

THE MASK

OF KAPPA PSI
PHARMACEUTICAL
FRATERNITY



FIFTH ANNIVERSARY NUMBER
MU OMICRON PI

DETROIT INSTITUTE OF TECHNOLOGY

April, 1932

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OF THE
Kappa Psi Pharmaceutical Fraternity
Issued under the direction and by the authority of
THE GRAND COUNCIL

THE MASK

(EXOTERIC)

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The Agora, VIII

(ESOTERIC)

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THE MASK

of *Kappa Psi Pharmaceutical Fraternity*

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of the U. S. of America

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Kappa Psi Pharmaceutical Fraternity Directory

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THE MASK

VOL. XXIX, No. 2

APRIL, 1932

WHOLE NUMBER 118

AN EXPRESSION OF APPRECIATION

By JAMES KOICH, Special Issue Editor

Mu Omicron Pi is very grateful for the privilege of presenting material for this issue of the Mask.

It is our desire to cooperate in whatever way we can to carry out the policies of the Fraternity. This privilege also we feel will afford a medium of introduction of our chapter to the other chapters of Kappa Psi and have a tendency to bring us in a little closer relationship to them.

The Editor wishes to take this opportunity to express his appreciation to all who have so splendidly exhibited their loyalty and interest in making this work possible by their liberal contributions.

GRAND CHAPTER NOTICE

The Grand Chapter takes pleasure in announcing the granting of two charters as follows:

RHO CHAPTER, University of Kansas, Lawrence, Kansas.

TOLEDO GRADUATE CHAPTER, Toledo, Ohio.

Details concerning these chapters and their installation will appear in the next issue of THE MASK.



DETROIT COLLEGE OF PHARMACY

A BRIEF HISTORY OF THE COLLEGE OF PHARMACY OF THE DETROIT INSTITUTE OF TECHNOLOGY

By ESTEN P. STOUT, *Dean*

During the summer of 1890 Dr. E. L. Shurley and Dr. E. C. Skinner of the Detroit College of Medicine talked with George S. Davis of Parke, Davis and Company. The subject under discussion was the opening of a pharmacy college in connection with the medical school. Mr. Davis was interested in the subject as he wished to have a school in the city, where he could send his employees.

He offered the use of his company's buildings and laboratories for the college. This offer was rejected but he was allowed to supply crude drugs and other materials for the school.

The school became a reality in January, 1891, when the first term started. Dr. John D. McGraw was the first dean. Besides Dr. McGraw there were nine other faculty members.

The opening enrollment was sixty students, who attended school in the evening, as this was the most convenient time for them. The curriculum consisted of the following subjects, chemistry, pharmacy, materia medica, manufacturing pharmacy and practical pharmacy. The course was divided into two terms of work. The total cost for both terms was one hundred dollars.

In 1892 Dr. John E. Clark succeeded Dr. McGraw as the dean. The official name for the school was School of Pharmacy, Detroit College of

Medicine. In February 1903 it was changed from an evening to a day school. The school, in time outgrew its meager quarters in the medical building and moved to its present address on John R and Witheral Sts. This happened in 1906, and at this time Prof. Wm. H. Allen succeeded Dr. Clark as dean.

During this year the school severed connections with the medical college, and under Dean Allen was operated as an independent school until 1908 when it was incorporated with the Detroit Institute of Technology, under the title of College of Pharmacy of the Detroit Institute of Technology. Dean Allen retired in 1915 and was succeeded by Dr. E. R. Jones who remained with the school until 1920.

In the spring of that year Dr. Jones becoming affiliated with an Industrial firm resigned and was succeeded by Prof. E. P. Stout who had served on the teaching staff since his graduation in 1911.

The school has made steady growth both in facilities and enrollment and at the present time is rated among the class "A" schools of the United States.

In the fall of 1925 the two year course was discontinued in favor of the 3 year course leading to the degree of Pharmaceutical Chemist (Ph.C.) The compulsory four year curriculum leading to the degree of Bachelor of Science in Pharmacy (B.S. Phar.) became effective in September 1930.

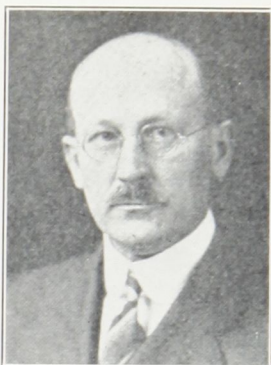
OUR FACULTY MEMBERS

WALTER H. BLOME, Ph.C., B.S., M.S.—Graduate of Monroe High School 1895. Entered the Literary Department at University of Michigan, 1895. Entered the pharmacy department 1896. Was assistant in Pharmacy at U. of M. 1900-1903. Was acting instructor in Pharmacy at U. of M. 1903-1905. He also was professor of Pharmacy at Alabama Polytechnical Institute, Auburn, Alabama, 1905-06.

He entered Drug store work in retail drug stores from 1897-1906. Held position in Scientific Department of Frederick Stearns & Co. Since 1906 he has served as an assistant chemist, chief chemist, chief pharmacist and present Pharmaceutical Director. In charge of Industrial School, Frederick Stearns & Co., 1908-10. Professor of Pharmacognosy in Detroit Institute of Technology since 1907. Charter member original chapter.

ESTEN P. STOUT, B.S., Ph.M.—Dean Stout after graduating from the high school at Jackson Center, Ohio, his birthplace, attended two years at Milton College. In 1909 he entered the Detroit Institute of Technology and graduated with the Ph.G. degree in 1911. In the fall of the same year he was given a position on the teaching staff and is about to finish his 22nd year of service with the Detroit Institute of Technology.

In addition to his activities at the school he has contact with certain industrial manufacturers as consulting and experimental chemist. Before entering into the teaching profession he acquired experience in Mfg. Pharmacy with the Ray Chemical Co. and later wholesale experience with the Michigan Drug Co. Dean Stout is a member of the American Chemi-



DR. W. H. BLOME



DEAN E. P. STOUT

cal Society, The American Pharmaceutical Association and a charter member of the Mu Omicron Pi Chapter.

J. VERNE CRANDALL, B.S., M.S.—Prof. J. V. Crandall is a native of Central Michigan. After attending the schools of that section he entered Bethany College at Bethany, West Virginia. From here he went to Western State Teachers College at Kalamazoo, Michigan, and received a life certificate. The next two years were spent as a chemistry teacher in the public high schools.



PROF. J. V. CRANDALL

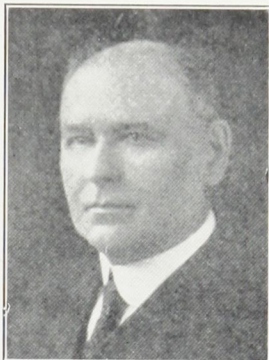
The next three years were spent at the University of Michigan where both B.S. and M.S. degrees were obtained. From the University he became an instructor in the chemistry department of our college of pharmacy in Detroit. He is now head of the chemistry department. Prof. Crandall is a charter member of the original chapter. He is a member of the American Pharmaceutical Association and has held several offices in

the Detroit Section of the American Chemical Society. He acts as consulting chemist to some of the industries here in the city.

JOSEPH L. DORION, Phar.B.—Instructor in Pharmacy. Honor Graduate Arnprior High School, Arnprior, Ontario. Graduate Ontario College of Chemistry and Pharmacy 1925. Graduate Pharm. B. University of Toronto 1926. Seven years experience as dispensing chemist.



PROF. DORION



DR. H. C. EMMERT

HERMAN C. EMMERT, M.S., M.D.—Doctor Emmert was born in Michigan. Attended Public and Parochial schools and Concordia College, Ft. Wayne, the Medical College of Indiana. Operated clinical laboratory at Indianapolis. Served as house physician in charge of Eloise Sanitarium and Hospital five years. Private medical practice many years. Became an instructor in 1924. Professor in 1926. Is a member of American Medical Association, Michigan State Medical and Wayne County Medical Society. Is a member of original chapter.

THE CHILDREN'S FUND OF MICHIGAN

By PROF. J. V. CRANDALL

"To promote the health, welfare, happiness and development of the children of the State of Michigan primarily, and elsewhere in the world."

In April of 1929, Senator James Couzens gave ten million dollars for the welfare and happiness of children. He created the Children's Fund of Michigan for the purpose of carrying out the work planned by the Trustees chosen by him.

It is intended that children of any race, creed, color or social condition shall be given opportunities that will make for independent, robust, intelligent and mature life. The effort to produce healthy and enlightened citizenry extends from prenatal life through infancy and childhood.

Senator Couzens has stipulated that the annual disbursement of approximately \$700,000 will be completely used, both principal and interest, in twenty-five years.

In the activities, it is purposed that the fund integrate itself into the life, health projects, and social machinery of the state and that after it has demonstrated the value of the work to the public, such work will

be taken over by the public for perpetuation. The Fund does not intend to duplicate efforts already in evidence.

The major emphasis has been placed on child health programs throughout the State of Michigan. A survey of the existing machinery for promoting healthy childhood in the state showed many gaps of grave consequence. In rural regions where these gaps were most pronounced, an oral hygiene movement has been launched; public health nurses provided; and women physicians sent for prenatal education.



FACULTY MEMBERS

Dean Stout, Dr. Emmert, Prof. Crandall, Prof. Dorion

A review of the 1930-31 annual report lists the following projects and studies which are being carried on under the auspices of the fund:

1. *Child Health* in which field 103 workers in different sections of Michigan examined and helped 150,000 children during the year.

2. *Dental Program*, a service which reached 73,471 children advising prophylaxis in certain cases and in others inserting fillings and making extractions.

3. *County Nursing Program*, through which the Children's Fund gives the services of a public health nurse for child health purposes to certain counties hitherto without such services, has not changed materially in this second year, except in size of volume of work. Thirty-three nurses are now in the service of the Children's Fund, and at work in thirty-two counties. County committees of local citizens are an important part of this work. Through them knowledge of child health practices is spreading widely. While school health still holds the major position in the program, the importance of prenatal instruction and medical supervision, as well as of the proper feeding and care of infants and pre-school children, is being recognized. Inspections given school children have numbered 40,439. Visits numbering 16,006 have been made in the interest of infants, pre-school and school children.

4. *Consolidated County Health Units*. A project designed to show that it is practicable for counties with limited taxable resources to unite in a health district for the welfare of their children. Supervisors of each

cooperating county vote to join a health district and appoint two of their numbers to a district board of health. The Children's Fund finances a staff composed of a Health Officer, the needed number of nurses, a dentist, and a sanitary inspector. This staff attacks the problem of child mortality and child morbidity all along the line. Inspection of school children, improvement in sanitary conditions of schools, of water and milk supplies, control of communicable diseases, and attention to individual needs of individual children are among the things done.

5. *Infant and Prenatal Classes.* During the first half of the year the two women physicians engaged in this program, held mothers' classes in series of six weeks each including as topics, prenatal care, infant care, the pre-school child, food for the family, child management and training, and home hygiene.

In October a new type of program was introduced which combined mothers' classes and health examinations and lengthened the period of service of the health educationist to three months in a county. The new program has included some work in tuberculin testing and in immunization.

6. *Health Education.* The State Department of Public Instruction using a subsidy from the Children's Fund, completed a course in health education especially adapted for use by teachers in rural areas. Teacher training schools at Marquette, Ypsilanti, Kalamazoo and Mt. Pleasant, were given grants with which to engage instructors in health education who are instructing the future teachers of the state in this and other courses in public health. A similar grant was made to Marygrove College in order to inaugurate health education in the parochial schools. Another grant to the Commissioner of Public Instruction influences the County Normal Schools, and the young women who are trained there for teaching. In addition to these endeavors to forward the spread of sensible knowledge of health and health habits, the staff of Child Health Division of the Children's Fund has carried on an intensive piece of educational work with physicians, nurses, teachers, children and parents, and has developed for use in the field, educational materials which may be easily interpreted by the rural group with which we are working.

7. *Research,* in which direction grants were renewed to the two undertakings to which money was given last year. \$22,000 was given to the inquiry being carried on by Dr. Russell W. Bunting at the University of Michigan Dental School into the causes of the decay of children's teeth. \$20,000 was given to the inquiry into causative factors leading to juvenile delinquency carried on by the Yale Institute of Human Relations in Detroit. During the year, grants were made to two new projects. A sum of \$15,300 was given to a study being carried on by Samuel J. Lewis, D.D.S., into orthodontic problems, particularly dental growth, and the growth of bones. A sum of \$12,000 was given to the St. Vincent de Paul society of Detroit for an inquiry into problems relating to Childhood Tuberculosis, which the Society is carrying on in cooperation with Henry Ford Hospital under the direction of Dr. J. A. Johnston. A building has

also been completed this year at 660 Frederick street, Detroit, on ground adjacent to the Children's Hospital of Michigan, in which is a combination hospital and medical research laboratory. The medical staff of Children's Fund will cooperate in pursuing inquiries in this laboratory pertaining primarily to problems of nutrition. Dr. Icie G. Macy, previously on the staff of the Merrill-Palmer School, has been engaged as Director of this work.

The above list of projects, selected from a series of many, gives some idea of the service which the Children's Fund of Michigan is rendering directly to the state and indirectly to the nation and the world. The far-reaching effects of this work in the upbuilding of a healthier and cleaner generation can never be adequately determined.

THE NUTRITIVE ASPECTS OF HUMAN MILK

By ROBERT FLEISCHER

In an interview with Dr. I. G. Macy, I have secured the following data which gives a survey of the present knowledge on human milk.

In spite of the progress that has been made in the past years on the artificial feeding of infants, pediatric advice still stresses the preference for breast milk whenever conditions make it possible.

Statistics of infant mortality and morbidity show that breast feeding is an actual nutritious advantage in early life of the infant while a risk is taken if fed artificially.

It is a well recognized fact that in some instances mother's milk has been unsatisfactory and a formula has been carefully prepared chemically and biologically and proved beneficial. As a substitute the milk of animals is usually assayed and brought up to the breast milk protein content of the mother. Milk contains varying proportions of fats, carbohydrates, minerals, and water. Also "little things" as science calls them. These "little things" contain probably salts of unknown character in minute amounts which in many cases decide the child's failure or success. It can be seen, the difficulty in trying to replace these in artificial breast milk.

As experiments have shown no two women have the same milk, the proportions vary, some close and some extremely wide, which are effective mainly by heredity, amount and kind of food intake, environment, conditions as fresh air, sunshine and intensity of work, emotional make up of the individual, and anatomical structure of the mammary gland.

The new phase of science research is to prepare the body of the mother by the application of nutritional principles to the mother's diet by which she will be able to secrete a milk that is adequate in quality and quantity also, to produce a milk not equal to ordinary human milk but to surpass it in excellence.

The food factors in infant feeding are of the various constituents of

milk that have been considered separately. In the experiments of Czerny and Keller in which they treated the nutritional disturbances of an artificially fed baby by supplying him with a food element in milk they thought insufficient for his development. They claim fat, not casein, is the cause of nutritional disturbances. Protein in milk has been designated as a digestive disturbance in infants. There is a distinctive difference in the curd formed in mother's milk and cow's milk. The curd in human milk has a fluid-like or flocculent nature while in cow's milk it is a dense hard mass which is difficult to digest. This difference in curd formation has been explained by the fact that the casein of human milk is less easily precipitated by acids and salts while the clot formed is looser and more flocculent. The proportional amount of casein and albumin in human milk has been demonstrated to be of real value to the infant. In one experiment Cocchi removed half of the casein from cow's milk and added Lactalbumin in the proportion found in breast milk. Babies thrive on this mixture. It is not only necessary to satisfy the necessary requirements of the infant but to give consideration of the Lactalbumin requirements.

Protein of milk is an essential tissue building substance. Its total content in normal breast milk fluctuates between 1.0 and 1.5 per cent. In abnormal specimens it extends from 0.7 to 3.5 per cent. Too low a percentage of protein will be followed by malnutrition even though there is no loss in weight.

Murlin states that under certain circumstances mother's milk may be retained in the child's body while in cow's milk a considerable part is eliminated. The infant will therefore add weight to his body if subject to mother's milk.

The fat content of breast milk runs around 3 to 5 per cent. After a feeding of human milk the stomach empties about two hours later while in cow's milk it is delayed to about twice the time. Understanding they both have the same fat content. Normal breast milk contains 7 per cent Lactose, a higher percentage than found in cow's milk. Milk sugar causes digestive disturbances in the infant of a fermenting nature. This cannot be overcome as it occurs with remarkable constancy because of bacterial flow of the intestine to the fermentative type or due to products of the indigestion of sugar.

Bosworth places his emphasis on the importance of mineral salts in the system. He states that the influence of the salts on the mechanical condition of milk after it reaches the stomach and of the digestibility of the food components are subjects that require further investigation. He further says the calcium and phosphorous in breast milk are better utilized than in cows milk. Statistics and records show that 55.5 to 82.0 per cent of breast milk are utilized as compared with 35.09 to 64.95 per cent of cow's milk. It has been shown that breast milk contains twice as much sodium chloride and almost three times as much potassium chloride as cow's milk. Other minerals such as iron, copper, and iodine have been found in variable amounts. Infants who have had a deficiency of calcium

content are usually diseased with rickets. In cases of anemia in infants the mothers have been treated with iron salts. In the case of goitre, iodized salt is prescribed.

Analysis of breast milk for Vitamin Fat Soluble "A" shows the same content as in cow's milk. Xerophthalmia will be prevented if the flow of the mother's milk is sufficient. Vitamins B and G are also found in variable amounts. If Vitamin C is contained in sufficient proportion it will prevent scurvy. Vitamin D is found in very minute amounts.

Breast milk varies in volume and composition depending upon the individual woman. These changes are noted from day to day during lactation period and are important to the nutritional well being of the baby.

Under standardized methods of expression, sampling and analysis at four-hour intervals during the 24-hour day, changes have been observed in the flow and chemical composition of breast milk that are of nutritional and clinical significance. The quantity of milk secreted by a lactating woman is dependent on the individual capacity of the mammary gland. There is a tendency for the milk to decrease during the day and increase during the night. A range of 25 per cent difference was found in the largest and smallest secretion in a 24-hour day. Under the same rigid conditions the nitrogenous content of milk showed a characteristic daily rise in the afternoon from 2 P.M. to 6 P.M. Simultaneously the total ash, calcium and phosphorous showed increased content from a minimum at 6 and 10 A.M. to a maximum at 2 P.M. Average per cent difference was 11 per cent, 14 per cent and 15 per cent. The chlorides of milk appear highest in the early morning and late evening and low during the day.

When the food of the mother is insufficient or excessive in calories for a period of time the quality of milk will change. Environment contributes an undefined condition. Excessive exercise tends to lower the milk flow, and quality of the milk. If the mother becomes bothered with nervous disturbances there will be an increased amount of fat and protein.

A study of the chemical constituents before and after a woman had taken cod liver oil and yeast showed no enrichment of milk but a better utilization of the calcium and phosphorous content, and an increased vitamin B content.

Menstruation decreases the milk fat. Colic, indigestion, diarrhea and loss of weight affect the flow of milk.

It has been demonstrated that some of the milk constituents vary. They usually fluctuate about a level, that is characteristic for a particular individual. Mother's milk is being subjected to careful chemical and biological investigation in respect to its adequacy in many known details and the possibility of its improvement through maternal care.

ATHLETICS AT DETROIT INSTITUTE OF TECHNOLOGY

By HUGH S. McGRANAHAN

A comprehensive program of both intercollegiate and intramural athletics was installed at Detroit Institute of Technology at the beginning of the 1928 school year. Prior to the fall of 1928 the school had never endeavored to sponsor athletics other than such events as an annual field day and a very short intramural basketball tournament.

The school's broader athletic program was the outgrowth of a healthy student sentiment. A large number of the group of students who just advocated the introduction of a school athletic program, were men from the Detroit College of Pharmacy which is one of the colleges making up the Detroit Institute of Technology. There was then, as there always has been since, a very generous representation of members in Kappa Psi. This group of pioneers were successful in their plea to the Deans and President of the school. Their request for Athletics was granted.

Hugh S. McGranahan, an instructor in the College of Pharmacy, was selected as the first athletic Director and Coach. He has been at the helm since that time. Coach McGranahan is a graduate of Mount Union College. He was a member of the football, baseball and track teams while at Mount Union. Walter Porosky a graduate of Hillsdale College has since been hired as track coach.

The season of 1928-29 found Tech engaging in football, basketball, and baseball. The next season tennis and outdoor track were added. The third year baseball was dropped and indoor track was added. During this year cross-country and golf have been added so that at the present time the school is represented in seven branches of intercollegiate athletics.

During the first two years victories were too infrequent as to be hailed as an event by the student body. However Tech has been coming into her own during the last few seasons, and now victory is to be expected and a defeat is considered an "upset." During these four years Tech's teams have met representative teams from Michigan, Indiana, Ohio, and Pennsylvania. The average of wins over losses in the whole group of sports is quite a sizeable margin, notwithstanding the high caliber of many of the teams met in contest.

Tech teams are not alone known for their prowess. They have become respected for their absolute adherence to amateur standards and the code of good sportsmanship.

Following the close of the 1931 basketball season, Tech was admitted to membership in the Michigan-Ontario Collegiate Conference, an organization of strong schools in this section of Michigan and Ontario. Tech immediately celebrated her entrance into this selected group by winning the championship in both track and tennis. In addition to this feat, Tech finished in second place in both football and basketball this season and is the choice to repeat for the championship in both tennis and track

this year. Tech has played through a whole calendar year since February 1931 with the loss of but nine contests.

During this four year period a larger intramural program has been developed for the recreation of the students. Our program now includes the Annual Sophomore-Freshman Jamboree, an outdoor field day with a large athletic program, tournaments in tennis, golf and handball in both the fall and spring; a basketball tournament, an indoor swimming meet and an indoor track meet. In addition to these competitive intramurals, there are supervised gymnasium classes of a non-competitive nature.



EN ROUTE TO INDIANAPOLIS

The following members of Kappa Psi have contributed in a very great measure to both the growth and success of the athletic program at Detroit Institute of Technology. Alger D. Weier, Frank Miscavige, Gerald Street, Thomas Wood, Frederick Arnold, Robert Fleischer, Charles Robson, Stanley Affeldt.

Weier a charter member of Mu Omicron Pi chapter was a member of the 1928 and 1929 baseball teams. Frank Miscavige was a member of the first three football teams and captained the 1928 eleven. He also won letters in basketball and track, he was a member of the baseball squad. Gerald Street is participating in his third year of track and in addition to being captain of this year's team has maintained a straight "A" average in his scholastic work. Wood, Arnold and Fleischer, Robson, and Stanley Affeldt, although not participating in varsity athletics have helped to bring many laurels to the College of Pharmacy through the intramural contests.

ORGANIZATION OF A MODERN DRUG STORE

By DOUGLAS ROBINSON

To insure success as a pharmacist or owner of a drug business, the first requisite is a complete knowledge of the rudiments of pharmacy. This is very essential as in the conduct of a business it is very important to be in position to converse intelligently with physicians on such important subjects as chemical combinations, toxicology, incompatibilities, etc. Having obtained this knowledge the next step is to learn to apply it in the practical conduct of a business. The rudiments of pharmacy and their application to the conduct of a business are taught in our colleges.

The next step in the development of a successful pharmacist is the obtaining of experience under the supervision of a practical business man who has made a success of his business.

After two or three years' experience the former student is in a position, if he has been studious, attentive and observant, to open and conduct a business of his own, so finding a suitable location he opens his store and makes an effort to obtain the patronage and the good will of the people in his neighborhood or city.

In giving you an idea of how a modern drug store should be organized and controlled we will start with the windows which should be well lighted and properly trimmed in such a manner as to make them inviting to the people on the street, not a "mess" of crepe paper and ugly signs.

The building and organization of the salesroom is very important in order to get the proper results and we have found it a very good idea to work it out from plans submitted by a competent fixture man.

The prescription room has always been of special interest inasmuch as it is the one place in the store where we can lift ourselves from business to our profession. So it must be kept clean, neatly organized and most important, so arranged that we can do our work efficiently and when we have a visiting physician, he will go away impressed with the idea that we are competent and that he can trust us with the dispensing of his prescriptions.

In modern business where competition is keen and gross profits are small it is very essential that complete records be kept. Sales should be classified into several departments such as prescriptions, fountain, candy, toilet goods etc., and buying should be so organized that the knowledge may be obtained as to the gross profit of each department, then by apportioning the proper amount of expenses against each department it is very easy to determine the net profit of each department. With this knowledge it is very often possible to increase profits of various departments by rearranging stock.

Buying should always be done with the use of inventory cards eliminating the possibility of overstocking and the accumulation of dead or slow moving merchandise. By the proper organization and control of buying and sales it is possible to conduct a good business with the minimum amount of capital.

It is also important to keep such records as the government requires, very carefully, as in that way you may be assured of the good will and support of government inspectors as well as the personal satisfaction that you are right.

In the proper operation of a business a person not only finds satisfaction in making a financial success but he also takes a great pleasure from the knowledge of work well done and if he has been so fortunate as to develop a large business he also takes pleasure in watching the development of his ideas and the final attaining of his ideals.

HALIVER OIL

By FREDERICK ARNOLD, *Pledge*

At some time or other you may have some one mention Haliver Oil to you. Some physician may prescribe it for your children or some friend or druggist may suggest it to you. Then, naturally the first thing that comes into your mind is, what is this product, Haliver Oil?

This product is based on extensive vitamin research work and a discovery that is believed to be of a farreaching therapeutic significance. This discovery is that the oil obtained from halibut liver by special methods which are far more delicate and complicated than the process of extracting oil from the cod fish. This oil far exceeds the cod liver oil in potency with regard to both Vitamin A and Vitamin D content.

The new product Haliver Oil with Viosterol 250 D, is a combination of Halibut liver oil with irradiated ergosterol in such proportions as to make its vitamin A value 60 times that of a high grade cod liver oil and its vitamin D value which is equal to 250 D. This oil supplies a rich source for the anti-infective and growth promoting vitamin A and also vitamin D in a high concentration.

As is well known during the first two years especially, every child should have an abundant supply of vitamin A and vitamin D so as to insure a sound and healthy body. Experiments have been enacted on animals to find the action of vitamin A. These experiments show that Vitamin A has a direct relation to the diseases in the respiratory tract starting in the nose, it is possibly involved in sinuses, tonsils, middle ear and bronchi. This knowledge obtained from the experiments on animals have been applied to experiments on the human body. Clinicians point out that Vitamin D is not the only necessity in the diet for infants. They show that this growth-promoting and disease resisting vitamin A is just as important and effective as the rickets-preventing vitamin D. While this is not only effective as an anti-infective agent, it has direct action on the growth and body development in children.

It can readily be seen that without these necessary factors, vitamin A and vitamin D, that the children will be underweight, growth retarded, and undernourished. However it is obvious that if both of these vitamins have to be given that it would be desirable to administer the two at the same time in small doses. The Haliver oil with viosterol 250 D is equal

to viosterol in vitamin D and one minim is equal in vitamin A content to a teaspoonful of cod liver oil. This oil has been analyzed and found to contain 300,000 units per gram of vitamin A and 3333 units of vitamin D per gram, according to the pharmacopeial method of assay.

The Haliver oil with viosterol 250 D is slightly darker than cod liver oil and has a fishy taste. The dose of this product is extremely small. For infants the dose is from 8-10 drops for the average and for the prematures, 10-15 drops. For curative daily dose, 15-20 drops and for severe rickets, 20-30 drops. This can be added to the infant's food or it can be given separately. For children daily dose is from 15-20 drops and for curative daily doses 20-30 drops. For adults 10-15 drops 3 times daily.

Haliver oil with viosterol 250 D comes in 5 cc. and 50 cc. amber colored bottles and also packed in 3 minim capsules with 25 capsules to a box.

This oil is one of the greatest discoveries for mankind and I think after it is well known that it will save a large amount of suffering.

HISTORY OF EPHEDRINE AND MA HUANG

By DELBERT DABNEY

As is generally known, ephedrine is an alkaloidal active principle obtained from a Chinese drug which, under the name of Ma Huang, has been used by native physicians for some 5000 years. It is mentioned in the Pentsas Kang Mu, a Chinese dispensatory, written in 1596. According to this authority Ma Huang is of value as a circulatory stimulant, diaphoretic, antapyretic and cough sedative.

Plants similar to, if not identical with Ma Huang have been employed as medicines since remote antiquity in other parts of the world. It is said that Greek physicians employed plants of the same genus (*Ephedia*) as Ma Huang, and that the Hippunis of Dioscorides was *Ephedra Fragilis graeca*.

In America a number of Ephedras were used by the Indians for various purposes. The Indians and Spaniards used decoctions of *Ephedra Californica* as a tonic and blood purifier. On the whole Ephedras seem to have enjoyed a reputation of two different kinds of usefulness: First in the treatment of venereal diseases and secondly, in the treatment of disorders of the respiratory system.

The development of a useful modern drug out of these ancient remedies has centered on the Chinese plan and as is usually the case has followed as a natural consequence of the isolation of an active principle. Pioneer work along these lines was done wholly by the Japanese, whose interest in Chinese drugs was naturally greater than that of the western world. This was because most of their empirical materia-medica including Ma Huang was derived from the ancient culture of China.

An active principle was first isolated from Ma Huang in 1885 by Yomanaski who obtained a crystalline though impure substance. After

his death the study was continued by Nagai with the assistance of Hori, who obtained the alkaloid in pure form in 1887.

The name ephedrine was first applied to this substance by Nagai, though the name had already been coined by Lowe for the tannin which he had prepared from *Ephedra Antisyphilitica*. The name Ephedrine is used now only in the sense in which Nagai used it to designate an alkaloidal active principle of *Ma Huang* and other *Ephedras*.

Physiological investigations disclosed the toxic effects of large doses upon the circulation and demonstrated the mydriatic action of the drug. As a result it was introduced to western medicine as a mydriatic, but its vogue was limited and brief and it was regarded as a very toxic substance. It is very interesting to note that Ephedrine, which has recently attained popularity as a substitute for or adjuvant to epinephrine, was available in pure form five years before the actions of the suprarenal extracts were first worked out completely and more than twelve years before epinephrine, the active principle of the suprarenal medulla, was first isolated.

Doctors Chen and Schmidt acting on a suggestion made by a Chinese druggist, obtained a small supply of *Ma Huang*. In the Autumn of 1923 a decoction made from this material was injected into a vein of an anesthetized dog. The consequent circulatory effect was the one now familiar as that of Ephedrine and attention was concentrated upon this promising drug. A crystalline alkaloid was readily isolated from it and further experiments demonstrated that this was the active principle, that it possessed epinephrine like effects, that it was of comparatively low toxicity and that it was effectively absorbed from the gastro-intestinal tracts of dogs and men.

As soon as a sufficient supply was prepared it was submitted to Dr. T. G. Miller of the U. of Pa. and to Dr. L. G. Rowntree of the Mayo clinic for clinical experiments. The results being favorable, ephedrine was made available for clinicians in general as rapidly as possible. In 1926 Ephedrine was submitted to the Council of Pharmacy and Chemistry of the American Medical Association and was subsequently approved by it.

PHARMACOGNOSY AND CHEMISTRY

Ephedrine occurs in certain plants of the genus *Ephedra* which includes a large number of species estimated by various authorities as about 35. These are distributed throughout the temperate and sub-tropical regions of Asia, Europe, and America. Only a few of these *Ephedras* contain ephedrine.

The actual identification of *Ma Huang* has been somewhat uncertain. *Ephedra equisetina* is the name recognized by the American Medical Association for the Chinese plant *Ma Huang* from which the commercial supply is obtained. None of the American *Ephedras* contain ephedrine. Ephedrine, having the solubility reactions of a typical alkaloid, is very easily separated from any extract of the plant. Generally speaking the

earlier workers obtained lower yields than the more recent ones, most of whom have succeeded in isolating more than 1 percent of total alkaloids from the Chinese plant; of this total 80 percent or more is pure ephedrine.

In contrast with the two concerns, one German and one Japanese, who were sole purveyors of pure ephedrine prior to 1924, the drug is now being prepared by eight firms in the United States, by one in Canada, by three in England, by two in Germany, by three in China, by four Japanese companies and by two in India and perhaps others.

Synthesis of this substance has been accomplished by various workers and by various different methods. At present the natural product is more widely used than the synthetic and American manufacturers are supplying only the natural ephedrine.

Chen and Schmidt in 1924 called the attention of the western world to Ephedrine in the belief that the actions of the drug were primarily sympathomimetic and that it should achieve a usefulness similar to that of epinephrine. However when the actions of Ephedrine are compared with those of epinephrine, in the laboratory, differences are more frequent than analogues, and there has recently been a tendency on the part of several investigators to emphasize the differences as part of indicative of an absence of any sympathomimetic effect on the part of ephedrine. It is scarcely to be expected of course, that two different substances however closely related, would possess physiological effects that are identical in all respects, but if it should be proved that the important actions of Ephedrine are fundamentally different from those of epinephrine the present attitude of physicians toward ephedrine would have to be radically altered. On the whole, there appears to be no conclusive evidence that the actions of Ephedrine that are important, are sympathomimetic and there is considerable evidence that they are. On the other hand there is scarcely any respect in which the effects of Ephedrine are identical with those of epinephrine and there are several instances in which the two substances have opposite actions upon the same structure or function.

When the pressor effect of Ephedrine is compared with that of epinephrine, several outstanding points of difference are apparent. *First:* The effect of epinephrine is more intense but much less prolonged than that of ephedrine. *Second:* The intensity of the effect of epinephrine is closely proportionate to the quantity injected but such is not the case with Ephedrine. *Third:* Following an injection of epinephrine the blood pressure frequently falls from the peak to a sub-normal level rising slowly to normal. *Fourth:* When epinephrine injections are repeated the same degree of effect will be obtained from each, with ephedrine however the first dose is by far the most effective one. All observers agree that ephedrine is effectively absorbed following oral administration and Hess in 1926 showed that rise in blood pressure also occurs following rectal administration of the drug.

It appears that when a therapeutic dose is taken by mouth every two

hours the first dose causes the most marked rise in pressure, the subsequent ones causing further but smaller rises in the already elevated pressure and maintaining it at an abnormally high level as long as the drug is given regularly.

The effect of Ephedrine differs from that of Epinephrine in that it is apparently exerted not only upon the extreme peripheral parts of the accelerator system, but upon its ganglia as well. Apart from its effect upon the respiratory passages, which are due wholly to peripheral actions ephedrine is a stimulant to the respiratory center, resembling caffeine in its effects. Ephedrine appears to be the most useful single respiratory stimulant that is available at present, its action seems to consist of two distinct components: First, an increase in blood pressure of the center. Second, a direct stimulant action upon the cells of the center.

One of the most important therapeutic actions of Ephedrine is its ability to relieve or to prevent the spasma of asthma. The effect is largely if not wholly peripheral, for it is elected in excised tissue and in pithed animals.

Ephedrine appears to stimulate the central nervous system but has no action on the sensory nerve endings. It is readily absorbed and produces systemic effects. The rate of absorption in men, evinced by the rise in blood pressure, is somewhat faster following subcutaneous or intramuscular injection than following oral administration.

The fate of Ephedrine in the body is still unknown, for there is no reliable and sensitive method for detecting it in tissues or excreta. It apparently passes through the liver unchanged but whether it is destroyed in the body or eliminated in altered or unaltered form is unknown nor is anything known about the route of elimination.

EXTRACTS OF PHARMACY AND DRUG LAWS OF MICHIGAN

By WILLIAM GOOD

Applicants for registered pharmacists examination, which are held on the third Tuesday of the months, February, June, and August, must have had at least two years of practical experience since filing their apprenticeship papers and completion of two years of college of pharmacy work, or three years of college of pharmacy work and one year of practical experience before being eligible to take the examination. There will be no more Registered Assistant Pharmacists examination given by the State of Michigan.

The fee for said application for Registered Pharmacist certificate shall be \$20.00 and upon notice that candidate was successful, a certificate fee of \$20.00 more will be required. Application for re-examination will cost the applicant \$10.00 before the time of the next board meeting.

Every pharmacy, drug store or apothecary shop shall be owned by a

registered pharmacist and no partnership or corporation shall own such unless at least 25 percent of all stock is held by Registered Pharmacists.

The general index of Drug Laws of the State of Michigan are available upon the receipt of 50 cents, to the Michigan Board at Lansing, at any time. It may be outlined as follows:

Drug laws: Fly poison and Flypaper law, Narcotic law, Federal Narcotic law, State, Ownership of Drug Stores, Pharmacy laws.

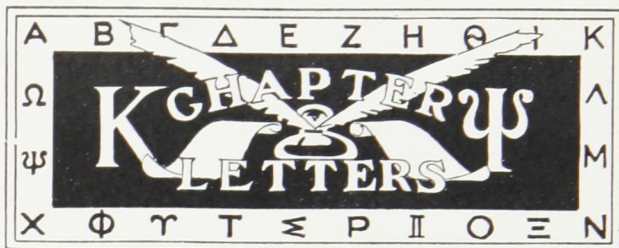
Prohibition: Laws regulating the manufacture and sale of liquor, Rules and Regulations relating to Pharmacy and Drug laws.

Thermometer Act: Clinical.

Thermometer Act: Regulation for enforcement of; Turpentine act.

Vendor's licensing law: Venereal Diseases, Laws relating to.

Wood Alcohol: Completely Denatured Alcohol, Labeling of.



MU OMICRON PI

James J. Hall, Regent 1932-33. Highland Park High School, Highland Park, Michigan. Highland Park Junior College, 1929. Treasurer and Chairman Entertainment Committee, 1929 Interfraternity Council. Pharmacy Baseball and Basketball teams.

Robert Fleischer, Vice-Regent 1932-33. Southeastern High School, Detroit, Michigan. Student Council. Director of Pharmacy Department teams in intramural athletics. Pledge Committee. President Junior Class.

Thomas Wood, Secretary 1932-33. Southwestern High School, Detroit, Michigan. Pledge Master 1931. Secretary Junior Class. Captain pharmacy baseball and basketball teams. Election Committee 1932.

Harry Williams, Treasurer 1932-33. Southwestern High School, Detroit, Michigan. Chaplain 1931. Pledge Committee 1932. Entertainment committee 1931. Treasurer Junior Class. Pharmacy baseball team 1929-30.

James M. Koich, Historian 1932-33. Southeastern High School, Detroit, Michigan. Pledge committee 1931-32. Chairman Meetings Committee 1932. Interfraternity Council.

Albert E. Daniels, Chaplain 1932-33. Algonac High School, Algonac, Michigan. Treasurer 1929. Chairman Entertainment committee 1929. Pledge Master 1928. Student Council 1927.

Wm. Good, Regent 1931. Southeastern High School, Detroit, Michigan. Vice-Regent 1930. Secretary 1929. Chairman Scholarship Committee, 1929-31. Secretary Senior Class.

Gerald E. Street, Secretary 1931-32. Highland Park High School, Highland Park, Michigan. Chairman Election Committee 1932. Scholarship committee 1931. Director of Intramural Track Meet. Captain Varsity Track Team 1932. Varsity "D" man. Now training for Olympics.

Stanley Paterson, Historian 1930-31. Southeastern High School, Detroit, Michigan. Chairman Judiciary Committee 1930-31. Entertainment Committee 1932. President of his Freshman, Sophomore, Junior, and Senior classes. In charge of Pharmacy graduation plans.

Douglas Robinson, Treasurer 1930-31. Highland Park High School, Highland Park, Michigan. Pledge Master 1932. Chairman Meetings Committee 1930-31. Treasurer Senior Class Student Council.

Pledges: Frederick Arnold, William Barnich, William Snyder, Harold Tyska.



MU OMICRON PI

Al Daniels is back at school trying to prepare himself for the State Board examination.

They are building the town of Bridgeport around Paul Lyle and his drug store.

Cliff Anderson has his own stand now in a suburb of Detroit.

Becker is running the Sun Drug Chain.

Geo. M. Schettler has no trouble running his chain. Doug Robinson runs his prescription department. Tony Lombardo is in charge of the Grosse Pointe stores. While Bill Colwell does what the other two don't do.

Ken. Fetters sleeps at the McMillan Drug Store in Ferndale.

Bill Good is the genius behind the world's largest drug store (Cunningham's on Griswald Street).

Grubbs is another Cunningham man right across the street from Kenny Fetters in Ferndale.

Clarence Hoerauf tells Mr. Wellington Travis how to run his chain.

Jerry Hummel is merchandising expert with the St. Amour Drug Co. Lambert Kiehler is working for Anguish Drugs on Hamilton.

Roland T. Lakey now runs the Pharmacy College at the Detroit City College.

Frank Miscavige helps increase the death rate by filling prescriptions at Unity Drug on Mack Avenue.

Charley Neuman hangs his hat at the Cunningham store on Grand River.

Big Paterson (John) claims it's easier to go to school, than to work, so he's going to school. His brother, Stan, is going to do the same thing.

Maurice Quinlan is in politics.

Elmer Rosenbusch announces that he will return to school this coming fall.

Fred St. Amour is the presiding genius behind the St. Amour Drug Co. His brother, Paul, is taking a vacation from work.

Harold Schwinkendorf will try the state board examination as soon as he becomes of age.

Russ. Volz is the doctor behind the counter at Sweier and Stockman's on Gratiot Avenue.

Hunt Whitehead is a medicine man down in Virginia.

Harry Williams is still in school.

Hank Zegarski is another Cunningham man.

Kenny Owens helps run a drug store in Henry Ford's town of Dearborn.

The Affeldt boys and the Jezewski boys divide their time between running drug stores and being mayors of Hamtramck.



MU OMICRON PI CHAPTER

Back row—F. Miscavige, S. Paterson, H. Schwinkendorf, K. Fetters, H. Rudd, J. Hall, R. Fleischer.

Middle row—T. Wood, F. Moschler, L. Kiehler, P. Remer, H. Whitehead, J. Paterson, H. Zegarski, H. Jezewski

Bottom row—H. Williams, J. Kawecki, W. Colwell, J. Juntunen, D. Robinson.

John Juntunen is in the Gas business.

Jerry Street is training for the Olympic Games.

Peck has a drug store in Port Huron.

Roland Francis Ellis has just passed the board and will soon be increasing the death rate.

Bill McIntosh is at Liggetts on Broadway.

Charlie Aumack is managing one of their stores.

Dutch Moschler is trying to buy a store in Virginia.

Francis Koelzer, the sailor man, is sailing along with Saylor Drug Co.

Joe Urban is working down in Hastings Street.

Don Knister is singing over the radio.

Joe LeVecque has a store in Ferndale, Michigan.

James Melton is police reporter on the *Daily Mirror* staff.

Sylvester Ray among the missing.

Alger Weier is playing professional ball in the Three-I league.

Walter Gottschalk is back to work after two years of leisure.

Charles Parker is studying medicine, University of Michigan.

Frank Karizeraski and Kenny Acker are on the missing persons list.

SUCCESS AND CHARACTER TRAITS*

By A. RICHARD BLISS, JR.†

Thomas Alva Edison lived to a ripe old age, but his mental grasp did not appear to be diminished as a result of his years. Shortly before his death he announced his formula for success. It is made up of three ingredients. First, *Ambition*; second, *Imagination*; and third, the *Will to Work*. Among the numerous criteria which the stages of the past have promulgated, we doubt whether there is anything superior to this list.

Someone has in this way introduced us to the "Success Family": The father of Success is *Work*. The mother of Success is *Ambition*. The oldest son is *Common Sense*, and some of the other boys are *Stability*, *Perseverance*, *Honesty*, *Thoroughness*, *Foresight*, *Enthusiasm* and *Co-operation*. The oldest daughter is *Character*. Some of the sisters are *Cheerfulness*, *Loyalty*, *Courtesy*, *Care*, *Economy*, *Sincerity* and *Harmony*. The baby is *Opportunity*. Get acquainted with the "old man," and you will be able to get along pretty well with all of the rest of the family. We will not take the time to make an intimate acquaintance with the whole family in the limited (time) space at our disposal—and I am inclined to believe that there are other members of the family that are not included in the list just mentioned.

If we analyze the success of an individual, we usually find one element, so irksome to the average individual, present in generous amounts, viz., repetition. It is victory after victory with the soldier, lesson after lesson with the scholar, problem after problem with the investigator, blow after blow with the laborer, crop after crop with the farmer, picture after picture with the painter, and mile after mile with the traveler, that secures what all so much desire, *success*. A successful manufacturer said if you make a good pin, you learn more than if you make a bad steam engine; your reputation is at stake in everything you do, it is your all. One is reminded of the old school day rhyme: "If I were a cobbler, it would be my pride the best of all cobblers to be. If I were a tinker, no tinker beside, should mend an old kettle like me."

Personality and traits of character constantly control our actions.

The successful individual possesses the more important traits to a high degree; the unsuccessful one fails to possess them; and the growing, developing person improves in those traits in which he is weak. One individual who has become a success does not possess all of the traits to an equal degree, but he acquires a sufficient degree of them to produce efficiency. At regular intervals every individual should take stock of his personal traits, just as the good business man takes an inventory yearly, semi-annually, or quarterly.

The (speaker) writer had the privilege of directing the Physiology and Pharmacology Studies of the Commonwealth Fund investigation

* An informal talk to the University of Maryland students, as jotted down in short-hand by one of the audience.

† Dean of the School of Pharmacy; Chief of the Division of Pharmacology, College of Medicine, University of Tennessee, Memphis.

commonly referred to as "The Charters' Study of Pharmacy." One of the many content-of-the-curriculum studies was entitled "Traits." Through interviews with interested individuals in locations which were scattered widely over the region east of the Mississippi River, thirty-three traits were determined, and were ranked in order of importance by 171 qualified persons. Among the first six traits in this order of importance list are found four traits of particular importance to students.

Besides the general traits of character such as *vision*, *enthusiasm* and *purpose*, the professional student must possess special and specific qualifications for his particular service for humanity.

Let us emphasize in the *first place* that a successful student must be *accurate*. Accuracy is not a natural gift, and requires nurture. For every purpose, whether for action or speculation, we hold that quality to be most valuable which it is quite within our own power to acquire, and which nature, unassisted, never yet gave to any man—I mean a perfectly accurate habit of thought and expression. "It will do" is a very bad saying. What costs little labor seldom deserves praise. If we acquire the habit of thinking that performances are already well enough, while we have the power of making them still better, we shall gradually bestow less and less pains, and still content ourselves with their execution. The sheet of paper is still extant on which Ariosti wrote an octave describing a tempest in sixteen different ways, and it was the last which was preferred. Tasso found rhymes with great difficulty. Yet those were men of genius. Who, with such examples before them, ought to be contented with first efforts?

Accuracy is of much importance and an invariable mark of good training in a man. Accuracy in observation, accuracy in speech, accuracy in the transaction of affairs. The habit of accuracy should be strenuously cultivated, not only on account of the resultant benefits to ourselves, but also because of the responsible position in which we stand one to another. With virtue, capacity, and good conduct in other respects, the person who is habitually inaccurate cannot be trusted; his work has to be gone over again; and he thus causes an infinity of annoyance, vexation and trouble.

The *successful* student must be *honest*. A newsboy entered a residence street at bedtime calling loudly and earnestly "Extra! Extra!" People came out of their houses to buy papers, thinking that something unusual had happened, and that an extra edition had been printed. But on examining a copy of the paper, for which the purchaser paid twice the usual price, he found that it was only the regular morning issue. The boy had deceived him and others. The fellow may have sold more papers than usual that night, but people know his voice and will not be deceived again. He will find that it does not pay to lie and cheat. The surest way to success is by the route of honesty in word and deed.

While sitting in the reading room of a well-known club, a well-groomed young man was observed playing solitaire. After a few moments it seemed that he was stuck, beaten by the cards. He hesitated, glanced

about the room as though fearing detection, then, slipping a card from under one of the piles, he played it on the board. He won the game; rather a measly form of cheating.

If Honesty is required in the program of the average man, it would seem doubly important in the work of the professional student.

There is one thing connected with the care and management of the body which may be said to partake of the nature of a moral virtue—*cleanliness*. This is a duty to which we are prompted by our natural feelings, and is important, not only as contributing directly to the health and comfort of the body, but also to the strength and purity of the mind. The different nations of the world are as much distinguished by their cleanliness as by their arts and sciences. Cleanliness is the root of many fine virtues, especially of purity, delicacy and decency. Cleanliness is more than wholesomeness. It furnishes an atmosphere of self-respect, and influences the moral tone.

There is time to mention one more element of success, that is, the *ability to gain confidence*. All confidence which is not absolute and entire is dangerous. We take it that, after all, here is the only lasting basis for attraction in social intercourse, and the only enduring foundation for genuine and profitable friendships. Confidence, mutual admiration—those reciprocal interchanges which, while they are real luxuries to the soul, yet never pall upon the appetite, cannot exist upon a substratum of pretence or affectation; but are restful and abiding only when men among men, and women toward women or men, *know* that there is a real ground for a sweep and abandon of mutual confidence. Confidence always gives pleasure to the man in whom it is placed. It is a tribute which we pay to his merit; it is a treasure which we entrust to his honor; it is a pledge which gives him a right over us; and a kind of dependence to which we subject ourselves voluntarily. In the Austro-Prussian War the Austrian soldiers lost all confidence in their generals, and after two or three defeats not only ceased to fight with spirit, but were changed into a panic-stricken rabble; whereas the Prussians, having full confidence in the ability and courage and fidelity of their leaders, marched from victory to victory.

In the *Rambler* Dr. Johnson answers the question, "What is Success?"

It's doing your job the best you can,
And being just to your fellow-man;
It's making money, but holding friends
And staying true to your aims and ends;
It's figuring how and learning why,
And looking forward and thinking high
And dreaming a little and doing much;
It's keeping always in closest touch
With what is finest in word and deed;
It's being thorough, yet making speed,
It's daring blithely the field of chance

While making labor a brave romance;
It's going onward despite defeat,
And fighting staunchly, but keeping sweet;
It's being clean and it's playing fair;
It's laughing lightly at Dame Despair;
It's looking up at the stars above,
And drinking deeply of life and love;
It's struggling on with the will-to-win,
But taking loss with a cheerful grin;
It's sharing sorrow, and work, and mirth,
And making better this good old earth;
It's serving, striving through strain and stress,
It's doing your noblest—that's *success*.



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NOTICE: CASH MUST ACCOMPANY ALL ORDERS. NO C.O.D.s

New Price List: Kappa Psi Badges and Guards

PLAIN, polished or Roman, beveled border; or chased or nugget border; with two rubies in the eyes of Mask.....\$ 4.50

CROWN SET BADGES:

Whole Pearls, Opals, or Garnets (or any combination of these alternately or in corners)	14.50
Whole Pearls with Ruby corners.....	17.00
Whole Pearls with Emerald corners.....	21.80
Whole Pearls with Diamond corners.....	46.00
Whole Pearls and Rubies alternately.....	22.84
Whole Pearls and Emeralds alternately.....	29.00
Whole Pearls and Diamonds alternately.....	92.00
Emeralds and Diamonds alternately.....	102.00
Rubies and Diamonds alternately.....	98.00
Emeralds with Diamond corners.....	67.00
Rubies with Diamond corners.....	60.00
Diamonds with Emerald corners.....	140.00
Diamonds with Ruby corners.....	138.00
Diamonds, entire.....	165.00
Sapphire mounting, same prices as rubies.	

Both eyes of Mask set with—

Brilliant Cut Diamonds, extra cost.....	12.00
Rose Diamond, best quality, extra cost.....	6.00
Platinum Setting: \$25.00 additional. 18K White Gold: \$5.00 additional.	

CHAPTER GUARDS:

	Small or Medium	Large
Single Letter—Plain Gold.....	\$ 2.50	\$ 2.75
Close set pearl.....	4.00	5.00
Crown set pearl.....	5.50	7.00
Double Letter—Plain Gold.....	3.50	4.00
Close set pearl.....	7.00	8.00
Crown set Pearl.....	10.00	12.00

Three Letter—Plain, \$4.50; Close set, \$10.00; Crown, \$12.00.

Additional price per stone: Rubies, \$0.53; Emeralds, \$0.79; Diamonds, \$3.15.

The Fraternity coat-of-arms with safety clasp and guard chain attachment may be had if preferred. They are furnished in gold in the miniature size at \$2.63 or the medium size at \$3.15.

18K White Gold, Single Letter.....	1.50 additional
18K White Gold, Double Letter.....	2.50 additional
Platinum Settings—Single Letter.....	5.00 additional
Platinum Settings—Double Letter.....	10.00 additional

All jewels are carefully selected and matched and of brilliant cut. The badges are of 14K gold and are provided with safety catches. Three initials and chapter letters will be engraved on the backs free of charge IF cash accompanies order. All badges are made with the Mask raised in gold and a ruby inserted in each eye.

PLEDGE BUTTONS will be furnished for 60c apiece. These are made of gold plate, hard French enamel, and a solid back. Each chapter should have a supply of these buttons on hand as the property of the chapter.

RECOGNITION BUTTONS, 75c each.

WALL PLAQUES: Insignia or Coat-of-arms in bronze, \$5.50 each.

TERMS

ALL ORDERS MUST BE SENT TO THE CENTRAL OFFICE OF KAPPA PSI, CROSSTOWN STA., P. O. BOX 6308, MEMPHIS, TENN. No jewelers will furnish Kappa Psi badges. Cash MUST ACCOMPANY ALL ORDERS.

Kappa Psi jewelry other than badges MUST be ordered from the OFFICIAL KAPPA PSI JEWELER—there is only one—The L. G. Balfour Co., Attleboro, Mass., and a duplicate order sent the Central Office.



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KY

Senior Officers' Sashes



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Junior Officers' Sashes



Members' Collars
(Optional)



Members' Gowns
(Optional)

Kappa Psi Paraphernalia

When
Ordering
Mention
Item No.

- OFFICERS' SASHES:** Set of twelve, all of adopted regulation patterns, and edged with silk braid, with correct emblem embroidered in golden-yellow silk on each, as follows:
- 1 One, only, scarlet sash of fine satin, golden-yellow braid, emblem "A."
 - 2 Eleven—grey sashes of flannel, scarlet braid, emblems, one each as follows: Greek letter Omega, Palm 99, Short Greek Sword, Shield and Wreath, Crossed Long Greek Swords, Crossed Short Spears, Crossed Pens, Crossed Keys, Mask, Eye, Greek letters "Kappa Psi."
 - 3 Sashes, any of above—each \$3.30, per set of 12.....\$35.75
 - 5 **MEMBERS' COLLARS:** (Optional). Lined and interlined, cadet-gray flannel, scarlet silk braid on both edges, no emblems. Each \$2.25. Per dozen\$22.25
- MEMBERS' ROBES:** (Optional).
Loose fitting, plain draped gowns with hood and cotton cord; waist girde all of solid black with double facing bands of scarlet sateen down front, each decorated with a scroll design worked in narrow silk braid (soutache) of gray on the scarlet facing.
- 10 Cambric, trimmed with sateen, any quantity, each.....\$5.90
 - 11 Cotton cashmere with sateen, any quantity, each.....\$6.60
Or same as above with the gray soutache scroll design omitted.
 - 14 Cambric, trimmed with scarlet sateen, any quantity, each.....\$4.85
 - 15 Cotton Cashmere, with scarlet sateen, any quantity, each.....\$5.65
 - 18 **TRIANGLE** (one required), wooden, painted alternating colors, scarlet and gray, each\$1.40
- SPEARS:** (two required). Each with seasoned shaft.
- | | | Each | Pair |
|----|---|--------|--------|
| 27 | Gilt bronzed wooden point and ball..... | \$1.10 | \$2.20 |
| 28 | Polished brass point and ball..... | 1.15 | 2.30 |
| 29 | Nickel plated metal point and ball..... | 1.30 | 2.60 |
| 30 | Nickel plated metal point and ball..... | 1.45 | 2.90 |
- GRECIAN SHORT SWORD:** (one required).
- 31 Leather Scabbard, Grecian hilt, steel blade, brass mounted handle and trimming—with stud for belt thong, each.....\$5.80
- BELT, FOR SWORD:** (one required).
- 33 Shoulder sling style—heavy webbing, leather thong.....\$1.30
 - 34 Shoulder sling style—all leather, leather thong.....\$2.00
 - 35 Waist belt style—heavy leather 1¾ inch wide, plain metal plate, leather thong (advise color black, brown, red).....\$2.95
- BALLOT BOX:** (one required). Exclusive of ballots (see next item).
- 37 Full secret swan neck pattern, walnut.....\$7.50
 - 38 Full secret, hinged lid pattern, quartered oak.....\$7.50
 - 39 Semi-secret, oak.....\$1.50
- BALLOTS:** 50 assorted black and white.
- 41 China, glazed, per set of 50.....\$.25
 - 42 Rubber-noiseless—black cubes, white balls, per set of 50.....\$.75
- GAVELS:** (four required).
- | | | Each | Per set of four |
|----|---------------|--------|-----------------|
| 45 | Oak..... | \$.40 | \$1.60 |
| 46 | Walnut..... | 1.00 | 4.00 |
| 47 | Rosewood..... | 1.50 | 6.00 |
- HOODWINK:** (one required). Each equipped with strap to adjust size, and spring attachment to effect quick removal or replacement.
- 50 Leather, velvet lined, metal eye caps are permanent, each.....\$1.88
 - 51 Similar to 75799 but metal eye lids can be turned open, permitting clear vision without removing hoodwink, each.....\$2.10
 - 52 Special pattern—permits clear view, or shows through red lens, or shuts out light completely.....\$2.50
- CHAPTER SEAL—**Heavy lever stand.
- 55 Circular die, 1¾ inch diameter, plain lettering, no emblem or Greek characters.....\$5.25
 - 56 Circular die, 2 inch diameter, plain lettering, no emblem or Greek characters.....\$35.25

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