

SUMMARY OF THE REGULATIONS GOVERNING THE SALE OF DRUGS
IN SWEDEN.*

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APOTHECARY SHOPS A STATE GRANT.

A state charter or privilege is required, and has always been required, for establishing and conducting an apothecary shop in Sweden. The proprietor is thus the possessor of a Royal Charter to conduct a certain apothecary shop, situated in a certain district.

When an apothecary shop becomes vacant through the death, transfer to another place, pensioning or retirement of the proprietor, a notification of the vacancy is made public within thirty days. Three of the applicants are then put first on the list of applicants by a special committee composed of five persons: Two proprietors of apothecary shops, selected by the Apothecaries' Society; two pharmacists who are not proprietors, selected by the Pharmaceutical Federation, and a chairman appointed by the Government. After the list of candidates has been published the State Medical Board selects one on the list, and, finally, the Government makes the appointment. Neither the Medical Board nor the Government is bound by the selection made by the committee, but usually the candidate who stands first on the list gets the appointment. It happens occasionally, however, that both the Medical Board and the Government make the appointment without reference to the proposed list of candidates.

The new proprietor must within a certain period report the business for inspection. Before making such report he shall have taken over the stock and fittings from his predecessor, provided the latter so desires. If the old and new proprietor cannot agree about the amount, the price shall be fixed by a committee of which the State Medical Board appoints the chairman, and each of the contending parties one member.

INTERIOR AND EXTERIOR FITTINGS OF THE APOTHECARY SHOPS.

In the public part of the premises there is always a counter which separates the customers from the personnel. The work is in general carried out at prescription desks which stand out on the floor.

In addition to the shop premises, an apothecary shop must have a laboratory, analysing room, mortar room, cellar, decoction room, room for tinctures, drugs and medical preparations, as well as a room for the pharmacist having the night watch. The same room may, however, be used for several of these purposes.

The laboratory must contain distillation apparatus for water and spirits, drying cabinet, a press, percolators, etc.

The analysing room must be fitted with all apparatus required for chemical examination and reagents, as well as with a microscope.

LEGISLATION GOVERNING APOTHECARY BUSINESS.

Apothecary shops should be available for the public day and night, week-days, Sundays and holidays, but the Medical Board may give permission to the alternate

* Section on Education and Legislation, A. Ph. A., Rapid City meeting, 1929.

closing and keeping open during nights and holidays in localities where there is more than one apothecary shop. The municipal authorities must, however, give their consent to such alteration. In general, the measure is carried through in towns having more than one apothecary shop.

Prescriptions can only be made up by graduated pharmacists, but a pupil or technical assistant may assist them in such work. The pharmacist in charge shall write his name on the label of the preparation, and under the list of ingredients written on the prescription form. Each ingredient shall be charged separately on the prescription form as well as each *pro labore* item. The prescriptions are returned to the customer with the exception of certain prescriptions for preparations containing spirits, in which case the prescription is retained by the apothecary as a voucher. On the label of the preparation an identical copy of the prescription formula is to be written, provided the physician has not expressly forbidden this.

The legislation regarding spirituous preparations is extremely detailed and stringent, so much so that the stipulations regarding the handling of such preparations by the apothecary shops is almost stricter than for poisons.

MANAGEMENT AND CONTROL OF APOTHECARY SHOPS.

The State Medical Board exercises supervision over the apothecary shops, as well as over everything else connected with public health. Within the Board matters connected with the dispensing of drugs and medicines are in charge of a Head Clerk who is a licensed apothecary, assisted by a pharmacist secretary and a legally trained secretary.

Each apothecary shop is inspected once a year. The inspection is generally performed by a government physician at the same time he inspects other institutions connected with public health in the same place. A report relating to the inspection in accordance with a certain form is sent in to the Medical Board. Extraordinary inspections of apothecary shops are made without notification at any time by specially appointed persons—professors in chemistry, members of the Medical Board, or apothecaries. An apothecary shop may be inspected in this way once a year, but several years often intervene between each such inspection. Reports in regard to the same are sent in to the Medical Board, and are not made on any fixed form.

The proprietor of an apothecary shop is in charge of the business, and it is his duty to inspect it in person every day. The proprietor is entitled to two months' vacation from the management of the shop each year, and for this time he shall submit the name of the temporary manager to the Medical Board. In addition the proprietor has the right to be absent from the shop during not more than thirty days each year, but not more than one week in succession without asking special permission from the Medical Board, provided, however, that a pharmacist with qualifications entitling him to act as manager for an apothecary shop is employed by him.

For some special reason, such as illness, the proprietor can obtain leave of absence, but not for more than six months at one time. If his health should require that he stay away a longer period than six months, the leave may be extended as long as necessary, but only for six months at a time.

Should the proprietor of an apothecary shop be incapacitated by chronic illness from attending to his duties, he may farm out the privilege to a licensed apothecary approved by the Medical Board. The sum to be paid for such transfer of the privilege is fixed by a commission, of which the Medical Board, the Apothecaries' Society and the proprietor, each appoint one member. The announcement that the shop can be leased is made in the same manner as in case of a vacancy, but the tenant is appointed by the Medical Board. The amount paid for the leasehold remains the same during the time the proprietor enjoys the concession, whether the same tenant remains during the whole time, or whether a change is made.

THE STAFF OF APOTHECARY SHOPS.

The pharmaceutical corps comprises proprietors, licensed apothecaries, graduated pharmacists and apprentices.

Furthermore, the apothecary shops employ rather extensively so-called technical assistants, almost exclusively females, who take part in all the work except the weighing and selling of poisons. The technical assistants as well as the apprentices work on the responsibility of the proprietor, or, when they assist one of the pharmacists, on the latter's responsibility.

The requirement for being accepted as an apprentice is matriculation examination for entrance to the universities. The apprenticeship period is a minimum of two years, during which time the apprentice participates in the duties of the shop and also of the laboratory, where he must make up a number of galenical preparations under the supervision of the chemist in charge. Subsequently, he has to pass a six-month course at the Pharmaceutical Institute in Stockholm, where he receives instruction in chemistry, pharmaceutical chemistry, botany and pharmacognosy, technical pharmacy and pharmaceutical legislation. Included in the course are chemical and botanical laboratory work. At the end of this course the student passes the graduation examination as pharmacist, which entitles him to carry out the duties of a pharmacist, but he cannot be placed in charge of an apothecary shop except in exceptional circumstances and for brief periods.

After the pharmacist has served another year in an apothecary shop in that capacity he may continue his studies for obtaining a certificate as licensed apothecary. The course covers a period of two years, but it usually takes from 2½ to 3 years before the pharmacist is ready to pass his examination as licensed apothecary.

Marks are awarded for both "pharmacist" and "apothecary" examinations on the subjects in which instruction has been given, and the graduates are registered by the State Medical Board.

PRICES OF MEDICINES.

The retail price list of medicines is worked out by two representatives of the Medical Board and two persons appointed by the Apothecaries' Society, three of the members of this committee being usually apothecaries, and one a physician. The list is revised at least once a year. In addition the Apothecaries' Society publishes a slightly more detailed price list simultaneously with the official one.

The official price list of medicines is compulsory for all apothecary shops in so far that the listed prices must not be exceeded. Neither can special preparations in original packings be sold at a higher price than if the ingredients were assessed ac-

ording to the rules laid down in the official price list. This applies only, however, to such preparations as fall within the designation "apothecary goods," *i. e.*, which may not be sold by other than apothecary shops. Goods commonly handled by apothecary shops, but which may also be retailed by other dealers, such as hair lotions, skin preparations, disinfectants, certain medicinal foods, etc., are not, on the other hand, affected by the stipulations of the official price list for medicines, the prices being usually set by the manufacturers greatly in excess of those ruling for "apothecary goods."

Sick benefit societies and other institutions are not entitled to any special rates, but for supplies to large hospitals, etc., the apothecary voluntarily allows a certain rebate.

"Counter sales"—*i. e.*, dispensing without prescriptions—comprises on the whole only medicines, bandages and food preparations, but cosmetic preparations most in demand are also generally stocked. Of the total turnover about 40 per cent are on an average derived from prescriptions, and 60 per cent from counter sales.

It is difficult to institute a comparison between the prices charged by retailers and the apothecary shops, because such goods as are sold by both are in general not comparable in quality; the pure chemicals and drugs sold by the apothecary shops are usually replaced by those for technical use in general commerce. Preparations put up by manufacturers, which are handled by both, are sold at the same prices. This is usually also the case in regard to bandages, etc.

NUMBER OF APOTHECARY SHOPS AND PERSONNEL.

There are in Sweden about 400 independent apothecary shops, and about 20 "medical stores" which are conducted by independent apothecary shops. The latter form of dispensing medicines is used in places where it is doubtful whether an apothecary shop would provide its possessor a reasonable income. Now-a-days concession for setting up an apothecary shop is not granted when it seems unlikely that the venture would pay, provided the local authorities do not undertake to guarantee the proprietor necessary financial assistance.

In Stockholm, with about 450,000 inhabitants, there are 33 apothecary shops. The population of Sweden is about 6,000,000, and the number of apothecary shops about 400. At the beginning of 1929 there were employed in apothecary shops about 450 licensed apothecaries, 350 graduated pharmacists and 150 apprentices.

At over 100 apothecary shops no qualified assistant is employed, and the proprietor is in consequence solely responsible day and night for the dispensing.'

HOURS OF WORK IN APOTHECARY SHOPS.

The hours of work of the pharmaceutical staff must be not less than 42 hours per week in order that the years of service shall be computed in full, and according to agreement between the Apothecaries' Society and the Pharmaceutical Federation the hours of work shall not exceed 48 hours per week. Night attendance is not included in the working time.

Personnel engaged in sick attendance is not included in the Swedish eight-hour legislation, but the non-pharmaceutical staff of apothecary shops does not as a rule work more than 48 hours per week.

SALARIES PAID TO EMPLOYEES OF APOTHECARY SHOPS.

Per annum the basic salaries are: For licensed apothecary, 6000 kroner; graduated pharmacist, 4200 kroner.

A licensed apothecary obtains in addition increases of 500 kroner, and one of 400 kroner, after he has served 4, 7, 10, 14, 18 and 22 years, counted from the passing of the "pharmacist" examination. A graduated pharmacist is entitled to four increases of 500 kroner each after 5, 10, 15 and 20 years of service.

From 3 to 7 kroner per night is paid for night attendance, depending on the size of the shop. Overtime, temporary or part-time work is paid for at the rate of 1.50 kroner per $\frac{1}{2}$ hour, part thereof to licensed apothecary, and 1.00 kroner to graduated pharmacist.

The foregoing is the basic remuneration, but in most apothecary shops supplementary additions are made, estimated according to the expense of living, and ranging from $2\frac{1}{2}$ to 25 per cent of the basic salary. Thus a middle-aged, married licensed apothecary in Stockholm has a minimum salary of about 10,400 kroner a year; more if he has children; and those occupying managerial positions are paid considerably more.

An apprentice is usually paid 900 kroner the first year, and afterwards 1200 kroner per year. There is no fixed wage scale for technical assistants, the wages varying between 1800 and 4800 kroner per year. Charwomen and laboratory workers receive from 1500 to 4200 kroner per year.

The additions for length of service are paid out of a fund. The Age-Addition Fund of the Apothecary Corps¹—into which all apothecary shops pay 24 öre for each prescription made up.

The wages of the pharmacists are only in part paid direct by the apothecary shops, the remainder being paid from a special fund—the Apothecary Shops Wage Fund.²

The supplementary percentages to the salaries—"dear-place" additions according to the Swedish term—are also paid out of the latter fund, which is maintained by direct contributions from the different apothecary shops according to a progressive scale. The highest contribution—32,000 kroner per year—is paid by my own apothecary shop. The smallest shops are entirely relieved from contributions for this purpose. The Board of Directors for these Funds are appointed by proprietors of apothecary shops.

In addition to contributions toward age-additions, "dear-place" additions, and supplementary additions the apothecary shops are charged with dues for the pensioning of proprietors. The small apothecary shops are relieved also from these dues, and the larger ones pay according to a progressive scale. The highest contribution toward pensions is at present paid by the "Kronan" apothecary shop—17,000 kroner per year in Gothenburg. For the middle class of apothecary shops, as to business, this charge may be estimated at about 2 per cent of the turnover.

Proprietors of apothecary shops retire on a pension at 70 years. The pension is 6000 kroner a year. Apothecaries and pharmacists who have not become proprietors also receive a pension, but the rules have not yet been fixed.

¹ "Apotekarekarens alderstilläggs-kassa."

² "Apotekens lönekassa."

ASSOCIATIONS OF APOTHECARIES AND PHARMACISTS. APOTHECARIES' SOCIETY.

Membership is compulsory for all proprietors of apothecary shops; the by-laws are authorized by the Government. The Board of Directors of the Apothecaries' Society¹ receives requests from the Government, the State Medical Board, and other state and local bodies to submit opinions on all questions concerning the sale and dispensing of drugs and medicines. The Board has at its disposal a considerable capital—2,500,000 kroner, mostly donations for benevolent purposes, from which relief is given to distressed pharmacists and survivors of deceased pharmacists, and prizes and aid given for carrying on studies and researches.

The Swedish Apothecaries' Federation² of which practically all proprietors and lessees of apothecary shops are members, is an employers' federation which carries on negotiations with the Pharmaceutical Federation on questions of wages, etc.

The Swedish Pharmaceutical Federation³ is the employee's association, comprising practically all working apothecaries and pharmacists.

The Pharmaceutical Society⁴ is a scientific association of which both proprietors and working pharmacists may be members.

COMPETITION BETWEEN APOTHECARY SHOPS AND GENERAL DEALERS.

Competition with dealers in chemicals and drugs exists, but the law defines the privileges of the apothecary shops so sharply that controversies on this point very seldom occur. Retail dealers in paints and chemicals, however, are constantly trying to get their range of goods increased at the expense of the apothecary shops.

The sale of poisons is exclusively reserved to the apothecary shops. A manufacturer of a poisonous article has the right to sell his product, but only to apothecary shops, or to trades or industries requiring it for their business. Such user may also himself import for himself a poisonous substance from abroad.

The retail trade in "apothecary goods," which do not include poisons, is reserved to the apothecary shops, but a great number of commonly used medical preparations are exempted from the monopoly of apothecaries. Among such preparations, which may be sold by general dealers, are the following:

Cosmetic preparations used for the care of skin, hair, or for the cleansing of the oral cavity and healthy wounds; corn preparations; disinfection mediums; bandages, also impregnated for antiseptic purposes; mineral waters; mineral spring salts; food preparations which do not contain other medical preparations than lecithine, or glycerophosphate of soda or calcium.

Wholesale trade with apothecary goods can be carried on by anyone who either himself possesses such competency as is stipulated in the Regulations governing "apothecary goods," or who appoints a competent person as manager of the "apothecary goods" department. The wholesaler, however, can only sell such goods to apothecary shops.

THE MANUFACTURE OF PHARMACEUTICAL PRODUCTS IN SWEDEN.

The chemical industry in Sweden produces only a few substances used in medical preparations. The major part of chemicals and alkaloids for medical

¹ "Apotekarsocieteten."

² "Sveriges apotekareförbund."

³ "Sveriges farmaceutförbund."

⁴ "Farmaceutiska föreningen."

purposes are imported from abroad, mostly from Germany, but also from Great Britain and other countries. The same is the case with drugs. These are largely imported from Austria.

Made-up pharmaceutical preparations, intended to be sold in original packings, are manufactured by a large number of firms in Sweden, but are imported to a still greater extent, chiefly from Germany and England. Since the World War the country has been flooded by domestic and imported specialties, which obtain a sale through the medium of profuse advertising.

In order that a preparation classed as "apothecary goods" shall receive permission to be sold in Sweden, it must be provided with a complete declaration of the nature and quantity of the ingredients in same. The price must be no higher than if the ingredients were estimated according to the official medicinal price list. Preparations which are not classed as "apothecary goods" may, on the other hand, be sold at any price. Manufacturers of preparations handled by general dealers usually put a very high price on them in comparison with the prices charged for "apothecary goods."

DUTIES ON DRUGS, ETC.

"Apothecary goods" are duty free, and the same is generally the case with vegetable substances. The duties on chemicals vary, the duty on a large group being 15 per cent ad valorem.

ABSTRACTS OF PAPERS OF SECTION ON HISTORICAL PHARMACY, A. PH. A.

"Writing Pharmaceutical Biography and History," by Edward Kremers.

This is a plea for more conscientious work in recording historical facts so called, also for the collection of material for the future historian rather than for premature attempts at "writing history."

"Tom, the 'Doctor's' Apprentice, a Medico-Pharmaceutical Character of Captain Marr-yat," by Edward Kremers.

The question whether pharmaceutical graduates should be given the doctor's degree was much discussed a quarter of a century ago. As soon as pharmaceutical education began to follow the well nigh universal practice of the American college campus, the problem solved itself. Some of us well remember how hotly the question was debated by not a few of the advocates pro and con. Now, that feelings have calmed down, it may not be out of place to resurrect a word picture that portrays the character of an English "doctor" who had not "graduated" from the London College of Physicians.

"Lloyd's Conference with Flückiger in New York," by Edward Kremers.

Under the title Flückigeriana, the following articles have already appeared, *viz.*:

I. Briefe Flückigers an Hoffmann, N. Y., *Apoth.-Ztg.*, 45 (1924), 110, 122.

II. Aus dem Tagebuch Augusta Flückiger's, *Ibid.*, 49 (1928), 57.

III. Flückigers Amerika-Briefe an Tschirch, *Ibid.*, 49 (1929), 142-155; also 50 (1929), 1 and 15.

To these is now added:

IV. Lloyd's Conference with Flückiger in New York.

It deals with the *Pharmacographia* planned by Flückiger and in the writing of which the senior member of the conference invited the junior member to prepare the monographs pertaining to American drugs.

"LeMort's Pharmacia," by Edward Kremers.

A History of pharmaceutical textbooks has not yet been written. To make the satisfactory writing of such a history possible, much detailed bibliographic work will have to be done. As a slight contribution to this task a preliminary account of what appears to be the first title "Pharmacia," Pharmacy, is herewith submitted. It is published in the hope that it may lead to further information concerning the author and his contributions to our calling.