

affords golden opportunities for making serious mistakes. The present condition of affairs constitutes a menace to a large number of the sick in this country and it would seem that a common-sense regard for their interests indicates clearly that where a hospital or dispensary is not in the position to employ a trained pharmacist, this important part of medicine should be placed in the hands of a local retail pharmacist who could detail one of his registered men at such times in the day to cover the work properly, in this way the prescribing doctors could be sure of their patients getting the best results from their treatments and the profession of pharmacy be placed on a better basis in every hospital and dispensary where medicine is compounded and dispensed.

(Signed) EDWARD SWALLOW,

Late pharmacist to Outpatient Dept. Bellevue Hospital, New York City.

18 CORTLANDT ST.,
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NOTES ON PHARMACY OF THE PAST CENTURIES IN SWEDEN—
ESPECIALLY THAT OF THE EIGHTEENTH CENTURY.*

BY B. E. HÖCKERT.

The first real drug store in Sweden was opened in Stockholm in 1592 and was licensed by King Johan the Third. It is still in existence. Before that time, drugs and spices were sold in grocery stores, by priests and others who had some knowledge of medicine and drugs. Some of the noblemen employed French or German pharmacists, who kept drugs for them, their families and retainers. During the next hundred years many drug stores were opened in Stockholm and other cities. They generally received their licenses from the local authorities until in the year 1688, King Charles the 11th designated the issuance of licenses a royal privilege. At this time he also prescribed that the Royal Collegium Medicum should examine and issue licenses to those qualified who desired to practice pharmacy or conduct a drug store, here called apothecaries. At this time a law was issued against quackery and illegal sale of drugs. The more important parts of this law are still in force.

Licenses for new drug stores were very rarely issued, and only after the people many times had petitioned for a new drug store. The present law has about the same rules as that of several centuries ago. Stores were sold, but the new owner must have passed his examinations and obtained a royal license. Some change was made in this respect in 1875, and a Royal Committee is now working on a new law.

When more than one drug store was licensed in one place, they were given names generally of animals,—thus, for example, during the time I worked in Stockholm, the drug stores of that city were: The Lion, The Crown, The Engel, The Blackmoore, The Owl, The North Star, The Monkey, The Swan, The White Bear, The Stag, The Monoceros, The Phenix, The Griffon, The Elephant and The Vase. Every drug store thus named had a picture sign, some of the old ones still being in use, but most of them have found their place in some museum, and new picture signs have taken their places. In the beginning of the 18th century, the Royal Medical Collegium started to inspect the drug stores and to test their chemicals

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and preparations. It still continues those inspections, which now, in compliance with the law, are made annually.

At this time transportation was very slow and the drug stores few and far between, so it was necessary to keep large stocks. The departments and storage rooms of the establishments, as a rule, were as follows: The store itself where a small stock of everything was kept, customer served, prescriptions filled, and simpler preparations were made. The fixtures in this were always of hard wood and elegant; they were generally well made, as was the rule of the time. Many sets of old fixtures from the 17th or 18th century were still in use in some of the back rooms at the end of the 19th century; now such fixtures have found place in museums. The fixtures included wall cases, the prescription counter, and the counter. The prescription department was not shut off with a high partition, but was open so the customers could look over it. Until about 1750 the vessels were either of glass or of wood; some of the wooden jars are on exhibition in the museums. At the time I was an apprentice, a few of them that were nearly two hundred years old still served as containers for veterinary remedies. During the latter half of the 18th century porcelain jars came into general use.

The other rooms of a drug store were—the tincture chamber, where extracts, tinctures and valuable drugs and chemicals were stored; the material chamber, where bottles, mortars, funnels, graduates and other apparatus and instruments were kept and cleaned, and also the larger quantities of drugs of frequent demand in the stores. Ointments, syrups and other preparations that must be stored in a cool place were kept in the cellar, and crude vegetable drugs in the attic.

The laboratory, during the period spoken of, was a busy place for many preparations were made here. Large mortars of iron and brass occupied an important place; they were generally ornamented on the outside with different figures and bore the date of their manufacture; some of them are still in use, many are kept as heirlooms, and a few are found in museums. While I was working in Stockholm, I took part in the celebration of the 200th birthday of one of these mortars. Next in importance was the distilling apparatus for preparing distilled water, aromatic waters, aromatic spirits, etc. (Waters and spirits were then not made from aromatic oils.) The plaster kettle, tincture press, and other apparatus now only used in large manufacturing plants, or discarded, had place in the drug store laboratory of the period mentioned.

The first modern pill machine came to Sweden about 1740, or a few years later. Before that time the pill mass was rolled out by hand on the prescription counter and cut with so-called pill combs. Plasters were spread on skin with a knife, except adhesive plaster, which was spread on linen by aid of a machine for that purpose. The weights were similar to the old ones used in this country; the scales were not as accurate as the modern, but very good for the time; by a Royal decree of 1857 metric weights were prescribed. Mortars were made of iron, wood, brass, marble, glass, porcelain and serpentine. Gilt and silver coated pills were very much in demand during the 18th century; the coating was applied within hollow spherical hard wood coaters, sometimes simply a paper box was used, in which the pills were rotated with silver or gold foil, after moistening them slightly with weak acacia solution. Spatulas were made of iron, wood and silver.

The stores were kept open from 6 A.M. to 10 P.M.—night-bell service for medicine after the latter hour; all clerks slept and boarded on the premises; the

apprentice, as a rule, slept in the store, and a registered clerk was nearby to be called if needed during the night.

A pharmacopœia printed in Latin was in use during the 17th and 18th centuries,—Pharmacopœia Holmensis, printed 1686. A number of other books for pharmacists were published during the 18th century, many of them translations; a number of German and French books were also in use during this time, just as they are to-day. In 1775, the first edition of Pharmacopœia Swesica was issued. It was printed in Latin as all following editions have been until the 8th, which is printed in Swedish. A special pharmacopœia was published in 1789 to be used when medicine was prescribed for soldiers, sailors, paupers, etc. It was really only a formulary to save the physicians' time and trouble in writing prescriptions. New editions have been published from time to time.

Concerning drugs and medical preparations of the 18th century, I cannot give a complete list, but will mention some not used in our days. Two of the most used preparations were *Species Amara Hjernesii* (Dr. Hjernes Bitter Spices) and *Electuarium Theriaca*. The first contained about the same ingredients as the Warburg's Tincture of this country. The formula was prepared by Dr. Urban Hjerne, the first Swede who graduated as a physician. The spices, as well as a tincture made from them, were very much in favor during the 18th and 19th centuries, and considered to be almost a universal remedy for every ailment human flesh is heir to. *Electuarium Theriaca* is said to have been invented by a Roman physician Andromachus, who was physician to the Roman Emperor Nero. After the formula in *Pharmacopœia Holmiensis* it was made from 66 different drugs. One of those, and one of the most important, was the flesh of a serpent. The 66 drugs were divided in several classes. When Theriac was to be made, each class of drugs was to be weighed out, and inspected by a magistrate or a representative of *Collegium Medicum*. After this inspection the mixing took place, first each class for itself, and then the whole. It was considered one of the most important remedies and used for every known ailment. Another form of Theriac for horses and cattle was also largely prescribed. It contained only four drugs and was first prescribed by the famous Arabic physician Avicenna who lived about the year 1000. Another very much used *Electuarium* was made from nine kinds of roots and Theriac. It was called *Electuarium Orvistanum* after the City of Orvieto in Italy, where it was first used by a quack about the year 1200. Another drug in general use was *Mumia Vera*, which was to consist of the fatty resin-like excretion that is to be found on the Egyptian mummies. But as this was too difficult to obtain, powdered mummies were substituted. Many adulterations were on the market, the most used being *Asphaltum*. This drug was considered a remedy for many ailments, and used both alone and in many mixtures, both for internal and external use. So was it one of the important parts in *Pulvis contra Casum*, which was said to defend against death itself. Externally applied, it was said to heal all sores; it was an ingredient of the famous *Emplastrum Stectum Crolli* which contained over 30 drugs and was invented by Dr. Oswald Croll, a famous physician in Frankfort about the year 1600. The Swedish physicians during the 18th century condemned *Mumia* as of no medical value whatsoever.

EDITOR'S NOTE.—The paper concludes with a list of drugs, which, as the author states, have disappeared from the *Materia Medica*. This list includes items that appear in old dispensaries, and is omitted.