

A COURSE IN PHARMACAL SUNDRIES AND SICK ROOM SUPPLIES.*

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In the efforts to keep pharmaceutical education abreast of the times, the length of the pharmacy course has increased from two years to three and is fast approaching a further increase to four years. Each of these educational advances, while permitting much needed extensions of courses already established, has also resulted in the introduction of new material. As the choice of this new material has been the cause of considerable controversy, I believe it advisable, before advocating the acceptance of a course not heretofore included in the standard curriculum, to review the following basic considerations.

Modern pharmacy is a business or profession demanding a broader training than many other pursuits. It, like other vocations, has become specialized within itself and the inclusion of these specializations with the original adds greatly to its scope. We have perhaps reached a point, already passed in many professions, where our instruction should recognize the condition by dividing itself clearly and distinctly into a general course for all students, followed by specialized instruction for those desiring to enter the allied fields. Such a plan would materially aid the cause of pharmaceutical education as there are certain of the allied fields in which a general pharmaceutical education is desirable as a ground-work and for which specialized instruction is not given in any other school of a university system. If we persist in attempts to use but one curriculum to acceptably prepare men for retail pharmacy, pharmaceutical manufacturing, public health fields, clinical and bacteriological work, analytical and industrial chemistry and all other branches more or less closely allied to pharmacy, it is likely that our efforts will not be successful. Therefore the real issue is, shall the basic pharmacy curriculum be so broad as to attempt to prepare men for both retail pharmacy and its allied but specialized branches, or shall it be limited primarily to preparation for the practice of retail pharmacy? I hold that the latter view is the more satisfactory in that it provides a definite objective and also because a majority of pharmacy graduates enter this field. But at the same time, the pharmacy schools should be fully prepared to meet the needs of those who, after completing the basic course, desire to specialize in the allied branches. If pharmaceutical education is to be primarily for the practice of pharmacy, the subject here termed Pharmacal Sundries might well be added to those courses proven necessary to the practicing pharmacist.

REASONS FOR THE COURSE.

For several years before the establishment of this course at the New York College, we had been hearing comments from those employing our graduates as to the general lack of knowledge in reference to many common articles of stock. Perhaps the condition was due to the abandonment of the old apprenticeship system under which many of the employers entered pharmacy. Usually a part of the apprenticeship was served before entering a pharmacy school, whereas to-day it is no uncommon thing for the pharmacy student to begin with his schooling and then enter a retail pharmacy. Under the older system a man gained a certain amount of knowledge in reference to these sundries by mere contact. Taking the condition

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as a possible fact and dismissing the causes, remedies were sought. For a year or two Prof. W. J. Bonisteel, then on our staff, conducted an extension course dealing with the subject, but as this was optional work it did not remedy the situation generally. At a later date and during the transition to a three-year course, the classes were circularized requesting answers to questions suggested by those commenting upon the shortcoming. The questions dealt with the differences between male and female urinals, colon and rectal tubes, 10- and 20-gage catheters, catgut and chromic gut, and gauze and flannel bandages. The answers were amazing and fully proved the contentions of retail pharmacy. About this time the "Charters Report" was issued and scanned to ascertain if any reference to these articles appeared. The general situation was touched upon at two points. Under Branch IV, Commercial Pharmacy, Merchandise Information, pages 250-254, excellent outlines are given for the treatment of soaps and hot-water bottles. Also under this same branch but in the Inventories, Table XXIX, pages 330-344, it is shown that most of the pharmacies inventoried, stocked the articles in question. In addition to the criticisms of the retail pharmacists and the recognition accorded by the "Charters Report," it is noteworthy that in modern business of almost any sort, salespeople are given intensive courses dealing not only with the actual sale of merchandise but also its qualities, peculiarities and manufacture. Large concerns find the procedure pays and how much more to the point is it that a retail pharmacist, with his intimate contact and personal business to consider, should know something more than the margin of profit and sales price of a clinical thermometer. Such information is not purely commercial and herein I differ from the "Charters Report" in the matter of placement. It is professional knowledge of a sort which adds to the possibilities of the pharmacist being considered more than a merchant.

Having decided upon the advisability of this course, the question of a title, which would be sufficiently descriptive and elastic, presented itself. In reviewing the list of desirable topics, it was at once apparent that a very heterogeneous collection of items must be dealt with. In an effort to avoid the extremes of general merchandise, the title "Pharmaceutical Sundries and Sick Room Supplies" was finally hit upon, but as this was cumbersome it was subsequently shortened to "Pharmaceutical Sundries." There were opinions that the course should include trusses and supporters and even surgical instruments, but our decision was against these on the ground that they represent specialities, despite the fact that trusses may be carried in retail stores. We also were of the opinion that the fitting of trusses, which often accompanies their inclusion in the drug store stock, is a matter for the dealer in surgical supplies and the physician.

RELATIONS TO COMMERCIAL AND PROFESSIONAL PHARMACY.

As previously stated, the "Charters Report" places this work among the commercial subjects and it certainly presents some commercial aspects, as knowledge of this class of merchandise is of influence in its sale. For pharmacists in metropolitan centers it is of further commercial interest in that many of the articles are not stocked by department stores and the so-called drugless drug stores. The pharmacist faces less competition in their sale and in fact often has no competition because of immediate need for a particular item. A customer is not likely to

shop around for a Sprague ice bag when it is ordered by a physician. Again, from information supplied me by retail pharmacists, the percentage of profit is very satisfactory. These facts show that the course has contacts with commercial pharmacy.

The reasons for my dissent from the "Charters Report" placement are more clearly apparent when one examines the list of topics presented herewith in syllabus form. Some of the articles are sold largely to physicians and sales arguments do not enter into the transaction. The part of the pharmacist consists in an ability to intelligently discuss the article with the physician and by being able to do so he certainly rises in the physician's estimation. Some of the articles possess distinct medicinal actions, a greater number are widely used as adjuncts to medical treatment and it is these actions and uses which are of immediate concern to the customer. The pharmacist may be under the necessity of instructing a purchaser regarding the use of an article ordered by the physician, as the latter may merely order an ice bag or a mustard plaster applied, without comment as to the procedure. I have even heard of instances in which the physician stated that the pharmacist would give the desired information. Thus while there are commercial aspects to some of the articles listed, there are also pharmacologic or therapeutic aspects to nearly all of them. Where the purely commercial aspects of display and merchandising are applicable, these should be included in the instruction of the division of commercial pharmacy, but the major portion of the work should be presented by the member of the staff who lectures on materia medica or pharmacology and should be linked up with remedial measures involving the use of drugs.

The course should be placed in the final year for at many points reference to other subjects in the pharmacy curriculum will be necessary. It is, in part, a summation course and requires a background of chemistry, operative pharmacy, physiology and pharmacology to avoid duplication and to conform to time limits.

DIVISION OF SUBJECT MATTER AND TREATMENT.

Owing to the variability of the subject matter it is rather difficult to provide an entirely satisfactory division of topics and one to which exception cannot be taken. A strict therapeutic classification, while it links up best with pharmacology or materia medica, is objectionable because a given article may be used for widely differing purposes. A basic materials classification is equally objectionable in that a given article may be manufactured in different materials or the finished article may consist of several basic materials. In order to minimize duplication and yet retain, as far as possible, the desirable features of both classifications, the work has been divided primarily into three sections as follows: I. Basic materials used in manufacture; II. Individual articles or appliances for specific therapeutic uses; III. Miscellaneous articles and procedures.

A consideration of basic materials necessarily brings in the matter of industrial processes and chemical technology, both of which may have been covered more completely at other points. The details of manufacture are reduced to those necessary for an understanding of differences in the articles included in the other divisions. The "Charters Report," page 253, has in part served as a model for this section of the work but as it is restricted to specific articles a consistent use of this scheme of treatment would involve much duplication. The basic materials con-

sidered are rubber, metals and enamelled wares, glass and porcelain and finally textiles and fabric materials. The details of treatment for each of these are given in the accompanying syllabus.

The second division, comprising sundries which have specific uses, is closely correlated with pharmacology or materia medica and shows in striking manner the reason for this work being done by one familiar with these correlated subjects. The articles in this division are a part of the materia medica and frequently play just as important a rôle as drug substances in the treatment of disease. The sub-divisions of this section include the following: application of heat and cold, irrigation, hypodermic and allied forms of administration, protection of surrounding materials, feeding accessories, temperature recording, bandaging and dressing materials, plasters, ligatures and sutures, hygienic appliances and finally miscellaneous appliances not otherwise covered.

The third division is one which allows of extreme elasticity and permits the introduction of various articles not included in the preceding sections and certain procedures not touched upon at other points in the curriculum of the particular school. With such a broad field as the retail pharmacy to choose from, one might possibly include many purely commercial items but our choice has been insecticides and rodenticides, fumigation and the more commonly used emergency or first-aid procedures. If additional time were available topics such as electrical appliances and foodstuffs, particularly infant and health foods, would be in order.

The course has been in operation for the past two years and is still undergoing modification as suggestions are received. During the past year, attempts were made to secure first-hand information regarding the extent of store stocks of the various articles included in the lectures. Inventory sheets were distributed to those working part-time in stores and were checked as to occurrence or nonoccurrence of the items. Incidentally the inventory sheet was suitable for study purposes and in some instances was not returned. A tabulation showed that in the main, the articles mentioned in the course were really included in the store stock.

Perhaps the greatest difficulty encountered in the establishment of the course was lack of sources of information. This difficulty, first apparent in the preparation of a section of a textbook in collaboration with Drs. Rusby and Bliss, while entailing an enormous amount of work in the preparation of lecture notes, leaves one free to use personal ideas in framing the course. There are no source books of information for most of the articles and my information had to be gained by personal interviews coupled with that to be had from catalogs or other publications of the manufacturers. When the objects of the course were made clear, I received very courteous treatment and was given valuable information. Not only did the manufacturing firms supply information but certain of them, accompanied the information with valuable exhibition material. It is difficult to attempt the work unless the student can actually see the articles dealt with in the lectures and we have, either by acquisition or outright purchase, obtained exhibits of practically all the materials included in the course. In certain instances we have had assistance from special lecturers but, owing to the limitations of time, they have had to be eliminated. Another factor which renders too great a dependency upon outside speakers inadvisable is that they are generally specialists and this is a general course. Many firms are in a position to send men to speak upon merchandising

and such speakers can give valuable assistance in commercial pharmacy. The most satisfactory results have been obtained by one individual carrying through the sundries work but at the same time maintaining contact with the lecturer in commercial pharmacy so as to correlate the commercial and pharmacologic aspects where this is possible.

In offering the following syllabus for a 32-hour lecture course, it is to be particularly noted that such a course has actually been in operation for two years prior to its publication in syllabus form. It therefore represents more than a plan on paper in that it has been subjected to the real test of experience under class room conditions. We have had ample opportunity to judge of its usefulness to the practising pharmacist and he is the one for whose benefit pharmaceutical education was primarily founded in this country.

SYLLABUS FOR COURSE IN PHARMACAL SUNDRIES.

INTRODUCTION.

General Considerations.

Objects and Scope of Course.

Definition of Pharmacal Sundries—articles and appliances used in connection with hygienic, medical and surgical treatment.

Reasons for noninclusion surgical instruments, trusses and supporters.

Sources of information—trade catalogs and publications.

Relations to commercial pharmacy and merchandising.

Knowledge of articles an aid to salesmanship.

Articles frequently only stocked by pharmacies.

Factor of competition less because of immediate need.

Profits ranging from 20% to 100%.

Association of sales—nasal spray with atomizer.

Desirability of correlation with courses in commercial pharmacy.

Relations to professional pharmacy.

Therapeutic effects of many articles or their use as adjuncts to other treatment.

Necessity of instructing purchaser in absence of direction by physician.

Divisions of subject matter.

I. Basic materials and processes of manufacture.

II. Articles used for specific purposes.

III. Miscellaneous procedures.

I. BASIC MATERIALS AND PROCESSES OF MANUFACTURE. (Including rubber, metal and enamelled wares, glass and porcelain, fabrics and textile materials.)

A. Rubber.

Chemical properties; complexity of composition; physical properties; geographical and botanical sources.

Production of Crude Rubber—tapping of tree; coagulation or curing latex by smoking, chemical procedures or centrifugal; washing; drying; tank shipment.

Production of Manufactured Rubber—milling; mixing to introduce vulcanizing agents, fillers and colors; vulcanizing agents, purpose and process; fillers, uses and abuses; rubberized fabrics.

Manufacturer's Designations—molded and glass-molded as water-bottles and rectal tubes; calendared as rubber aprons; dipped as surgical gloves; blown as rubber ball; die-cut and pinched-seam as bathing caps; hand-made as overshoes.

Contrasts of seamless and seamed articles.

Contrasts of pure gum and rubberized fabric articles.

Hard Rubber, Vulcanite or Ebonite—preparation from rubber; advantages, rigidity, inert, less affected by solvents; displacement by Bakelite and similar products.

B. *Metals.*

Uses govern choice of metal; may be divided into—

1. Articles for intimate and long continued contact with tissues or body fluids; must be of inert metals as gold, silver, platinum, solid or heavy plated; mainly surgical appliances therefore not considered.
2. Articles for intimate but short contact with tissues or body fluids; of gold, silver or nickel plated ware, also polished steel and stainless steel; hypo needles, atomizer parts.
3. Articles not for intimate contact with tissues or body fluids; of tin, copper, zinc, but more often enamelled ware.

Enamelled Ware—manufacture by shaping iron plate; welding or crimping seams, enamelling; advantages and disadvantages in contrast with other metallic wares and with glassware.

C. *Glass and Porcelain.*

Manufacture and technology.

Manufacturer's types—molded, pressed, blown.

Advantages and disadvantages of glassware as contrasted with enamelled wares.

D. *Fabrics and Textile Materials.*

Cotton—most used for purpose in medicine.

Botanical and economic aspects; chemical composition of raw and refined; U. S. P. definition.

Gathering and preliminary preparation—picking; ginning; cleaning.

Manufacture of loose or fibre cottons—chemical treatment with alkalis, acids, bleaches and subsequent washings; drying; carding; felting.

Manufacture of fabric—spinning; weaving; looms; thread count; bleaching; washing.

Linen—contrasts with cotton; reasons for lesser use.

Botanical aspects; production fibre and seed.

Preliminary preparation fibre—retting; separation.

Manufacture of fabric—similar to cotton.

Wool—contrasts with cotton.

Source—finer grades by shearing.

Preparation—washing; wool-fat U. S. P.; cleaning; carding; felting.

II. ARTICLES USED FOR SPECIFIC PURPOSES.

A. *Application of Heat and Cold.*

Heat as a remedial measure—dry through use of hot-water bottle, heating pad, lamps, air heaters; moist heat through use of wet dressings; physiological effects each; uses each.

Cold as a remedial measure—dry cold through use water-bottle, ice bag, water coils; moist heat through use wet dressings and baths; physiological effects contrasted with heat; uses.

Appliances for application heat—hot-water bottles; forms—standard, head, spinal, ear, Sprague ear, face; capacities; caution against boiling water; storage when not in use; electric heating unit in stopper; may also be used for application cold. Electric heating pad—form; caution against wet.

Waterless heaters—form; refills. Metal hot-water bottles—form; contrast with rubber; use as bed warmers.
 Appliances for application cold—ice bags—rubberized fabric *vs.* pure gum; forms—flat or English, face and ear, throat or tonsillectomy, spinal, cap. Water coils—forms, head and abdominal; contrast with ice bags.

B. Appliances for Irrigation Purposes.

General purposes irrigation—lavage; relieving obstruction; supplying liquids; therapeutic actions as anthelmintics, astringents, antiseptics.

Typical solutions or medicaments used in irrigation.

Appliances used for irrigation:

Rubber syringes—types as fountain or gravity-flow and compression; forms—fountain, bulb, infant, ear and ulcer, vaginal; tips and fittings; combinations.

Metal syringes—nickel-plated; construction; capacities; tips—nasal, aural, urethral, catheter, rectal.

Glass syringes—construction; rubber bulb types; capacities; advantages over others; tips and fittings.

Irrigator cans—enamelled and glass; capacities; fittings and tubing.

Catheters—uses; technic in introduction; types—soft rubber, glass, woven, return-flow; sizes or gauge; gauge numbers often applied to tubings.

Rectal and colon tubes—uses; with rubber bag or irrigator can; gauge numbers; differences in length.

Tubings—types—irrigator, drainage, stethoscope, suction, Carrel-Dakin; sizes in terms bore.

Bed and douche pans—materials used in manufacture; forms; cleansing and sterilization.

Stomach pumps and tubes—uses in poisoning; lavage and test meals; technic of introduction; forms.

Nasal douches—uses; forms—Birmingham type, rubber bulb, siphon; typical solutions used.

Atomizers and nebulizers—construction; types for aqueous, oily, corrosive materials; uses; medicinal substances used for antiseptic, astringent, stimulant, protective, local anaesthetic purposes.

C. Appliances for Hypodermic and Allied Forms of Injection.

General contrasts of this with other methods administration commonly used.

Hypodermic, intradermal, intramuscular, intravenous, spinal, transfusion—site of injection each; typical medicaments for each; contrasts each as to rapidity of action.

Pharmaceutical preparations—hypo tablets, ampuls, sterile solutions, biologicals; methods of sterilization and importance.

Appliances used—importance sterilization.

Hypodermic syringes—construction; capacity; graduation; forms; care; legal aspects.

Hypodermic needles—materials and construction; various gauges and lengths for different uses; care; legal aspects.

D. Appliances Used for Protective Purposes (excluding bandaging and dressing materials).

Rubber sheeting—uses; market forms; trade sizes.

Air cushions—uses; market forms.

Finger cots—uses; leather and rubber forms.

Gloves—uses; surgical and household forms; sizes; care in use and preservation.

E. Appliances for Feeding Purposes.

Nipples—commercial forms; sizes; cleansing.

Nursers, baby bottles—forms; capacities; cleansing; pasteurization in infant feeding.

Feeding cups and spoons—forms of each; uses.

Intestinal feeding—absorption; apparatus required; typical foodstuffs for method.

F. Thermometers and Temperature Recording.

General considerations—points at which temperature may be taken; heat regulatory apparatus of body; variations in normal temperature; variations due to abnormal conditions; relations to pulse rate and respiration.

Thermometers—manufacture; graduations; forms—clinical oral and rectal, household, bath chemical; method of use; reading time; cleansing after use; certification.

G. Bandages and Dressing Materials.

General purposes—absorption, protection against foreign materials, support, medication, covering.

Cotton—manufacture (refer to basic materials); absorbent and nonabsorbent; bleached and unbleached; sterilization; medicated moist and dry; market packings.

Gauze and gauze bandages—manufacture (refer to basic materials); thread count; plain and medicated; moist and dry; widths and lengths bandages; finger bandages; sterilization; market packings.

Muslin—contrast with gauze; sizes and packings.

Elastic bandages—manufacture; with and without rubber; advantages each type; length stretched and slack; uses; market packings and sizes.

Packing strips—medicated and nonmedicated; uses; market packings.

Bandage compress—form; uses; market sizes.

Medicated pads—picric acid, mercurochrome; uses.

Tape dressings—form; uses.

Stockinette—manufacture; form; use with plaster bandage.

Plaster Paris—manufacture; uses; method application; market sizes and packings.

Esmarch bandage—form; emergency uses.

Lint—contrasts with cotton bandages; uses; market forms.

Wool—manufacture (refer to basic materials); forms sheet, rope, tampon; uses tampons; market packings.

Oakum and jute—contrast with cotton; little used.

Impervious bandaging materials—general uses, protection, covering; nonadherent; disadvantages.

Oiled fabrics—manufacture; silk and muslin; uses; preservation; market packings.

Waxed fabrics—manufacture; muslin and gauze; use in burns; market packings.

Waxed and oiled papers—contrasts with others; uses.

Gutta percha—source and manufacture; properties; sheet and stick forms; dental and supporting uses; market packings.

H. Plasters.

General uses—protection, support, medication.

Basic materials—resins and waxes, lead oleate, rubber; advantages and disadvantages each.

Rubber base plasters—manufacture; U. S. P. specifications; uses; market packings.

Medicated plasters—manufacture; forms of medicament; official—Belladonna, Capsicum, Cantharides, Mustard; specifications for each; nonofficial

market plasters; medicinal actions official and nonofficial; market packings and forms.

Court plaster—manufacture; contrast with adhesive; market forms.

Corn and bunion plasters—medicated and nonmedicated; uses each; market forms and packings.

I. Ligatures and Sutures.

Definitions of terms.

Types material used—catgut, silk, kangaroo tendon, horsehair, silkworm gut, fascia or skin, linen, wire.

General considerations—absorbable and nonabsorbable; sterile and nonsterile; dry and moist; boilable and nonboilable; emergency tubes; tubes, packets, loose.

Catgut—source and manufacture; absorption; chromic or hard gut; sterilization; sizes or gauges; emergency tubes and other market forms.

Silk—source and manufacture; forms twisted and braided; colors; nonabsorbable; capillarity; contrasts with gut; sterilization; sizes or gauges; market packings.

Kangaroo tendon—source and preparation; contrasts with gut; sterilization; sizes and lengths; market forms.

Horsehair—source; nonabsorbable; contrasts with others; importance sterilization; market forms.

Silkworm gut—source and preparation; nonabsorbable; contrasts with others; lengths and sizes; sterilization; noncapillarity; market forms.

Fascia or skin—source and preparation; colors; contrasts with others; market forms.

Linen thread—source; nonabsorbable; lengths and sizes; colors; capillarity and coating; market forms.

Wire—silver; special uses; lengths and B. & S. gauges

Needles—only relation in emergency tubed sutures; types—full curve, half curve, straight; points—taper, triangular, spear, regular; eyes—regular, round, square; body—round, flat, square.

J. Hygienic Appliances.

Suspensories—form; fabrics; sizes; jock-straps and athletic supporters; uses.

Sanitary napkins—forms; modern cellulose products as filling; sizes; uses; disposal in relation to plumbing

Napkin belts—forms; sizes; uses.

Preventives—forms; uses; legal aspects

Pessaries—forms; materials; uses; legal and surgical aspects.

Prophylactics—forms; ointments and liquids; medicaments; uses; relations to public health.

K. Miscellaneous Appliances Not Otherwise Considered.

Urinals—forms male and female; glass and enamelled.

Pus basins—forms—kidney-shaped, triangular, square; glass or enamelled ware; uses.

Inhalers and croup kettles—construction; types—water kettle, jacketed, direct heating, electric; uses; typical medicinal substances used.

Eye cups—forms metal and glass; clear and colored; typical solutions used; importance filtration, cleanliness.

Medicine glasses and spoons—forms of each; graduations; preference to household utensils.

Breast pumps—forms; uses.

Nipple shields—forms; uses.

Protoclysis or drip apparatus—Murphy drip; fittings and accessories; arrangement of apparatus; solutions used.

III. MISCELLANEOUS ARTICLES AND PROCEDURES.

A. *Insecticides and Rodenticides.*

General considerations—definitions of terms; economic importance of control; labelling requirements and inert matter; sources—vegetable, chemical, biological; forms used—liquids, solids, gases.

Insecticides—stages in life cycle insects; stomach poisons, contact poisons, repellants; methods application—spray, blower, fumigation; division into those of agricultural interest and those of household importance; general measures—cleanliness, light, dry.

Household insects—moths, flies, roaches, bedbugs, mosquitos, fleas; means of prevention and combatting; substances used in control.

Rodenticides—habits; methods of combatting—mechanical, poisons, fumigants, repellants, biologicals; contrasts of efficiency; typical substances used in each method.

B. *Fumigation.*

General considerations—historical; action on bacteria and vermin; agents in use (except agricultural).

Preparations for fumigation—sealing and closure; moisture; protection metal articles; placing fumigant.

Cautions after fumigation—entering room; air circulation; caution with HCN.

Quantities fumigant required—room measurements.

Sulphur—formation dioxide on burning; penetrative power; effects on vermin and bacteria; effects on metals and colored articles; efficiency increased by moisture; market forms for purpose.

Formaldehyde—formation from paraformaldehyde in burning; penetrative power; effects on vermin and bacteria; no effects on metal and colored articles; efficiency increased by moisture; market forms for purpose.

Cyanogen—from cyanides by action acids; penetrative power; effects on vermin and bacteria; no effects on furnishings; caution regarding thorough sealing and entry after use; chief use on ships and in warehouses; ordinances governing use.

C. *First Aid and Emergency Treatment.*

General considerations—limitations; must not be more than temporary treatment pending arrival medical aid; drug store often first resort after injury or accident.

General procedures—summon medical aid; place injured in comfortable position; check bleeding; temporary wound dressing; relieve shock.

Control of bleeding—elevation injured member; application of pressure, manual or by tourniquet; characters of arterial, venous and capillary bleeding; points at which pressure applied; internal bleeding; nose bleed.

Wound dressing—temporary, leaving permanent to physician; cleanliness; use of antiseptics; compresses.

Treatment of shock or faintness—position of body and head; application heat; stimulants; rest.

Burns—first, second and third degree, differences; emergency treatment each type; medicinal agents used in treatment; severe sunburn

Sunstroke—symptoms and emergency treatment.

Heat prostration—symptoms and emergency treatment

Fainting—emergency treatment.

Epileptic seizures—emergency measures.

Frostbite—emergency treatment.
 Sprains—nature; symptoms; temporary treatment.
 Strains—nature; symptoms; temporary treatment.
 Dislocations—nature; symptoms; temporary measures.
 Fractures—nature; classification—simple, compound, comminuted; symptoms; temporary treatment and transportation.
 Artificial respiration—accidents requiring this treatment; mechanical devices; summon medical aid but meanwhile start process; prone pressure method—sequence and time of steps; conserving body temperature; after-treatment.

COLUMBIA UNIVERSITY, SCHOOL OF PHARMACY.



Ophthalmic counter, Lascoff Pharmacy—here Ophthalmic preparations only are dispensed.

AN ANCIENT EYE DOCTOR.

A stamp belonging to a Roman eye doctor who practiced in London about 300 A.D. was recently discovered during the course of excavation work near London Bridge. It was made of a flat stone, two inches square and three-eighths of an inch thick. On the four narrow sides had been carved the name of the doctor, Caius Silvius Tetricus, and his prescriptions for four eye troubles. The stamp was apparently used to impress the doctor's name on his preparations, which were made in the form of solid sticks, resembling sticks of sealing wax.

OPIUM PARLEY IN SIAM.

John K. Caldwell, foreign service officer with the rank of Consul General and State Department authority on opium questions, is attending as an observer the conference on the use of opium in the Far East which opened at Bangkok, Siam, November 9th.

Mr. Caldwell will be assisted by Colonel Lucien R. Sweet, Chief of Staff of the Philippine Constabulary, who is thoroughly informed on the administration of Philippine narcotic laws.