

Practical Hints on Dispensing for Students.

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(From the *British and Colonial Druggist*.)

POWDERS.

The compounding of a prescription for powders is not an operation of much difficulty, the most essential points being accuracy in weighing the ingredients and treatment in folding. Prescriptions may be met with written in various ways as,

I.

R Pulv. ipec. co.....15 grs.
Divide in pulv..... 3.

In this case it will be noticed a certain quantity is to be divided into several powders or it may be this form,

II.

R Bismuth carb..... 3 grs.
Soda bicarb..... 5 grs.
Misce. Fiat pulv. Mitte 6.

Here we have a definite quantity ordered to form one powder, a certain number of which are to be sent. Occasionally prescribers use somewhat ambiguous phraseology in directing how powders are to be prepared, and instances like the following are not uncommon:

III.

R Hydrag. suchlor..... 2 grs.
Sacchr. alb..... 10 grs.
Misce. Fiat pulv. S. 1 omnis 3 horis.

In such cases the dispenser must use his discretion, and may usually be guided by the dose and frequency of its administration as to the intention of the prescriber.

When a number of powders are to be prepared, as in Ex. II., the collective quantities may be weighed, mixed and then divided into the requisite number of papers.

When the prescriber leaves the quantity of sugar to be added to the discretion of the dispenser, he should use just sufficient to insure the proper distribution of the active ingredient, and, if possible, to cover the taste of the drug. The quantity employed should be noted against the copy in the prescription book. If the ingredients are bulky they should be triturated in a glazed mortar until thoroughly mixed, or when small quantities only are being dealt with, the best method is to mix them on a piece of smooth paper by means of a palette knife, which also prevents any loss taking place in the process of mixing. In dividing, each powder should be weighed out separately, the division not being made by gauging the quantity with the eye. Powders containing volatile or deliquescent salts should first be folded in white paper, then inclosed in tinfoil or waxed paper. One or two powders only are usually dispensed in small envelopes, larger numbers being sent out in boxes. The utmost neatness ought to be observed in folding powders, each one being made exactly the same in size, symmetrical in shape, and every care used to prevent soiling the paper in any way. Powders ordered in bulk, and not

to be divided into separate papers, are usually dispensed in wide-mouthed bottles.

CACHETS.

This convenient method of administering nauseous medicines in the form of powders has been for some time in use on the Continent and is now gaining favor with practitioners in this country. The cachet consists of two bone-shaped circular discs with flat edges, composed of wafer paper, which, when placed together, form a kind of envelope. Some are made with a flat lid, which folds down over the bowl-shaped part. When used, the drug must be reduced to a fine powder and placed in the receptacle, the edges of the other half are moistened, and then placed on top of that containing the powder, the rims being pressed together to seal it. In this manner, butyl-chloral hydrate, sulphonal, quinine, and similar unpalatable drugs, may be easily swallowed by the most fastidious patients without unpleasant taste. Cachets are made to hold from 5 to 15 grains.

CAPSULES.

Another tasteless form of exhibiting nauseous remedies is the capsule, which has recently increased in popularity. The flexible gelatine capsules now used are especially suitable for administering liquids, and are made to hold from 5 to 30 minims. The capsule is usually egg-shaped in form, and composed of gelatine, with an aperture at one end, by means of which the liquid may be inserted, and the capsule then sealed. It is made by dipping a metallic mould, the size required, into a hot solution of gelatine, inserting the other end of the mould into a stand, and allowing it to remain until dry. The base of the gelatine coat is then cut round with a knife, forming the aperture, the capsule is slipped off the mould and is ready for filling. The bulb of the mould should be greased, before being immersed in the solution. Capsules may be filled with the aid of a pipette, or small syringe, and sealed by applying a touch of gelatine solution with a camel hair brush over the aperture until completely covered, then allowing to remain until perfectly dry. This may be polished by gently rubbing with an oiled cloth. The gelatine solution may be made by dissolving gelatine solution 6 parts, sugar 1 part, in water 12 parts. The most disagreeable medicines are rendered tasteless when administered in this way, it being specially useful for exhibiting such drugs as liquid extract of cascara sagrada, terebene, &c. The American capsules are well adapted for giving powders or a semi-liquid mass in this form. They are cylindrical in shape and rounded at the ends. They are made of thin but firm gelatine, with a cap or top which may be removed to insert the drug, and then replaced. The capsule may be sealed, when filled, by passing a camel hair brush charged with gelatine solution round the joint. They are made in various sizes to hold from $\frac{1}{4}$ to 12 grains.

MEDICATED AND COMPRESSED TABLETS.

Although only introduced into this country a few years ago, the compressed tablet has now become an established medicinal agent in pharmacy, and is certainly an elegant and convenient method of exhibiting certain drugs. The tablets may consist of a single chemical or drug, or a combination of active remedies compressed into a small disc. By varying the degrees of pressure employed in the process of manufacture they may be made to dissolve quickly or slowly in the mouth. Several forms of apparatus have been introduced for manufacturing the tablets, some having been brought to a great state of perfection with automatic and other improvements. In each the principle is much the same. A weighed quantity of the drug in a state of fine powder is placed in a kind of mould, which is brought under a press or compressing cylinder, by the force of which the tablet is formed. With the larger machines they may be turned out very rapidly and beautifully finished. A simple form of hand apparatus is that in the form of a hollow cylinder, having a loose mould inserted at the bottom end, into which the powder is dropped from the upper end of the cylinder. It is then compressed into shape by means of a punch on which a few taps is given with a hammer.

The medicated tablet is a form of administration that seems likely to become a favorite one with medical men. They may be made in a very short time, and with less trouble than pills. Either chocolate or cocoa butter may be used as a base, with the addition of powdered gum and a flavoring agent. By this means cocaine, morphine, aloin, and other active remedies in great variety may be exhibited in a pleasant and palatable form. The following formula may be taken as an example, which may be altered as required:

COCAINE TABLETS WITH CHOCOLATE.

Cocaine hydrochlor..... 2 grs.
Pulv. tragacanth..... 24 grs.
Chocolate (sweetened) 1 drm.
Ess. vanille 10 minims.
Aque 25 minims.

mix and divide into 24 tablets each to contain $\frac{1}{2}$ grain of cocaine.

Proceed by triturating the cocaine with the powdered tragacanth, then reduce the chocolate to powder and thoroughly mix all together. Now add the flavoring essence and finally beat into a soft mass with the water. The mass may now be treated as if it was to be made into pills, being rolled out in the ordinary way on the machine, but without using powder. When rolled the proper length, instead of cutting into pills, flatten the pipe by pressure, and place it a moment over the pill cutter to accurately mark the divisions, then cut into square tablets with a sharp knife, and set aside on a plate to dry. If the flavor of chocolate is objected to, the same proportion of cacao butter may be used instead, with the addition of a few grains of saccharine to sweeten it. One or two grains will be found sufficient for this quantity. The tablets made with