Accompanied by Miss Rose Fried, '14

*Courtesy of Waterson, Berlin & Snyder

PROGRAMME

PART TWO

1—Selections.....College Orchestra
2—Roll of Honor.....Dr. Geo. C. Diekman
3—Leo Feist's 1914 Song Successes
Bob Miller*
a. "On the Shores of Italy".Sam Wilson
b. "Mrs. Rip Van Winkle"
4—Modern Dances.....Miss E. Balterman
C. Ligorio, '14
5—Variety Act.....Miss Marion Klein
Miss Helen Gruber
6—Awarding Alumni Prizes..Dr. J. Weinstein
Pres. Alumni Association
7—Illustrated Columbia Songs.....Glee Club

*Courtesy Leo Feist, Inc.

The College Orchestra and Glee Club did exceptionally well judging from the volume of applause that was accorded them.

Nat Hochberg, the T. E. P. man from Fordham Chapter, "tickled" the crowd with his impersonations.

Miss Marjorie Townsend came from the wilds of Long Island to sing a duet

with H. Wirklich, '14, which was very well rendered.

Sam Wilson & Bob Miller sang some very catchy songs which brought down the house.

C. Ligorio, '14, in his dances with Miss Balterman, demonstrated to the satisfaction of all that he deserved the title of champion "spieler" of the College.

In fact every single number of the program was exceptionally well taken.

There were two numbers on the program which were anxiously waited for by the students, namely, the Reading of the Honor Roll and the Awarding of the Prizes.

Before reading the Honor Roll, Dr. Diekman mentioned some "new discoveries" made by the students during examination week, and they were enjoyed immensely. The Doctor explained that there were twelve subjects, making the total number of possible points 1200, of which

Miss Helen F. Roudin.
received ..... 1093 or 91.08%
Max Levine ..... 1072 or 89.33%
Morris L. Epstein..... 1070 or 89.17%
Miss Deborah Arginteanu 1061 or 88.42%
Leslie L. Blake..... 1061 or 88.42%
Isidor S. Chambers..... 1049 or 87.42%
Eynon H. Williams.... 1049 or 87.42%
George N. Graves..... 1043 or 86.92%
Fonnie J. Andrews..... 1042 or 86.83%
Le Roy S. Hagaman... 1040 or 86.67%
Solomon Feigin ..... 1039 or 86.58%
George D. Virden..... 1026 or 85.50%
Emil Angel ..... 1023 or 85.25%

Dr. Joseph Weinstein, President of the Association, in a short address, presented the Alumni Junior Prizes as follows:

First Prize—A Torsion Balance was awarded to Miss Helen F. Roudin.

MISS HELEN F. ROUDIN
WINNER OF THE FIRST PRIZE

Second Prize—A National Dispenatory was awarded to Max Levine.

Third Prize—A Culbreth's Materia Medica was awarded to Morris L. Epstein.

The Glee Club fittingly finished up the evening with Illustrated Columbia Songs.

Cheers echoed back and forth, college spirit ran high, everybody had a great time!

After the completion of the program the entire building was thrown open for

inspection. Many of the guests took advantage of this opportunity to see the laboratories.

The entire program consisted of volunteer talent, and the committee wishes to thank the following persons who so cheerfully and kindly contributed toward the success of the evening:

Members of the Glee Club.
Members of the Orchestra.
(Names mentioned further on.)
Mr. Nat Hochberg
Miss M. Townsend
Sam Miller and Bob Wilson
Miss E. Balterman
C. Ligorio, '14
Miss Marion Klein
Miss Helen Gruber

COMMITTEE:

F. A. Leslie — J. Hostmann
C. W. Ballard — H. H. Schaefer
B. Maslon — S. Fasano
L. Roon, Chairman

ORCHESTRA.

T. E. Kinane, '14, Manager.
E. A. Atwood, '14, Director.
F. Ambrose, '15, Assistant Director.
T. McGranaghan, '15, Librarian.

The other active members are Dr. C W. Ballard, A. Weinstein, J. Martus, J. Windt, A. Lambert, J. Sciacca and A. M. Dixon.

GLEE CLUB.

E. M. Baldwin, '14, President.
H. Wirklich, '14, Director.
W. A. McBride, '16, Sec'y-Treasurer.

Other active members are Miss R Fried, pianist; S. R. Drapkin, F. A. Frawley, T. E. Kinane, E. L. Moadinger, A. Galateria, F. Fletcher, D. W Odell, M. Markowitz, G. Portoghese.

KAPPA PSI.

The results of the election of officers for the year 1914-1915 are as follows:

J. B. Madden, '15, Regent.
H. E. Miller, '16, Vice Regent.
Wm. A. McBride, '16, Secretary.
B. E. Graystone, '15, Treasurer.
L. Feltus, '15, Historian.
F. J. Andrews, '15, Chaplain.

PHI DELTA CHI.

Officers for 1914-15.

Lewis N. Brown, '14, President.
George N. Graves, '15, Vice President.
Chas. Dougherty, '15, Secretary.
Geo. C. Aronstamm, '16, Treasurer.
Edwin J. Smith, '15, Chaplain.
Alfred G. Young, '15, Sergt.-at-Arms.
Chas. H. Kenvitt, '15, Asst. Sgt.-at-A.
Edwin A. Atwood, '14, Editor.

TAU EPSILON PHI.

Election of officers for the coming year will take place in last week of May.

Several new men went "through the mill" and are now regular T. E. P. brothers. They are E. Windt, '13, B. Geiger, '15, and D. Svigelsky, '15.

The New York College of Pharmacy

Columbia University

The 85th Annual Term of Instruction of this College, Open to Men and Women, will begin on Monday, September 21, 1914.

The College offers a course of two years, consisting of three day's instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on 15 Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College offers courses of three, four and six years of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.) Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Any of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

The Isaac Plaut Fellowship provides five hundred dollars annually, for one year of study at a foreign university, for that Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

With the session of 1914-15 an evening course in Microscopy and Pharmacognosy will be inaugurated.

Those interested will please communicate with

THOMAS F. MAIN, Secretary, 115-119 West 68th St., New York City.

...The...

New York Journal of Pharmacy

Published Monthly by the Alumni Association

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CURT P. WIMMER, A. M., PHAR. D., MANAGING EDITOR.

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Contents:

NEW WATCHWORDS OF TO-DAY.

(President Nicholas Murray Butler's Commencement Address at Columbia University, June 3rd, 1914.)

It is a matter of no small concern to those who leave this university to-day for the purpose of entering upon the active work of life, to realize what ideas and purposes are just now dominant in the minds of men and how these differ from those that have gone before. In the evolution of human ideas a curious cycle is observable. Beliefs and tendencies that have once appeared and that have been rejected or outgrown tend to reappear, sometimes in a new guise, with all the freshness of youth, and they are then acclaimed by those unfamiliar with their history as symbols of an advancing civilization. Probably the greatest waste recorded anywhere in human history is that which results from the attempt to do over again that which has once been done and found disappointing or harmful. If the study of history were more real and more vital than it is ordinarily made, and if it showed ideas, tendencies and institutions in their unfolding and orderly development, and if the lessons of history so studied were really learned and hearkened to, the world would be saved an almost infinite amount of loss, of suffering, and of discouragement.

When this college was young the word that rose oftenest and instinctively to the lips was liberty. Men were then everywhere seeking for ways and means to throw off trammels which had been placed upon them by institutions of long standing, but which were found to hamper them at every turn and to hem them in on every side. Liberty in those days meant not one thing but many things. It meant freedom of conscience, of speech, and of the press; it meant participation in the acts of government and in the choice of governing agents; it meant freedom to move about over the world, to seek one's own fortune under strange skies and in foreign lands, there to live the life that one's own mind and conscience selected as most suitable. Liberty was then the watchword, not in the New World alone by any means, but in the Old World as well, and particularly in France, which has so often pointed the way of advance in the march of ideas. Standing in his place in the convention during the fateful Spring of 1793, Robespierre pronounced this definition of liberty, which is almost the best of its kind: "Liberty is the power which of right belongs to every man to use all his faculties as he may choose. Its rule is justice; its limits are the rights of others; its principles are drawn from Nature itself; its protector is the law." Whatever judgment may be passed upon Robespierre's conduct, certainly his thought on this fundamental question of liberty was clear and sound.

But during the years that have passed we have moved far away from this view of what is important in life. There has grown up, not alone in America, but throughout the world, an astonishingly widespread belief in the value of regulation and restriction not only as a substitute for liberty, but directly in opposition to it. That against which the leaders of the race revolted a century and more ago is now pressed upon us in another form as a desirable

end at which to aim. Not liberty, but regulation and restriction are the watchwords of to-day, and they are made so in what is sincerely believed to be the greater public interest. John Stuart Mill, in his classic essay "On Liberty," saw and described these tendencies nearly fifty years ago, but even his clear vision did not foresee the length to which restrictions on liberty have now been carried.

Just as the driving force of an engine is to be found in the steam chest and not in the brake, so the driving force in civilization will be found in liberty and not in restriction. The cycle will, in due time and after a colossal waste of energy and of accomplishment, complete itself, and liberty will once more displace regulation and restriction as the dominant idea in the minds of men. It is worth your while to take note, therefore, that while liberty is not now in the foreground of human thinking and human action, it cannot long be kept out of the place which of right and of necessity belongs to it.

The only logical and legitimate restriction upon liberty is that which is drawn from the like liberty of others. That men may live together in family, in society, and in the State, liberty must be so self-disciplined and so self-controlled that it avoids even the appearance of license or of tyranny.

There are three possible ways of viewing and of stating the relationship between the individual and the group or mass of which he forms a part.

In the first place, each individual may be regarded as an end in himself whose purposes are to be accomplished at all hazards and quite regardless of what happens to his fellows. This is that extreme form of individualism which has always ended, and must always end, in physical conflict, in cruel bloodshed, in violent anarchy, and in the triumph of brute force. It does not provide a soil in which ideas can flourish.

In the second place, each individual may be regarded as a mere nothing, a negligible quantity, while the group or mass, with its traditions, its beliefs, and its rituals, is exalted to the place of honor and almost of worship. The logical and necessary result of this view has always been, and must always be, from the standpoint of human accomplishment in institutions, stagnation, powerlessness, and failure. It is this view of life which has from time immemorial held so many of the great peoples of the Orient in its grip and which has set them in sharp contrast with the active and advancing life of the West for nearly two thousand years past.

The third view of the relationship of the individual man to the group or mass is the one that I would press upon you as offering the fullest measure of individual happiness and achievement and the greatest amount of public good. It stands between the philosophy of self-assertion, of disorder, of brute force, and of anarchy on the one hand, and the stagnation of an unprogressive civilization on the other. It is the view which emphasizes the individual to the utmost, but which finds the conception of each individual's personality and accomplishment in his relations to his fellows and in his service to his kind. "He that loseth his life shall find it"

is alike the last word of ethical philosophy and the supreme appeal of Christian morals. The enrichment and the development of the individual, in order, not that he may acquire, but that he may give; in order, not that he may antagonize, but that he may conciliate; in order, not that he may overcome and trample under foot, but that he may help and serve—this, as distinguished from the philosophy of disorder on the one hand and the philosophy of stagnation on the other, I call the constructive philosophy of the institutional life. It is built upon human individuality as a cornerstone and a foundation. The higher and loftier the structure rises, the more plainly it points upward, the heavier is the burden that the foundation bears and the greater is its service to God and to man.

The work of preparing the prospectus of the college for the Session 1914-15 is now practically completed. A number of changes have been made. The booklet will be ready for distribution about July 1st, 1914.

Graduates are again requested to call for their diplomas, or, upon written notice, the sheepskins will be mailed. The trustees have again reduced the mortgage on our College building. $5000 more have been ordered paid off.

At this writing we have a registration of about 100 students, which is 50 more than last year at this time. This points to extraordinarily large classes. Our course for the degree of Doctor of Pharmacy (the third year course) will be given for the last time this coming session. Holders of the degree of Ph. C. or of an equivalent degree are eligible. After the coming session, it will take six years to get the Phar. D.

Extensive alterations are being made in the Dispensing Laboratory. The botanical specimens now kept there will be removed and new desks accommodating 120 students will be placed. Electric light will be installed. The lecture platform will be on the west wall of the room.

Electric lights will also be installed in the office, the main hall and basement.

In the Microscopical Laboratory, 11000 slides of cross sections, longitudinal sections and of powdered drugs are being prepared. These will constitute a complete slide library as they contain samples of all of the U. S. P. and N. F. crude drugs. 15 new microscopes have been added to the equipment. All of the botanical and physiological charts have been duplicated so that one of each may be displayed on each side of the lecture room.

In the Bacteriological Laboratory, the windows in the west wall will be enlarged to get more light. All desks will be supplied with gas. Estimates have been obtained for the cost of installing individual gas lamps on the Pharmacognosy Laboratory desks.

These lights will be required for the new evening courses in Microscopy and Pharmacognosy.

Professors Rusby, Diekman, Arny, Mansfield and Wimmer have attended the convention of the New York State Pharmaceutical Association at Saratoga.

Mr. Hostmann was in attendance at the annual meeting of the New Jersey State Pharmaceutical Association at Lake Hopatcong, N. J.

The summer courses in the different departments will be given as follows:

Monday, June 1—Department of
Friday, June 19—Chemistry.
Monday, June 22—Department of
Friday, July 10—Materia Medica.
Monday, July 13—Department of
Friday, July 31—Analytical Chemistry.
Monday, Aug. 3—Department of
Friday, Aug. 21—Pharmacy.

Dr. Hugo Schaefer is continuing his researches on a new alkaloid in Nux Vomica.

Professor Oehler has purchased a new Hudson car. To prove that it runs, he took Messrs. Arny, Hostmann and Simpson on a trip through the Ramapo Mountains.

Mr. Roon is driving a car in and about the roads of Long Island.

Dr. Wimmer and Mr. Roon are doing some researches on certain Phtalic Acid condensations.

Mr. E. V. Pelletieri, '12, has emigrated to Australia, where he expects to mine opals. His address is: c/o Mrs. M. McCormick, Morgan St., Wagga Wagga, N. S. W., Austalia.

Dr. Chapman, '15, has opened a store at the corner of 79th St. and Broadway under the firm name of Pope and Chapman. Chas. Waters, '13, is his manager.

W. Crockett, '13, is chemist for the Police Department at New York City.

Jack McKeown, '12, is manager of the new Hegeman-Riker store at 42nd St. and 5th Ave.

CRUDE OIL AS A FUEL.

By Edward Kemp, Jr., '15.

The development of the internal combustion engine during the past few years has made the fuel problem a serious one. The many advantages of this type of motor assure its complete supremacy for some time to come for small units such as automobiles, motor boats and aeroplanes, if a sufficient quantity of cheap and satisfactory fuel can be secured. The number of motor cars each year is increasing surprisingly, and each little car must have its supply of fuel. Not only motor cars, but also motor boats are becoming yearly more numerous. Aeroplanes as yet have not increased in sufficient numbers to affect the fuel supply, but we may have reason to believe that they will increase in the near future and so make the demand for fuel more urgent.

Naturally, with the increased demand for fuel we must look about for substitutes, and we find on close examination of the less powerful explosives that the possible supply may be drawn from three sources: coal products, alcohols, and petroleum. Among coal products we find the mild explosives known as coal gas, which is made by distilling bituminous coal and purifying the volatile product. The hydrogen in the coal passes off partly as free hydrogen, and partly in combination with carbons as hydrocarbons and with nitrogen. The ammonia, carbon dioxide, and sulphur compounds are removed as impurities before the gas is fit for use.

Alcohol has not yet been developed to any practical extent for fuel purposes but there is no limit to the possible supply, and ultimately it must be utilized. Chemically speaking, ethyl alcohol is C_2H_5OH, a colorless, volatile liquid having a burning taste and a pleasant odor. It does not freeze until at 130° below 0° centigrade. Commercial alcohol is between fifty and ninety-five per cent pure.

Pure or absolute alcohol is obtained by removing the remaining water with lime. Denatured alcohol would be the most practical for fuel purposes. It is a mixture of 100 parts ethyl alcohol, 10 parts methyl alcohol, and a small proportion of benzine. It is not taxed, and in its legalized forms is used as a cheap substitute for pure alcohol.

The only remaining substitutes are petroleum distillates, which I shall take up in detail later. It seems to me that the fuel which is the most practical of the petroleum compounds is crude oil. Gasoline and kerosene have been used with some success, especially the former.

Let us now look up kerosene and crude oil in detail. We know that they are petroleum distillates. They are carbon compounds containing hydrogen and in some cases oxygen. They are capable of further combination with the oxygen of the air, the operation being started and accompanied by considerable heat. The value of the fuel depends upon the ease with which this process is completed and maintained, the amount of heat produced by it, and the degree of neutrality of its products. The carbon combines with the oxygen and forms carbon dioxide, the hydrogen unites with the oxygen and produces water. If the supply of oxygen is not sufficient, the carbon combination will revert to carbon monoxide and much less heat will result, a considerable residue will remain in the form of soot, and some of the hydrogen gas may pass off through the exhaust without having combined at all. If the oxygen supply is too great, the process of combination will be slow and feeble, and the gases will pass out of the motor before all the heat of combustion can be utilized. A liquid fuel must be transformed into the gaseous state before it can combine in this way with oxygen and secure a complete and rapid combustion.

Petroleum is found to some extent in almost every country and is extracted from the earth through oil wells similar to those driven for water. In some places it appears on the surface naturally, in others, pumping is required from considerable depths. Petroleum varies somewhat in different localities but roughly speaking, it is seven-eighths carbon and one-eighth hydrogen, with a small part of oxygen. It is a mixture of the above elements, whose proportions

are difficult to determine by analysis, and are not especially important for our purpose. Petroleum in its natural form is crude oil. By the process of refining which practically consists of boiling, condensing, and separating the vapors, it may be divided into a number of liquids varying considerably in physical characteristics. To go into detail, crude oil is first subjected to a moderate temperature the resulting vapors condensed and drawn off, the temperature is increased producing more vapors, which are treated similarly, and so on. By careful regulation of the temperature and its duration, it is possible to produce an almost infinite variety of products varying in volatility, specific gravity, fluidity, and color. All the distillates of petroleum produced at a temperature below 340° F have a flashpoint below ordinary atmospheric temperature, and are classed as gasoline, benzine, naptha, etc.; that is to say, at ordinary temperatures these liquids are so volatile that they give off gases which will ignite or flash if a flame is half over the liquid.

Before the discovery of the internal combustion engine, these products, being too inflammable to use in ordinary lamps and stoves, were hard to dispose of, and the quantity distilled was kept as small as possible. Laws were finally passed specifying the flash-points of kerosene and burning oils. The numerous explosions of oil lamps and stoves showed that the refiners were leaving too much of the gasoline group of liquids for the next distillation. A number of different grades were produced under this general head to meet the requirements of various trades as closely as possible, and encourage the demand. Not many years ago the gasoline group were regarded as very objectionable as well as a dangerous by-product. To-day the enormous increase in the number of small motors using gasoline has provided a ready market for what was almost a waste product. To supply the demand, the oil refiners have been forced to discontinue some of the more volatile grades, that the whole of the gasoline group may be volatile enough for satisfactory vaporization in these motors. One product was particularly popular known as "Pratt's Deodorized 86° Naptha," which was used for two cycle motors in cold weather. A few years ago 76° gasoline could be obtained at any garage. While both are still produced, it is doubtful if they can be readily secured in most localities, and the fact must be remembered that they are no longer necessary to satisfactory operation.

After having considered the physical and chemical properties of the various fuels, there are a few questions on which the argument for crude oil depends. Can the supply of gasoline keep pace with the demand? We do not think so, since the rising price shows us that the supply is becoming less in proportion to the demand. What are we going to do? Find a suitable substitute. What, for instance? Crude oil or kerosene. Can perfect carburetion be secured with both of these? Yes, with crude oil, and no, with kerosene. Is crude oil less expensive in operation? Can crude oil be easily and cheaply produced?

The demand for gasoline is increasing from year to year, while the supply remains about the same. It is evident that some substitute fuel for internal combustion engines is needed in order to meet the demands on gasoline. With 700,000 automobiles and motor trucks now in use

as compared with less than 500,000 in 1911 and with tractors, motorboats, motorcycles, and other gasoline burning engines increasing equally rapidly, it is interesting to note that the supply of high-grade gasoline is decreasing; in fact there would have been a shortage in 1911 had it not been for the rapid development of the natural gas condensing process. This is the situation which has brought about the rise in the retail price of gasoline. Considering, too, that the present season will boost the number of motor cars in use from the number mentioned to at least 850,000, while plans for 1913 show a production which will put the total beyond the million mark. The objections to the natural gas fuel are that in order to produce coal gas one must have quite a large space, and of course that would be impracticable for automobile use, since a motor car could hardly carry a gas producing outfit around with it and still have room for passengers. For stationary use coal gas may be favorably considered. But here again is the objection to attention required by such a plant and the inconvenience of handling coal and ashes.

Alcohol at present cannot be seriously considered as a possible fuel, since certain laws governing its manufacture do not permit the sale of large quantities by retail dealers. Consequently the price is not low enough to compete with other fuels. The combustion products of alcohol are more or less injurious to metals, and on evaporation of the poorer qualities it develops a stickiness which would hinder lubrication. So it is evident that alcohol is not to be considered as a practical fuel. At some point further on I will show why kerosene has not been a success as a fuel for internal combustion engines. Another reason why the price of gasoline is still rising is that the supply is controlled by the Standard Oil Company and the Texas Oil Refining Company. Several years ago the Standard Oil got into trouble over the gasoline question and was fined an enormous sum and also forced to dissolve. This they did by forming subcompanies in several states all working together as before. The result is that they control the supply today just as much as they ever did, but in the eyes of the law it is legal now, whereas it wasn't before. The Texas Oil Refining Company has been making money at a rapid rate by selling very poor grade gasoline at the usual market price. It is so poor and inefficient that it cannot be used with success in motor-cycles. So between these two companies there is very little chance for the price of gasoline falling unless some new fuel comes on to the field.

Although up to the present time there has been a deal of difficulty in securing perfect carburetion, in recent years great strides toward perfection have been made. The improvement in devices for carburetion has kept pace with deterioration of the fuel, if it may be called that, and will probably continue to do so. The change has been gradual so far, but we have almost reached the limit of the gasoline group of petroleum distillates, and a new proposition confronts us. Almost any motor of modern type and construction will use gasoline, benzine, different grades of naphtha, distillate, etc., because they are of the same general nature, and behave in a similar manner under similar motor conditions. In Pennsylvania petroleum the gasoline group comprises about 15% of the

whole, the Texas and California products having somewhat less. About 60 to 65 per cent. of Pennsylvania oil is kerosene or burning oil under one name or another, which constitutes the next group of distillates.

A temperature of from 350° F. upwards is required for production, and the flash-points vary from 100° to 250° F. The flash-points I have given are only rough approximations, for they vary with the different crude oils and in different refineries and are trade secrets of the oil refining business. There is, however, a marked difference between the temperatures at which the gasoline and kerosene group vaporize, so that an entirely different treatment is necessary for each, to provide proper vaporization. In gasoline practice, no special provision is necessary. A stream of air at atmosphere temperature breaks up the liquid, the eddies of air current through the manifolds and valves break it up still more, and the heat of the motor and that caused by the compression of the charge makes the fuel vaporize sufficiently for practical purposes. If properly vaporized, one hydro-carbon compound is as good a fuel as another, generally speaking. There is not much chemical difference between gasoline and kerosene, and the proportions of carbon, hydrogen and oxygen are approximately the same. The considerable difference in volatility or vaporizing ability, however, has bothered many an ambitious designer. Much more heat than that supplied by the atmosphere is necessary, and it must be furnished at the proper time. Kerosene has an unpleasant habit of disassociation when subjected to high temperatures. That is, its compounds break up into other compounds, leaving a residue of free carbon or soot This is particularly true, when the heating takes place when the supply of oxygen is insufficient for combustion.

Many devices have been tried along the line of gasoline appliances, such as hot air supply to the carburetor, heated retorts in which the fuel was vaporized before being mixed with air, etc., and several successful ones are on the market. The principle of direct fuel injection into the combustion chamber has been tried with varying results. The original method was to maintain some portion of the combustion space at a very much higher temperature than the rest, usually by having it unjacketed This was not conducive to lubrication, since the piston had a tendency to stick when passing over the spot. The fuel was supplied after the air was taken in, but before the compression; and, as there was often an insufficient supply of oxygen in contact with the fuel during vaporization, the fuel sometimes "broke-up," leaving a heavy carbon deposit. Also when a vaporized fuel at a higher temperature came in contact with the cooler air during compression, a further precipitation of carbon took place. This fact is particularly true of kerosene.

But in crude oil engines of the Diesel type we have perfect carburetion of the heavy oil. Pure air is compressed in each cylinder by between seven and eight hundred pounds' pressure, the resulting temperature being above that required for ignition of the fuel. Hence no ignition apparatus is required. The fuel is injected gradually, and burns during a portion of the power stroke with enormous expansive power, so avoiding the extremely high initial pressure but main-

taining a high average pressure on the power stroke on account of its burning instead of exploding. By keeping the proportion of fuel low, it can be seen that all of the objections of kerosene fuel are overcome, and then crude oil is on an equal basis with gasoline in all but price. The price is so much lower than that of gasoline that it is hardly a fair comparison. In a few years I firmly believe that Diesel crude oil engine will be made in small enough units for automobile use, and then the price of gasoline will go down almost to where it was in the beginning.

Crude oil is less expensive in operation than gasoline, kerosene or alcohol. Crude oil sells at about seven cents a gallon, gasoline at twenty-five, kerosene at twelve and alcohol at twenty cents a gallon. Crude oil may also be used as a lubricative. The laws have not made any provision for the manufacture of alcohol in large quantities so the price remains high. These facts show that if crude oil can be vaporized, it will be beyond doubt the coming fuel. On the other hand, we see the price of gasoline going up, and the price of crude oil about the same. Looking back a few years, we see that in 1911* gasoline sold at retail for 13 to 15 cents a gallon against this year's figures of 22 to 25 cents a gallon. In 1911 the crude oil production increased only 3½%. Of this less than 10% was classified as gasoline and naphtha, while an additional 45% was kerosene. The former totaled only 20,000,000 barrels, while the kerosene added to these figures would give a total of 117,000,000 barrels. The price of kerosene is not very variable; it remains about the same. The use of electricity for lighting purposes has brought the price of kerosene down. The supply is not so large as it used to be because the demand is decreasing owing to the above reasons.

Crude oil is the easiest and cheapest to produce. When I discussed petroleum, which is another name for crude oil, I said that it was a natural oil—that is, it is pumped out of the ground, strained, and barrelled. It does not need any factory process of refining. Hence there is no skilled labor required to put the oil on the market. It is not a difficult or expensive process to get the oil out of the ground. Wells are driven similar to artesian wells, a rotary pump is attached to the pipe, and then you have your oil on tap ready to be strained of foreign materials and be barrelled. Crude oil is not a dangerous oil to handle. A man may smoke with perfect impunity about a crude oil reservoir as long as no sparks fall on the liquid; it will not go off spontaneously. When it does burn, it burns slowly, and one would have plenty of time to get away from it or find means of fighting the flame. It is a lubricative as well as an explosive. Crude oil is used for the body of most lubricating oils. It is tinned out with sperm or whale oil so that it will be more fluid. However, it is a very fair lubricative in its natural state and could be used on large engines.

I have proved by figures and facts that the price of gasoline is rising, while the supply is not increasing in proportion to the demand. These facts show that a substitute of lower price such as crude oil is needed. I have shown by facts that there has been great improvement in carburetion devices in proportion to

*(This information was obtained from the Scientific American, Jan. 15, 1913.)

the deterioration in the present fuel, gasoline, and also that perfect carburetion is possible with crude oil as fuel. I have proved with figures that crude oil is the cheapest known fuel. I have just shown that crude oil is the easiest and cheapest fuel to put on the market. Hence I believe that crude oil is the most suitable fuel for internal combustion engines.

1914 STUDENTS 1915 STUDENTS 1916

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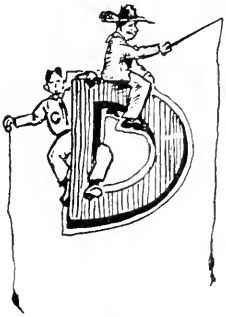

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PERSONAL NOTES.

E. G. Swift, general manager of Parke, Davis & Co., is expected home on June 15th from his long trip around the world, after an absence of nearly nine months. His itinerary embraced England, France, Egypt, India, Ceylon, Java, China, Australia, the Philippines, Japan and the Hawaiian Islands. Mr. Swift's companions on his long journey were Mrs. Swift and his youngest son, Leroy. Since their departure from China, Dr. Selby S. Coleman, manager of the East Indian branch of Parke, Davis & Co. at Bombay, has been a member of the party. Dr. Coleman returns for a thorough posting, a well-earned vacation, and the privilege of making the acquaintance of his infant daughter, who was born in Louisville four months ago.

Cyril C. Murray, for many years the Sydney manager of Parke, Davis & Co.'s business in Australia and New Zealand, will visit the home plant in Detroit in June. Mr. Murray comes to the United States every three years.

Mr. J. C. Dysart, who represents Sharp & Dohme in Southwest Missouri, visited the St. Louis office recently and reported that the prospects are bright for a good year in his section of the State.

Mr. Chas. E. Matthews, manager of Sharp & Dohme's Chicago branch house, called upon his friends in the jobbing trade in St. Paul and Minneapolis the past week. Messrs. Burke, Lund, Gilmore and Coontz, S. & D.'s salesmen in the Northwest, were on hand to meet Mr. Matthews and discuss with him matters of business in the interest of their company.

Mr. W. W. Jackson, better known to some of his friends as "Water Wagon" Jackson of Jonesboro, Ark., was married on Sunday, April 5th. Mr. Jackson is a "live wire" in the drug line, and the benedicts will welcome him to their ranks.

The Wasself Pharmacy, 4239 Broadway, are about to open a branch drug store at Broadway and 112th St., New York City.

Mr. E. T. Curtis, manager of Sharp & Dohme's St. Louis branch house, has just returned to his desk after an extended trip through Kansas and Southern Missouri. He reports business conditions as good and indicates that Kansas expects a bumper wheat crop this year.

Another Taka-Diastase Campaign.

Parke, Davis & Co. are again directing the attention of physicians to the important improvement which, through a new process in manufacture, they have effected in Taka-Diastase—an improvement which virtually doubles the medicinal efficacy of this valuable agent for the treatment of starch indigestion. Under conditions of temperature and moisture corresponding to those existing in the normal stomach, Taka-Diastase will now liquefy three hundred times its weight of starch in ten minutes. The Company is taking full-page space in a long list of medical journals to announce the improvement. The advertisements contain a complete roster of Taka-Diastase products—liquid, powder, capsule and tablet, together with the various combinations of Taka-Diastase and other agents in capsules and tablets. It is understood that the campaign of promotion embraces additional publicity in the form of letters and literature which are being mailed direct to physicians, and some active detail work by a small army of traveling representatives. With all these agencies in cooperation it is a safe guess that the medical profession will be well informed with respect to the virtues of this "greater Taka-Diastase." This means a larger volume of Taka-Diastase prescriptions, a contingency which druggists will do well to take account of.

EXAMINATION QUESTIONS

Senior

DISPENSING PHARMACY.

Spring, 1914.

1. Outline a method for the manufacture of Zinc Stearate.

2. Syrup of Calcium Iodide: (a) Name the substances necessary to prepare it. (b) Name the substance which acts is an oxidizing agent. (c) Name the by-product which is formed.

3. Explain why it is necessary to use glycerin in the manufacture of bismuth subgallate.

4. State what changes take place in each of the following galenicals when exposed to air: (a) Basham's mixture, (b) Tincture of ferric chloride, (c) Syrup of ferrous iodide, (d) Compound syrup of hypophosphites.

5. Name three official extracts in the manufacture of which water is employed as the menstruum.

6. How much official hypophosphorous acid and how much water are required to make six pounds of an acid 5 per cent. strong?

7. Name the official elixirs.

8. State what happens when the following are brought together: (a) Donovan's solution and tincture of myrrh, (b) Syrup of rhubarb and fluidextract of conium, (c) Chrysarobinum and cold cream, (d) Antipyrin, spirit of nitrous ether and water.

9. Compound morphine powder: (a) Give its common name, (b) Name all of its constituents, (c) Give per cent. of its principal active constituent.

10. One part of morphine is soluble in 3330 parts of water. What is the percentage strength of a saturated solution?

11. How may quinine hydrobromide be prepared from quinine bisuphate?

12. Name three official galenicals which contain free iodine, and three which contain metallic mercury. Give per cent. of iodine or mercury present in each case.

13. Ammoniated Mercury: (a) Give its common name, (b) State how it is manufactured, (c) Why is the precipitate washed with a mixture of water and ammonia water?

14. Describe in detail a method for obtaining morphine from morphine hydrochloride.

15. Criticise the following prescriptions:

(a)

℞

Tincture of iron	℥	iii
Ammon. tr. guaiac	℥	i
Tinct. of aloes	℥	ii
Syrup, q. s. ad	℥	iv

Mix.

Sig. ℥i before meals.

(b)

℞

Tartar emetic	℈	i
Arom. sulph. acid	℥	ii
Quinine sulph.	gr.	xii
Water, q. s. ad	℥	ii

Mix.

Sig. ℥ss at bedtime.

(c)

℞

Ichthyol	℥	ss
Tr. val. aeth	℥	ss
Water, q. s. ad	℥	iii

M. S. ℥i t. i. d.

(d)

℞

Strych. nitrate	gr.	ii
Fowler's sol.	℥	iv
Water, q. s., ad	℥	i

M. S. ℥i every three hours.

Senior

MACROSCOPIC PHARMACOGNOSY.

Spring, 1914.

1.—20. Place on the first page of your book, numbers one to twenty.

After each number place the name of the drug found in the envelope stamped with that number. The variety of the drug must be stated when it is of several. If any of the drugs are adulterated or spurious, that fact must be stated.

21. Give the official Latin title, the official English title, and the botanical

name of each of the following drugs:

1. Poke Root
2. Green Hellebore
3. Bitter Apple
4. Poison Hemlock Fruit
5. Colchicum Seed

22. Name the part or parts of the plant from which each of the following drugs is derived:

1. Cascarilla
2. Bittersweet
3. Blue Cohosh
4. Mandrake
5. Squills

23. Write an accurate description of wild cherry bark.

24. Give the common name of each of the following drugs:

1. Frangula
2. Physostigma
3. Calendula
4. Ulmus
5. Tiglium

25. State the distinguishing characters of Alexandria and India senna.

26. State how peppermint leaf differs from spearmint leaf.

27. State the classes into which the plant products are grouped, citing one example under each class.

28. Describe the different varieties of calamus found in commerce, and state which variety is U. S. P.

29. Name an official drug which is derived from each of the following parts of a plant: Corm, Bulb, Tuberous root, Root, and a Rhizome.

30. Give the habitat of each of the following drugs: Wild Cherry, Dandelion, Culvers Root, Ergot, Coca.

Senior

ANALYTICAL CHEMISTRY.

Spring, 1914.

Qualitative.

1. Name four typical representatives of each of the groups of the acidic components. Under what conditions are the anions of the second group alone precipitated by their group reagent?

2. Give five instances of mutual reactions of the acidic ions. How can these reactions be prevented?

3. Describe the tests necessary for the identification of the following, existing separately: nitrate, arsenite, fluoride, borate, sulfite.

4. How is a solution of a solid prepared for the acidic analysis? If the solid is insoluble in water and acids, what treatment is it usually subjected to for this purpose?

5. What is the value of preliminary tests? How is a substance preliminarily examined for: (a) oxidizing anions, (b) organic anions, (c) decomposable anions?

6. How is the treatment with nitrohydrochloric acid carried out? How is any residue then tested for silicate? What is the fusion treatment expected to accomplish?

Quantitative.

7. When is a volumetric solution (a) normal, (b) empirical? How is the value of an empirical solution often expressed?

8. What is a volumetric determination of a substance based on? Why

are the results of titration of ferrous compounds expressed in terms of iron, and those of sulfite as sulfur dioxide?

9. In what does a simple titration differ from a residual titration? Which of these would you perform in the determination of an insoluble base? Why?

10. Find the quantities of the pure reagents in 500 cc. of each of the following V. S. (The figures represent molecular weights):

2/N-sodium hydroxide (40.04).
N/2-sulfuric acid (98.09).
N/1-hydrochloric, 95% (36.47).
N/10-sodium thiosulfate (248.24).
N/20-permanganate (316.06).

11. Calculate the per cent. of Ba Cl2+2H2O (244.32) in a sample in the titration of which were used: sample, 0.32 g., N/10 $AgNO_3$ V. S., 30 cc., N/10 KSN V. S., 5 cc.

12. A solution of KOH is found to be 106.5% normal. (a) How many cc. of a 92% N/2 V. S. of an acid will be neutralized by 22 cc. of it? (b) How much water must be added to convert 800 cc. of the solution into a N/1 V. S.?

Senior

TOXICOLOGY.

Spring, 1914.

1. To what sub-class does each of the following poisons belong?

Cantharidin
Strychnine
Silver Nitrate
Colchicine
Nitrous Ether
Adonis
Veratrum
Resin of Jalap
Tobacco
Camphor

2. Which of the following doses would you regard as decidedly dangerous for an adult, under ordinary conditions?

1 oz. Fluidextract of Spigelia
1/10 grain of Aconitine
1 fl. dr. Tincture of Veratrum
10 minims Oil of Cinnamon
15 grains of Asafoetida
¾ grain of Codeine
8 oz. of Brandy
1 dr. of Copper Sulphate
30 grains of Blue Mass
8 oz. Syrup of Senna

3. Give the symptoms and treatment of poisoning by Nitro-glycerin.

4. In case of each of the following poisons, state whether it would dilate or contract the pupil. This does not refer to dilation due to collapse in final stage, but to the direct action of the poison.

Hyoscyamine
Eserine
Opium
Cocaine
Nicotine

5. Name the best physiological antidote for each of the following:

Strychnine
Aconite
Mercury
Atropine
Cocaine

6. How would you distinguish between poisoning by alcohol and belladonna? What is the appropriate treatment for each?

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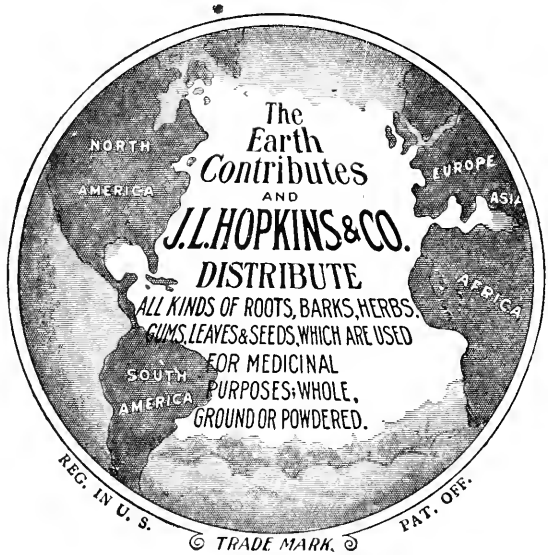

"J. L. HOPKINS & CO.,

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Columbia University

The 85th Annual Term of Instruction of this College, Open to Men and Women, will begin on Monday, September 21, 1914.

The College offers a course of two years, consisting of three day's instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on 15 Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College offers courses of three, four and six years of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.) Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Any of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

The Isaac Plaut Fellowship provides five hundred dollars annually, for one year of study at a foreign university, for that Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

With the session of 1914-15 an evening course in Microscopy and Pharmacognosy will be inaugurated.

Those interested will please communicate with

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New York Journal of Pharmacy

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Contents:

REST AND LET REST.

This is vacation time—rest and let rest. By no means forget to take some time off. Leave behind the worries of your daily toil, forget the Boylan law, the high price of citric acid, the Board of Pharmacy, the soda fountain and the gas bill. Go out of town for as long a period as you possibly can—remember there is more to the world than the four walls of your drug store; there are mountains and forests and rivers and lakes, the beautiful seashore, the refreshing ocean; they are calling you. Go to them and enjoy yourself. There is no time like the present and you will be a long time dead. Don't fail to take a vacation and when you have returned, strengthened in body and mind, remember that he who took your place and burden is a human being like yourself and let him go on his vacation. Rest and let rest.

A COMPLIMENT FROM FAR-OFF INDIA.

MULLER & PHIPPS,
Asiatic Selling Organization.

Madras, India, June 3rd, 1914.

Dr. Curt P. Wimmer,
New York City.

Dear Sir:

Allow me to congratulate you on your success as the editor of The New York Journal of Pharmacy.

The Journal which you are at the present time getting out is very newsy and interesting, and it is with great pleasure that I look forward to receive the monthly edition which is forwarded to me from Bombay while I am travelling around Asiatic Countries.

Trusting that you will keep up the good work, I am

Yours sincerely,
H. H. Hertz,
Class 1910.

(As a rule we carefully refrain from printing complimentary notes sent to us. We do not believe in a "bouquet" column, but we gladly print the above letter because it shows conclusively that this Journal is successful in its mission not alone in the U. S., but also in the other half of the globe.)

VARIOUS IMPRESSIONS OF THE SARATOGA MEETING.

Harmony seemed to be the key-note of the meeting, even the proposed Commissioner of Pharmacy, who mixed up things for a few minutes, went peacefully back into committee.

Thanks of all of the pharmacists of the Empire State are due to the Legislative Committee. We hope sincerely that the publication of the proposed Boylan law and the Boylan law as it was passed will act as an eye-opener and show what this committee has accomplished.

The priests and laundrymen had their conventions at the same hotel and at the same time. We have not heard of anyone of us being mistaken for a priest, but it was different with the laundrymen. We looked almost as prosperous as they did.

Grape Juice was served in the hotel corridor free of charge. Strange to say, a certain room in the basement where drinks were dispensed and charged for seemed to be more popular.

Full dress was the order for the President's reception. Those of us who hod intentionally forgotten to bring ows

had to forego the pleasure of attending. But we did not get left. Saratoga is slumbering but not dead.

Some of the springs reminded us of the analytical laboratory. The water smelled of Hydrogen Sulfide and tasted of it. But the beautiful village park condoned for the odor of its springs. The Fountain of Youth, Lover's Lane, the Casino and the Pergola present pictures not easily forgotten, especially when you have kodaked them.

Dr. Rehfus was a splendid presiding officer. Business was disposed of with dispatch and the sessions, without exception, were interesting. When will another meeting be held at Saratoga? We'll come again.

PERSONALS.

Guy M. Smith, one of Sharp & Dohme's most popular Ohio representatives, was recently married to Miss Lela Moling of Columbus, Ohio. On their bridal tour they spent several days at the home of Mr. and Mrs. P. E. Herman, Cincinnati, Ohio.

J. Byrne Severs and family recently occupied their new home at Cloverport, Ky. Mr. Severs represents Sharp & Dohme in Western Kentucky.

THE MEDICAL SECTS.

ALVIN E. KUHLMANN, Ph.C., M. D.,
Pathologist to the Babies' Hospital.

The intelligent person directing his thoughts into medical channels must of necessity wonder why there should exist in medicine the so-called sects or schools. He reads of allopathy, homeopathy, eclecticism, etc., and of the "wonderful cures" brought about by this method of treatment where that method has failed. For what reason do these various therapeutic sects exist? Medicine is a science, is it not? As such its principles ought necessarily to be definite, clear cut and incontrovertible. The existence of the various "pathies," however, seems to point in the opposite direction.

Medical sectarianism does not exist in the scientific world at the present time! The public at large is misinformed and guided by the opinions of decades long since gone by. Sectarianism in medicine belongs to past ages and generations. It exists only among laymen who are misinformed and among physicians below the ordinary level of mental capacity who accept in good faith teachings now known to be obsolete.

Among the medical sects I include only allopathy, homeopathy and eclecticism, for these and only these represent the reputable of the medical sects. Osteopathy, chiropractic and the like, I refuse to dignify by classing them among the true medical sects. Briefly stated they are vicious, mercenary, criminal practices, participated in ignorantly by some and intentionally by others. They belong to the worst sort of quackery because of their semi-professional aspect. Their schools have no requirements, they have no facilities for teaching medicine, and

above all their morals are extremely oblique, as shown by the recent investigations of the Carnegie Foundation for the Advancement of Teaching.

Likewise do I exclude from the true medical sects a class including hydro-therapists, electro-therapists, physio-therapists and a few others. The intentions of these people are in many instances good, though in a fair percentage evil also. As a matter of fact they have no general education much less an education in the biological sciences. They know little or nothing of pathology, and all have in common a pet idea. The hydro-therapists treat every ailment to which human flesh is heir, with water the electro-therapists with electricity. Hydro-therapy, likewise electro-therapy are both branches of modern medicine. Taking hydro-therapy for example, I might say that it is a valuable branch of present-day medicine. It has its uses chiefly in the reduction of temperature in the febrile diseases and in increasing the eliminative power of the skin in certain diseases, particularly nephritis. It is, however, the greatest folly to treat (as the hydro-therapists do), e. g., a retroverted uterus by altering the temperature of the body or by influencing the activity of the skin, hoping thus to cure a purely mechanical condition. Such methods as these speak for themselves. The same rationale applies to electricity, mechano-therapy, etc., they all have a definite limited place in modern medicine and are used when indicated by the modern therapeutist.

There still remains another class of healers of which I must dispose before discussing the medical sects proper. I refer to the mental healers—Emmanuelists, Dowieists, etc. The power of mind over matter is well recognized. Psycho-therapy occupies a definite place in modern medicine. It is a fatal mistake, however, to assume that because a neurasthenic or hysteric can in eight cases out of ten be cured by suggestion, hypnosis, etc., that diabetes, Bright's disease and cancer of the stomach are to be treated exclusively by such. methods This is clear to everyone, excepting the Christian Scientists and their kind. I have no doubt that the intentions of these people are lofty in the extreme. Their zeal, however, is fatally misdirected. They are to be pitied rather than scorned, and looked upon as the natural outcome of the great waves of paranoia and hysteria which sweep the country at periodic intervals.

Having in brief reviewed the varied, irrational modes of treating disease as a whole, I come now to a discussion of the true medical sects. The origin, credulity in and promulgation of the medical sects can be attributed to two prime causes, viz.:

1. An ignorance of the clinical manifestations of disease uninfluenced by treatment of any kind, and

2. An ignorance of the role which mental influence plays in seemingly altering the clinical course of pathological processes.

To these two factors can be attributed all the modes, sects, schools, absurd, semi-absurd and otherwise which have arisen in medicine since its beginning 6,000 years ago. Considering the first reason, no intelligent physician doubts its truth. We can easily see why scores of drugs were used in the treatment of pneumonia during the past century. Each had its

period of glory each "cured" pneumonia in its time and each in turn became obsolete. Pneumonia is a self-limited disease— a man, who twenty-four hours ago was at death's door, suddenly brightens, his temperature falls, his pulse slows, he is remarkably improved. This is the crisis which occurs anywhere between the third and twenty-first day of the disease. It is perfectly plain how the drug which was given just before the crisis "cured" the disease. The self-same applies to typhoid and many other diseases. The advocates of these cure-alls were in many instances the good clinicians of their time. What was lacking was the careful supervision, tabulation, methods of recording, improved methods of physical diagnosis, and, moreover, all this information taken from large groups of parallel cases, the opportunity for the study of which is furnished by our large, modern, well-equipped hospitals

The second reason for the apparent benefit derived from absurd methods of treatment, viz., the role of mental influence, was no less a factor in the production of the medical sects. Why was it that Father Kneipp had so many followers (including the Pope and the Empress of Austria)? Why was it that after his death his methods of treatment became inert? It is granted by all students of psychical medicine that this man alleviated suffering and stimulated hope by means of his lovable personality. On no other grounds can his success be explained. Similarly why was it that many a poor creature with a degenerative disease of the spinal cord was helped by the famous French neurologist, Prof. Charcot, and by no one else, in spite of the fact that Dr. Charcot prescribed inert powders? The answer is psycho-therapy, in this instance by the mental influence which Dr. Charcot held over his patients by means of his charming and radiant personal characteristics. There are scores of examples of improvement in disease processes brought about by strong mental influence. However, I wish to make it clear that mental medicine influences only the subjective symptomatoly of disease, and in no way alters the anatomico-pathological process if such be present.

With a realization of the foregoing and with the development of scientific methods in medicine, sectarianism has made an unconditional surrender. At the present time there exists but one school of medicine—modern medicine. Modern scientific medicine, as exemplified by our great medical institutions—Johns Hopkins, Harvard, Cornell, Columbia, brushes aside all historic dogma. There exists no pet formula such as "similia semilibus curantur" and no a priori explanations, no grandiose preconceptions of disease. Modern scientific medicine is built upon exact clinical and experimental evidence, nothing more nor less. Allopathy has long ago surrendered to modern medicine. No allopathic institution exists at the present time. Homeopathy is only such in name. The original theories of Hahnemann have been entirely discredited. The so-called homeopathic schools are well grounded in modern pathology and have thrown to the winds the dogmatic preconceived notions of their founder. It simply remains for them to discard the irrational term homeopath. This will soon occur. The eclectic school is rapidly going to its grave. It will soon cease to exist, com-

paratively speaking it does not now exist. The vicious mercenary institutions of which I have previously spoken must of necessity cut their own throats and bring about their own deserved destruction.

As the final result of the recent awakening of the stimulus enhancing a more liberal general education to the populace at large in association with the remarkable advances made within the last few years along the lines of medical education and research, dogma can no longer survive; its place must be taken by something more stable—exact clinical and experimental work, in other words Modern Scientific Medicine.

Congratulations are in order for J. R. Botkin, '13. He has taken a fair New Jersey maid as his life-long partner and now resides in Philadelphia, where he represents the P. S. Aseptic Company.

E. S. Bellis, '13, is "doing time" at M. N. Wordman's Pharmacy in the Bronx.

V. de Lalla, '04, and wife have just left on a pleasure trip abroad. His store on 674 Bleecker Street, Utica, N. Y., is being managed for him by his brother, M. de Lalla, of the Class 1914.

Chas. M. Driesen, '11, sold his store at 3517 Broadway to M. Markowitz, '14, and purchased the Peek Drug and Specialty Company. We extend our best wishes for prosperity to Mr. Markowitz in his new enterprise. Mr. Driesen will no doubt make as much of a success in the wholesale business as he has in the retail line. He's a hustler.

Miss Lillian Leiterman, '11, attended the N. Y. S. Pharmaceutical Association meeting at Saratoga as a delegate from the American Women's Pharmaceutical Association. One can easily perceive that women are pushing their way to the front ranks even in the profession of pharmacy. At the N. Y. S. P. A. Convention at Saratoga, Prof. Mansfield exhibited 165 organic drugs which will be contained in the next Pharmacopœia. Prizes were awarded to those showing themselves most proficient in identifying them, and Mrs. St. Claire Ransford-Gay, '98, Miss Charlotte G. Ransford and Miss Lillian Leiterman, '11, received first, second and third prizes respectively.

Mr. A. C. Burnett, '15, has a real summer job on the "Robert Fulton" of the Hudson River Day Line. He has charge of the Lunch Room, Cigar and Candy Service on board that vessel. The "Robert Fulton" was anchored at the finish when the Columbia varsity crew won the boat race at Poughkeepsie on June 27. There was some celebration Mr. Roon was in that crowd.

N. Bernstein, '15, is resting easily on his new job with S. Elkin, N. Y. C.

Mr. M. J. Breitenbach, proprietor of Gude's Pepto-Mangan is spending his summer at his home on the Thousand Islands in the St. Lawrence River. During the summer Mr. Breitenbach is an enthusiastic farmer and fisherman, and a believer in the "Simple Life."

Dr. Bliss, '07, professor of chemistry and pharmacy at the Birmingham Medical College, Alabama, paid us a visit while touring up through the Northern States.

Mr. J. Hostmann, President-elect of the Alumni Association, took hold of the reins of office on July 1st. Much is expected from him and no doubt much will be accomplished.

To those who have visited the College within the last month, we wish to explain that the scene in the lower hall and Dispensing Laboratory is not the result of a Kansas cyclone, but the work of a corps of electricians, painters and carpenters who are renovating the lower floor. Who said "these are hard times"?

Dr. Wimmer has been appointed Health Commissioner of Ocean Beach, Fire Island, U. S. A. Some healthy job for the Doctor.

Mr. McCaffrey, '02, is the proprietor of an elegant pharmacy in Utica employing eighteen people among whom are Gurry, '14, and Hughes, '10.

Mr. Sullivan, '94, is also a prosperous pharmacist in Utica. F. A. Fletcher, '14, is working for him.

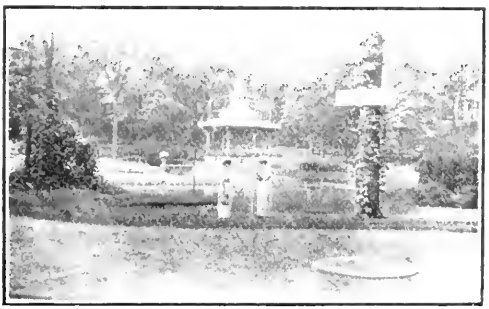
Dr. Harry B. Ferguson manages an excellent drug store at 311 Crane Street, Shenectady, N. Y. He wishes to be remembered to his many friends in and about New York. Dr. Ferguson also attended the State Meeting at Saratoga.

SARATOGA SNAP-SHOTS.

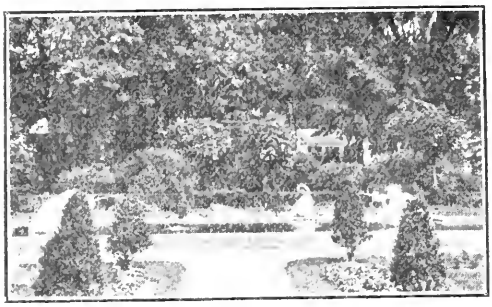
DELEGATES OF THE AMERICAN WOMEN'S PHAR. ASS'N.

Left to Right:

MISS LITERMAN, MISS LAKE, MRS. SCHWAGER.



THE PERGOLA.



The Fountain of Youth.

DOING A FAVOR.

Mr. Business Man, there are two ways of conferring a favor, and if you can grasp the right way and stick to it, it will mean many hundreds of dollars in your pocket during the course of your business life. When you are asked to do a favor, make your decision mentally. If you have to give your answer on the spot, you may have to do some quick thinking, but take a few minutes and make your decision mentally. If your decision is no, say no, and let that end it. But if your decision is yes, say it with a smile.

If you have to make a sacrifice, let it yield you a return. Do it gracefully. Do it with a smile. It seems a simple lesson, yet some men never master it. They go through life, granting as many favors as other men, and always doing it in a grudging way. This is a huge mistake.

We know of no better lesson for a young business man to master than this: If you have to do a favor, do it gracefully, and with a smile.—*National Druggist.*

A COMPARISON OF VARIOUS PRESERVATIVES OF URINE.*

By William M. Dehn and
Frank A. Hartman.

In certain studies on normal urines, incurring the collection and keeping of hundreds of liters, the necessity of using a non-volatile preservative compelled us to test a number of reagents to determine their preservative power.

The ideal preservative for urine requires continuous conformity to the specifications (1) of being neutral or acidic and non-volatile, (2) of having efficient antiseptic power, (3) of being free from hydrolytic or other chemical effects on the organic components of urine and (4) of avoiding interference with reactions involved in the ordinary analysis of the urine.

Though no single preservative meets all of these requirements, a few approximate the same. However, it is scarcely to be expected that a solution so complex as urine, containing so many organic and inorganic compounds, held in acidic-basic, hydrolytic, precipitative, and oxidative equilibria, can be maintained indefinitely in its original composition. It is rather to be expected that one preservative will be effective with certain components of the mixture, while another preservative must be used for others. Hence a variety of preservatives must be studied and their modifying influences must be noted.

For our purpose sulfuric acid was finally adopted, but our studies led us so far afield that we determined to make a systematic survey of preserv-

*From Journal American Chem. Soc.

atives of urine, of which the following is of the nature of a preliminary report. This undertaking was further justified not only by the fact that only a little work has been done, at least in a comparative manner, on preservatives of urine, but also for the reason that profound chemical changes resulted when urines were preserved with sulfuric acid and other reagents.

In the first set of experiments a quantity of urine, to which dextrose had been added, was hermetically sealed in flasks with the respective preservatives; the second set was put up in glass-stoppered bottles; all the samples were in 500 cc. volumes. After certain times the changes that resulted were observed (1) directly, (2) microscopically and (3) through chemical analysis.

Direct observation showed that all samples became cloudy or yielded precipitates on standing. Thymol remained clear the longest; the others gave cloudiness or precipitates immediately or after days, inversely in the order of formaldehyde, ether, toluene, hydrochloric acid, chloroform, etc. The following developed mold: hydrochloric acid, hydrogen peroxide, formaldehyde, boric acid and strychnine sulfate.

Microscopical examination showed that bacteria were present in all samples, and in large numbers, except in cases of hydrochloric acid and formaldehyde. Urate crystals were present in the sediments of all samples, but seemed to decrease in volume after many days in samples containing mold, especially in the case of hydrogen peroxide. All the urines, except those treated with strychnine sulfate, formaldehyde, toluene, thymol and sodium benzoate, being acidic in reaction, gave sediments containing calcium oxalate but no triple phosphate; the latter urines being alkaline gave both, except in the case of sodium benzoate which gave neither.

The total phosphate was determined by the uranium acetate method; the glucose by Purdy's method; the ammonia and creatinine, by Folin's methods; the uric acid, by Ruhemann's method;[1] the urea and chlorine, by Dehn's methods;[2] and the total reduction of alkaline picrate by boiling and estimating colorimetrically.[3]

These analytical methods, except for phosphates and for chlorine, are subject to criticisms. The determination by Purdy's solution includes other oxidation-reactions besides glucose; the aeration of alkaline urines yields other volatile bases besides ammonia; the development of color in cold as well as hot alkaline solutions of picric results from other substances besides creatinine; and with hypobromite, nitrogen is evolved from ammonia as well as from urea. We have corrected for ammonia in the urea reading by multiplying the percentages of the

[1] *Berl. klin. Wochsch.*, 1903, Nos. 2 and 3; *Deut. med. Z.*, 1903, No. 8; *Med. Woch.*, 1904, No. 3.

[2] *Z. anal. Chem.*, 44, 604; *Z. physiol. Chem.*, 44, 11.

[3] We have found that hot alkaline solutions of picric acid develops color not only with creatinine but also with glucose, uric acid, other purine bases, acetone and acetoacetic ester. We are investigating the possibility of application of this reaction to the analysis of urine. See preceding article.

former by 1.75 and subtracting this from the percentages of the latter.

In the following tables are given the chemical data as percentages.

TABLE I.

No.	Preservative	Grams per 500 cc.	Litmus 2	Days 4	Total phosphate	Glucose	Chlorine 174.3	Uric acid	Ammonia	Urea 176.3	Urea corr. 176.3	Creatinine 173.3
..	None1.....	...	A	..	0.1499	0.6896	.....	0.0370	.....	.....	.....	.....
..	None.....	...	B	83	.....	0.2439	0.7302	.....	.....	2.0890	.....	0.1421
1	Salicylic acid.....	1	A	82	0.1350	0 6890	0.7372	.....	0.0146	1.9613	0.938	0.8901
2	Chloroform.....	3	A	18	0.1414	0 3827	0.8195*	0.0290	1.0158	1.0001	0 972	0 6231
3	Thymol.....	1	B	53	0.1410	0.9524*	0.7411	.....	0.0342	1.9621	0.902	0.9643*
4	Boric acid.....	1	A	29	0.1370	0 5127	0.7681*	0.0350	0.0166	.....	.....	0.6750
5	Ether.....	1.6	A	52	0.1310	0.2777	0.7411	0.0150	0.0259	1.9361	0.891	0.9643
6	Formaldehyde.....	2	B	51	0.1362	0.7093*	0 7380	0 0365	0.0300	0.8921	0.842	0 6639
7	H_2O_2 (3%).....	2	A	33	0.1458	0.4167	0 7018	0.0252	0.0311	0.9631	0.909	0.8901
8	HCl (conc.).....	2.4	A	26	0.1385	0.2890	0.8585*	0.0310	0.0331	1.9441	0.886	0.9000
9	Toluene.....	1.6	B	46	0.1350	0.9748*	0.7414	0.0370	0.0342	1.9481	0 888	0.8901
10	Sod. benzoate.....	1	B	44	0.1375	0.3960	0.7459	0.0210	0.0411	1.0341	0 962	0.0040

1 Analyzed on the day when the samples were put up.

2 The Letter A indicates acidic or neutral reaction; B indicates alkaline reaction.

3 The numbers in the headings of these tables indicate days.

4 The days of this column refer to the columns of phosphates, glucose, uric acid and ammonia. The days of preservation of others are given in the respective columns.

TABLE II.

No.	Preservative	Grams per 500 cc.	Litmus.2	Glucose 20.3	Picrate 20.3	Uric acid 163.3	Ammonia 28.3	Urea 67.3	Urea corr. 67.3	Creatinine 29.3
..	None1.....	..	A	4.545	...	.....	.....	1.710	.....	0.648
..	None.....	..	A	4.166	...	0 0080	0.0956	1.635	1.468	0.623
1	Salicylic acid.	1	A	4 546	5.5	0.0134	0.0306	1.649	1.596	0.628
2	Chloroform.....	9	A	4.706*	6.0*	0.0246	0.0308	1.730	1.676	0.487
3	Thymol.....	1	A	4.420	5.5	0.0190	0.0242	1.700	1.658	0.575
4	Boric acid	1	A	4.255	5.7	0.0125	0 0325	1.643	1.586	0.506
5	Ether.....	16	A	4.469	5.1	0.0160	0.0319	1.744	1.688	0.566
11	Sod. arsenite.....	1	A	4.445	5.2	0.2200	0.0356	1.643	1.581	0.623
12	Sod. borate.....	1	A	4.211	5.4	0.0125	0.0343	1 610	1.530	0.416
13	Strychnine H_2SO_4.....	1	B	4.520	5.2	0.0040—	0.0220	1.627	1.589	0 529
14	Sulfuric acid.....	4	A	4.020	6.0*	0.0030—	0.0345	1.560	1.500	0.625*
14	Sulfuric acid.....	18	A	4.082	5.8	0.0020—	0.0241	1.287	1.245	0.000*
15	Poenol.....	1	A	4.494	7.0*	0.0130	0.0355	1.600	1.538	0.675*
16	Gallic acid.....	1	A	4.706*	6.2*	0.0620	0.0310	1.632	1.578	.....
17	Sandalwood oil.....	1	A	4.566	5 5	.....	0.0225	.....	.....	0.506

1 Analyzed on the day when the samples were put up.

2 The letter A indicates acidic or neutral reaction; B indicates alkaline reaction.

3 The numbers in the headings of these tables indicate days.

Though some of these methods are known to be somewhat inaccurate, for our purposes, being rapid and applied under the same conditions, they give valuable and comparable data.

Observations drawn from the above tables of data are made upon (1) abnormal indications, (2) effects upon the respective components of urine and (3) estimates of the respective preservatives.

Abnormal Indications.—The most important abnormal indications are such as are produced on the analytical data by the preservatives themselves. These are marked in the tables with the asterisk, at least those that are very apparent and whose causes are

evident are so marked. However, it must be remembered that an apparent increase of concentration, owing to quantitative disturbances by the preservative, may be compensated by the loss of material, owing to fermentation and other causes. Therefore, when both factors are operative, the apparent reading of concentration may be above, equal to, or below the original concentration, but is invariably above the true concentration.

Since chloroform yields formic and hydrochloric acids by hydrolysis after standing, its presence vitiates chlorine and glucose determinations. Other preservatives that destroy the accuracy of glucose are gallic acid, phenol, salicylic acid, formaldehyde, hydrogen peroxide, and thymol.[5]

Since thymol also absorbs iodine and reduces alkaline picrate solutions, its presence will effect not only the glucose, but also the uric acid and creatinine determinations. Owing to hydrolysis, sulfuric acid, in dilute concentrations, converts creatine into creatinine; in greater concentrations sulfuric acid precipitates the creatinine. For these reasons sulfuric acid gives the abnormal results indicated above. All concentrations of sulfuric acid not only effect the creatinine but precipitate the uric acid and most of the coloring matter of urine.

Adequate explanations of the other high results in the tables are impossible at present.

[4]for the effect of formaldehyde on Fehling's solution see Rudd and Bolenbaugh, Proc. Virginia Chemists' Club, 220.

[5]For the effect of thymol on acetone see Welker, *J. Biol. Chem.*, 3, 27; *N. Y. Med. J.*, 86, 552.

Changes in Urine.—The changes possible in urine through aging and standing with preservatives are almost as numerous as the components of the mixture. Only certain inorganic salts, as for instance sodium chloride, seem proof to chemical decomposition. The easiest observed changes result from mere cooling, when urates and other substances are precipitated. A change in reactivity, as when normally acidic urine become alkaline, is accompanied by numerous chemical transformations, particularly of the urate, the phosphate, and the creatine-creatinine equilibria. For this reason it is evident that an acid preservative most often will be the more desirable.

Important transformations in urine are produced bacterially on glucose, urea and other fermentable substances. The enzymes developed are chemically hydrolytic, dissociative and oxidative, as evidenced by the formation of alcohol, carbon dioxide, ammonia, nitrate and nitrate. Though each of the preservatives in the above studied concentrations, undoubtedly has inhibitory influence, none has perfect bactericidal power, hence none is a perfect preservative.

Reference to the above data shows very little change in the phosphates, except when the reaction of the solution becomes neutral or alkaline; a notable exception is the ether sample. The chlorine analyses are uniformly constant, except when interfered with by such preservatives as hydrochloric acid, hydrogen peroxide, and chloroform; why the boric acid sample is high is not evident. With glucose the compensating influence of

the preservatives and loss by fermentation are evident in cases of chloroform, thymol and gallic acid; probably with phenol, sodium arsenite and ether also. Salicylic acid, sandalwood oil and boric acid seem best for the preservation of dextrose. With uric acid, the changes are apparently great with ether, hydrogen peroxide and sodium benzoate; however, it must be remembered that these preservatives, and also thymol, interfere with the analysis of uric acid by the uricometer method, thus giving rise to the discordant data.

The ammonia data, as direct estimates of the hydrolysis of urea, are probably the best indications of the comparative antiseptic value of the different preservatives, not only on account of the refinement of analysis of ammonia but also on account of the non-interference of preservatives with its determination. However, it must be remarked, that, although sulfuric acid yields but little ammonia, it transforms, possibly by oxidation, exceptional quantities of urea.

Considerable uniformity is met with in the analysis of urea, sulfuric acid alone seeming to have large destructive effect and formaldehyde being next with low results on account of precipitation.[1]

With creatinine there may be either an increase or a decrease of concentration. The increase resulting in acidic solutions involves the hydolysis of creatine to creatinine. Since the colorimetric method of analysis of creatinine was employed, preservatives like thymol, phenol, ether, etc., gave too large readings of concentration. The decrease, resulting usually from the alkalinity of the solution, involves a transformation of creatinine to creatine; a decrease may also result, through precipitation, as in the treatment with sulfuric acid.[2]

The Respective Preservatives.—(1) Salicylic acid is the best preservative of those studied. This excellence of salicylic acid for urine was described by Jordan.[3] It is of further interest to observe that, finding alkaline salicylate to have no reducing or solvent effect on copper, Kendall[4] uses it instead of alkaline tartrate as the medium for oxidation of sugars. Its use, therefore, as a preservative will not interfere with the estimation of dextrose in urine by copper solutions.

(2) Though chloroform preserves urea, and therefore ammonia, it is ineffective with glucose and creatinine.[5]

(3) Thymol, though used frequently as a preservative for urine, does not seem to merit the value placed upon it; for, although little sediment is formed when it is used, and even if it had considerable bactericidal power, which is doubtful, its presence interferes with too many reactions involved

[1]Vide infra.

[2]Edlefsen, *Munch. med. Wochsch.*, 55, 1615, 2524.

[3]*Biochem. J.*, 5, 274; *Proc. Roy. Soc. Med. Pharm. Sec.*, 5, 26. See also Luchrig and Sartori, *Pharm. Centrh.*, 49, 934; Dafert and Haas, *Arch. Chem. Mikros.*, 1908, 1; E. von Meyer and H. Kolbe *J. prakt. Chem.*, 12, 178.

[4]THIS JOURNAL, 34, 320.

[5]The loss of creatinine when chloroform was used as a preservative was observed by Benedict and Myers, *Am. J. Physiol.*, 18, 380. See also Gill and Grindley. THIS JOURNAL, 31, 707. The unsatisfactory preservative power of chloroform for sewage was remarked by Lederet and Hommon, *Eng. Record*, 62, 319; *J. Am. Pub. Health Assoc.*, 1, 267.

in urine analysis. Gill and Grindley[6] made extensive studies on the preservation of urine by thymol and refrigeration and obtained good results for periods up to thirty-two days. However, it is very probable that the *cold* and not the thymol was more important in the preservation of the urines studied.

(4) Boric acid has little merit[1] as a preservative of urine, at least in 0.2% concentration.

(5) Ether in large quantities preserves well, but volumetric relations are thereby disturbed.

(6) Formaldehyde cannot be considered a good preservative, because it precipitates urea[2] and is a reducing substance.

(7) Hydrogen peroxide (and its stabilizer) interferes with many reactions in urine analysis and has feeble bactericidal power.[3]

(8) Hydrochloric acid has nothing to recommend it as a urinary preservative.

(9) Toluene preserves uric acid and creatinine well.

(10) Sodium benzoate is a very poor[4] preservative of urine.

(11) Sodium arsenite is a fair preservative of urine.

(12) Sodium borate is a poor preservative of urine.

(13) Strychnine sulfate[5] is a good urinary preservative.

(14) Sulfuric acid has no value as a general preservative of urine; it causes too many reactions of hydrolysis and oxidation and does not prevent bacterial change.

(15) Since many bacteria are phenol-forming,[6] phenol cannot be expected to have much preservative power; moreover, it interferes with the analysis of many components of urine.

(16) Gallic acid has no value as a preservative of urine.

(17) Sandalwood oil, from the limited data given, indicates value as a preservative.

Summary.

(1) The ideal preservative must be soluble, non-volatile, and neutral or slightly acidic.

(2) Different preservatives must be employed for different purposes; no one preservative can prevent the change of all the components.

(3) The following may be considered poor preservatives of urine; for-

[6]This Journal, 31, 695; Hawk and Grindley, *Proc. Am. Soc. Biol. Chem.*, 9, 10 (1907-8).

[1]For the feeble inhibitory action of boric acid on diastatic ferments see Agullion, *Compt. rend.*, 148, 1340; *Ann. inst. Pasteur*, 24, 495. For other feeble preservative powers see Kuehle, *Pharm. Centr.*, 50, 559; Luchrig and Sartori, *Ibid.*, 49, 934.

[2]Goldschmidt, *Ber.*, 29, 1896; May, *Deut. Arch. klin. Med.*, 1900; de Jager, *Z. physiol. Chem.*, 64, 110. For bacterial resistance to formaldehyde, Tiraboschi, *Il policlin.*, 15, 39, 40.

[3]Croner, *Z. Hyg.*, 63, 319.

[4]For the action of sodium benzoate on bacteria, Herter, *J. biol. Chem.*, 7, 59; see also, Lucas, *Proc. Soc. Exp. Biol. Med.*, 6, 122.

[5]For the effective influence of strychnine on bacteria see Scadikow, *Centr. Bakt. Parasitenk. I Abt.*, 60, 417.

[6]Dobravotski, *Ann. Inst. Pasteur*, 24, 595.

maldehyde, hydrogen peroxide, phenol, boric, gallic hydrochloric and sulfuric acids, sodium borate and sodium benzoate.

(4) The following are better preservatives: chloroform, toluene, ether and thymol.

(5) The best preservatives are salicylic acid, strychnine sulfate, sodium arsenite and probably sandalwood oil.

EXAMINATION QUESTIONS

(*Continued.*)

Senior

PHARMACEUTICAL CHEMISTRY

Spring, 1914.

1. ALUMINUM. (a) Source. (b) Metallurgy. (c) Properties. (d) Formula and properties of Alum, U. S. P. (e) Formula and properties of Ferric Alum, U. S. P.

2. CHROMIUM. (a) Symbol and atomic weight. (b) Source. (c) Formula of Potassium Dichromate. (d) Manufacture of Potassium Dichr mate. (e) Give its uses.

3. GOLD. (a) Symbol and atomic weight. (b) Name three parts of the world where gold is found native. (c) In what form is it usually found? (d) Give two methods of extraction of gold from this source. (e) Give some of the properties of gold.

4. MERCURY. (a) Source. (b) Extraction. (c) Properties, including (d) melting and boiling point. (e) Name two official preparations containing metallic mercury.

5. SOLUTION OF HYDROGEN DIOXIDE. (a) Graphic formula of Hydrogen Dioxide. (b) Percentage of Hydrogen Dioxide in the official solution. (c) Manufacture of the official solution. (d) With what is the commercial solution usually preserved? (e) Give uses of the solution.

6. CALOMEL. (a) Formula. (b) Manufacture. (c) Properties. (d) What is "Black Wash"? (e) Give two simple tests for distinguishing calomel from corrosive sublimate.

7. FOWLER'S SOLUTION. (a) Official name. (b) Manufacture. (c) Percentage of arsenic in it. (d) Appearance of the finished solution. (e) Medical properties and dose of the solution.

8. BLUE VITRIOL. (a) Official name. (b) Formula. (c) Manufacture. (d) Describe its appearance. (e) Explain reaction between it and ammonia water.

9. MONSEL'S SOLUTION. (a) Official name. (b) Manufacture. (c) Explain the chemical reaction occurring in its manufacture either by equations or in words. (d) What occurs when it is mixed with an equal quantity of concentrated sulphuric acid? (e) Describe its appearance and give its uses.

10. Write equation showing the production of ammoniated mercury from corrosive mercuric chloride. How many grammes of ammoniated mercury could be made from 54 grammes of corrosive mercuric chloride?

ORGANIC CHEMISTRY.

Spring, 1914.

1. WOOD ALCOHOL. (a) Chemical name. (b) Formula. (c) Manufacture. (d) Give two tests that will show the presence of wood alcohol in grain alcohol. (e) Uses of wood alcohol and its dangers.

2. SALICYLIC ACID. (a) Graphic formula. (b) Natural source. (c) How is it made from this source? (d) Outline its synthesis. (e) Give some of its properties.

3. CHLORAL HYDRATE. (a) Formula. (b) Manufacture. (c) Properties. (d) Give equation showing its reaction with potassium hydroxide. (e) Say something about chloral formamide.

4. TARTARIC ACID, U. S. P. (a) Graphic formula. (b) Which of the three tartaric acids is it? (c) Explain difference between these three tartaric acids. (d) Manufacture of the official acid. (e) Give its properties and uses.

5. ISOMERISM. (a) Define. (b) Give examples of polymerism. (c) Give an example of three isomeric bodies which we call "ortho," "meta" and "para" respectively. Give examples of three bodies that we call "vicinal," "symmetric" and "asymmetric" respectively. (e) Define stereoisomerism and give an example.

6. ANTIPYRINE. (a) Say something about its structure. (b) Give its correct chemical name. (c) Manufacture. (d) Properties. (e) Uses.

7. ACETIC ETHER. (a) Formula. (b) Correct chemical name. (c) Manufacture. (d) Properties. (e) Uses.

8. TERPENES. (a) Define. (b) How do they differ from cymene? (c) Name an official alcohol that is a terpene derivative. (d) An official ketone that is a terpene derivative. (e) What large class of plant products are mostly terpene derivatives?

9. CELLULOSE. (a) Say something about its composition. (b) Give the name of the official form of nitrocellulose. (c) How is this made? (d) Give some of its uses. (e) What is the purest natural form of cellulose?

10. Calculate the number of grammes of pure olein—C_3H_5 $(C_{18}H_{33}O_2)_3$—and of 85% sodium hydroxide—NaOH—that will be needed to make 100 grammes of a soda soap—Na $C_{18}H_{33}O_2$—containing 20% of water.

MATERIA MEDICA.

Spring, 1914.

1. What kind of a plant yields each of the following drugs, and where does it grow?

Jalap
Gambir
Gentian
Quebracho
Cinnamon
Bryony
Aconite
Conium
Calamus
Ipecac

2. What part of the plant constitutes each of the following drugs:

Henbane
Fennel
Buchu
Elaterium
Frangula
Capsicum
Stavesacre
Squill
Colchicum
Quercus

3. What are the medicinal properties and uses of Hydrochloric acid?

4. Name the official drugs, including the alkaloids, of the Solanaceae.

5. What are the medicinal properties and uses of Quinine?

6. What are the medicinal properties and uses of Phenol?

7. What is the official standard for each of the following drugs:
Oil of Eucalyptus
Calabar Bean
Pilocarpus
Aconite
Oil of Thyme

8. Name the active constituent or constituents of each of the following:
Digitalis
Conium
Podophyllum
Peppermint
Oil of Wintergreen
Granatum
Scammony
Bloodroot
Ricinus
Convallaria

9. Name five drugs the activity of which depends wholly or chiefly on Saponin.

10. Name five drugs the activity of which depends wholly or chiefly on Tannin.

11. What is the official average dose of each of the following:
Fluidextract of Aspidium
Fowler's Solution
Tincture of Guaiac
Wine of Antimony
Potassium Sulphate
Syrup of Squill
Nitrate of Silver
Cocaine Hydrochloride
Phosphorus
Digitalis

12. Give a full account of Hydrastis, including titles, synonyms, definition, home, habit, constituents, properties, uses, preparations and doses.

A PRECISIAN.

A New York physician who has recently transferred his activities to the Hub, tells of a Bostonian who, like most of his townsmen, is a precisian in the matter of English, and who had occasion not long age to consult the aforesaid doctor.

After ascertainment of symptoms, the physician said:

"What you need, more than anything else, is a tonic in the shape of fresh air."

Whereupon the Hubbite waxed sarcastic, and inquired:

"Before we proceed further, would you mind telling me what is the shape of fresh air?"

HER REASON.

Curate—I am glad to see you come so regularly to our evening services, Mrs. Brown.

"Yus. Yer see, me 'usband 'ates me goin' hout of a heavening, so I does it to spite 'im."

The New York College of Pharmacy

Columbia University

The 85th Annual Term of Instruction of this College, Open to Men and Women, will begin on Monday, September 21, 1914.

The College offers a course of two years, consisting of three day's instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on 15 Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College offers courses of three, four and six years of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.) Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Any of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

The Isaac Plaut Fellowship provides five hundred dollars annually, for one year of study at a foreign university, for that Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

With the session of 1914-15 an evening course in Microscopy and Pharmacognosy will be inaugurated.

Those interested will please communicate with

THOMAS F. MAIN, Secretary, 115-119 West 68th St., New York City.

...The...

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CURT P. WIMMER, A. M., PHAR D., MANAGING EDITOR.

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Contents:

EFFECTS OF THE EUROPEAN WAR.

The drug market has not suffered as much as might be supposed, of course the prices of a few articles have risen momentarily, but as soon as there is a decisive victory on the sea, trade will be less perilous and the market will find itself with its prices only slightly higher than before the war. Shipping, at present, is nearly at a standstill as far as Europe is concerned owing to the lack of American owned vessels. However, with passage of the Registry Bill this trouble should be remedied, provided it is recognized by the warring nations.

When the war broke out many small druggists in this country attempted to corner the market on certain crude drugs which they thought would become scarce as the war progressed. The wholesale dealers, however, put a stop to this by refusing to fill their order for more than the usual amount. So many a bright hope of a nice little fortune, out of the restriction of imports due to the war, was blasted. There is a chance, of course, of the aniline dyes maintaining their present high price, in which case, manufacturers of textiles will probably return to the old method of making dyes from natural products, such as logwood, madder. Chemicals for use in the manufacture of steel are scarce and those on hand will probably command high prices. Crude rubber has gone up, but I believe that is only temporary until commerce opens up with Brazil. In that connection I notice that the Brazilian line of steamships trading with Europe as well as America have decided to place all their ships in service with the United States. This will aid to bring the crude drugs of South America to New York and meet the then urgent demand. When the Registry Bill is passed, great relief should be felt along all the lines of import and export.

It is difficult to look far into the economic future. A war, whose cost draws large sums of capital and many millions of the most skilled laborers from profitable industries and turns their efforts to the destruction of property, is bound to have a lasting bad effect on those countries involved. When peace is finally declared it will take an almost equally great amount of money to repair the ravages of war and such destructive war with the most deadly of weapons the French field guns, not seen or seeing the enemy but dealing death by the thousands! The war will doubtless exert a long and tense influence on the economic conditions of Europe. The effect on the United States will probably be quite the opposite. We are not seriously entangled in the financial troubles of Europe as the closing of the Exchange or the recourse to emergency banknote issue might tend to show. One thing is certain, we must depend on our own capital after the war, and we have already been several months preparing our finances to do without foreign assistance. I think the Exchange need not have closed because it seems more than likely that American investors would have supported it sufficiently when quotations dropped so suddenly. Possibly our financial strength will be most greatly felt in our position in international grain trade. We could, no doubt, control to a great extent the grain of the world. England realized this when she secured all our available surplus when she declared

war. Our industries should be stimulated by the absence of foreign competition. The greatest difficulty, at present, is the lack of vessels to carry our products to their destinations. The remedy for this is the Registry Bill whose passage seems imminent.

EDWARD KEMP, JR.

Alvin E. Kuhlman, Ph.C., '10, M. D., '14, finished his course of study with honor at the College of Physicians and Surgeons. His old classmates will be pleased to know that at present he is resident pathologist to the Babies' Hospital, and after January 1st he will be at the Presbyterian Hospital, where he received an appointment as interne for two years.

Harry Hansen, Ph.C., '10, is finishing up his medical course at P. & S. He often leaves his abode in the wilds of Jersey, near Schuetzen Park, to visit the College of Pharmacy.

Armin A. von St. George, Ph.C., '10, M. D., '14, is one of the famous trio to depart from the College of Physicians and Surgeons with a sheepskin in his hand. He has a two-year appointment to the German Hospital as interne, but we confidently believe that though owing to the present war crisis, Armin will "throw up" his job and go to fight for the Vaterland.

The College is to be exceptionally well represented this year at the A. Ph. A. convention which will be held at Detroit in August. Dean Rusby, Professor and Mrs. Diekman, Professors Arny, Vorisek, Mansfield, Wimmer, Dr. Ballard, Mr. and Mrs Hostmann will attend.

R. L. Flett, '13, is to be found at Johnson's Pharmacy, Atlantic Highlands, N. J.

The bonds of matrimony now hold C. K. Brown, '06, of Deposit, N. Y. Evidently he is a hustler in branches other than pharmacy. We extend hearty congratulations.

P. Guerrieri, '13, manufactures toilet preparations for Bamberger in Newark, N. J.

A. J. Traub, '13, side partner of Guerri's, is also in Newark working as chemist for Chas. Cooper.

A. Buck, '12, left his position with Riker. He prefers to work in the hills of Long Island at Northport.

Sidney May, '00, formerly with Durkee and then with Montgomery & Ward is now chemist for Austin, Nichols & Co.

Eugene Schick, '04, of Bethlehem, Pa., is with the Peruna Medicine Co., of Columbus, O.

F. Callahan, '14, is employed at Hetherington's, Grand Central Terminal.

T. E. Kinane, '14, the famous trombone artist of the C. U. C. P. orchestra is "blowing" about the fine job he has with Van Horn & Sawtell.

C. Hergert, '14, forsook beautiful Elizabeth (New Jersey) and now stands in strong with Riker's at 71st and Broadway.

H. C. Cartwright, '10, finished his second year of medicine at Bellevue.

E. Auchenpaugh, '10, is a neighbor of Dr. Ballard's in that uncivilized portion of New York commonly called Bay Ridge. He is an employee of the Coch Pharmacy at Third and Ovington Avenues.

Mrs. Braswell, '11, paid the College a short visit last week.

Alphonso Jean Marie de Lignori dropped from the ranks of the pharmaceutical profession and is now in Chili with some contracting and engineering concern.

Dr. H. H. Schaefer, '13, has written a very interesting and instructive paper on the new alkaloid which his father has discovered in Nux Vomica. He is at present doing research work in the New York Quinine factory.

Alumni and seniors will be very much pleased at the improved appearance of many parts of the building. Electric lights have been installed in the hall, dispensing laboratory, and Dr. Arny's office and laboratory. The dispensing laboratory has been entirely rearranged and renovated, so that it now accommodates 114 more students than it did last year.

Miss Kerker has returned to her arduous duties in the office after a pleasant vacation.

Mr. Simpson is now taking his turn and is enjoying himself at Colchester, Conn.

Beginning October 1st, a course in pharmacognosy, under the direction of Prof. Mansfield, will be given for the benefit of those graduates and others engaged in the practice of pharmacy, who desire to fit themselves in the microscopical analysis of drugs. We predict success for this evening extension course.

STRANGE CAUSES OF DEATH.

Of the hundreds of death certificates handled annually by the Wisconsin State Board of Health in making classification of diseases, many contain interesting remarks as to the cause of death. These death certificates are generally filled out by a local physician and mailed to the board. Some of the "causes," as found in the reports by Chief Statistician L. W. Hutchcroft, follow:

A mother—"died in infancy."

Went to bed feeling well, but woke up dead.

Died suddenly at the age of 103. To this time he bid fair to reach a ripe old age.

Do not know cause of death, but patient fully recovered from last illness.

Deceased had never been fatally sick.

Died a mere child (an infant of one-half year).

Last illness caused by chronic rheumatism, but was cured before death.

Died suddenly; nothing serious.

Kick by horse shod on left kidney.

Chronic disease.

COLLOIDS AND THEIR IMPORTANCE TO PHARMACY.*

CURT P. WIMMER Phar. D., New York.

If I remember correctly, it was about five or six years ago that my esteemed friend, Jerome Alexander, in conjunction with Professor Hallock of Columbia University, exhibited and explained the ultra-microscope for the first time at a meeting of the College of Pharmacy. A few months after that, at a meeting of the Chemist's Club, I had again occasion to view a number of substances in the ultra-microscope and, each time and ever since, have been greatly interested in the colloid state of matter and have made it my business to follow the rapid strides which this new science, called "Colloid-Chemistry," has made. The first sight of a substance in the colloidal state under the ultra-microscope is a truly impressive and remarkable one; the substance, which appears to be perfectly homogeneous and at rest when observed with the naked eye, is found to be full of life and motion. We see little particles oscillating back and forth; we see the everlasting, never-ending motion of matter. Again, a few weeks ago, I attended a series of colloid-chemical conferences held by Dr. Wolfgang Ostwald at Columbia University, and I felt that Colloid Chemistry is, and will be destined to be of the greatest importance to all sciences, but especially to pharmacy.

It is with a great deal of pleasure that I come before you to-night with the privilege of talking about colloids and their importance to pharmacy.

*A lecture delivered before the New York Branch of the American Pharmaceutical Association, March 9, 1914. Reprinted from J. A. Ph. A., July, 1914.

In the short space of an hour allotted to me, it will be possible only to skip over the surface of the science and to give the most important facts, omitting much that would be of great interest.

I have divided the subject matter of my lecture into two general parts:

1. The nature, preparation and properties of colloids.

2. Their importance to the sciences, especially to that of pharmacy.

The subject of colloids is a vast one, although the science, as such, is only about fifteen years old, and is growing at a pace which makes it well nigh impossible to keep track of it. Colloids have been prepared and used for centuries, but without any true conception of this state of matter.

Although true colloidal solutions have been prepared as far back as 1802 by Richter, in 1839 by Woehler, and again in the fifties by Faraday, Kuhn and St. Gilles, none of these investigators had an exact idea of the true state of colloidal subdivision, although some of them suspected that they had metals suspended in the liquid in fine subdivision. The first systematic investigations along these lines were made by Thos. Graham, an English scientist, in 1861 to 1864, who published his findings in "Philosophical Transactions," and in "Liebig's Annalen der Chemie." Graham studied dialysis—the diffusion of dissolved substances through parchment paper or a membrane. He observed that some substances passed readily into a surrounding pure solvent, while others did not or, at least, did so at an exceedingly slow rate.

Those which passed through, he found to be substances which could be readily obtained in crystalline form, those which

did not pass through were usually amorphous or glue-like, so he divided all matter into two general classes: Crystalloids and Colloids (from colla, glue).

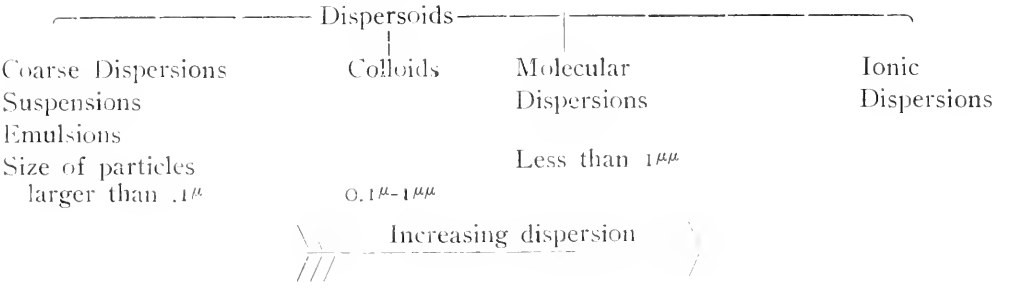
But Graham made another important discovery. He found that certain substances, which were said to be insoluble, could be obtained in so-called pseudo-solutions (a term proposed by Franceschi di Selmi in the forties). Graham prepared solutions of Ferric Hydroxide, Chromium Hydroxide and others, and found that they did not dialyse, so he gave them the name "Colloidal Solutions," or "Sols," a term which is now accepted and used for a colloidal solution. It would lead too far to go into all of Graham's investigations; simply let me state that they laid the foundation for the colloid chemistry of to-day. After Graham, work on colloidal substances was done by others, but little importance was attached to it; the theoretical and practical researches of organic and inorganic chemistries dominated the scientific world. Whatever chemical change or phenomenon which could not be expressed by a formula was not considered worth investigation. Interest in the subject was re-awakened, however, in the late nineties, when Bredig succeeded in preparing colloidal solutions of heavy metals by the aid of the electric spark.

The actual impetus to the work on colloids, however, was given by the invention of the Ultra-Microscope by Zigmonody and Siedentopf in 1905.

Our present view of the nature of colloids is diametrically opposed to that of Graham. He distinguished two worlds—the Crystalline and the Colloid worlds. Our present accepted view is, that there is only one world and that the colloid state can be assumed by any substance, solid or liquid, under appropriate conditions.

A general definition for a colloidal solution or a "sol" is this: A colloid is any solid, liquid or gaseous substance in a certain state of subdivision, or dispersion, in another solid, liquid or gaseous substance.

A substance which is subdivided or dispersed is called a "Dispersoid." In order to illustrate the above definition of colloid, I ask you to kindly look at Ostwald's Schema:



There are, of course, transition states between the above dispersions.

A colloidal solution, or "sol," consists of at least two substances, the dispersoid and the dispersion medium; a colloidal solution is, therefore, a "di-phasic heterogeneous system."

Inasmuch as solids, as well as liquids and gases, can form part of a colloidal system, we distinguish nine different cases, as follows:

Solid — { Solid——Ruby-glass, Sodium in Sodium Chloride, precious stones.
Liquid—Suspension—Colloids. (See below.)
Gas——Cigar and other smoke, cosmic dust.

Liquid— { Solid——Water in salts, occluded water in crystals.
Liquid— Emulsoids. (See below.)
Gas——Vapors, Clouds—Foams.

Gas—— { Solid——Gases in lava.
Liquid—Fog.
Gas——Not a colloid system.

Of the above, the two systems, Solid-Liquid and Liquid-Liquid have been studied most thoroughly and are of special interest.

The following are the general characteristics of these two systems:

(a) *System*: Solid-liquid, also called "Suspension colloid."
Type: A gold-sol.

(1) Viscosity is about that of the dispersion medium.

(2) They are slightly turbid or opalescent. Under the ultra-miscroscope we see bright and distinct spheres.

(3) They exhibit Brownian movement, the rapidity of which increases with increase of temperature and decrease of viscosity of dispersion medium.

(4) They have a distinct electric charge. After addition of an electrolyte, they coagulate and separate. They become irreversible, viz., they cannot be brought in suspension again by simple means.

(5) Centrifugation may separate them as fine powder.

(b) *System*: Liquid-Liquid, also termed "Emulsion colloid."
Type is solution of albumen in water.

(1) High viscosity (inner fraction). A tremendous increase of viscosity follows a slight concentration. Higher temperature decreases viscosity. For example, on heating a solution of gelatine from 21° C. to 31° C., the viscosity decreases by about 1,000 per cent.

(2) They foam upon shaking.

(3) They exhibit pseudo-fluorescence (like suspensoids).

(4) The Ultra-Miscroscope shows a bright field, particles or spheres are, as a rule, not seen.

(5) They have no distinct electric charge.

(6) They coagulate only upon addition of large amounts of electrolytes.

(7) They may gelatinize or swell.

There are several different ways of classifying colloids, none of which has yet been definitely accepted.

Preparations of Colloids: Inasmuch as the colloids are in degree of dispersion, between coarse suspensions of molecular and ionic solutions, we have two general methods of preparation.

Coarse Suspension — Colloid — Molecular Sol.

(1) Method of dispersion: We start with a solid or coarse suspension.

(a) Mechanical grinding—Colloidal osmium.

(b) Action of light—colloidal silver.

(c) Action of electric current—colloidal gold, etc.

(2) Method of concentration: We start with one or more colecular solutions and obtain the colloid by chemical reaction. Colloidal silver, gold, barium sulphate, etc.

In using these methods, we obtain at times particles of different sizes, we remove the coarse ones by filtration and the molecular ones by dialysis.

Most metals have been obtained in colloidal solutions, either in water or in organic solvents, such as alcohol, pentane, ethyl-ether or iso-butyl alcohol. Even the radio-active elements, or their salts, have recently (see Kolloid Zeitschrift, Feb., 1914) been prepared in this condition.

The Properties of Colloids. (1) Mechanical properties. They exhibit Brownian movement when obserbed under the ultra-microscope. This is a dancing, trembling movement discovered by the English botanist Brown in 1827. The motion is back and forth from a fixed central point. Smaller particles move faster than large ones, particles larger than 3-5μ in diameter do not show the motion any more. There are several theories for the cause of this motion; one is that the gravity of the particles is only partially overcome by the viscosity of the medium, that the particles fall or rise until the viscosity of the medium overcomes the gravity and the particles are pushed back again. In coarser suspensions, the gravity overcomes the viscosity and a separation takes place, viz., cream, in which the particles of butterfat are 2-10μ in diameter.

(2) Diffusion: Colloids have been found to diffuse. They differ in this respect from crystalloids only in the rapidity of diffusion.

(3) Osmotic Pressure. The osmotic pressure of colloidal solutions is, as a rule, very slight; some have none at all.

(4) Gravity: The density of colloidal solutions cannot be calculated from the density of the dispersoid and that of the medium. Dispersoids show, as a rule, a volume contraction and the density increases with increasing dispersion. J. Rose determined the following figures for gold:

Gold, melted and pressed..	19.33
Gold, by oxalic acid.....	19.49
Gold, by $FeSO_4$—finest powder	19.55-20.71

(5) Optical properties: Most colloidal solutions appear to be clear and transparent when viewed with the naked eye. Often, a turbidity, fluorescence or opalescence can be noticed, especially in reflected light. A ray of strong light sent through a solution of this kind, will show the "Tyndall phenomenon," viz., the light is repeatedly reflected and polarized. The ultra-microscope is constructed so that all rays, except those reflected from the suspended particles, are excluded. We see the "halo," so to say, of the particles. The color of the colloidal solution varies with the degree of dispersion. System Liquid-liquid most

often appears whitish to pale yellow. Gold "sols" may be violet, red, blue, green, orange. The intensity of the color is measured by the amount of white which must be added to get a certain tint.

(6) Electric Properties: The disperse-phase is charged either positively or negatively.

Positive charge have: Metal hydroxides, silicic acid and certain dyes like methylene blue.

Negative charge have: Metals and their sulfides, dyes like indigo, eosin, fuchsin, also starch, mastic and acacia.

Filter paper in water becomes negatively charged—a substance, therefore, which does not ascend the filter paper by capillarity, is positive in charge, viz., it coagulates on the paper.

The kind of charge is usually stated for water, for it may be different in other solvents; for example, it is the opposite charge from that in oil of turpentine. Graphite in oil is positive, in water it is negative. Addition of certain substances may reverse the electric charge; albumin becomes negative by addition of an alkali; it becomes postive on addition of an acid. In passing the electric current through a colloidal solution, the particles travel either to the anode or cathode, according to their charge. This is Electro-osmosis or Kataphoresis. Colloidal solutions conduct electricity considerably less than dissociated solutions. The addition of a so-called "protective colloid," such as albumose, acacia, etc., imparts to the dispersoid the charge of the protective colloid. So, collargol, lysargin and other colloidal preparations carry the charge of the protective colloid used.

(7) Jellification: Under this head we distinguish (a) setting, and (b) swelling.

The setting or jellifying of colloidal solutions is due to changes in the internal dispersion and in hydration. Setting takes place upon warming and consequent concentration, or upon the addition of electrolytes. The amount of the latter must exceed certain minimal values and amounts, which differ greatly with the nature of colloid as well as electrolyte. Hydrophilous colloids increase their volume on being brought in contact with water—they swell. This swelling may go on to such an extent that the particles of the substance are torn apart and a colloidal solution results, or it may reach a certain limit and then stop. The setting and swelling of collloids is a very important phenomenon. Every substance or organ has a certain definite swelling-value, which may counter-balance or even overcome osmotic pressure. The force of swelling is often very great. Ostwald states that swelling peas lifted the cover of an iron pot which had been weighted down with 83.5 Kg. The swelling-pressure of starch has been found to be equal to a pressure of 2523 atmospheres. The old Egyptians drove wooden sticks into stones and poured water in them. The swelling of the wood broke the stones, which were used for building purposes. The curling of gelatine-films is due to a swelling, also the straightening or curling of hair in dry or moist air respectively. Interesting work has been done on the structure of jellies. When we dissolve a small amount of gelatine in a mixture of alcohol and water and allow to cool slowly, we note under the mocroscipe, that small semi-liquid drops separate and, as their

number increases, they adhere to one another and finally form a net-like structure. By varying the amount of the gelatine, we get slightly different results, but we find that jellies are sponge-like colloidial structures filled with colloidal solution.

Salts, or acids, or bases—in short, electrolytes, have great influence upon swelling.

Acids and alkalis increase swelling, as do many neutral salts. Gelatine swells more in the presence of Magnesium Citrate than in water alone. Calcium Chloride, Hydrochloric Acid and Sodium Hydroxide increase the swelling capacity very considerably. The cause for this must be sought in the chemical nature of these hydrophilous colloids. They are probably amphoteric, that is they have weak acid and alkali reaction at the same time. By an addition of acid or bases, they form more or less ionized salts, which in turn cause a hydration, or a taking up of water, with subsequent increase in volume. R. Chiari, in Vienna, found that he could distinguish between distilled water and ordinary water, by means of the degree of swelling of purified globulin, which he found to be very sensitive to electrolytes.

(8) Coagulation: When we boil a solution or albumin, or add Ammonium Sulphate, we coagulate the albumen. Coagulation is an electrical phenomenon conditioned by colloids of different electric charge or by electrolytes. The amount of electrolytes must, however, exceed certain minimum values.

Gold or platinum "hydrosols" can be coagulated by Ferric or Aluminum hydroxide "hydrosols," provided the amounts added are such as to exactly neutralize the electric charge of each other. A 1/10,000 per cent. solution of gelatine will coagulate a mastic emulsion if more is added the gelatine will act as a protective colloid.

(9) Pectization is the gradual resolution of substances into the colloid condition; for example, when we treat silver or mercurous iodide with solutions of potassium iodide of different strengths, we will get a colloidal solution. Szillard, of Paris, has made a large number of interesting experiments in which he tried to prove that inorganic substances can act like albumens.

(10) Adsorption: We are all familiar with the property of charcoal to condense large volumes of gases, or to take coloring matter out of solutions; the various silicates, like fuller's earth, kaolin, etc., can be used for the same purpose. Gelatine and isinglass can also be used for clarification or decoloration. The analyst knows that the concentration of certain salts (viz., lead), is reduced upon filtration through paper. These phenomena are classed as adsorption phenomena and are due like many other properties of colloids to their tremendously large surface development. A cubic centimetre of a substance reduced to colloidal dispersion has a total surface of 600 square metres and the surface forces of the colloids are, therefore, very pronounced. Adsorption is caused by a decrease in the surface tension of the solvent conditioned by the dispersed substance, or a third substance added. Quincke showed that a substance which causes a decrease in surface tension of a colloidal solution, has a tendency to travel to the dispersoid phase and form a sort of covering around it.

Fats, fatty acids, albumen and its decomposition-products, decrease the surface tension of water very considerably and are also readily adsorbed. It appears that adsorption is a physical phenomenon and that no chemical process plays any part. Ostwald, to emphasize this, has termed it "Mechanical adsorption."

(11) Reactions in jellies: When we allow chemical reactions to take place in jellies, we find that the reaction-product separates out in ring forms, which rings appear in periods. A gelatine "gel" containing potassium dichromate, with a solution of silver nitrate on top of it, will slowly show the yellow rings of silver chromate. Such rings are called "Liesegangs rings" after the scientist who investigated them most thoroughly.

On reviewing what I have told you so far about the preparation and properties of colloids, I find that I have omitted much that is important and exceedingly interesting, but I must hurry. I hope, however, that another opportunity will present itself to take some one certain phase of colloid-chemistry and go into it more thoroughly. Time does not permit me to tell you anything about the methods of colloid research. Most of them are directed, of course, by the properties of colloids. Splendid and very promising results have been obtained by the method of ultra-filtration devised by Bechold. In fact, colloid chemistry has opened a field of research which is tremendously large.

There is no science in which colloid chemistry does not enter in some way or other, and as a system of knowledge it is of the utmost importance. Each of us here is a fine example of heterogeneous polyphasic colloid system; so is the chair on which you sit, the nails which hold the pieces of wood together and the glue which lends stability. You arise in the morning—the linen of your bedding, the feathers of your pillows are colloids, you proceed to bathe and use soap—again a colloidal process. You have your breakfast which consist of colloids; digestion sets in—again a colloidal process; the cigar you smoke and the smoke you exhale are colloidal systems—and so on and on. To still more emphasize the importance of colloids, I beg leave to say a few words about their uses in the various arts and sciences.

Cookery and Foods: The kitchen is a great colloidal-chemical laboratory. Meat of young animals is richer in juice and of softer tissue than that of older animals. This depends upon the swelling value of the tissues, which value changes with the age. Meat, on boiling, loses 20-30 per cent. of its weight of water—no doubt a dehydration of a colloid. On frying meat a heat coagulation prevents the loss of juice. Artificial foods are now classed according to their content of carbohydrates and nitrogen. The colloid chemist will classify them according to their swelling value upon which depends primarily the degree to which a food can be readily absorbed. Milk will be examined as to its surface tension and viscosity which show abnormal fat and protein contents. Addition of water is detected by coagulation with calcium chloride and the refractometer; the amount of milk sugar is estimated by the polariscope after removal of the milk colloids with colloidal ferric hydroxide. Cheese is albumen colloidally dissolved in milk; the determination of the swell-

ing-values of the different cheeses will, no doubt, solve the question of their digestibility. Bread and beer are colloidal preparations which are now being investigated. The taste of beer depends on its viscosity, due to colloids, and its electrolytes. The brewing water used, seems to have considerable influence upon the taste.

Mineralogy: Most precious stones owe their colors to minute quantities of a colloid substance, viz., in topaz-sapphire we have colloidal cobalt oxide, in ruby, chromium oxide. The opal is a "gel."

Metals: Steel is a system: Iron-Carbon-Iron Carbide. Tungsten filaments were made by pressing tungsten together with dextrin or syrup through small openings into wire form. The filament was then subjected to high heat to carbonize the organic material. Kuzel has improved this method by preparing a "tungsten-gel" by alternate action of acid and alkali upon finely powdered tungsten. This is pressed into filaments and gives splendid results in the Tungsten lamp.

Dyeing and tanning are purely colloidal processes and our knowledge of these most important subjects has been considerably enriched by colloid chemistry.

The setting of cement is a colloidal process; pottery and porcelain ware are colloidal substances.

Photo-chemistry has made tremendous progress since Luppo-Cramer, of Dresden, has applied colloid chemical methods to its research.

Cellulose and its preparations are colloids: Parchment paper swells in presence of acid, mercerized silk in sodium hydroxide. A solution of cellulose in copper-ammonia solvent, is a colloidal solution. Rubber is a colloidal system Vulcanization is an adsorption of sulphur by rubber.

To come nearer home: Enzyme-action is a colloidal process, so are the various immunity reactions, the Wassermann reaction, for example.

The urine, the blood, as well as all other body fluids are colloidal solutions.

Martin H. Fischer, of Cincinnati, has made very interesting experiments on the cause of œdema and finds that all swellings of parts of the body are due to abnormal acid production, which is again a colloidal phenomenon. He also finds that nephritis is caused by abnormal productions of lactic acid, which causes the kidney tissues to become soft and the appearance of albumen in the urine. The application of colloid-chemical methods has proved most fruitful in explaining the causes of many physiological phenomena, viz., muscle contraction, ossification, formation of gallstones, disturbances of circulation, etc. Under the heading, "Importance of Colloids to Pharmacy," we must consider first of all the remedies which are colloidal and are supplied by the pharmacist. The first one of these was Ung. Credé, which appeared in the market in 1896, and from then on, and especially in the last few years, colloidal remedies have been put forth, one after another, so that to-day we have a very large number of them, and with them has come a voluminous literature of their own. French physicians and pharmacists are especial-

ly prolific, and a French firm now puts on the market the following:

Electrargol	Colloidal	silver stabilized
Electraurol	"	gold "
Electroplatinol	"	platinum "
Electropalladiol	"	palladium "
Electrocuprol	"	copper "
Electroselenium	"	selenium "
Electromartiol	"	iron "

They are also investigating, at the present time, the physiological activities of

Electrotellurol	Tellurium
" indiol	Indium
" uraniol	Uranium
" vanadiol	Vanadium
" manganese	Manganese
" cobalt	Cobalt
" nickel	Nickel

Also, Thallium
Cadmium
Lead
Aluminum
Oxides of heavy metals and ferrocyanides, etc., all in the colloidal state.

The larger pharmaceutical manufacturers of England, Germany and the United States have also taken up the manufacture of such preparations. Names like Collargol, Lysargin, Protargol, etc., are familiar to us. Collargol is prepared by reducing silver nitrate with ferrous citrate in the presence of dextrin, which acts as a stabilizer. Lysargin contains metallic silver protected by the sodium salt of lysalbinic acid. As to the action of these preparations, we may say in general that they have the same physiological activity as their salts would have in diluted solution, viz., colloidal silver is used as an antiseptic, colloidal iron is recommended for the different forms of anæmia. One of the prominent features of their activity is a certain catalytic action which they exert. Palladium colloid, for example, is now used for obesity. It seems to stimulate the oxidation processes of the body and it has been found that intravenous injection of this colloidal metal is followed by a considerable loss in weight. No bad side-effects whatsoever have been reported.

Considering next the time-honored remedies prepared by the pharmacist, I believe that I do not overstate matters when I say that fully 80 per cent. of all of our pharmaceutical preparations are colloidal. Our gums, resins, and many alkaloids will form colloidal solution by simply mixing with a solvent. We use gelatine, gum acacia, tragacanth, etc., to stabilize preparations. Emulsions, most liniments, our collodions are colloidal preparations. All of our fluidextracts, most of our tinctures and syrups, as well as glycerites, are colloidal preparations.

I will cite specific cases, which show that the pharmacist has made and is making daily use of colloid chemistry.

You prepare Peppermint Water by rubbing up the oil with purified talcum—you increase the surface of the oil so that it may be dissolved in the water—this is a colloidal solution—a colloidal-chemical process has been made use of. You make an emulsion by shaking up in a dry bottle some oil of turpentine with tragacanth and then add water and again shaking. This is colloid-chemistry—the system, oil-water, is stabilized by the tragacanth, which is adsorbed at the boundary lines of the two liquids and thereby forms a covering around the globule of oil. The stability of an emulsion is directly proportional to the dispersion of the oil. You prepare liniment

of ammonia. The ammonium oleate formed, decreases the tension of the cotton seed oil toward the water and is, therefore, adsorbed at the boundary line of the system, oil-water. You prepare vinegar of squills and boil it—the coagulation of the albumin is a colloidal process. We add alkalis to fluid extracts of senega and taraxacum, to prevent pectization. We know that alcohol or salts in certain amounts, will crack emulsions; this is due to the dehydration of the colloid and subsequent coagulation. We distinguish between solution of ferric sulphate and Monsel's solution, by addition of sulphuric acid—this is a colloid-chemical test. Monsel's solution is a colloidal solution which is coagulated by the electrolyte H_2SO_4.

Cold cream is a colloid-system water-fat. The water, the dispersed phase, is dissolved in the fat. We know that only such substances as are soluble in fat, are absorbed by the skin, and the principal action of cold cream depends upon its water contents.

Ferric hydroxide is used as arsenic-antidote because it adsorbs arsenous acid.

And so I could go on and on and recite to you manipulation after manipulation, test after test, used by pharmacists and belonging strictly to the field of colloid-chemistry.

What a field of research lies here before us! The scientific pharmacy of the future will be in a position to determine in advance what the action of certain remedies will be or, how certain remedies must be modified, to exert certain actions, or to make them more stable and presentable. Professor Thoms, of the University of Berlin, in a lecture delivered before the German Pharmaceutical Association, pleaded for more active participation of the pharmacists in researches of biologic standardization. Without wishing to detract one iota from his arguments, I want to call to your attention that in colloid-chemistry there is a field of research for the pharmacist which is not alone of interest and value, but also full of promise of reward.

The lecturer carried out the following experiments to illustrate his remarks:

Preparation of colloidal gold and of colloidal silver by the electric spark under water.

Preparation of colloidal gold and silver in different colors by chemical means.

The Tyndall phenomenon in gold "sols," in cigar smoke and other colloidal systems.

Different forms of dialysers—sausage — thimble — filters — parchment — collodion, etc.

A number of Liesegang's rings and Le Duc's figures.

Preparation of coagulated colloidal-Ferric Hydroxide.

Preparation of gelatinous Barium Sulphate, gelatinous charcoal, etc.

EXAMINATION QUESTIONS

(*Continued.*)

Senior

MICROSCOPIC PHARMACOGNOSY.

Spring, 1914.

1. State how you would distinguish between powdered cubebs and powdered allspice.

2. Name all the cells and cell contents that it is possible to find in a powdered bark.

3. A powder contains the following elements: Unicellular, non-glandular, curved rough walled hairs; guard cells with two surrounding cells; crystal bearing fibres; cells with chlorophyll. Identify it.

4. What cells and cell contents are found in powdered Erythroxylon Coca?

5. Make a complete sketch of Uva Ursi.

6. Name the diagnostic element or elements found in each of the following drugs:

1. Physostigma
2. Lobelia
3. Scoparinus
4. Belladonna Root
5. Aconite Root

7. Sketch and name the different types of trichomes found in each of the following drugs:

1. Anthemis
2. Sumac
3. Digitalis
4. Peppermint
5. Cannabis Indica

8. State how you would distinguish between powdered Russian and powdered Spanish licorice.

9. Name the drugs studied during the year having characteristic crystal bearing fibres.

10. Illustrate by sketch the structure of the conducting cells of hydrastis.

11. State what cells and cell contents are diagnostic in a powder, derived from each of the following parts of a plant:

1. Leaf
2. Root
3. Wood

12. Illustrate by sketch the structure of the starch grains found in each of the following drugs:

1. Ipecac
2. Aconite
3. Blood Root
4. Ipecac
5. Cubebs

13. State how you would identify powdered Chinese blistering beetle when mixed with powdered Spanish fly.

14. Name six drugs having diagnostic crystals.

15. Make a careful sketch of the glandular hair found in peppermint.

THE MAN WHO DESERVES THE CHEER.

Never admire a man just because he has money. Any chump can get that, if he is mean enough to scrape it up and go without comfortable things to acquire it. But the man who thinks, strives, works, and sweats to grind out something that is of benefit to the whole race—that's the chap for whom to cheer! When I think of the telephone, the phonograph, and the electric light, I realize that all men are not born equal! Some get a bigger share of energy.—*Robert Lloyd.*

The New York College of Pharmacy

Columbia University

The 85th Annual Term of Instruction of this College, Open to Men and Women, will begin on Monday, September 21, 1914.

The College offers a course of two years, consisting of three day's instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on 15 Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College offers courses of three, four and six years of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.) Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Any of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

The Isaac Plaut Fellowship provides five hundred dollars annually, for one year of study at a foreign university, for that Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

With the session of 1914-15 an evening course in Microscopy and Pharmacognosy will be inaugurated.

Those interested will please communicate with

THOMAS F. MAIN, Secretary, 115-119 West 68th St., New York City.

...The...

New York Journal of Pharmacy

Published Monthly by the Alumni Association

of the New York College of Pharmacy—Columbia University.

CURT P. WIMMER, A. M., PHAR D., MANAGING EDITOR.

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Contents:

WELCOME.

When this issue of the Journal reaches its subscribers, the New York College of Pharmacy will have opened its doors once more to admit young men and women who have decided to make pharmacy their life's vocation. They come equipped with primary and secondary school education as a basis and most of them have, in addition, practical experience in pharmacy. After the first few days of confusion have passed and the instructors have brought order into a chaos and have subdivided the 500 hundred odd students into classes and sections, the wheels of instruction begin to move and within less than one week everything moves like clock-work. To all students, beginners as well as advanced, we extend a hearty welcome. May they find at our College what they want and what they need: a wealth of useful information, plenty of practical training, a good foundation for their chosen profession. It is offered to them here as good and better than anywhere else; it is their task to take it and acquire it by hard study and close application.

OF IMPORTANCE AND INTEREST TO THE PHARMACIST WHO WANTS TO KNOW.

Have you registered for the Thursday evening course in histology and microscopic pharmacognosy which will be given at the Columbia University College of Pharmacy? If not, do so at once, as the term begins on October 1st

The course covers a period of thirty weeks and includes ninety hours of instruction. The fee of $30.00 is payable in advance.

A certificate will be awarded to those successfully completing the course.

You and your friends are invited to attend the opening illustrated lecture on the "History and Development of the Compound Microscope," Thursday, October 1, at 7:30 P. M.

PERSONAL.

Mr. Wm. A. Sailer, General Manager of Sharp & Dohme, who has been enjoying week end visits with his family at their summer home, Snug Harbor, on the Severn River, near Anapolis, Md., incidentally indulging in numerous cruises on the Chesapeake Bay in his gasoline yacht, the Sinbad, was in New York on a flying visit the other day. He certainly looked fine and fit.

We learn that the extensive additions to the Laboratories of Sharp & Dohme in Baltimore are progressing most satisfactorily. When completed S. & D. will have one of the most complete and scientifically equipped laboratories in the United States.

Mr. E. Stauffen, of Sharp & Dohme only recently returned from his annual trip to Europe. The much needed rest has evidently done him a world of good He found his way from the Continent by easy stages with little discomfort to London where he succeeded in securing passage on the Steamer The Royal George, of the Canadian Northern Line from Bristol to Montreal, and thence to New York. Mr. Stauffen is glad to be back at his desk.

The Eighty-fifth Session of the New York College of Pharmacy, Columbia University, opened on Monday, September 21.

The registration books for the Thursday evening course under the direction of Professor Mansfield have not been opened at this writing, but from the number of communications received in regard to this work, we are led to believe that every seat will be occupied. Special drop lights for the desks in the pharmacognosy laboratory have been installed so that the microscopic work may be pursued as well as by daylight.

The re-arrangement and addition of desks in the dispensing laboratory has increased our capacity in that room by 132 students.

Most of the gas lights in the building have been removed and high powered electric Tungsten lamps substituted. Painters, masons, electricians, roofers, etc., have been busy all summer in the building and returning students will find many improvements.

The fall supplementary examinations have been held and many deficiencies have been made good by men from all classes.

Mr. Roon of the Department of Pharmacy has plans under way to make this a big year for the student organizations. Many of the members of last year's successful Glee and Mandolin Clubs and of the Orchestra have returned to College which gives these organizations a good start for the coming year.

On Tuesday evening, October 20, the first stated meeting of the College will be held in the lecture hall, at which time an interesting lecture on Stock Keeping in the retail drug business will be given by a well known New York pharmacist

Our Professor Arny is busily engaged in the preparation of a new edition of his book.

During the summer months the library was entirely renovated, the lighting facilities having been markedly improved There has recently been installed a crystal show-case for the exhibition of the rare books which the library possesses and it is planned to make systematic exhibits of these books under the proper subject, such as botany, pharmacy and medieval chemistry. The back numbers of the Chemisches Centralblatt which have been ordered to complete our files of this journal have been held up by the war.

It reflects great credit on the College and it will please the many friends of John A. Steffens, Phar. D., '10, to hear that he has been elected to the Phi

Lambda Upsilon, the honorary chemical fraternity. Dr. Steffens is now studying Chemical Engineering at Columbia.

Leon Monnell, Ph. C., '11, is also taking Chemical Engineering at Columbia He is beginning his third year.

Henry E. Miller, '16, writes us a long letter about all the work he has to do at Livingston Manor, N. Y. He holds a position with Dr. Lathrop. Cheer up, Henry, we predict more work for you during the coming term.

Mr. Edwin Chas. Steinach, an old stand-by of the Alumni Association, married Miss Charlotte Rutz of this city. We extend hearty congratulations and best wishes, and hope that married life will not keep him from the A. A. meetings.

The registration of students continues to be heavy. So far 180 seniors and 275 juniors expect to be with us. The post graduate courses will no doubt be proportionately larger than last year.

Owing to the paralysis of the imports from the war zone, laboratory supplies and other materials have gone up tremendously in price.

The books in the library have been entirely gone over, rearranged and renumbered. Miss Kerker spent much time doing this and is about to publish an interesting and comprehensive volume entitled: "What do We do in the Summertime."

The Pharmaceutical Laboratory receipt book system which met with much favor last year will be incorporated in all classes this year.

Mr. A. J. Bauer announces the arrival of a little Miss Bauer. He's always up to something! Congratulations from all of us.

Strange rumors float about that J. Bowen, '14, is married and works in Nanticoke, Pa. When Bowen confirms this report we'll extend our hand in sympathy.

Joseph Cappetta, '13, is working for an M. D. at Fordham.

W. Zibulsky, '14, is the proprietor of a flourishing pharmacy at 50 Montrose Ave., Brooklyn.

J. Marianowsky, '14, prize winner, is very much pleased with the excellent position he holds at the pharmacy of J. L. Lascoff.

J. Windt, '14, is employed at Schaff Bros., 116th St. and 8th Ave.

1914 men will be pleased to learn that Cupid has sought out one from their ranks. The victim is J. Sciacca, 1st Cornetist of the C. U. C. P. Orchestra. He expects to marry Miss E. Bizzaro in the latter part of September and settle down in a store of his own in New Jersey.

J. Wiener, '14, works for Wenzel on Broadway, Brooklyn.

R. Colley, '14, dropped around to see us lately. He had a dainty maid under his wing, and we firmly believe that Cupid has him by the throat.

Miss May O'Connor, '16, our ever-faithful reporter, sends us the following good news:

Miss Edythe Caffrey, '16, is sojourning with her family at Lake Hopatcong, N. J.

Thomas Zimmerman, '13, is with A. J. Bauer, 114th St. and Broadway. "He's some ladies' man, take it from me."—M. O'C.

O. M. Guck, '16, is touring New York and Pennsylvania.

"Little Bill" McBride, '16, is increasing under the balmy influence of Kingston, N. Y. Poor boy, he needs it!

P. Pretzell, '15, is getting over a light attack of pneumonia.

Mr. L. Williams, '14, is still with Mr. Chas. Pope of 112th St. and Broadway

Duncan Rose is again a happy addition to John Roemer's force in the Favorite Corner Drug Store at White Plains.

J. Paulonis, '16, and J. Sesta, '16, recently took a trip to Poughkeepsie and passed through Vassar College, according to the cards we received.

J. Cohen, '16, spent an enjoyable vacation at Hurleyville, N. Y.

J. E. Davis, '16, dropped us a line from Smithtown, L. I.

N. Moskowitz, '14, owns an elegant pharmacy at Bedford Ave. cor. 2nd St., Brooklyn, and has in his employ A Rosenfeld, '14.

DROP WEIGHTS.*

CURT P. WIMMER, PHAR. D. AND LEO ROON, PH. C.

It is a fact well known to physicians and pharmacists alike that the method of prescribing liquid medicines in the form of drops is not an accurate one. The only valid excuse for the use of the drop is the convenience of measuring, or better, dropping. As a unit of measure, a drop is decidedly unsatisfactory. Nevertheless we know that a large number of medicines are invariably dispensed or ordered to be taken by the drop.

The size and weight of drops varies considerably and depends upon many factors, such as the consistency of the liquid, specific gravity, cohesion, temperature, etc.

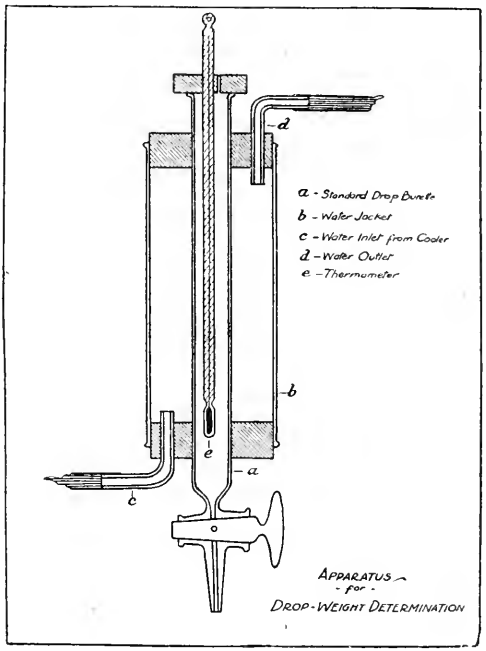
As soon as we use a certain standard drop as a primary unit and standardize all others accordingly we couple convenience with accuracy. The International Conference at Brussels in 1902 adopted a dropper which was constructed so as to deliver 20 drops of distilled water at 15° C. to weigh exactly one gram. The outer diameter of the delivery tube was to be exactly three millimeters.

A number of so-called normal droppers are on the market, for example the Eschbaum Normal Dropper, the Lamprecht Patent Dropping Flask, the Viginta Drop Glass of Steinbuch, and others. All of these are constructed to conform with the requirements of the Brussels Conference. Having occasion to determine the weight of a certain number of drops of a liquid, it occurred to the authors that a burette might readily be constructed and

*From Journal, A. Ph. A.

used to deliver the 20 drops of distilled water at 15° C. to weigh one gram. The firm of Greiner & Co. furnished a burette according to our directions—20 cc. burette accurately graduated in tenths, 3 mm. in diameter for dropping surface delivering 20 drops of water to weigh one gram at 15° C. Upon testing the burette was found to be exact provided a certain rate of dropping was maintained. The difference in weight of the drop due to a changed rate of dropping amounted to about 1 to 2 milligrams per drop.

In order to maintain the temperature during the process of dropping, the burette was jacketed and water cooled to 15° C., passed through it. A thermometer was suspended in the burette. The accompanying sketch illustrates the apparatus used.



By means of this apparatus a large number of drop weights of the more common potent medicines were determined and were found in most instances to agree closely to those determined by Dr. Frederich Eschbaum. Eschbaum was the first scientist to advance definite maxims relative to drop weights which maxims are interesting as well as important and we can only confirm the accuracy of such as we had occasion to try out. They are: First, the drop weights of solutions, even of the most concentrated ones, are practically equal to those of the solvent.

To cite an example, an aqueous 50 per cent. potassium iodide solution will have almost the same drop weight as pure water and aqueous solutions of alkaloids, sugar, salts, extracts or gums have the drop weight of water. Alcoholic tinctures have the drop weight of alcohol.

Second, different liquids have different drop weights. The authors of this paper believe that the drop weight can be used, to a certain extent at least, to help in the identification of certain pure liquids and preparations.

Third, the drop weight depends upon the size of the dropping surface. The standard for this is 3 mm.

Fourth, Eschbaum states that the rate of dropping as well as temperature may be neglected for practical purposes. The authors find that it is quite necessary to preserve the temperature carefully and also to maintain a standard rate of dropping to get accurate results.

A number of drop weights of some of the more important medicines, as determined by Mr. Roon and bearing out the above statements, is appended.

Substance.	1 gm. equals at 15° c. Drops.	1 Drop weighs Grams.	1 Drop measures c.c.
Acid, Hydrochloric	19.5	.051	.042
Acid, Hydrocyanic, Diluted	20.0	.050	.045
Acid, Nitric	22.9	.043	.025
Alcohol, Ethyl	65.5	.015	.020
Chloroform	58.8	.017	.010
Creosote	37.4	.027	.022
Ether	90.0	.011	.015
Fluidextract Belladonna	55.2	.018	.020
Fluidextract Ergot	52.6	.019	.020
Glycerin	23.1	.043	.030
Guaiacol	38.1	.026	.023
Oil Santal	41.5	.024	.020
Oil Wintergreen, Synthetic	40 6	.025	.020
Phenol, Liquified	35.5	.028	.025
Solution Arsenous and Mercuric Iodides	19.7	.051	.045
" Arsenous Acid	19.3	.052	.045
" Iodine, Compound	32.	.027	.025
" Potassium Arsenite	21.1	.047	.045
" Potassium Bromide, 10%	20.0	.050	.050
" Potassium Iodide, 50%.	18.7	.053	.035
" Strychnine Sulphate ($f\bar{3}$i=1 gr.)	20.0	.050	.045
Spirit Ammonia Aromatic	57.3	.017	.020
Spirit Nitrous Ether	65.5	.015	.017
Syrup Ferrous Iodide	18.9	.053	.040
Ticture Aconite	56.3	.017	.020
" Digitalis	48.1	.021	.020
" Ferric Chloride	53.3	.019	.018
" Hyoscyamus	50.8	.020	.020
" Iodine	63.3	.016	.015
" Nux Vomica	57.3	.018	.020
" Opium	50.9	.019	.020
" Opium Camphorated	50.9	.019	.020
" Strophanthus	57.2	.017	.020
Water, Bitter Almond	29.3	.034	.037
Water, Distilled	20.0	.050	.045

SELENIUM.

By Edward Kemp, Jr.

Selenium was discovered by Berzelius in 1817. Its name is derived from the Greek word for moon, on account of its similarity to Tellurium meaning earth. Selenium exists in three allotropic forms, amorphous, red crystalline and gray metallic crystalline. The last form of selenium is of most interest to us. It resembles sealing wax in appearance and putty in the ease in which it can be cut. The metal conducts electricity quite well though it exerts a tremendous resistance to the flow of the current. The resistance, however, is in direct proportion to the intensity of light thrown on the selenium wire. This fact has always had a certain fascination to me, and no one has ever been able to tell me why light has such effect on this strange metal. Some say it must be the influence of an impurity found in the metal, but different specimens of selenium vary a great deal in their resistance to electricity. On account of this quality it has often been used as an actinometer.

A very interesting experiment which I conducted some time ago with what I termed my Selenium Dog demonstrates one use for the metal. The Dog was made in the shape of a triangular box having three wheels. The two front wheels were driven by an electric motor

and battery installed in the box. On the front end of the box were two magnifying glasses so focused as to throw an intense light on a selenium wire, which was connected in circuit with a small but powerful electro-magnet on one side of the tiller which controlled the direction of the rear wheel. In the same manner a selenium wire was placed in circuit with a magnet on the other side of the tiller. Between the two "eyes" I placed a "nose" made out of tin and of such a shape that light striking one "eye" could not easily strike the other unless directly in front of the Dog. This accomplished I made a powerful hand light on a long wire and then sat down and waited until darkness came. I forgot to say that I had a tiny red light placed on top of the dog's back so I could tell where it was Finally evening came and I decided to take my dog for a walk, so out we went on to the lawn. I turned on the motor switch and the dog started off very slowly wandering around with his little red light much to every one's amusement Then I got my hand light working and turned it on and behold the dog recognized its master changing its course and coming over to where I stood and as long as I kept my light on it it followed me, much to the wonder of all. Little they thought that the wonderful faithfulness was caused by two small selenium wires one in each eye. Right here is an idea which could be applied to torpedoes making them deadly at night in following up warships guided by a searchlight from shore. Mines might be exploded by having an attachment of this sort on a floating buoy with a clock-work arrangement to turn it off in the daytime making a contact mine of it until dark.

A WORD ABOUT PACKAGES AND LABELS.

People are very exacting as to what comes from a drug store; not only must the goods be of the best quality, but the packages in which they are put up must appeal to the sense of neatness. The dry-goods clerk, the shoe clerk, the grocer—in fact, salesmen in all other trades—do not care much about the appearance of the packages they send out. A sheet of paper twisted or rolled around the article, a piece of string, and the thing is done; and nothing better is expected. But with the druggist it is different. We wonder how many druggists appreciate the effect of a neatly-tied package or a simple, neatly-printed label, upon their customers. And yet we know of people who prefer a certain store to another for no other reason than that the goods sent out of it are neater than those coming from the other. What is true of parcel wrappings, also holds for labels. A great deal of improvement is noticeable in this respect within the last twenty years. We remember the fantastic labels sported in many drug stores at the time the Japanese art craze swept this nation. Label makers swam with the stream, and some of their efforts were gorgeous beyond belief—so gorgeous that the lettering on the labels was completely lost in the maze of decorative detail. Labels of this kind are seldom seen nowadays, but they turn up once in a while in some obscure village. The intelligent public would not tolerate such things nowadays.

Have your packages neat and your labels plain.—*National Druggist.*

EXAMINATION QUESTIONS

(*Continued.*)

Senior

CHEMICAL ANALYSIS OF URIN.

Spring, 1914.

1. What observations and physical tests are made in the examination of urin? Outline two methods of determination of its density. What is the usual reaction of fresh urin?

2. What are the solids of normal urin mainly composed of? How can total solids be most accurately determined?

3. What are the sources of inaccuracy in the hypobromite method for urea? Name another method of determination which can be employed.

4. In what form is uric acid present in a clear sample of urin? How is the amount of acid determined? How is the free acid identified?

5. Describe the reactions which a sample of urin containing glucose gives when heated: (a) with alkaline copper tartrate, (b) with methylene blue soln., (c) with phenylhydrazine hydrochloride and an alkali acetate.

6. In the volumetric determination of sugar were used: alkaline copper tartrate solution, 15 cc., urin mixed with an equal volume of water, 12.8 cc. Calculate the quantity (g) of sugar per 100 cc. also (gr.) in 1 fl. ounce. Of the V. S. 10 cc.=0.05 g. sugar.

7. Outline the volumetric determination of total phosphates. When is the titration ended? How is the amount of the alkali phosphates found?

8. What is the average amount of NaCl in urin? Which method of titration of chlorides is to be preferred? Why? Is the centrifugal method equally accurate?

9. How is the presence or absence of albumin established? Name other reagents for albumin. Is the Esbach's method for albumin an accurate one? Why?

10. State how you would identify the following in urin: bile acids, acetone, indoxyl sulfonic acid. What is the diazo reaction of urin?

Senior

PHARMACY.

Spring, 1914.

1. Name five official galenicals containing camphor.

2. Give a brief outline of the official process for preparing each of the following: (a) Tincture of ipecac and opium, (b) Vinegar of squill, (c) Diluted hydrocyanic acid, (d) Glycerite of tannic acid.

3. Why is acetic acid employed in the preparation of official syrup of ipecac?

4. Name all substances used in preparing: (a) Aromatic powder, (b) Blue ointment, (c) Churchill's tincture of iodine, (d) Dobell's solution.

5. State why oleic acid is used in the preparation of volatile liniment.

6. Name two official tinctures in the manufacture of which the drug is extracted by alternate maceration and expression.

7. State how quinine can be distinguished from morphine by chemical means.

8. Give a common name for (a) Tinctura amara, (b) Mistura carminativa, (c) Liquor morphinae hypodermicus, (d) Liquor potassae chlorinatae.

9. Give the official Latin title of (a) Red precipitate, (b) Heavy magnesium oxide, (c) Spirit of Salt, (d) Tincture of thebaine.

10. Give details of the official method for the preparation of a decoction.

11. Name three official syrups which contain an acid, and three which contain an alkali.

12. Write, in both Latin and English, the meaning of each of the following abbreviations: (a) p. c. (b) Rad. (c) s. a. (d) ejus. (e) Coch. mag. (f) sol.

13. How can solution of lead acetate be distinguished from Goulard's extract?

14. Give three methods for the preparation of ointments, illustrating each by naming an official example.

15. Enumerate the three principal sources of laws which govern the practice of pharmacy in any given community.

PROFIT ACCOUNTING BY THE DRUGGIST.

The following business records should be kept:

1. Sales.
2. Purchases.
3. Expenses.

The expense account should include the following items: (1) taxes, (2) insurance, (3) fuel, (4) light, (5) water, (6) rent, (7) proprietor's salary, (8) clerk hire, (9) advertising, (10) telephone, (11) telegraph, (12) office supplies, (13) postage, (14) repairs, (15) delivery service, (16) donations, (17) subscriptions, (18) depreciation in stock and fixtures, and (19) losses in bad accounts.

At the end of the year an annual statement should be drawn up covering the following facts:

1. Total sales.
2. Purchases.
3. Stock increase or decrease as shown by the inventory.
4. Cost of goods actually sold.
5. Gross profits.
6. Expenses.
7. Net profits.
8. Total income from the business.
9. Inventory of stock.
10. Inventory of fixtures.

There should be added to or deducted from the annual purchases any increase or decrease in the permanent stock shown by the inventory. After this adjustment has been made, and the real cost arrived at of the goods actually sold during the year, the latter should be deducted from the sales, thus discovering what the gross profits are. From these gross profits the expenses are deducted in turn, leaving the net profits.

From these records it is an easy matter to arrive at the four facts which every druggist should know about his business:

1. His percentage of expense.
2. His percentage of gross profit.
3. His percentage of net profit.
4. His entire income from the business as a whole.

His percentage of expense is gotten by dividing total annual expenses by total annual sales. His percentage of gross profit is obtained by dividing total gross profits for the year by total sales. His percentage of net profit is the differ-

ence between the percentage of expense and the percentage of gross profit. His total income is discovered by adding the proprietor's salary, taken from the expense account, to the net profits for the year.

These percentages, it should be explained, are all based on the selling price instead of the cost. Let us suppose that a druggist finds his percentage expense to be 28, and in pricing a given article he wants to cover this expense plus a net profit of 12 per cent., making a total or gross profit of 40 per cent. How does he arrive at the proper selling figure? The article, let us say, costs $2.00. The unknown selling price represents 100 per cent., 40 per cent. of which is to be profit, and the remaining 60 per cent., therefore, the cost. The cost price of $2.00 is accordingly 60 per cent. of the selling price to be determined. The problem may therefore be stated as follows:

$2.00 : 60 : : X : 100,

and the answer is $3.33. Thus a precise knowledge of selling cost and percentage of profit is a vital necessity in the pricing of every article in the store, and indeed in the conduct of the whole business if a druggist wants to make a store yield him a good income instead of doling out reluctantly a mere living.

LIQUID PETROLEUM OR "RUSSIAN MINERAL OIL."*

Petroleum has been in use as a medicine from time immemorial. It was known to Herodotus 400 years before Christ and is mentioned by Plutarch, Dioscorides, Pliny and other early writers. It was extensively used by the Arabians and evidently played an important part in the practice of medicine in India, being known to the Bengalese as "Muthe Katel." The raw product was the substance used in earlier times and differed much in character and composition, as obtained from different sources.

As an internal remedy it was early employed in chronic pulmonary affections, in obstinate skin diseases, in rheumatism, and for the expelling of tapeworms. It was extensively used for these several purposes in France under the name "Oleum Gabianum" and in North America as "Seneka oil." The internal use of the refined product may be traced to a patent granted to Robert A. Chesebrough of New York, in June, 1872, for the manufacture of a "new and useful product from petroleum, named vaseline." This name was originally applied only to a semi-solid preparation, but later a liquid products known as liquid vaseline was marketed and for a time exploited as a cure for coughs, colds, consumption and a number of other diseases and conditions.

The liquid petrolatum has since become known under a variety of names, proprietary and otherwise, in additional to being used as a substitute or an adulterant for other, more costly, fats and oils. Some of the names applied to the product are:

Adepsine oil	Neutralol
Amilee	Olo
Atoleine	Paraffin Oil
Atolin	Paroline
Blandine	Petralol
Crysmalin	Petro
Deeline	Petrolax
Glyco	Petrolia
Glycoline	Petronol
Glymol	Petrosio
Heavy Petroleum Oil	Rock Oil

*From the Journal of the A. M. A., May 30, 1914.

Liquid Albolene	Russian Liquid Petrolatum
Liquid Cosmoline	Russian Mineral Oil
Liquid Fossiline	Russian Paraffin Oil
Liquid Geoline	Russol
Liquid Paraffin	Saxol
Liquid Petrolatum	Terraline
Liquid Saxoline	Terralbolia
Liquid Vaseline	Usoline
Mineral Glycerin	Waterwhite-Mineral Oil
Mineral Oil	White Paraffin Oil

A preparation similar to that official in the Pharmacopœia of the United States as liquid petrolatum has been included in many, if not all, of the foreign pharmacopœias, the official title under which this preparation is recognized being as follows:

Petrolatum liquidum, U. S. Pharmacopœia; Paraffinum liquidum, pharmacopœias of Great Britain, Germany, the Netherlands, Japan, Belgium, Austria, Denmark, Switzerland, Sweden, Servia, Italy, Hungary and Russia; Oleum Paraffinæ, Spanish Pharmacopœia; Vaselinum liquidum, French Pharmacopœia, and Oleum Vaselini (as a synonym) pharmacopœias of Danmark and Russia.

The requirements of the several pharmacopœias differ somewhat and the specific gravity as given is as follows:

U. S. P. VIII, 1905....	0.870 to 0.940	at 25°
Ph. Brit. IV, 1895.....	0.885 to 0.890	at 15.5°
B. P. C. II, 1911, usually	0.875 or lower	at 15°
Ph. Germ. V, 1910, at least	0.885	at 15°
Ph. Ross. VI, 1910....	0.880 to 0.885	at 15°
Ph. Hung. III, 1909...	0.88 to 0.89	at 15°
Ph. Ital. III, 1909.....	0.875 to 0.890	at 15°
Ph. Fr. V, 1908, about.	0.875	at 15°
Ph. Serb. II, 1908, about	0.880	at 15°
Ph. Svec. IX, 1908....	0.88 to 0.90	at 15°
Ph. Helv. IV, 1907....	0.880 to 0.885	at 15°
Ph. Dan. VII, 1907, at least	0.880	at 15°
Ph. Austr. VIII, 1906, at least	0.880	at 15°
Ph. Belg. III, 1906, not below	0.880	at 15°
Ph. Japon. III, 1906...	0.875 to 0.945	at 15°
Ph. Ndl. IV, 1905, not below	0.860	at 15°
Ph. Hisp. VII, 1905...	0.840	at 15°

For pharmaceutical purposes, liquid petroleum may be divided into two grades, the lighter or more limpid oil, used extensively as a vehicle for oil sprays, and the heavier, more viscid oil generally recognized in European pharmacopœias and used as an ingredient of ointments and more recently as a remedy in the treatment of intestinal stasis.

PARKE, DAVIS & CO.'S NEW OFFERINGS.

"Russian Oil, Aromatic, P. D. & Co.," "Russian Oil, Unflavored, P. D. & Co.," "Agar, P. D. & Co." These are names that you will soon see on prescriptions. They are the titles of some very efficient mechanical laxatives which Parke, Davis & Co. are making known to physicians through the media of a long list of medical journals and a staff of detail representatives that covers the country.

For the information of druggists who are not as yet acquainted with this agent, it is pertinent to say that Russian Oil (P. D. & Co.)is a mineral oil distilled from Russian petroleum. It is notable for its high specific gravity, its resultant high viscosity and its great lubricating power—features in which it is markedly superior to the cheap petrolatums of low specific gravity. The product is waterwhite, odorless and tasteless. It is not a laxative in the generally accepted sense of the term, but an intestinal lubricant. Parke, Davis & Co. supply Russian Oil, Aromatic, and Russian Oil, Unflavored.

The New York College of Pharmacy

Columbia University

The 85th Annual Term of Instruction of this College, Open to Men and Women, will begin on Monday, September 21, 1914.

The College offers a course of two years, consisting of three day's instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on 15 Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College offers courses of three, four and six years of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.) Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Any of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

The Isaac Plaut Fellowship provides five hundred dollars annually, for one year of study at a foreign university, for that Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

With the session of 1914-15 an evening course in Microscopy and Pharmacognosy will be inaugurated.

Those interested will please communicate with

THOMAS F. MAIN, Secretary, 115-119 West 68th St., New York City.

...The...

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CURT P. WIMMER, A. M., PHAR. D., MANAGING EDITOR.

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Contents:

PRESIDENT BUTLER GIVES GREETING AT UNIVERSITY OPENING.*

161st Collegiate Begins Impressively in the Gymnasium—Peace the Slogan.

The Rationality of the College Men Allows Him to See Both Sides of Every Question.

At the opening exercises of the University held in the Gymnasium, President Butler, in his greeting to the professors, officers and students, the American University most affected by the European struggle, struck the key-note of the war—militarism.

Over twenty-five hundred thronged the Gymnasium to attend the official beginning of the 161st year of Columbia. The Stars and Stripes and the Blue and White hung together over the great platform when the processional of the Faculty clad in academic gowns with varicolored hoods designating their respective degrees, marched in.

Chaplain Raymond C. Knox opened the exercises with prayer, then the Master of Ceremonies rose to lead in the singing of "Stand Columbia." The strains of a beautiful orchestra mingled with hundreds of voices raised in honor of Alma Mater and the perpetude of Peace.

President Butler, who occupied a chair on a dais erected on the platform greeted the assembled University as follows:

"To each member of the University new or old, to the Scholares docentes and to the Scholares discentes, I give a hearty welcome on this opening day of the 161st year of Columbia's long and honorable life."

He said in part:

"Our usual interests however great, our usual problems however pressing, all seem petty and insignificant in view of what has befallen the world while we were seeking rest and refreshment in the summer holiday. The murky clouds of cruel, relentless war, lit by the lightning flash of great guns and made more terrible by the thunderous booming of cannon, hang over the European countries that we know and love so well. The great scholars that we would have so gladly welcomed here, have not come to us. They are killing and being killed across the sea. Friends and colleagues whom we honor are filled with hate toward each other, and toward each other's countrymen. The words that oftenest come to our lips, the ideals that we cherish and pursue, the progress that we fancied we were making, seem not to exist. Mankind is back in the primeval forest, with the elemental brute passions finding a truly fiendish expression. The only apparent use of science is to enable men to kill other men more quickly and in greater numbers. The only apparent service of philosophy is to make the worse appear the better reason. The only apparent evidence of the existence of religion is the fact that divergent and impious appeals to a palpably pagan God, have led him, in perplexed distress, to turn over the affairs of Europe to an active and singularly accomplished devil.

"What are we to think? Is science a sham? Is philosophy a pretence? Is religion a mere rumor? Is the great international structure of friendship, goodwill and scholarly co-operation upon

which this University and many of its members have worked so long, so faithfully, and apparently with so much success, only an illusion? Are the long and devoted labors of scholars and of statesmen to enthrone Justice in the place of Brute Force in the world, all without effect? Are Lowell's lines true—

"'Right forever on the scaffold,
Wrong forever on the throne?'"

The answer is No; a thousand times, No!

"In the first place, the moral judgment of the American people as to this war and as to the several steps in the declaration and conduct of it, is clear, calm, and practically unanimous. There is no beating of drums and blowing of bugles, but rather a sad pain and grief that our kin across the sea, owing whatever allegiance and speaking whatever tongue, are engaged in public murder and destruction on the most stupendous scale recorded in history. This of itself proves that the education of public opinion has proceeded far, and, whatever the war-traders, and militarists may say, that the heart of the American people is sound and its head well-informed. The attitude of the American press is worthy of the highest praise; in some notable instances the very high-water mark of dignity and of power has been reached. When the war-clouds have lifted, I believe that the moral judgment of the American people as to this war will prove to be that of the sober-minded and fair-minded men in every country of Europe.

"Next, it must not be forgotten that this war was made by kings and by cabinets; it was not decreed by peoples. I can testify that the statement that kings and cabinets were forced into the war by public sentiment, is absolutely untrue, so far at least as several of the belligerent nations are concerned. Certainly in not more than two cases were the chosen representatives of the people consulted at all. A tiny minority in each of several countries may have desired war, but the militarist spirit was singularly lacking among the masses of the population. People generally have simply accepted with grim resignation and reluctant enthusiasm the conflict which in each case they are taught to believe has been forced on them by another's aggression.

"The most significant statement that I heard in Europe was made to me on the third day of August last by a German railway servant, a grizzled veteran of the Franco-Prussion war. In reply to my question as to whether he would have to go to the front, the old man said: 'No; I am too old. I am seventy-two. But my four boys went yesterday, God help them; and I hate to have them go.' 'For, Sir,' he added in a lowered voice, 'this is not a people's war; it is a kings' war, and when it is over there may not be so many kings.'

"Another great gain is to be found in the fact that no one is willing to be responsible for this war. Every combatant alleges that he is on the defensive, and summons his fellow countrymen who are scientists and philosophers to find some way to prove it. The old claim that war was a part of the moral order, a God-given instrument for the spreading of enlightenment, and the only real training-school for the manly virtues, is just now in a state of eclipse. Each one of the several belligerent nations insists that it—and its government—are devoted friends of peace, and that

it is at war only because war was forced upon it by the acts of some one else. As to who that some one else is, it has not yet been possible to get a unanimous agreement. What we do know is that no one steps forward to claim credit for the war or to ask for a vote of thanks or a decoration for having forced it upon Europe and upon the world. Everybody concerned is ashamed of it and apologetic for it.

"It is not the Slav or the Teuton, the Latin or the Briton, the Oriental or the American, who is the enemy of civilization and of culture. Militarism, there is the enemy!

"The first notable victim of the Great War was the eloquent and accomplished French parliamentarian, M. Jaures. He was murdered by a war-crazed fanatic. In the course of a long and intimate conversation with Mr. Jaures shortly before his tragic death, he dwelt much on the part that America could play in binding the nations of Europe together. He spoke of the success of the policies that had been worked out here to make the United States and Germany and the United States and France better known to each other, and he thought that through the agency of the United States it might eventually be practicable to draw Germany and France together in real trust and friendship. As we parted his last words to me were: 'Do not leave off trying. No matter what the difficulties are, do not leave off trying.' To-day the words of this great socialist leader of men, seem like a voice from beyond the grave. They are true. We must not leave off trying. When exhaustion, physical and economic, brings this war to an end, as I believe it will at no distant day, the task of America and Americans will be heavy and responsible. It will be for us to bind up the war's wounds, to soften the war's animosities, and to lead the way in the colossal work of reconstruction that must follow. Then if our heads are clear, our hearts strong, and our aims unselfish—and if our nation continues to show that it means always to keep its own plighted word—we may gain new honor and imperishable fame for our country. We may yet live to see our great policies of peace, of freedom from entangling alliances, of a world concert instead of a continental balance of power, of an international judiciary and an international police, of international cooperation instead of international suspicion, generally assented to, and, as a result, the world's resources set free to improve the lot of peoples, to advance science and scholarship, and to raise humanity to a level yet unheard of. Here lies the path of national glory for us, and here is the call to action in the near future.

"It is often darkest just before the dawn, and the hope of mankind may lie in a direction other than that Europe toward which we are now looking so anxiously. Arthur Hugh Clough's noble verses are an inspiration to us at this hour:

" 'Say not the struggle nought availeth,
The labour and the wounds are vain,
The enemy faints not, nor faileth,
And as things have been, they remain,
" 'For while the tired waves, vainly
breaking,
Seem here no painful inch to gain,
Far back, through creeks and inlets
making,
Comes silent, flooding in, the main.

"'And not by eastern windows only,
When daylight comes, comes in the light,
In front the sun climbs slow, how slowly,
But westward, look, the land is bright.'"

* * *

After the singing of the Star Spangled Banner, Professor William A. Dunning, Lieber Professor of History, delivered the address of the day. Dr. Dunning delighted the audience with his wonderfully concepted witticisms on college life from the rational point of view. He spoke of the power of the emotional over the rational and said that one advantage (or disadvantage) a college man had to labor under was that of seeing both sides of any question. He described the man as "lucky" who had the opportunity of attending Columbia. He was applauded continually.

A benediction of intercession for peace was made by the Chaplain and the Peace was made by the Chaplain and the collegiate year officially opened.

*From Columbia Spectator.

ALUMNI NOTES.

Of the delegates appointed by the President the following attended the annual meeting of the American Pharmaceutical Association, held at Detroit, Aug. 22nd-29th, 1914: Mr. Thos. F. Main, Mr. Chas. W. Holzhauer, Prof. George C. Diekman and Prof. Curt P. Wimmer.

The faculty of the College was unusually well represented, so well, in fact that it caused considerable and favorable comment.

A dinner uniting the Alumni, Trustees and Faculty of the New York College of Pharmacy, was held on Wednesday, Aug. 26th, 1914, during conv tion week. The following attend Thos. F. Main, New York; W. Alpers, Cleveland, Ohio; Frederick Wulling, Minneapolis, Minn.; Casw A. Mayo, Brooklyn, N. Y.; Jos Weinstein, '06, N. Y.; C. W. Balla '07, N. Y.; Curt P. Wimmer, '02, N. Otto Raubenheimer, '88, Brooklyn; V. Arny, '89, N Y ; Jeannot Hostma '89, Hoboken, N. J.; Geo. C. Diekm '88, New York; Ben. S. Pers Macon, Ga. (guest); Wm. Mansfi New York; Anton Vorisek, New Yo Curtis P. Gladding, Hartford, Co H. Glendening, Norwalk, Conn.; C Holzhauer, Newark, N. J.; Philip As New Orleans; H. H. Rusby, New Yo Geo. F. Payne, Atlanta.

Anthony Robitsek, '12, has opene pharmacy at 47 Easton Ave., N Brunswick, N. J. He had been c nected with Rust's Pharmacy for ab two years, where he made many frie who wish him success in his new v ure.

David Gritz, '13, is engaged to be m ried to Miss Mary A. Hamburg Congratulations.

G. J. Spitale, '14, has returned fr a trip to sunny Italy. While there captured the heart of a pretty sc teacher and the wedding is to take pl very soon.

Cosimo Ligorio, '14, who sent us above notice, is managing the Chatl Square Pharmacy, the proprietor which is Edw. Santaghata, '04. L Lerner, '14, in a note to us, states t Cosimo is going to attach a pretty tan ist to himself at an early date.

J. Wiener, Phar. D., '13, is cher for Bendiner and Schlesinger, 12th and 3rd Ave.

Leo H. Fried, '11, has been appointed Instructor in Pharmacy in the Jersey City College of Pharmacy.

Harry Flaxman, '13, is with the Wager Drug Co.

Chas. Weinreb and M. Levine, '14, are studying medicine at the College of Physicians and Surgeons.

Jerome Martus, '14, is studying medicine at New York University.

Harry Shwalb, '14, is studying dentistry at the New College of Dentistry.

Harry Hammer, '14, is still on his vacation at Asbury Park.

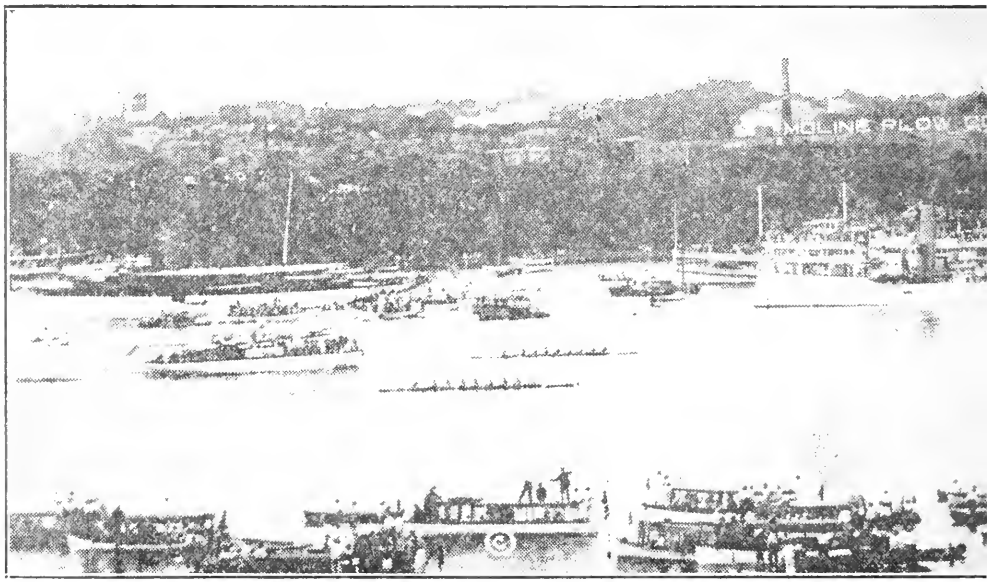
We were glad to hear from Mr. Willard H. Roberts, '97, of Utica, N. Y. He has a fine store there and is doing a splendid business.

The Journal will be sent to you, Willard. We are thankful for your interest.

COLLEGE NOTES.

The first meeting of the Board of Trustees was held on Tuesday, October 6. Of those present, Provost William H. Carpenter, Ernest Stauffen, Edward W. Runyon and Robert Lehman had returned from Europe but a few days previous. They were all in Germany at the time war was declared. At this meeting, the following successful seniors at the fall examinations were declared to be Graduates in Pharmacy:

Lena O. Ager
Edward A. Atwood
Edward Cragg, Jr.
Antonio Franceschi
Anthony Galateria
M. P. Gordon
Ludwig Lechner
Abraham S. Levy
Clarence S. Lord
Jerome H. Martus
Daniel W. Odell
Rose Ofrias
T. G. Osborn
Roy M. Peddie
Duncan Rose
Robert Schwersens



COLUMBIA VARSITY CREW WINNING INTE

Samuel Siegel
Daniel M. Toomey
Samuel B. Wright

The first regular meeting of the College members was held on Tuesday evening, October 20, at which time interesting reports of the conventions at Saratoga and Detroit were submitted by Dean Rusby and Dr. Diekman respectively.

On Thursday, October 15, Dean Rusby gave a public and well attended lecture at Columbia University on South America. He is to give, on November 14, at the New York Botanical Garden, a public lecture on the effect of radium on field crops.

At the time the registration books for the 85th Session were closed, the following totals had been reached:

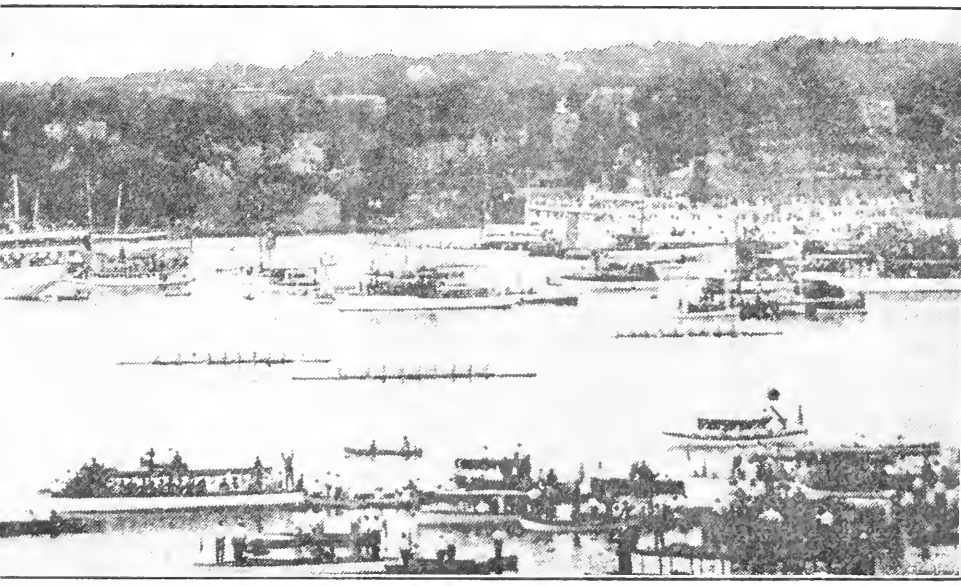
Junior Class	287
1st year University Class	20
Post Graduates	5
Evening Course	13
Senior Class	168
Second year University Class	19
Food & Drug Course	1
Special Students	7
Summer Course	32

Of our last year's University Class, the following are at the College of Physicians and Surgeons:

Louis V. Mango
Harold T. Brotherton
Charles Weinreb
Jerome H. Martus
Benjamin H. Crystal
Isidore Ritter
Harry Wirklich

Edward Eichacker is at the Long Island Medical College.

An interesting collection of pharmaceutical, chemical and botanical works dating back to the 16th Century are on exhibition in the library. The members of the Alumni Association are hereby reminded that the library shelves are open for their use.



TE BOAT RACE BY 1¼ LENGTHS, JUNE, 1914 (Courtesy of Columbia Spectator)

REPORTERS

J. Cairoli, '15.
B. E. Graystone, '15.
J. J. Rampulla, '15.

STUDENT ACTIVITIES

REPORTERS

Miss V. Kleppner, '17.
H. A. Cohen, '17.
W. H. Levitt, '16.

Edited by Leo Roon, Ph. Ch

Miss M. A. O'Connor, M. A. Associate Editors: Lewis N. Brown, Ph. Ch.

WORDS OF WELCOME FROM THE FACULTY.

Beginning the year with a record registration, C. U. C. P. opens its doors to admit hundreds of new students, who coming for the first time to the College, are eager and ready to learn of what Columbia can give them and what they can give her.

The Dean, the Professors of Pharmacy and Chemistry in the letters appended express the sentiment of the remainder of the faculty in extending a hand in welcome to the incoming classes:

To the Students:

As the oldest active member of the Faculty, I have lived to see many and profound changes in the College; in its organization, management and finances, as well as in its student body and the training which they here undergo. In almost all respects, the conditions are marvellously improved. Twenty-five years ago, and to a still greater extent in the earlier periods, the equipment of the College was very inadequate and the methods of instruction necessarily the same. Now, there is no place in the world where the pharmacy student receives greater or more practical assistance in his efforts to gain knowledge and training. At that time there were numerous fake schools which were unrestrained in their efforts to entice the student away to the mere gaining of an unearned diploma. Now such schools are very few and they are obliged to struggle against both professional and legal condemnation and restraint. Then there was lack of co-operation and often of harmony, in College membership, Board management, or educational administration. Now everyone is interested in promoting the highest welfare of the College, with all selfish considerations trodden under foot. The greatest change of all has

DR. H. H. RUSBY, Dean

been in the student body. Sometimes, in the early history of the institution, a majority of the class had not the necessary training to fit them for performing the work of the course, whereas a stringent law and a watchful state education department now prevent the admission of such students.

With all these improvements, and consequent upon them, one adverse influence has become more strongly active, namely, that of negligent habits on the part of the students. Necessity is the mother of invention. When students had poor facilities and little help, they, or such of them as were earnest seekers after knowledge, devised their own means of getting information and training. This cultivated in them the spirit of determination, the quality of self-reliance, the habit of industry. Their employers felt the necessity of seconding the work of the school and gave them individual assistance. Now the student comes to the College with an educational golden spoon in his mouth. Rich in the means of learning, he is tempted to do as does the boy who is rich in money, neglect to put forth those individual efforts which alone can make everyone strong and capable. If it is as easy for a camel to go through the eye of a needle as for a rich man to enter into the kingdom, it is equally difficult for a student rich in all the facilities of education to become a good grubber. My message to all of our students is an adjuration to resist this tendency; to remember that in all character formation and professional preparation the struggle and the effort are purely individual. You cannot work through on the responsibility of any other. You must be your own maker!

H. H. Rusby.

DR. GEO. C. DIEKMAN
PROFESSOR OF PHARMACY

On behalf of the Department of Pharmacy it is my pleasure and privilege to extend a hearty and sincere welcome to the members of the several classes now in attendance at our college.

To the members of the incoming classes, University and College, I extend a hearty greeting, coupled with the wish and desire to aid and assist each one of them, should opportunity present itself to so do. They have shown good judgment in selecting our college as the medium for obtaining their professional knowledge. They have also shown that their object is to obtain a professional education, most thorough in kind, rather than merely obtaining a degree without the requisite knowledge to support this. The facilities offered by our college, to aid them in their obejct, are second to none, and that each student shall profit therefrom to the very limit, is our aim and desire.

In addition to the foregoing, I would extend to the members of the Senior Class my congratulations upon the excellent manner in which they performed the difficult tasks set before them during the first year. If they will pursue their studies with the same degree of diligence as marked their previous efforts, they cannot meet with anything but success.

The college year is short, and there remains much work to be done before the coveted degree can be conferred upon each of the successful students. The task will, however, seem much lighter, if the ultimate object is constantly borne in mind. A degree from our college is worth working for, and its possession assures recognition everywhere.

To the members of the Food and Drug class is likewise extended a sincere welcome. Although the class numerically is small, its members give evidence of a desire to obtain a thorough knowledge of subjects more advanced in nature. It is a pleasure to note the strict attention with which the members carry on their work.

Lastly, I would also extend a most hearty and sincere welcome and greeting to the members of the University classes. Much credit is due to these young women and men for their desire to obtain a University degree. That they should have elected to take up the difficult work of the University course, extended over a minimum of three years, is in itself a guarantee of their earnestness and their desire to obtain knowledge covering a wider field and range than is available in a two-year course.

To the members of the first year University class I would say that if they succeed in equalling the accomplishments in scholarship of the second year University class, they will have done well. To surpass these accomplishments should be their goal.

To the members of the second year University class I would extend hearty congratulations upon the results accomplished during the first year. A continuance of such earnest work must lead to ultimate success.

To the members of the Graduate class I would likewise extend a sincere welcome coupled with the wish that each may be counted a success, not only as far as the college work is concerned, but likewise in the years that are to come.

GEO. C. DIEKMAN.

DR. H. V. ARNY
PROFESSOR OF CHEMISTRY

To the Students of the New York College of Pharmacy:

On behalf of the Department of Chemistry I bid a hearty welcome to all the incoming classes of the college year 1914-1915, and notably to our brand-new class of 1916.

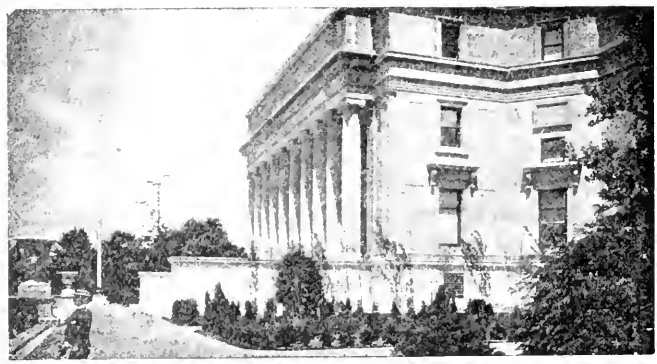
The best wish I can extend is the hope that each student may find in chemistry

the enjoyment and obtain from it the same benefit that has been experienced by those of us privileged to teach the subject.

Never before has this country realized how dependent it is on the science and practice of chemistry than in these times of dreadful war, when we are deprived of the chemical products of Germany and other countries engaged in the conflict. The outcome will be a better appreciation of the service rendered by all branches of chemistry to general economic conditions, and with this appreciation will come a greater demand for trained pharmaceutical chemists.

Yours sincerely,

H. V. Arny.



VIEW OF THE LIBRARY, COLUMBIA UNIVERSITY

COLUMBIA UNIVERSITY.

Historical Sketch.

King's College "in the City of New York in America" was founded in 1754 by royal charter in the reign of George II. The Medical School, established in 1767, was the first one in America. During the Revolution the college was closed and the buildings turned into a hospital. In 1784, and again in 1787, the Legislature of New York passed statutes confirming the charter of King's College and changing the name to Columbia.

The original site of King's College, west of Broadway, between what are now Barclay and Murray Streets, continued to be occupied by Columbia College until 1857. At that time the rapid growth of the city having made it necessary, a change was made to the "old site" between Forty-ninth and Fiftieth Streets and Madison Avenue. From that time until the present day, the history of the University may be summarized in the word "expansion." The Law School was established in 1853, and the School of Mines, which has developed into the present School of Applied Science, in 1864. In the latter year President Barnard came to Columbia and remained president until his death in 1889.

In 1890 Seth Low, class of 1870, was installed, and during President Low's administration the greatest progress was made. In 1896 Columbia became in name what it had been in fact—a university—and in 1897 the old site long since

found utterly inadequate, was abandoned for the present one on Morningside Heights. In 1901 President Low resigned his office in the University to accept the nomination of the Fusion party of New York City for the mayoralty and was succeeded by Dr. Nicholas Murray Butler, '82, Dean of the School of Philosophy, as acting president. Later, Mr. Butler was chosen president by the trustees unanimously on the first ballot, and on April 19, 1902, was installed in his new office in the presence of the greatest assemblage of educators and representative men that has ever graced such an occasion.

The history of the College of Pharmacy, which became affiliated with Columbia University in 1904, began on March 18, 1829, when a number of prominent pharmacists met and organized the College of Pharmacy of the City and County of New York. In 1831 a charter was secured and the first session began with three students in the new dispensary at the corner of White and Center Streets, each paying a tuition fee of six dollars. In May, 1836, the college moved to the southwest corner of Grand and Elizabeth Streets. The building was later found to be unsuited for use and the College again changed its quarters to a room in the University of the City of New York in 1835. In 1836 it returned to its old room in the dispensary building, and in 1842 it secured a room at 285 Broadway over Lockwood's book store. Between the years of 1840-50 the progress of the college was rather slow, the largest class (5) being recorded in 1847. Following this period many very famous men became connected with the college; such as Professors Doremus, Torrey, Mayer, Maisch, Bedford, Squibb, Rice and Chandler.

In 1871 the Alumni Association was formed, and it proved to be and still is a powerful factor in college activities. In 1873 a class of 33 students was graduated, and in the succeeding years the classes so increased in numbers that it became necessary to provide larger quarters. In 1878 the property at 209-11 East 23rd Street was purchased, the attendance increased steadily, taxing the facilities of the college building to its utmost and steps were at once taken to procure a larger building, and in 1894 the college moved to its present commodious quarters. From that time on the college has been very prosperous, the registration increasing so fast that at the present time over four hundred students are attending.

C. U. C. P. has risen from the status of a college in the experimental stage to the largest and most reputed college of its kind in the country.

HINTS TO JUNIORS.

(Seniors May Profit.)

Don't be a nonentity. Get interested in one or two college activities; then, stick to them.

Show class and college spirit. A poor Junior never makes a good Senior.

Subscribe for the "Journal." Boost it. Work for it. Watch for it. *Read* it.

Watch your cuts. Ninety per cent. of the class recitations must be attended. Don't run over the three-cut limit. It means being barred from final examinations.

Take proper exercise. There are all forms of athletics. They keep the brain clear. A bright, active brain, means a good student — a credit to his Alma Mater and himself.

"Where there's a will, there's a way." Truly this may be said of last year's Musical Organizations; from a small beginning where the least spark of Life meant a big ray of Hope these organization have grown and flourished far beyond the earliest expectations of their originators. May this year be an added glory to all the clubs. We are happy to say that we are to have as our Faculty Supervisor, Dr. C. W. Ballard. Further comment of the coming successes is needless under such an able and ardent helper.

GLEE CLUB.

H. Wirklich, Ph. Ch., 1914, Director.

Fortune favors the brave! Mr. Wirklich, last year's clever leader of the Glee Club and now a busy man at Physicians and Surgeons College, has notified us of his intention to return to us as this year's director. Mr. Wirklich will find an energetic group awaiting him. To date, over forty candidates have applied. Keep up the good work Juniors. Seniors, where are you, shall the "Little Ones" lead you? Present conditions point that way! Wake up, Seniors. Show the juniors by actions not words that you appreciate and practice "College Spirit."

ORCHESTRA.

E. A. Atwood, Ph.G., 1914, Director.
T. E. Kinane, Ph.G., 1914, Manager.

Seniors hear the call! Mr. Atwood of 1914, now at Bellevue Medical, is coming to resume the directorship of the Orchestra. Mr. Kinane of Trombone fame will manage this organization for this year. Don't let the Juniors do all the "fiddling," come and join the merry throng.

MANDOLIN CLUB.

Mr. Galateria, Ph.G., 1914, Director.

The same spirit, which seems to be with us all this year, that "get up and go" spirit, was strongly manifested by the number of students who turned out for the first meting of the Mandolin Club. Mr. Galateria, well known last year, will be pleased to see the many new faces when he resumes his directorship for the coming year.

COLUMBIA SONGS.

STAND UP AND CHEER.

Stand up and cheer,
Stand up and cheer for Old Columbia.
For to-day we raise
The Blue and White above the rest.
Our boys are fighting,
For they are bound to win the fray.
We've got the team
We've got the steam
And this is Old Columbia's day.
'Ray! 'Ray! 'Ray!

SANS SOUCI.

What if to-morrow brings
Sorrow or anything
Other than joy?
What if 't be wintry chill,
Rain, storm or summer's thrill?
To-morrow's the future still.
This is to-day.
To-morrow's the future still,
This is to-day.

Out on life's stormy sea
All of us soon may be,
Far, far away.
Still hold your glasses high,
Here's to youth while it's nigh;
Though we to-morrow die,
This to-day.
Though we to-morrow die,
This is to-day.

One last toast ere we part,
Written on every heart,
This motto stay:
"Long may Columbia stand,
Honored throughout the land,
Our Alma Mater grand,
Now and for aye.
Our Alma Mater grand,
Now and for aye."

COLUMBIA MEDLEY.

If I had a daughter
I'd dress her up in Blue
And send her on the Hudson
To coach the Freshman crew;
But if I had a son, sir,
I'd put him on the crew
And teach him to do the fine old stunts
His daddy used to do.
Here's to our Alma Mater,
Long may she live and rise;
Exalted be her banners
Until they reach the skies.
And, while we live, support we'll give
And ever we'll be true
To the colors of Columbia,
The dashing White and Blue.

May the pipe and the bowl never leave us,
Kind friends, may they never deceive us,
And happy is the man who will meet us
In heav'n above, where all is love,
The Faculty won't be there!
But down below, where all is woe,
The Faculty will be there singing
C—O—L—U—M—B—I—A!
C—O—L—U—M—B—I—A!
C—O—L—U—M—B—I—A!
Ray! Ray! Ray! for Old Columbia!
Cheer now, boys, for she's out of sight,
Ere the sun has sunk to rest
In the cradle of the West,
In the clouds will probably float
The Blue and White.

DRAMATICS.

"All the world's a stage,"
Upon which each man plays his part
And "The play's the thing."

Until the present year Dramatics seemed to be outside of our reach. However, in response to that energy of the Junior class, which is just bubbling over to do things, a well attended meeting was held and many students signified their desire to found a Dramatic Society. Mr. P. B. Binder, 1916, is the temporary chairman. We are very fortunate in obtaining as a coach Mr. N. Hochberg, now a student at Fordham University, but lately with Robert Hilliard It will be remembered that Mr. Hochberg gave some excellent impersonations last May on Junior night. His presentation of Sir Henry Irving's "Bells" being an excellent piece of work. Happy he who will be under such a director!

NEW ITALIAN SOCIETY.

A number of students of Italian parentage have formed the "Italian Junior Association of the class of 1916." The following officers have been elected:

President, Mr. M. G. Pipi; Vice-president, Miss Theresa Checchia, Treasurer, Mr. F. L. Piantieri; Secretary, Mr. P. Aragiusto; Reporter, Mr. L. W. Scilipoti.

KAPPA PSI.

Regent—J. Madden, '15.
Vice-Regent—L. Blake, '15.
Treasurer—B. E. Graystone, '15.
Secretary—W. A. McBride, '16.
Historian—L. Feltus, '15.
Chaplain—C. Boehlert, '15.

Gamma Chapter started the term 1914-1915 with several absentees from the roll. Bro. Andrews, '15, entered the University of North Carolina. Bro. Troy, '15, is finishing his pharmacy course at Albany College of Pharmacy, Dept. of Union University, where he will continue to be an active member of Kappa Psi. Bro. H. E. Miller, '16, decided to stay away for a year because the "white lights" hurt his eyes. Bro. Bankert decided to sojourn in Utica for the present because of a deported feminine attraction.

The whereabouts and doings of Alumni Kappa Psi men will be found under Alumni Notes.

PHI DELTA CHI.

President—L. N. Brown, '14.
Vice-President—G. N. Graves, '15.
Treasurer—G. Aronstamm, '15.
Secretary—C. Dougherty, '15.
Chaplain—E. J. Smith, '16.
Editor—B. O'Malley, '15.

The first regular meeting of the Chapter was held Tuesday evening, Sept. 29th, in the Alumni room of the college.

Bro. Brown appointed Bros. O'Malley, Neergaard and Smith on the Social Committee with authority to arrange for the annual smoker—place and date to be announced later.

This year promises to be the biggest in the history of Gamma Chapter, since co-operation is being shown by all active members. A great surprise is in store for many.

The old stand at No. 75 is filled to its capacity and, as usual, Mrs. Mather is attending to all wants and needs in that same motherly way.

Bro. O'Malley, Junior of '11, has returned in good health to complete his Senior year.

TAU EPSILON PHI.

Chancellor—H. L. Hudes, '15.
Vice-Chancellor—C. Weinreb, '14.
Scribe—D. Svigelski, '15.
Assistant Scribe—A. S. Levy, '14.
Treasurer—L. H. Fried, '11.
Historian—E. Windt, '13.
Chaplain—L. Fein, '13.

The Epsilon Phi extends a hearty welcome to the Junior class and offers its sincerest wishes for a successful year.

During the summer vacation months, men of Alpha Chapter kept in close touch

with each other and were able to enjoy many good times together.

On July 5th the annual outing and boat ride to Point Pleasant Park on the Hudson took place. The Alpha and Beta Chapters engaged in a game of ball, in which Beta downed Alpha to the tune of 6-5, Beta thereby demonstrating their hitting as well as pulling (teeth) ability. The party of 80 then returned in the moonlight after having spent a most enjoyable day.

Several men have been pledged and are awaiting their doom.

Several of the Alpha graduates are taking up medicine at P. & S. and Bellevue.

EMPLOYMENT BUREAU.

The Alumni Asociation is now bending its energies toward the organization of a sound and dependable employment bureau system, and it feels that if this venture is successful, a long-felt want will be filled.

One word spells its success—CO-OPERATION. If the C. U. C. P. men that are proprietors; the C. U. C. P. that are or at any time become unemployed and the student body will keep in touch with the Employment Bureau they will derive the following benefits:

(1) For the proprietors — efficient, recommended, registered or junior help without cost or waste of time.

(2) For the unemployed—a satisfactory position with a C. U. C. P. man.

(3) For the student — employment during college year on part time and summer vacation work.

The Bureau will endeavor to study the trade in the various sections of the city and vicinity so that when a request for help is received a man suitable for that store, that class of trade and that proprietor can be sent without delay.

Employ your Employment Bureau!

It will save

TIME
MONEY
WORRY

EMPLOY YOUR EMPLOYMENT BUREAU!

Students will apply to the Editor of Student Activities for information.

AN EASY SOLUTION.

"How does the breakfast suit you, John?" inquired the young bride, anxiously.

"It's just right, dearest," said her husband. "It may be plebeian, but I'am awfully fond of calves' liver for breakfast."

"So am I, dear," said the wife. "Oh, John, don't you think it would pay us to keep a calf? Then we could have liver every morning for breakfast."

DOWN IN THE MOUTH!

Jack—You ought to see him tickle the ivories!

Stone—Some pianist, you bet!

Jack—Pianist nothing! He is a dentist.—*Dartmouth Jack O'Lantern.*

The New York College of Pharmacy

Columbia University

The 85th Annual Term of Instruction of this College, Open to Men and Women, will begin on Monday, September 21, 1914.

The College offers a course of two years, consisting of three day's instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on 15 Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College offers courses of three, four and six years of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.) Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Any of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

The Isaac Plaut Fellowship provides five hundred dollars annually, for one year of study at a foreign university, for that Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

With the session of 1914-15 an evening course in Microscopy and Pharmacognosy will be inaugurated.

Those interested will please communicate with

THOMAS F. MAIN, Secretary, 115-119 West 68th St., New York City.

...The...

New York Journal of Pharmacy

Published Monthly by the Alumni Association

of the New York College of Pharmacy—Columbia University.

CURT P. WIMMER, A. M., PHAR D., MANAGING EDITOR.

Published at 115 West 68th Street, New York, N. Y.

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Copy of Advertisements must be in the hands of the Editor before the 15th of the month of publication.
The Journal will be published the last Wednesday of each month.

Entered as Second-Class Matter, January 30th, 1914, at the Post-Office at New York, N. Y., under the Act of March 3rd, 1879.

Contents:

A WORD FROM THE PRESIDENT OF THE ALUMNI ASSOCIATION.

The Alumni Association of the New York College of Pharmacy wants to impress upon the students the fact that it wishes to, and stands ready to do its duty to them in so far as possible by making the time spent at college more pleasant by assisting in the formation and direction of the various college organizations, such as the Orchestra, Glee Club, Mandolin Club, etc. It is also the intention of the Association to hold monthly meetings, at which features, entertaining or educational will be presented. These affairs to be successful must have the active co-operation of the student body and alumni. We therefore ask you to lend us your support. Not in a half-hearted, begrudging manner but with the proper show of college spirit. Come out and attend our meetings. Come out and attend the rehearsals of the various organizations even if you do not sing or play. Show the active members that their fellow students are interested in the work that is being done to help make their college years more pleasant.

Our Alma Mater has a record that we, its graduates and graduates to be, may well be proud of. For many years our college has taken a leading part in every movement that has had for its object the betterment of our profession. The Alumni Association has ever been and, let us hope, always will be ready, to aid and assist the officers and trustees of the college in the noble work they are carrying on. Once again, therefore, we ask you to come out and attend the meetings and various functions, show the necessary "college spirit," become real students, show the officers and trustees as well as the faculty that the work they are doing so well is being appreciated by those for whom it is being done.

Subscribe to the Journal so that you can keep abreast of what is going on and when you have received your diploma join the Association and by virtue of your membership keep in touch with our activities, attend the meetings and become an active alumnus, thereby assisting not only the Alumni Association but the college and future students as well, the former in giving and the latter in receiving a good and thorough pharmaceutical training and education, seasoned with some of the necessary little pleasant diversions so needed to take away the "grind" from student life.

JEANNOT HOSTMANN,
President.

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* * JOHN RUTGER PLANTEN. * *

John Rutger Planten, only son of H. Rolf Planten, died on Wednesday at his home, 207 Carlton Ave., Brooklyn. He was a grandson of the late John R. Planten, for more than forty years Consul General of the Netherlands at this port.

He was a graduate of the Polytechnic Institute, the New York College of Pharmacy and the Columbia University School of Pharmacy '13, with the degree of pharmaceutical chemist. A year ago he became chemist for the firm of H. Planten & Son, manufacturers of pharmaceutical specialties, of which his father is the head. Meanwhile he continued research work at the College of Pharmacy. He leaves his parents and two sisters.

THE AMERICAN INSTITUTE OF PRESCRIPTIONISTS.*

H. V. Arny, PH.D.

Reform in American Pharmacy is the call of to-day. We hear of prospective legislation which will separate the real pharmacy from the bazaar drug store, even as in Germany we find the Apotheke separated from the "Drogen Handlung." A year or so ago much was said of the creation of certified pharmacists by joint committees of physicians and pharmacists, and the latest is the appointment by the New York State Pharmaceutical Association of a Committee of Eleven, to study the entire question from one end to the other.

The interesting subject has been given much thought by the writer ever since the idea of the certified pharmacist was first broached. This idea, while considered sympathetically, never seemed very feasible to one who knew how exceedingly difficult it is to get physicians and druggists in conference assembled, to agree on questions of policy. What physicians consider essential, scarcely fits the views of a majority of druggists, and what the druggists decide on, rarely agrees with medical views of the same subject.

The next thought was that the certified pharmacist should be decided by the medical men alone. The main idea of a certified pharmacist is a man fitted to cater to physicians' wants by accurately filling prescriptions and otherwise contributing to the progress of the healing art. The question therefore rose as to the possibility of establishing the idea of the certified pharmacist under the guise of "accredited agents" of the American Medical Association. This idea, however, was soon abandoned and no one realized more clearly than the writer that any plan of a medical protectorate over pharmacy will not meet with the approval of the majority of pharmacists, even those who specialize on prescriptions.

This led to a third plan, in which the certification of pharmacists is to be done by pharmacists only and this idea is here presented under the fanciful name of The American Institute of Prescriptionists.

Let us imagine the practicing prescriptionists of this association—not the manufacturers, not the professors, nor the frankly commercial retail druggists—forming an organization under the motto, "prescription compounding our foremost consideration," and let them formulate such requirements of membership as follows:

1. The candidate must be a graduate of a recognized college of pharmacy and must be a registered pharmacist in the state wherein he resides.

This will be agreed to with little opposition.

2. He must be the majority owner of a pharmacy and an actual compounder in same.

This is apt to cause a split at the beginning, since much available timber may be found among those who are employes in stores owned by others, but this proviso seems essential to head off the inclusion in the plan of corporation drug stores.

3. He must show that ———— per cent. of the business of his store is in prescriptions.

It will be noticed that the actual percentage is left blank and that the amount

*From J. A., Ph. A.

of prescription business is expressed as a ratio to the total business rather than as a minimum fixed quantity. A man running a business of only ten prescriptions a day should be eligible, if his prescription receipts represent say, 30 to 50 per cent. of his total business; whereas a corporation store putting up fifty prescriptions a day should be ineligible if it were shown that the prescription receipts represent only 10 per cent. of the total sales.

4. He should show his interest in his prescription department by having it properly equipped with the necessary appliances and properly located in his store.

Any druggist sticking his prescription department on a hot and stuffy platform, midway between floor and ceiling in order to use the space properly belonging to it for some rankly commercial purpose, shows by that act that he considers his prescription business of minor importance and by that act renders himself ineligible to membership in the Institute. Again, any druggist who is content to run his prescription department with broken graduates, and cracked mortars and with a scarcity of even these, shows he does not care for prescription business. As to suitable appliances, these are to be the subject of a paper at this meeting, so the only suggestion I offer is that the list should be based on the needs of a ten-prescription-a-day business and that of course a proportionally larger list must be formed in those stores where more than ten prescriptions are put up each day.

5. He must have the knowledge and the ability necessary to perform the tests of the pharmacopœia and routine analysis in clinical chemistry and must have in his store the necessary appliances to carry out such work.

A painter's supply store, some years since, used in its advertising literature the legend "a paint seller should know his paints as a druggist knows his drugs," which strikingly indicates the estimate set by the public upon the druggist's ability. The colleges of pharmacy have spent years teaching students how to detect adulterations in chemicals, how to assay drugs and how to determine the quality of powdered drugs by means of the microscope.

It is not, therefore, asking too much to expect the "member of the institute" to be sufficiently interested in the products sold under his name to be willing to examine these by means of official tests.

As to work in clinical chemistry—such as urinary analysis—this is the logical side-line for the prescription pharmacist, and it might be added that unless the pharmacist is ready to assist the physician in this direction, he can scarcely expect to interest the modern practitioner.

6. Membership is limited to a three-year term, and is renewable only when the member's qualifications remain unchanged.

In all callings is found the condition that certain representatives vested with the prerogatives of the occupation in question, find more profitable work and embarrass their original calling by using its prerogatives in their new field of endeavor. A man may honor himself and his country in the national legislative halls. Or he may be a great corporation lawyer and as such win great wealth and distinction. But when a man who has won a reputation in Congress spends his vacation looking after the interests of a

corporation, such a combination of functions is—to say the least—in rather bad taste. So it is entirely possible to imagine that a man selected as "member of the institute" may attract the attention of large commercial establishments who might consider the presence of this person on their staff as a distinct asset. This might be so, and even so it might be a distinct advantage for the person in question to accept the new position, but in this event his privileges as "member of the institute" should automatically terminate and that for the simple reason that membership in the organization is limited to practicing prescription pharmacists who own their own establishments and to such independent prescriptionists only.

Now that the six requirements for membership have been stated, an entirely proper question to ask is who shall enforce these requirements and how? This leads us to the question of organizing the Institute.

We are all aware of the propriety of the private club, which essentially consists of a self-organized group of men or of women of similar tastes and of similar ideals. A small number of these gather together and organize and then invite other desirables to join with them. This is exactly the method that should be used in organizing the American Institute of Prescriptionists.

Let some twenty to fifty prescription druggists, whom we recognize as leaders in retail pharmacy as a profession and those preferably consisting of representatives from every section of this country of ours, get together and organize, and let them, and them only, invite others possessing the qualifications stated above to join them, and thus start the Institute. It should of course be operated under national charter and if possible the title, "Member of the Institute of Prescriptionists" (M. I. P.), should be legally protected from imitation. While the membership should be unlimited as to numbers, most rigid adherence to the conditions of membership should be observed. On first thought, it would seem that no one would want so trying a position as that of member of the committee on admissions, but the work of the American Conference of Pharmaceutical Faculties clearly shows that severe conditions, strictly adhered to, have the effect of keeping out undesirables and that with little bad feeling.

As to the short period of membership, it is plain that a one-year term is not possible without reorganization each year, hence it will be well to place duration of membership at three years, thus leaving two-thirds of the members at all times in active service.

And after all is said and done, what will be the use of the Institute to its members?

If properly conducted it will be the honor roll of retail pharmacy in America, and a druggist will be as proud to belong to it as a French scientist is to be invited to belong to the Académie Française.

To be a member of the Institute, to have the privilege of attaching to one's name the initials "M. I. P." will carry the prestige which unfortunately neither the registered pharmacist certificate nor any pharmacy college degree can possess.

The registered pharmacist certificate merely gives the right to run a drug business anyway—within the law—that its holder chooses. The college degree is of little value unless the college behind

the degree is doing good work, and while a certain degree from a certain college may be a real distinction, the same degree from another college may be a joke. That both the registered pharmacist certificate and the college diploma are considered important, is shown by the fact that provision is made that the "member of the Institute" shall be the possessor of both documents, but greater than these should be the title "M. I. P.," since it will show all, notably the prescription-writing physician, that here is a man to whom prescriptions are of the first importance, a man who by the vote of his fellows, is shown to be a real pharmacist.

Once launched, the Institute itself will be in a position to devise plans of co-operation that will be of financial advantage to each of its members, but that is a detail that cannot be discussed in this paper.

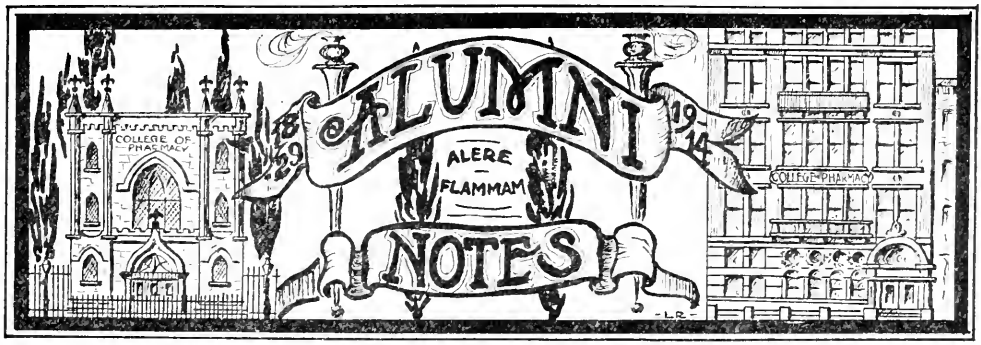
In conclusion, some one may say that the American Institute of Prescriptionists (A. I. P.) is an attempt to ape after the American Institute of Surgery, which in turn according to some of its critics, is an imitation of the Royal College of Surgeons. Of course, the primal thought of organization in the mind of the writer resembles to some extent the basic principles of the institute of surgery, but in detail the Institute of Prescriptionists no more resembles the surgeons' organization that it does the American Conference of Pharmaceutical Faculties or the association of certified public accountants, both of which are self-constituted private organizations frankly designed to sift the excellent from the inferior. And, if the American Institute of Prescriptionists can accomplish that purpose in retail pharmacy, it will more than justify its existence.

* * GEORGE R. M. EWING. * *

John Ewing, of 313 West 105th Street, New York City, died at his summer residence, "Bramble Brae," Glen Spey, Sullivan County, New York, on Wednesday, July 29th, 1914. Mr. Ewing was born at Cathcart, near Glasgow, Scotland, on May 21st, 1848, and was the son of John Drew Ewing and Mary Burnside Ewing. In 1851 his family came to reside in New York City. After joining the New York College of Pharmacy, Mr. Ewing, in 1874, entered the drug business in Jersey City, N. J., and soon was the junior partner in Doyle and Ewing. In 1877 he parted with Mr. Doyle and started out under his own name. Becoming associated with his brother-in-law, Mr. Alexander Mackenzie, the firm of Ewing & Company was formed, and this firm continued until it was dissolved in May, 1895, owing to the desire of both partners to retire from active business and also to the fact that Mr. Ewing had changed his residence to New York City. Mr. Ewing was the sixth pharmacist to register in the State of New Jersey and was a member of the New Jersey Pharmaceutical Association, the New York State Pharmaceutical Association, Crescent Lodge, No. 402, F. & A. M., and Hugh De Payens Commandery, No. 1.

On October 3, 1876, he was married to Miss Grace Mackenzie, daughter of George R. Mackenzie, President of the Singer Manufacturing Company, of Jersey City, N. J.

He is survived by his wife; one son, George R. M. Ewing; two grandsons, George R. M. Ewing, Jr., and Alexander L. Ewing; one sister, Mrs. Agnes Dittmar of New York City, and one brother, William Ewing of Keyport, New Jersey. The funeral was held at his summer home on August 1st.



SEE WHAT WILL PRUSS, '04, IS DOING.

Pruss, Rep., Wins in 19th, Beating SCHEIDERMANN.

The fight for Republican Assemblyman in the primary election in the Nineteenth Assembly District resulted in a sweeping victory for William Pruss, the organization's choice, over Henry Scheidermann. The latter is the present member from the district, by grace of Republican-Progressive fusion last year, but was recently turned down by the powers that be, so he tried to go things on his own hook by making love to the new law. But it didn't work. Pruss was victorious in every one of the twenty-two election districts. Even in the Sixteenth, Mr. Scheidermann's home district, he won out, the vote there being 18 to 15 in favor of Pruss. In Pruss' home district, the Fourteenth, Scheidermann polled but 1 vote to 30 by his opponent. Even Whitman's vote in this district was one less than that of Pruss. And there was much rejoicing at the Nineteenth Assembly District Republican headquarters, 116 Jefferson Street, when he made his appearance.

Louis Weiss, '13, has purchased a store at 144th St. and Seventh Ave., New York. He is doing very well and writes that he would be glad to have some of his former classmates call on him.

Henry Sasse, '93, is a piscatorial artist of no mean ability; no one can "cod" him after a trip, for he always delivers the goods.

Eugene Lohr, '93, and Dr. John Horni, '93, are frequently seen speeding through Brooklyn. 'Gene is some soldier boy, while Jack's ability as a surgeon has won him the title of "the village cut up."

August Diehl, '88, met with a great loss in the death of his brother, Theodore, which occurred early in August. They conducted two of the nicest stores in Brooklyn.

Henry G. Born, '94, having sold his store in Brooklyn, is now located on Lexington Ave., N. Y. City.

Fred Linnig, '94, is congratulating himself in that he did not go to Europe with the D. A.s this year. Nothing like cultivating a *taste* for the goods "made in America."

Joseph Munk, '94, having disposed of his store, is now doing relief work in Brooklyn. We see him at Miss Mahegin's pharmacy on Bedford Ave. twice each week.

Nelson S. Kirk, '94, continues to win the pools on the fishing boats from Sheepshead Bay. He knows how to "hold their heads up."

Professor George C. Diekman.

SOURCES OF CELLULOSE.

O. Reinke, in Chem. Ztg., states that bean and pea stalks may be made to yield a superior kind of cellulose. The raw material is treated with caustic soda under pressure, and the product thus obtained is bleached with solution of potassium permanganate 1:1000, and subsequently treated with sulphurous acid, and then thoroughly washed with water. The product is said to conform to the most severe requirements for cellulose, and is employed in the manufacture of the various nitro-products. Twelve tons of pea stalks yielded 7.88 tons of cellulose, and 8 tons of bean stalks yielded 2.84 tons of the product.

CHANGES IN FIXED OILS.

Henry A. Gardner, in Chem. Rev. ueber d. Fett-und-Harz Industrie, calls attention to the fact that linseed and other fixed oils used in paints, are often infected with micro-organisms. The infection usually is caused by lack of cleanliness during the pressing of the oil. Many of these micro-organisms cause a splitting up of the glycerides, which is evidenced by the high "acid" number of such oils. Many fixed oils upon standing separate a mucilaginous substance in which will be found many of the micro-organisms. Such decomposed oils when mixed with many of the basic color agents will produce definite compounds, many of which possess colors different from such as are desired. Gardner recommends that all such oils be carefully filtered in order to remove the mucilaginous matter which separates, and also that they be heated to 100° C., in order to destroy the micro-organisms.

METHYL-ORANGE AS INDICATOR.

Hecht, in Chem. Ztg., reports that methyl-orange serves as an excellent indicator for the titration of free sulphuric acid in the presence of copper sulphate. He states that in the acid solution methyl-orange shows a red-violet color, similar to that of neutral-red, and in neutral solutions the color is light green, or in presence of larger quantities of copper sulphate, grass-green.

Wogrinz and Halla have subjected this method to an examination in connection with estimation of free sulphuric acid in copper-baths. They report that the change in color of the end reaction is very sharp, and that there is no danger that excessive quantities of alkali will be required because of possible hydrolysis of the copper sulphate. They further re-

port that the best results are obtained if sufficient methyl-orange be added at first, so that the color of the mixture is decidedly violet-red, and not greenish-red.

EXAMINATION OF IODO-TANNIN COMPOUNDS.

L. Bourdet, in Bull. Science, Phar. XX, reviews the various methods for determining the iodine content of iodotannin preparations. The method of Douris as carried out in case of syrup of iodotannic acid consists in subjecting the syrup to the action of nitric acid and silver nitrate on the water-bath, until all organic matter is destroyed. The resulting silver iodide is then weighed or is estimated by the Charpentier-Volhard method. The method of A. Goris and A. Wirth consists in subjecting the syrup to the action of diluted acetic acid and zinc oxide, in order to convert the iodine into zinc iodide. An aliquot portion of the filtrate is treated with ammonia to remove tannin, again filtered, and the iodine determined volumetrically or as silver iodide. A third method, that of Barthe, seeks to destroy the organic matter by means of strong alkalies and heat, determining the alkali-iodide formed and collected from the ash by any of the known methods. Barthe admits a possible loss of about 8% of iodine by use of his method, and adds this amount to the amount found. Bourdet states that the loss by the Barthe method may be as high as 26.4%, thus rendering the method useless in his opinion. The method of Douris was found to yield the most exact results.

CAMPHOR OINTMENT.

W. Duliere, in Journ. Phar. d' Anvers., reports on the examination of a number of samples of this ointment, which were supposed to have been prepared in accordance with the formula found in the Codex. In two of the samples examined he found the following:

Camphor, 7.2% Starch, 15%
Camphor, 5.6% Starch, 17%

DETERMINATION OF EUCALYPTOL.

Dodge, in Chem. Ztg., states that eucalyptol or cineol can readily be determined in volatile oils by shaking these with a cold solution of potassium permanganate 6:100. Eucalyptol will not be attacked in this manner, while other terpenes and unsaturated combinations found in oils of eucalyptus and cajeput, will be oxidized into water-soluble compounds. The unoxidized eucalyptol can readily be removed from the watery solution and its volume determined.

BOOK REVIEW.

The tablet industry, its evolution and present status, the composition of tablets and methods of analysis. E. F. Kebler. The Journal of the American Pharmaceutical Association, 1914, page 820.

This article is reviewed by Hermann Schelens, Cassel, who writes as follows:

In the year 1904 I published in the columns of the Pharmazeutische Zentralhalle a history of the tablet and pastille industry. It is pleasing to me to note that in my article I traced the manufacture of such articles to a much earlier period than is attempted in the article under review. I must, however, much to my sorrow, admit that in his article Kebler was enabled, by means of illustrations, to make his meaning much clearer. Illustrations, to my mind, say

more than a most exhaustive description could do. It is regrettable that a German writer cannot allow himself such luxuries.

FAT CONTAINING FRUITS.

M. Krause, in Tropenpflanzer, reports his investigations in the matter of a fruit-nut obtained from a tree known as Canarium Polyphyllum, which is widely distributed through Neu-Guinea. The nuts are inclosed in a soft fleshy shell. The nut itself consists of a kernel covered with a brown skin. The natives have long been familiar with the properties of these nuts, and have employed them in various ways. Other Canarium species are found growing on the different islands of the Malayian Archipeligo, the oils of which come into commerce under the names of Canarium Oil, Java Almond Oil, Huile de Canaria, Jungle Balsam, etc.

An ether extraction of the nuts yielded an oil, with values as follows:

Weight of 10 nuts,	93 Grammes
Weight of 10 nuts, minus their shell,	21 Grammes
Per cent. of fat,	68.23
Nitrogen content of substance after oil removal,	9.77%
Congealing point of oil,	19°-20° C.
Melting point,	30° C.
Index of refraction,	1.4750
Degree of acid,	226
Saponification number, Koettsdoerfer,	200.2
Iodine number,	59.74
Reichert-Meissl number,	4.41

The residue after extraction of the oil, because of its nitrogen content is fed to cattle. Poisonous or otherwise harmful substances are not contained in the oil. The oil has a light-yellow color and is perfectly clear. Other investigators have examined the oils obtained from other species of the Canarium, the results, however, do not differ materially from those given above for the oil obtained from Canarium polyphyllum.

ESTIMATION OF ALKALOIDS.

Felix Daels, in Journ. Pharm. Chim., reports on results obtained from what he describes as a new method for the extraction and estimation of alkaloids from official drugs. He determines the total quantity of basic substances as follows:

Ten grammes of properly dried and powdered drug are placed in a 500 Cc. flask, together with 200 Cc. of chloroform and 50 Cc. of 2% solution of sodium hydroxide. The flask is then connected with a reflux condenser and the contents heated on a water-bath for one-half hour with constant agitation. Any chloroform lost by evaporation must be replaced. After cooling, the liquid is filtered through a good quality of Kieselguhr. 150 Cc. of filtrate being collected.

To the 150 Cc. of filtrate, 30 Cc. of N/10 sulphuric acid V. S., and 120 Cc. of water are added, and the mixture thoroughly and repeatedly shaken. After the liquids have separated, 100 Cc. of the acid liquid are removed by filtration and titrated with N/10 sodium hydroxide. Haematoxylon as indicator is employed in the case of cinchona, while in the case of ipecac, nux vomica, hyoscyamus, aconite and belladonna, iodeosin is recommended. The 100 Cc. of acid filtrate contain the alkaloidal contents of 5 grammes of the drug powder. The author used a correction factor which differs for the different drugs and gives the required figures in an appended table.

COLOR IN WOODS.

The wood of the elm, birch and oak grown in certain parts of France, especially in Normandie, is often found to be green in color. This color change is produced by action of certain fungus growths which inhabit these trees, the chief of these being the Helotium aeruginascens. The color is not caused by a diseased condition of the wood, and is found only in trees of certain ages. These woods are hard and very durable and take on a smooth polish, showing the grain in a bright green unchangeable color, and are much sought for, as they are used in the manufacture of certain articles of furniture.

WHOOPING-COUGH MIXTURE.

Dr. Weinberger's Whooping-Cough Mixture is said to contain the following: Euchinin or Aristochin, 2 gm., or 3 gm., respectively, Antipyrin, 4 gm., Luminol, 0.8 gm., Narcophin, 0.12 gm., Glycerin, 10 gm., Alcohol, 2 gm., and syrup enough to make 200 Cc. The mixture is given at 8 A. M., and 2 P. M. in varying doses, depending on the age of the patient.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, ETC.

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George Hohmann, 115 West 68th St., New York.

Treasurer:
Fred. A. Leslie, 115 West 68th St., New York.

Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities: None.

Sworn to and subscribed before me this 30th day of September, 1914.

ELEANOR KERKER,
Notary Public.

(My commission expires March 31st, 1915.)

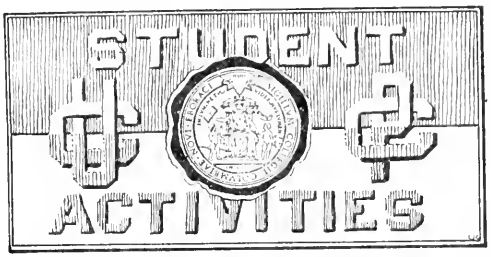
PERSONAL NOTES.

Wm. A. Sailer, General Manager of Sharp and Dohme was a recent visitor at Indianapolis, where he attended the N. W. D. A. Convention.

Julius Foerster, who sailed for Europe on July 2nd on Steamship Barbarossa, which was chartered by The German Apothecary Society of New York, has just recently returned to the United States from the war zone.

Mr. Foerster, who enjoys the distinction of being Sharp and Dohme's General Representative, or District Manager for all of New England, was perhaps the last member of the large party of Pharmacists to return to this Country. He states he could have returned several weeks earlier, but stayed with the view of getting a glimpse of actual warfare.

Mr. Foerster is in possession of much first hand and interesting information concerning the great European conflict.



STUDENT NIGHT.

"Big oaks from little acorns grow." Yes, the "Bug" has us. And now we've started, there's no telling where and how large our ending is going to be. Wednesday evening, November eleventh, the Alumni Association issued in "Students' Night," "College Spirit" has the association now. Nothing too good for the student body. These get-together nights are part of the play-life of C. U. C. P.

Despite the fact that the first event came upon us so suddenly an excellent program was enjoyed by an appreciative audience, great in quality if not quantity. But everything comes to those who wait!

The orchestra rendered several pleasing selections. After some words of introduction by Mr. Roon, Dr. Wimmer gave a brief but very interesting sketch of the work of the Alumni Association from its organization in 1871 to the present date. Dr. Wimmer promises a more detailed paper with illustrated pictures in the very near future. We're waiting, Doctor. You see, the "bug's" at work; the more we get, the more we want.

Dr. Steffens, 1910 C. U. C. P., now illustrated a very snappy interesting talk of Campus Life, with some well-known pictures of Alma Mater on the Heights. Come and tell us some more, Dr. Steffens; it makes us feel as if we really were part and parcel of dear old Alma Mater "upon the Hill."

C. U. C. P. has certainly one staunch backer—wish College of Pharmacy of Philadelphia men could meet Dr. Hostmann! In an address of welcome and appeal the genial President of the Alumni Association asked the student body as a whole to become strong, active members of C. U. C. P. Learn now the value of the Alumni Association and in years to come when the hours of study are over, and real life has begun, rally faithfully and as strongly to her appeals, whatsoever they might be.

Speeches of thanks and appreciation for the President's kind words were then made by the representatives of the student body.

ATHLETICS.

Ninteen long, weary years where patience was a virtue. Slowly but surely Columbia came back unto her own and made good by her sweeping victory on the Hudson one day late last June. Will she do it again? Will her future varsities have such sticking qualities as 1914 did? Will she be able to muster such material? No doubt she can and more—

many high school graduates greatly interested in school athletics have come to College of Pharmacy this fall. After they have settled into the regime of their course, their first question is, No Athletics?

Certainly, all you want of it and in any form. College of Pharmacy being part and parcel of Columbia University shares all of Alma Mater's privileges. Any now interested may join the Gym. with all privileges by paying a fee of seven dollars. If a candidate makes good in any branch the Alumni Association offers to pay his fee, or if paid to refund the same.

Any University student at the College of Pharmacy has the privilege of entering Intercollegiate events. The College students may only enter local or Interclass events.

What has C. of P. done to hold its own in Athletics? Just scan the following:

M. Simon, 1914, won the Ambringe Cup.

L. N Brown, 1914, made the 1 mile relay team and won his numerals.

G. Simon, 1912, next best high jumper to Harry Babcock.

J. Deffaa, 1912, a member of Columbia's Varsity Swimming Team.

C. Dougherty, 1915, basket-ball.

W. A. Smith, 1915, is a candidate for the crew.

A. C. Snyder, 1915, is some sprinter, doing the 440-yard dash in 54 seconds.

Does this make your heart tingle-lingaling? If it don't, something is wrong. Better see the doctor. Are these to be our only representatives? Will Alma Mater still hold the coveted place next June?

Let us be up and doing. No time like the present. Join the happy, healthy throng on the heights men. Keep up C. of P.'s reputation and by that send Alma Mater on to many such victories as she won last June.

UNIVERSITY CLASS '16 ELECTIONS AND REORGANIZATION.

Wednesday evening, November 18, the University Class of 1916 met in the Lecture Room to elect officers and to reorganize. After listening to the very interesting preliminary speech upon College Spirit and Class Obligations by our Student Activities Editor, the following members were elected as officers:

President, Mr. Strongin;

Vice-President, Mr. Capeci;

Treasurer, Mr. Guck;

Secretary, Miss O'Connor.

Upon taking the President's Chair Mr. Strongin laid before the class plans for a very active year. In order to carry out these arrangements, Mr. Strongin brought forth the necessity of having a basis for the class to act upon. Hence, it was decided to draft a new Constitution and By-Laws, suitable for the needs of the class. A committee of the following members were selected by the President to prepare and draw up a Constitution and By-Laws to be ready for the next class meeting, Wednesday, December 4th.

Miss O'Connor.
Mr. Capeci,
Mr. Dragotta,
Mr. Green,
Mr. Blau

C. U. C. P. DRAMATIC SOCIETY.

President, J. J. Coronel.
Secretary, Miss Kaplow.
Treasurer, Miss Davidson.
Reporter, Miss Kleppner.

Meetings—Saturday at 5 P. M.

Immediately after organizing, Coach Hochberg began real work with his charges.

He has selected a play and the parts have been assigned. Under such capable directorship, the Society will, no doubt, in a short time spring a surprise on us all.

SPECIFIC GRAVITY OF MILK.

D. M. Bull, '16.

As milk is slightly heavier than water, and as water is the most common adulterant of milk, any addition of water would serve to lessen its specific gravity.

To determine the specific gravity of milk we use an ordinary Board of Health Lactometer. In devising the lactometer, it was assumed that 1.029 was as low as the specific gravity of any unadulterated milk would fall, therefore the scale of the lactometer was graduated from 0 to 120, the 0 marking the point of pure water, or a specific gravity of 1.000, and 100 corresponding to the assumed least specific gravity of milk, or 1.029. If, then, in any given sample of milk the lactometer fell to 90, it would indicate the presence of 10 per cent. of water, and if it fell to 75, of 25 per cent. of water.

The relative density of milk varies with its temperature, so that the lactometer is only correct at one given temperature. Most lactometers are graduated for a temperature of 60° F.

The solids in milk are not all of the same specific gravity; some are heavier and some lighter than water.

The fats are lighter, the other solids are all heavier.

The specific gravity of the milk, then, depends not only on the amount of solids in the milk, but also upon their relative proportions.

The specific gravity may be affected by the addition of any substance to it or the abstraction of any of its constituents. Since some of the constituents of milk are lighter than water, their abstraction in whole or in part would be followed by an increase in density.

It will be readily seen that if a part of the fats are removed the specific gravity of the skimmed or partly skimmed milk will be heavier than normal, and the addition of a certain amount of water or other substance lighter than the milk would only serve to bring the specific gravity back to the normal point.

In this way, if it is done skillfully water may be added to milk, and cream abstracted from it without affecting the specific gravity as revealed by the lactometer, and a very inferior sample of milk might pass as perfectly normal if the lactometer alone was depended upon for its detection. You can readily see that this method of testing milk for specific gravity with the lactometer alone would be very incomplete. So Prof. Babcock, of Wisconsin Agricultural College, invented the Babcock test, which gives a very accurate account of the amount of butter fat contained in a given sample of milk, so that taking the two tests together we get very close to the actual amount of adulteration.

KAPPA PSI.

Messrs. O'Hagan, '16, Wheelock, Ward and Taylor of the class of '15 were initiated into the fraternity at the first initiation in October, and Kirkwood and Sinclair, also '15, are yet to go through the "mill."

Kirkland, Bartlett, Lehman and Bacon, 1917, and Snyder, Burns, Dowsey Harwood, '16, are pledged and in line for the goat at the next initiation. Kappa Psi's goat is growing very strong on tin cans and lots of exercise, and, from all indications, he will make things interesting.

All report a very good time at the smoker which was held October 16 at the Col. Univ. Commons.

PHI DELTA CHI.

"Gamma Active."

Gamma Chapter has entered into one of its most promising years in its history. All the brothers are keeping things moving so fast that we are surprising even ourselves.

Our smoker this year, held at The Commons, was easily the best conducted and most lively affair of its kind in some time. Brother Simpson acted as toastmaster for us, and in his usual happy manner kept everyone present in paroxysms of laughter with his line of new stories.

During the course of the evening speeches were delivered by brothers Dr. Leslie, Brown, Aronstamm, Hakes, Thode and Messrs. Palmer and Linck. Our old friend Mr. Roon came in to help us finish up, which we did in fine style.

Our pledged men to date are Messrs. Palmer, Linck, Baker, McQuillan and Ackerman. Of course, we have more in view and hope to have a few surprises next month. These men will receive their initiation soon after the Thanksgiving holidays.

We have moved our headquarters to 63 W. 60th St., and have the entire house to ourselves. This is the greatest feat accomplished since the chapter was founded. We wish to extend an invitation to all to visit us at our new address. Mrs. Mather has us in charge and we hope to see many of our friends soon.

At the Alumni meeting our boys from the house made quite an impression by their first appearance as a quartet. After they had been on everything, livened up, and the entertainment was made easily a success. We hope to give even a better demonstration at the next.

Brothers Buck, Thode, Guerrier and "Oehlers and Wife" were visitors during the past month.

We are all striving to make this a banner year in Gamma Chapter and, to all appearances, we are on the right track. Xyz. 11/18/14.

B. O'Malley, Editor.

TAU EPSILON PHI.

Alpha Chapter.

The Alpha Chapter's new home is located at 137 W. 69th St. This is very convenient for the active men who make use of the house for study and recreation during their "off-hours."

On October 30, an informal smoker was held at the house to serve as a sort of house warming. It was a complete success socially and as far as attendance was concerned–over forty being present. This, of course, will not interfere with the annual smoker which is coming very soon.

The House Directors are very busy arranging a social schedule for the coming season. The Juniors who have been pledged are:

H. A. Cohen, '17, L. R. Brown, '17, C. Mossowitz, '16, E. May, '16, K. Berger, '16, W. Levitt, '16, J. Maslon, '16.

PRIZES AND SCHOLARSHIP.

Prizes and Scholarships prove to be great incentives to the student-body at large. For the benefit of the incoming students the following may give him an idea of the prizes and scholarships offered by the Trustees: Alumni Association, the Faculty Graduate Prize, the Max J. Breitenbach Prize, the Kappa Psi Prize, Italian Pharmaceutical Association Prize, Senior Scholarships and the Isaac Plaut Fellowship. Something to look forward to? Indeed, a just reward for an honest effort. A material benefit derived from the correct use of a trained mind.

Trustees' Prizes.

Three prizes of $100 each and appropriate certificates are given to Senior students on the roll of honor for the best practical competitive examinations in Materia Medica, Analytical Chemistry and Practical Pharmacy, respectively.

Alumni Association Prizes.

For Seniors: A gold, silver and bronze medal respectively to the three students having the highest standing.

For Juniors: Torsion balance, U. S. Dispensatory and Culbreth's Materia Medica respectively for the three students finishing their junior year in the first, second and third positions on the roll of honor.

Max J. Breitenbach Prize.

A cash prize of $200, accompanied by a certificate, is presented annually for highest proficiency in the Senior University course.

Kappa Psi Prize.

A gold medal for highest standing maintained during the entire University course is awarded by Gamma Chapter.

Italian Pharmaceutical Association Prize.

A gold medal offered to the member of the graduating class who has obtained the highest general average in practical laboratory work during the Senior year.

Senior Scholarships.

Two scholarships for the Senior course granted by the college to members of the outgoing Junior class.

The Isaac Plaut Fellowship.

This Fellowship provides a sum of $500 annually for a year of study at a foreign school or university by a graduate of the B. S. course of this college. This Fellowship has been founded by Mr. Albert Plaut in memory of his father, Isaac Plaut.

For details see Bulletin of Information, pages 19-27.

THE CLOSED DOOR.

He stood leaning heavily against the door, his hand grasping the knob, his ear against the panel. His lips were compressed and his face was white.

"Not finished yet," he moaned.

Another period of tense waiting, and he placed his eye at the key-hole. Slowly he straightened up and cast a piteous glance towards Heaven.

"They are in the bath," he said.

Then as if a new vitality had entered his veins he turned and smote the door with his bare fist.

"Let me in, let me in," he cried.

The door was flung back. A dull red light suffused itself through the room, and his friend stepped out of the closet with a batch of newly developed kodak films.—*Columbia Jester.*

At what age is acacia at its best?
When in the mucil-age.
—*California C. P. Graduate.*

This drifted in from Kansas:

Early to bed and early to rise,
Cut the weeds and swat the flies,
Mind your own business and tell no lies,
Don't get gay and deceive your wives,
Pay your own debts, use enterprise,
And buy from the ones who advertise.

One hundred and forty-five words a minute by Wireless.—News Item. That's nothing. We know a dame—enuf sed.

"She dropped her Eyes passionately." (From a popular novel.) It doesn't say whether anyone picked them up for her.

PERSONALS.

Miss Ida Schimansky, formerly of 1915, is still commuting. "Designing" at Pratt's Institute is the magnet. Miss Ida reports great progress. Good work, Miss Ida.

Miss Kate Kramer, Ph.G., Ph.C., 1914, is now studying medicine at Cornell.

Ever and anon the "Gay White Way," issues its call. Mr. Henry E. Miller, formerly of Univ. Class 1916, heard that call and obeyed. "Harry" was one of the many at the big doings for the Crew up at the Heights. Come again, Harry, and stay longer with us.

Frank Schumacher, formally of Univ. 1916, reports a very, very interesting course in medicine, at the University of Valparaiso, Valparaiso, Ind.

Miss L. Ager was a welcomed guest several days ago.

We don't see anything of our dear "Juny." But you all know now "Juny" may be out of sight, but he is decidedly in mind. "Juny" says the South is glorious, especially North Carolina, but—well, he'd just love to be at C. U. C. P. once more. He certainly is *some lonesome.*

The New York College of Pharmacy

Columbia University

The 85th Annual Term of Instruction of this College, Open to Men and Women, will begin on Monday, September 21, 1914.

The College offers a course of two years, consisting of three day's instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on 15 Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

To graduates of this and other courses properly qualifying for advanced work, a Graduate Course of one year in the microscopical and chemical analysis of foods and drugs is open.

As a department of Columbia University, the College offers courses of three, four and six years of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.) Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Any of these courses admits the graduate to the College of Physicians and Surgeons of this University, without examination. Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations or of the College Entrance Examination Board.

The Isaac Plaut Fellowship provides five hundred dollars annually, for one year of study at a foreign university, for that Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

With the session of 1914-15 an evening course in Microscopy and Pharmacognosy will be inaugurated.

Those interested will please communicate with

THOMAS F. MAIN, Secretary, 115-119 West 68th St., New York City.

...The...

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of the New York College of Pharmacy—Columbia University.

CURT P. WIMMER, A. M., PHAR D., MANAGING EDITOR.

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Contents:

A HAPPY NEW YEAR.

WE EXTEND OUR BEST WISHES FOR A HAPPY AND PROSPEROUS NEW YEAR TO ALL OF OUR FRIENDS.

TO OUR ADVERTISERS.

WE WISH TO THANK YOU FOR YOUR KIND SUPPORT DURING THE PAST YEAR. WE KNOW THAT OUR MANY READERS APPRECIATE WHAT YOU HAVE DONE FOR US AND THEM. THEY WILL RECIPROCATE. MANY ARE DOING IT NOW, MORE WILL DURING THE COMING YEAR.

Our First Year.

The first year of the existence of this Journal has now passed, and it may be opportune to say a few words about it. There can be no doubt that the Journal has fulfilled its purpose and that it is being eagerly looked for about the end of each month. Both alumni and students read it to learn some news of their class-mates or to learn what is going on in the College of Pharmacy. This publication keeps awake the interest of the Alumni in affairs of the College, it maintains a bond between graduate and institution and does not allow the interest in their Alma Mater to slacken. Many letters from graduates of years ago eloquently testify to that effect. There has been expressed, in certain quarters, a suspicion that this Journal is a money-making publication. Our answer to that is the following: Neither the Managing Editor nor any of the Associates have received one penny of remuneration for their work. In fact, it looks as if a deficit will have to be paid. But we hope that now, when the Journal has proven its value, sufficient support will be secured to make its publication certain for some time to come.

The College of Pharmacy in President Butler's Report.

The following passage referring to our College has appeared in the annual report of the President of Columbia University:

"The really capital work of the College of Pharmacy is more widely appreciated every year. The Trustees and the Faculty work in close harmony and co-operation, with the result that the College has been enjoying a prosperity far in excess of anything in its past history. The Dean and his colleagues co-operate constantly with the State authorities for the improvement of conditions relating to the practice of pharmacy, and the people of this State and of adjoining States are each year under a new debt to this wholly admirable and self-sacrificing organization."

THE FRENCH FOLK MEDICINE.*

By J. F. Llewellyn, Mexico

THE Druids wore crowns of vervain, and shot arrows to allay storms. A seventh century engraving shows St. Roche curing the plague; this Saint was also a veterinarian, and cakes from his altar (1649) cured hydrophobia. Many were cured (507) by sleeping in churches.

In the thirteenth century they used tincture of flints, oil of bricks, spirit of paper, volatile salts of frogs, staghorn, ivory, blood, skulls, human hair and nails, oil of viper, and draughts of urine.

A fomentation was used of sage, rosemary, thyme lavender, chamomile, and red roses, boiled in white wine, and a local application of oil of lilies, puppies newly born, and earth worms, prepared with venice turpentine. Under the pharmacy of 1608 druggists were to keep in stock millipedes, rain worms, ants, vipers, scorpions, frogs, crabs, leeches, skulls of persons never buried, goat's liver, wolf guts, intestines, and many similar goods, including nanny tea. A druggist advertised a better grade of human fat than that furnished by the hangman.

(1679) Persons were wrapped in red cloth to cure smallpox, and a sheep was skinned alive in the anteroom of a royal lady, to apply the warm skin to her body.

Letters patent were granted to George Hubert by the king to cure canine madness by imposition of hands.

Powered mummy administered in treacle raised the question as to its use in Lent. Treacle then meant Theriac Orvietan, Venice Treacle, sixty to seventy drugs pulverized and made into an electuary with honey. The Montpelier formula had eighty-five ingredients.

In Normandy charlatans practiced illegally as water judges, diagnosing and treating patients by inspection of their urine.

The Prince of Conde was given a syrup of rice and marshmallow root, with a blister night and morning, and a preparation of hyacinth to fortify his heart, followed by poppy water, syrup of stagshorn, ipecac, licorice and mistletoe root; he lived six months after this.

"Liquor cranis humanis" was a distillate from water and a newly dead unburned human skull, used for epilepsy, gout, somnolence, and an antidote to poison.

Powdered human bones and red wine cured dysentery; oil distilled from bones was used for rheumatism; moss from a human skull as an haemostatic. Mummy and coagulated blood were used for cough and pain in the spleen; a belt of human skin to facilitate labor and mitigate pain.

Water distilled from human hair and mixed with honey was a hair restorer.

A French philosopher (1658) explained to a solemn assembly how to make a powder that cured wounds distant one or more thousand miles.

Montaigne mentions the medical use of left foot of tortoise, urine of lizard, liver of mole, dung of elephant, blood from under the wing of white pigeon, excrement of rat powdered for stone; and a pill with one hundred ingredients.

(1698) Dr. Martin Lister, of London, visited Paris; he found that a monk

*Proceedings of the Missouri Pharm. Ass'n through Merck's Report.

had taken hypochana and jesuits bark five times without results. Ipecac was used for dysentery, dose 10 to 40 Gm., price twenty to fifty crowns a pound. Everywhere on walls were handbills of quacks promising to cure everybody; apothecaries, barbers, women, and monks meddled with the cure of syphilis.

He mentions the boundless confidence and intruding of quacks, women and monks in the practice of medicine. He had calls for King Charles drops, and showed how to make this by distilling raw silk.

Moliere mentions a clyster of "double catholicon" rhubarb, honey of roses and other ingredients, a purgative of cassia and Levantine senna, clarified and edulcorated whey.

Orvietan would cure itch, scurvy, fever plague, great and smallpox.

Constellated rings cured delusions. They had a gold cure in those days, potable gold; dose, one drop.

When cholera ravaged Brittany the government issued pamphlets of medical advice; these pamphlets were converted into ballads, the singing of which was the treatment for cholera.

There were certain Breton noblemen whose touch and spittle were healing. Nails offered at the shrine of saints, cured boils.

Dung of cats cured felons and with wine it cured fevers; the urine of fever patients administered to another transferred the fever.

(1755) The king paid a large sum for a cure of tapeworm, which was male fern roots; part of the treatment was "Panacea Mercuralis," calomel digested in spirits of wine.

Pradiers cataplasm for gout was purchased by Napoleon for $125,000 pro bono publico; formula; Balm of Mecca 6 drams, Red bark 1 ounce, saffron ½ ounce, sage 1 ounce.

All maladies were curable by holy relics, displayed at midnight, especially epilepsy; this was such a source of scandal that it was suppressed by Louis XVI. A blind man touched the bones of a martyr and was cured; towels were carried from a shrine to heal the sick

The peasants of Perronne believed that vomiting was caused by the stomach becoming unhooked; a quack would unhook his own stomach by contortions, rehook it and thus relieve the sick of vomiting and of five francs.

Music was used to cure sciatica, and assist in the circulation of the blood. In a case of violent sickness a band was called in, and in a few hours the patient's bowels were in perfect tune.

Father Hennepin administered confection of hyacinth, a "precious specific"; when Father Gabriel fainted, confection of hyacinth revived him. He brought with him also a good supply of Orvietan and used it for the sick Benedictine monks of Picardy; treated dropsy with powdered broom seed one dram, in one and a half glass of white wine every morning, followed by two ounces of olive oil; for biliary calculus they used ether three, turpentine two, dose half a dram twice daily in whey or broth.

"Ratafia de brou de neu" was of green walnuts and cloves.

Peasants used a decoction of colocynth as a purge.

1830 a child was killed with bitter almonds administered for worms, and

two deaths occurred in Paris from black hellebore recommended by a quack to be taken in cider.

Colchicum was known as "tue chien" dog bane, supposed to be the active part in "Eau de Medicionale de Housson," a famous cure for gout.

Elixir de St. Aur was a distillate from eleven aromatics, Capuchin cordial was from seven, Chartreuse cordial from eighteen ingredients.

Folk medicine had little usefulness as Cartier obtained remedies from Indians. Herbs of St. John, mullein, mugwort, and vervain are hung over the door on St. John eve to keep off witches and lightning.

At Aix and Marseilles country folks bring "de herbs de St. John" into town on midsummer morning and every one buys them to deck their houses and throw on the fire for luck, but they must be plucked before sunrise with the dew on them. "Great powers lie in stems of hypericum dug on the feast of St. John, in twigs of wild cherry cut off on sacred anniversary of St. Martin, and the sympathetic aspen wood split up at noon when the sun is in the sign of Virgo, and the moon is in a crescent."

In Normandy morning dew is a cosmetic; in Brittany it cures fevers.

When the vine is pruned drops exude, the vine weeps, and these tears are a sovereign remedy for eye troubles.

Heliotrope gathered in August, wrapped in bay leaves with a wolf's tooth, prevents anyone from speaking an angry word to the wearer.

Balsam of bats was made from adders, bats, sucking whelps, earth worms, lard and stag's marrow.

The waters of Lourdes began to cure (1858); 250,000 persons go yearly to bathe three minutes, and stocks of crutches are left learly. A mail clerk two years in bed, both legs paralyzed, was cured in two days.

The Academy of Medicine (1874) stopped the sale of a salve that cured everything from toothache to tuberculosis, and a cure for hydrophobia before it developed, and a cure for hydrophobia, caries, angina, and typhus in cattle. A French medical specialty (1900) sold for $115,000.

A rich Parisienne (1901) paid 10,000 francs to a doctress for a vision of angels and a few bills. The French apothecaries (1575) subscribed to an oath part of which was to disown and shun as a pestilence, the scandalous and pernicious practices of quacks, empirics and alchemists.

There was a mysterious mixture for which fabulous prices were paid, compounded of powdered coral, pearl, sapphire, emerald, topaz, gold and silver leaf, grease of serpent's toad and unicorn. It was considered indispensable in every household and found in almost every home, especialy in Provence and Languedoc.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, ETC.

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Secretary:
George Hohmann, 115 West 68th St., New York.

Treasurer:
Fred. A. Leslie, 115 West 68th St., New York.

Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities: None.

Sig: CURT P. WIMMER.

Sworn to and subscribed before me this 30th day of September, 1914.

ELEANOR KERKER,
Notary Public.

(My commission expires March 31st, 1915.)

Professor George C. Diekman.

ESTIMATION OF VIOFORM IN GAUZES.

E. J. von Itallie had occasion to examine a number of samples of gauzes and cottons for their Vioform (iod-chlor-oxy-quinolin) content. He states that he found in literature bearing on this subject only two methods which could be employed. Both of these methods were subjected to a critical examination by (Utz Phar. Zentralh. 49 (1908), 383), and both were reported as faulty. Utz reports that in one of these methods the gauze or cotton is ashed, a process which causes a volatilization of at least 10% of the chlorides. V. Itallie has recommended the following method and states that it yields good results. From two to five grammes of the gauze or cotton to be examined are placed in a Soxhlet extraction apparatus and extracted during a period of two hours by means of half-normal alcoholic potassium hydroxide. The apparatus is then filled with alcohol and the extraction continued for two further hours.

The extract thus obtained is diluted with ten times its volume of water, phenolphthalein solution is added and then nitric acid until all color disappears. The vioform which is thus precipitated is collected on a filter, washed with water and dried over sulphuric acid. For the complete fixing of its halogens vioform requires 70.66% of its weight in silver.

The Detection of Carbon Disulphide in Volatile Oils.

F. Utz states that the best method for this purpose is that of E. Kurowski,

as modified by himself. The method is as follows: To the suspected oil is added about one-fourth of its own volume of alcohol. The mixture is now subjected to distillation, and 5 to 10 cubic centimeters of distillate collected. The distillate is then mixed with an equal volume of an acetylaceton-thallium solution. This solution is prepared by boiling for a protracted period thallium carbonate with acetylaceton dissolved in alcohol. In this manner an alcoholic solution of acetyl-aceton thallium is obtained. This reagent reacts with carbon disulphide with formation of a voluminous precipitate possessing an orange-yellow color. Depending upon the quantity of carbon disulphide present in the suspected oil there will be noted at once or after standing, a yellowish turbidity, and sooner or later the characteristic yellow-orange precipitate will be noted. The author states that the presence of 1% of carbon disulphide, or even lesser quantities, can be shown with certainty. Oils containing sulphur compounds among their components do not respond to the test. Another method described by Utz, is that of E. Schmidt, and is as follows: The suspected oil is placed in a retort and connected with a condenser and distilled on water-bath. The distillate is received in a small quantity of absolute alcohol. After the distillation is completed the condenser tube is washed out with absolute alcohol, and the washings mixed with the distillate. A small quantity of alcoholic potash is now added and the mixture heated gently. After cooling the mixture is acidified with acetic acid, and a solution of copper sulphate is added. In the presence of carbon disulphide a yellow precipitate of suboxide of copper will form either at once or after standing for several hours.

Treatment of Hay Fever.

H. E. Goetz reports upon the results of his investigations in the treatment of hay fever or Coryza vasomotorica periodica, describing a method which in his hands produced much better results than some of the older methods of treatment. In persons subjected to this very troublesome disorder Goetz recommends, beginning several weeks prior to the expected attack, or time when the attack may be expected, spraying of the mucous membrane of the nose with Dobell's solution, night and morning, followed by spraying with a 10% solution of camphor-menthol in paraffin.

The patient who has already been subjected to an attack of hay fever, and where the disease is well established, is at once given the following:

℞ Dionin 0.01500
Atropin, sulf..... 0.00012
Caffein, citric..... 0.00750
M. f. pulv. det. in caps amyl.

This dose is repeated every two hours until such time as the mouth and nasal cavity becomes dry, and then is repeated every four hours to prevent a recurrence of symptoms. The author states that after the ingestion of several doses of the powder the patient feels much relieved, and, except in very severe cases, is able to follow his usual vocation. He ascribes this favorable action to the combined effect of all three medicaments. He further states that he has not noted any disagreeable

side effects, nor have the patients complained of constipation.

Goetz is particular to state that he is not recommending this form of treatment as a "cure all," but says that it has given better results than any other of the so-called cures for hay fever, at least in his hands.

New Remedies, Specialties and Formula.

The following are noted for the purpose of calling attention to the great number of these articles with which the foreign market is flooded:

Empyrol is a colloidal tar dispersion, containing about 50% of oil of cade. Used in exema, purities, etc.

Ilun is the name given to a chemically pure sample of Kreatinin, and which is employed in ascertaining the functional activity of the kidney.

Gonoktein, formerly known under the title of Gonotod, according to an analysis made by Dr. W. Milota contains the following: Extracts of Uva ursin, Rheum palmatum, Erythraea centaureum and Menyanthes trifoliata, Kawa Kawa resin, Bismuth subnitrate and Oil of Juniper.

According to H. C. Howard (Lancet No. 4728) the juice of the potato possesses peculiar pain-quieting properties. He has employed it with good results in inflammatory conditions of the joints, gout, rheumatism and sprains, and stated that the pain subsides in a very short time after application. The juice is prepared by expressing the raw potato and removing the starch from the expressed liquid. This is then concentrated to small bulk and mixed with an equal volume of glycerin. This liquid before using is diluted with 3 to 4 parts of water and is applied to the part by means of a compress. Howard also employs the remedy in the form of a plaster, liniment and ointment with excellent results.

Mercurioleolo is the name applied by Sereno to mercury cholesterin oleate. This substance is a semi-solid mass possessing a light yellow color and is soluble in ether, benzol, chloroform and oils in all proportions. It is usually applied by inunction, and for this purpose is mixed with enough oil of almond so that 1 cubic centimeter of the solution contains 0.01 gm. of metallic mercury.

Thiorubrol is a name applied by Wolo A. G. to an organic colloid containing sulphur. It is employed as an odorless sulphur bath, and is stated to yield better results than ichthyol and potassium sulphide, and this without the disagreeable odor accompanying the use of the latter.

Bolus-Biozyme is employed in the treatment of catarrhal conditions of the mucous membranes of the vagina. It is prepared by mixing a pure yeast product with a thoroughly sterilized sample of bolus alba. The two must be mixed in a thorough manner, sifted and then dried at a temperature not exceeding 35°. Sugar in powder form to the extent of 20%, is then added and the article is ready for use.

Castycal. Under this title is marketed a preparation said to have given excellent results in the treatment of various inflammatory conditions of the lungs, grippe, asthma and whooping cough. It contains Elixir Castaneae

vescae with thymol and potassium sulphoguiacolate.

Gramonervin is the designation applied to tablets whose chief constituents consist of butyl-chloral-hydrate and Calcium glycerophosphate, and which are said to be of use in the treatment of hay fever.

Benzin-Substitutes.

Owing to the scarcity and the prohibitions against the sale of benzin on the Continent, it has become necessary to devise mixtures which might be employed in the place of benzin. Some of such, proposed by Dr. Karl Dieterich of Helfenberg, are as follows:

1. Benzolspirit. (a) 70 parts of 95% denatured alcohol are mixed with 30 parts of benzol. It is recommended that the benzol be added to the denatured alcohol, slowly under constant agitation. Admixture in reverse order is to be avoided. (b) 50 parts of 90% denatured alcohol, 20 parts of technical acetone and 30 parts of benzol are mixed in the following manner: Mix the alcohol and acetone first and then add the benzol gradually under constant shaking.

2. Benzinspirit. (a) 70 parts of 95% denatured alcohol are mixed with 30 parts of benzin, the benzin being poured into the alcohol. (b) 50 parts of 90% denatured alcohol, 20 parts of technical aceton and 30 parts of benzin are mixed in the following manner: Mix the alcohol with the aceton and then gradually add the benzin.

3. Spiritether. (a) 90 parts of 95% denatured alcohol are mixed with 10 parts of sulphuric ether. (b) 90 parts of 95% denatured alcohol are mixed with sulphuric ether 10 parts and naphthalin 1 part. The naphthalin is soluble in the mixture if thoroughly agitated.

4. Acetonspirit. (a) 10 parts of denatured alcohol, 95%, are mixed with 30 parts of commercial aceton. (b) 50 parts of 90% denatured alcohol are mixed with 50 parts of commercial aceton.

5. Petroleum mixtures. Petroleum mixed with benzin or benzol in the proportion of 2 to 1, or petroleum 3 parts, aceton 1 part, or petroleum 90 parts, ether 10 parts and naphthalin 1 part.

Colorometric Estimation of Uric Acid.

If uric acid is treated with a solution of phosphomolybdic acid and di-sodic phosphate, a blue coloration is noted. The result is negative when applied to albumen, peptone, albumenose, creatinin, creatin, sugar, etc., unless a solution of sodium or potassium hydroxide is used together with the solution of phosphomolybdic acid. The blue color produced as above with uric acid remains permanent for several hours. Riegler, in Phar. Zentr., 55, No. 34, 1914, describes a method for the estimation of uric acid, based on the above named reaction. The method is described in detail and the needed apparatus and solutions are enumerated carefully. He also recommends that albumin if present in urine be first removed, and that any free acid be brought into solution with sodium bicarbonate.

Treatment of Plumonary Tuberclosis by Means of Copper.

Dr. E. Moewes and K. Jauer, in

Muenchener Med. Wochensch. 1914, report as follows:

In their experiments they employed Lecutyl-Bayer, a solution of an organic copper combination, each cubic centimeter of which equals 0.01 of copper, the remedy was employed externally, by inunction, in form of an ointment, also in the form of intravenous and intramuscular injections.

Treatment by inunction was soon abandoned, because of severe skin irritation produced, as was medication by means of administration of capsules containing the remedy. The gastric irritation in the latter case was very severe and of long duration.

Intramuscular injections were in all cases painful, despite the use of novocaine. Intravenous injections, under observance of proper care, were usually painless. The remedy is employed in quantities of ½ cubic centimeter, gradually increased to 2.50 cubic centimeters, each dose being diluted with from 5 to 10 cubic centimeters of psysiological salt solution, and administered twice a week. In some cases the injections were followed by an increase of temperature, vomiting and diarrhoea. In one case the catarrhal condition of the lungs was much increased.

In only 18 of the cases was it possible to continue the treatment for the prescribed length of time, in all others, because of the side effects, the treatment had to be discontinued. Improvement was noted in the case of 8 patients, neither of whom however was suffering from the disease in an advanced stage. All advance stage cases resulted fatally. The observers came to the conclusion that while the remedy did not produce harmful results, it could not be claimed that its action was beneficial. In such cases as were seemingly benefited by this mode of treatment, it was a question whether the results obtained were not possibly due to the general better surroundings in which the patients found themselves.

ARTIFICIAL SPONGES.

These may be made from Viskose, a xanthogenic acid ester of cellulose. This substance is treated with an aqueous solution of caustic soda, until the mixture is of uniform consistence, and is allowed to stand for a period of several days. The dough like mass is then kneaded with hemp fibres cut short, and selected crystals of sodium sulphate. The size of the latter will determine the pores (size of) in the artificial sponge. Pieces of convenient size are cut out of the doughy mass, and subjected to the action of diluted sulphuric acid, which will cause the viscose to coagulate, and become water insoluble. The cyrstals of sodium sulphate are removed by dissolving in water.

ORCHESTRA.

Friday evening, November 20, the Orchestra held its Annual Meeting with Mr. Kinane in the chair. Mr. Ambrose was re-elected Director, Miss

O'Connor, Business Manager. After the business meeting, a rehearsal was held. Dr. Ballard and his new Cello are certainly some additions to the players. From all appearances, a busy year is in store for all the members.

Note.—Any talent hidden under well meant modesty would be highly appreciated and surely will materially aid in the success of the coming busy year.

KAPPA PSI.

Gamma Chapter.

The holiday session is affording a little breathing spell for the K. P. Goat, which "bucked" Bartlett, Dowsey, Burns, Miller, Sinclair and Lehman into the Fraternity. The occasion was celebrated by a full turnout of the active and most of the alumni men. The men are all enthusiastic and a banner year is expected.

PHI DELTA CHI.

Gamma Active

While it is true that a common bond exists between the students at the College, since their aims and objects are in the same direction, the bond that links one fraternity man to another is a much stronger one—it is a bond of brotherhood.

For this reason Phi Delta Chi has been rather slow and careful in the selection of its candidates and to date the following have been initated: Ackerman '16, Palmer '15, and Kemp '15.

Our next batch of victims will number about eight and we are right proud of them.

Phi Delta Chi extends to all a merry Christmas and a successful new year.

B. O'MALLEY,
Editor.

TAU EPSILON PHI.

Alpha Chapter.

The winter months of activity are with us again and their presence is being heralded by a never-to-be-forgotten smoker to be held on December 28th. The Committee headed by Bro. Schwartz, '15, is exerting itself to its utmost to make that affair even surpass the success of last year's event.

Alpha congratulates itself on obtaining at its last initiation K. Berger, '16, W. Levitt, '16, L. R. Brown, '17, E. May, '16, and J. Maslon, '16. H. A. Cohen, '17, and C. Mossowitz, '16, are pledged.

The Ball and Banquet Committee have been appointed and have already started things humming.

COUNTER PRESCRIBING.

G. A. Richardson, '16.

Once counter-prescribing was a folly but now it has become a business.

To those who cannot display sufficient knowledge of a pharmaceutical education and are compelled to prac-

tise this unlawful business, to make a living on, there must be three factors at least and any one, or all of these will sooner or later come crashing down upon their benighted heads.

1—To the regularly licensed physician alone is given the right to treat the sick and injured. Men who have spent years in deep study and at great expense. Therefore, they have a perfect right to complain because of counter-prescribers, as it is their only means of making a living. Would you not complain if a drug store opened near you and cut prices far below than what you could buy for? Same with the doctor. He cannot afford after all the years of hard study and the money he has spent in acquiring his knowledge, to treat people for twenty-five or fifty cents and give medicine besides. You are not licensed to practice medicine! How quickly you would complain if other professional men, say dentists or lawyers, were to put up prescriptions and practice pharmacy without a license.

2—Why do doctors give their own medicine? Excluding Homeopaths some, because to draw their patients to them, because the druggist on the corner will try to help them for less than his fee and his prescription. If druggists will show the doctors that they are proficient in the art of compounding medicines and prescriptions and help the doctor by tending to his profession, namely, pharmacy, the doctor would in turn help the druggist by sending him his prescriptions.

3—'Tis true that druggists know a little physiology to enable them to classify medicines as to their uses, but what does he know of diagnosing disease? Nothing! 'Tis just guess work with most of them. Who suffers by this—the druggist himself because the doctor will soon know of it and the patient. How often have we heard that the medicine the druggist prescribed, in some cases did no good, others created more pain, still others which have killed. There is no sympathy coming to the druggist as he deserves all he gets, but to the public, there is, to those poor ignorant folk who know no better.

Let the pharmacist practice his profession with dignity and proficiently, as surely there is sufficient in the art to occupy his time without infringing on another profession, so as to make the doctor feel that his services and help are indispensable in his practice and in turn will look up to and appreciate the art of pharmacy and the pharmacist himself.

A SHAMEFUL SIGHT.

I saw him take her in his arms—
The window shades were right;
He gazed upon her half-draped charms,
The day was full and bright.
A dozen people stopped and stared
Upon this shameful sight.

He clasped her soft and pearly throat;
He stroked her shining hair.
He stooped, with hand that seemed to dote,
And touched her ankle bare.
And she before that window stood
And did not seem to care.

He lifted high a lacy gown,
A tremor o'er me ran;
He slipped it o'er her dainty head,
No protest she began—
She was the dummy girl, and he
The window-dresser man.

—Puck.

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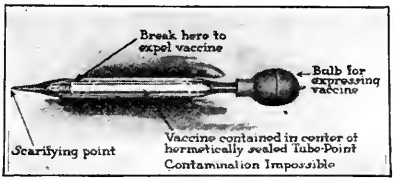
AN IMPORTANT IMPROVEMENT

Tube-Point Glycerinized Vaccine



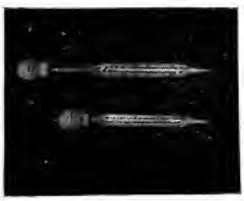
The Mulford Tube-Point is the greatest advance made in perfecting Vaccine Virus.

It furnishes a sterile point for immediate use.

It is made entirely of one piece of glass, which is easily sterilized; no joints to become loose and allow contamination of the virus.

The vaccine is hermetically sealed within the tube-point and cannot be contaminated.

The tube-point is easy to use and does not suggest any cutting or surgical operation to the patient



1. Place the rubber bulb over the small end of the tube point, so that the end of the glass tube protrudes through it.

2. Scarify with the point, drawing no blood.

3. Break the tube inside the bulb.

4. Remove end of capillary tube from bulb.

5. Break off the point at the file mark.

6. Expel the virus from the tube directly on the scarified area by means of the rubber bulb and rub in with virus with the end of tube.

Dr. J. N. Hurty, Secretary of the Indiana State Board of Health and an Ex-President of the American Public Health Association, commends our new tube-point, as follows:

"We are glad to receive your new vaccine points.
"I believe these points reach perfection. It may now be said that the vaccine administration problem has been settled. The idea is easily the best one yet invented. I shall distribute a few of these to some of our most active health officers, telling them where the points came from, and recommending them.
"I congratulate you most heartily upon this advanced improvement over previous-style points."

Supplied in packages containing 10 Tube-Points (10 vaccinations), and in packages containing 1 Tube-Point (single vaccination).

For a reliable vaccine, the preparation of which is surrounded with all of the safeguards that science has devised, SPECIFY "MULFORD VACCINE TUBE-POINT."

H. K. MULFORD CO., Philadelphia, U. S. A.

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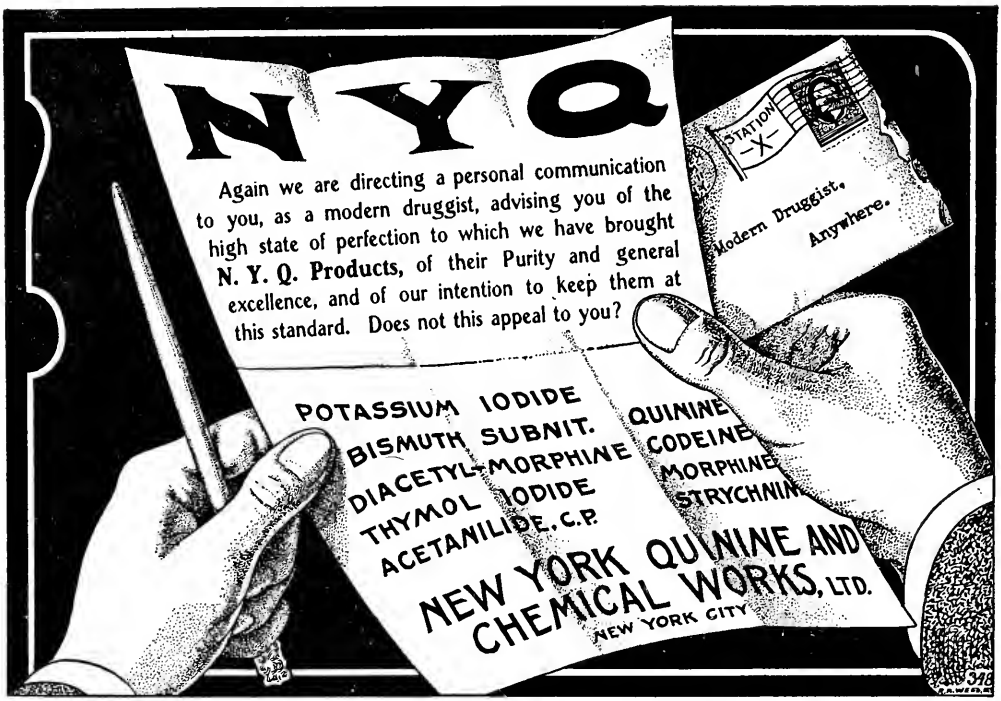

The patient's adviser is the doctor

The doctor's assistant is the druggist

The druggist's servant is

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