ROYAL PHARMACEUTICAL SOCIETY

ROYAL PHARMACEUTICAL SOCIETY MUSEUM
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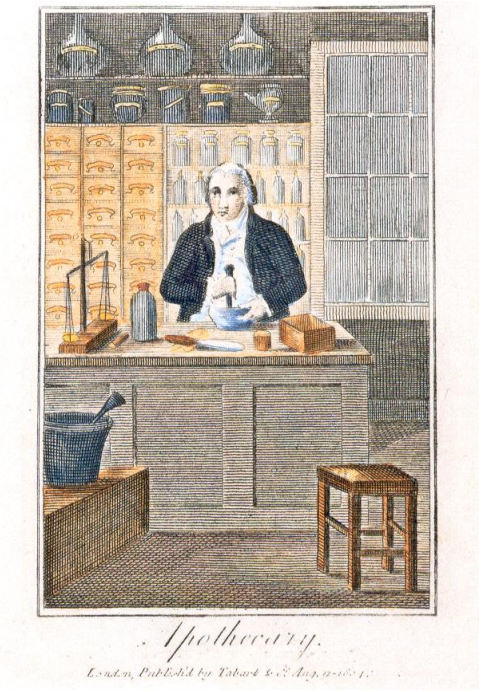
INFORMATION SHEET: 9

CAPSULES AND TABLETS

CAPSULES AND TABLETS ARE THE MOST USED FORMS OF MEDICINE. TODAY THEY ARE MANUFACTURED ON A LARGE SCALE, BUT IN THE PAST THEY HAVE BEEN PREPARED IN THE PHARMACY

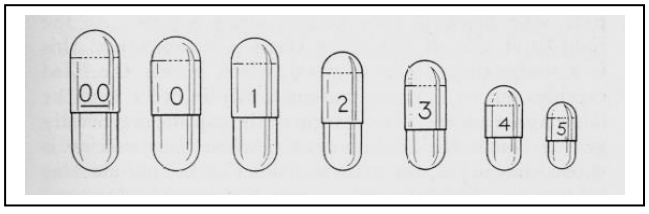
HISTORY

Progress in medicine saw a reduction in the use of infusions of the whole of plants. Increasingly parts of plants eg. leaves and roots, were powdered, and by the 1800s some of their active ingredients were being identified and reproduced chemically. New mineral and chemical substances were discovered that had medicinal use. Many medicines were produced in a liquid or powder form. Ways of making these medicines palatable, disguising the taste and making swallowing easy, resulted in today's most popular and accurate dosage systems, the *Capsule* and the *Tablet.*
Nowadays production is done commercially on a large scale. In the past the Pharmacist prepared these products on a small scale within the Pharmacy.



CAPSULES

There are two forms of capsules, *hard capsules* and *soft capsules.* Hard capsules are for powders or semi-solid preparations and soft capsules for liquids.



Sizes of Hard Capsules, From *The Art of Dispensing, 1937*

Hard capsules were invented in 1833 in France. They were (and are today) made of gelatin and consist of two parts, a body and a lid (they were supplied ready made but were filled in the pharmacy). A simple filling apparatus would consist of a wooden base, drilled with holes equivalent to the size of capsule being used. Weighed powder doses could be introduced through a small funnel. Semi-solid preparations were rolled into a pipe, a piece cut off and

weighed, trimmed to the correct weight and placed in a capsule. The caps were fitted and the capsules packed and labelled.

Soft capsules could be made in the pharmacy. The apparatus was called a *dipper* and consisted of metal moulds of various sizes which were set into a base. The dipper was inverted and dipped into a melted glycerin/gelatin mixture, placed on its base and, when cool, the capsules were removed. The capsules could then be filled with a measured amount of liquid via a syringe then closed with a blob of the molten glycerin/gelatin mixture applied with a glass rod, or sealed by careful application of a heated rod.

TABLETS

Pharmacists have prepared tablets in two basic ways - by using a tablet triturate mould or an apparatus for compression.

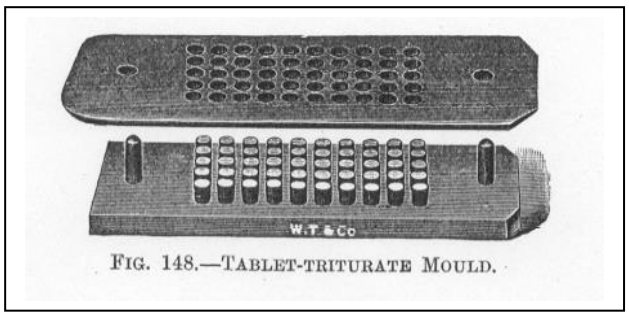
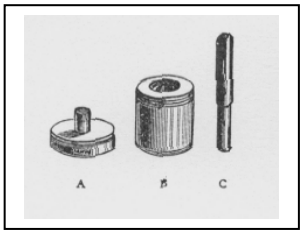


FIG. 148.—TABLET-TRITURATE MOULD.

From *Practical Pharmacy, 1908.*

A *tablet triturate mould* consists of two flat plates, one bored with holes, the other having projections exactly corresponding to the holes. The ingredients are mixed with milk sugar (lactose) and the whole powder dampened with neat alcohol. This mixture is then rubbed in to fill the holes in the plate which has been placed on a flat surface. When the mixture has dried, the other plate is used to push out the tablets now formed. This method of tablet making has limitations due to the size of tablet it is possible to make and the danger of dampness affecting the medicaments during production.

For small-scale production of *compressed tablets* the pharmacist could use a simple press (see illustration) consisting of three parts: a base die (A), a sleeve (B) and a punch (C). The sleeve was placed on the base die, a weighed amount of powder introduced, the punch fitted and hit with a mallet, thus producing a compressed tablet.



Single Tablet Press.
From *Art of Dispensing, 1926*

Later, as demand increased, small machines were produced with adjustable dies to allow better control of the compression and to introduce the medicament automatically in measured doses.

The illustration overleaf is from a Museum postcard entitled '*Apothecary', published in 1801.*

This information sheet is also available in a large font size.
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