

Specification of Moses Poole : capsules for medicine.

Contributors

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A.D. 1843 N^o 9906.

S P E C I F I C A T I O N

OF

MOSES POOLE.

—
CAPSULES FOR MEDICINE.
—

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE, }

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A.D. 1843 N° 9906.

Capsules for Medicine.

POOLE'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, MOSES POOLE, of the Patent Office, Serle Street, in the County of Middlesex, Gentleman, send greeting.

WHEREAS Her present most Excellent Majesty Queen Victoria, by Her
5 Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Twelfth day of October, in the seventh year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Moses Poole, Her especial licence, full power, sole privilege and authority, that I, the said Moses Poole, my exors, admors, and assigns, or such others
10 as I, the said Moses Poole, my exors, admors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, the Invention of "IMPROVEMENTS IN ENVELOPING MEDICINES," communicated to me
15 by a certain Foreigner residing abroad; in which said Letters Patent is contained a proviso that I, the said Moses Poole, shall cause a particular description of the nature of the said Invention, and in what manner the same is to be performed, to be inrolled in Her said Majesty's High Court of Chancery within six calendar months next and immediately after the date of
20 the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said Moses Poole, do hereby declare that the nature of the said Invention, and the

Poole's Improvements in Enveloping Medicines.

manner in which the same is to be performed, are fully described and ascertained in and by the following statement thereof, reference being had to the Drawing hereunto annexed, and to the figures and letters marked thereon (that is to say):—

The Invention consists of applying membrane to contain or envelope 5 medicines in doses suitable to be swallowed whilst contained in such envelopes. And in order that the Invention may be most fully understood, and readily carried into effect, I will proceed to explain the means employed for preparing and using animal membrane when performing the Invention. I would, however, first remark, that medicines have been heretofore enveloped in gelatine, 10 which, although it prevents the medicine being tasted when in the mouth, the covering too quickly dissolves, and persons having taken medicines so enveloped in gelatine have soon after experienced nauseous eructations. The object therefore in using an organic substance as the material for enveloping medicines is, to prevent the medicines which are taken therein from being too 15 quickly released, the membrane resisting the humidity and heat of the stomach, and in some degree the digestive powers of the gastric juice, and thus the coverings of medicine so enveloped will not be digested till they arrive in the intestines, thereby avoiding those disagreeable sensations and nausea heretofore common when employing gelatine as the material for enveloping medicines. 20 The coverings of membrane I call capsules; the organic substance preferred is derived from the small intestine of the sheep or other herbivorous animals, and the process of preparing the same is similar to that employed by the makers of harp strings, so far as regards getting it freed from the peritonal, mucous, and external membranes. The membrane thus obtained being 25 thoroughly washed in pure water, is then cut into small lengths suitable to be converted, by a process herein-after described, into capsules calculated to contain and envelope portions of medicine either fluid or solid. When the membrane is cut into pieces, as above described, it is desirable to immerse them in dilute sulphurous acid of the strength of one part acid and ten of 30 water; this has the effect of preserving the membrane from putrefaction for an indefinite time.

Figure 1 shews a mandril used in forming the capsules which fits into holes in the board *a*, Figure 2, pierced with several holes to receive the lower ends of the mandrils *b*; the size of the mandrils (which I prefer to be of box- 35 wood) is in proportion to the size of the desired capsules. The mandrils of wood should be boiled in tallow to prevent the capsules from sticking to them. The small mandrils thus prepared are ready to be used for making capsules. The person working is to be seated before a table, having at his left a board

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(a) full of holes to receive the mandrils. In a small vessel is placed a quantity of the pieces of membrane; he takes a mandril, when a piece of membrane is drawn over it, as shewn in the Drawing, turning the membrane inside out in the act of drawing it on the mandril, care being taken to fold
5 over the end of the membrane so as entirely to close it without leaving too great a thickness where so folded. This mandril is then placed upon a pierced board, and the operation is repeated upon numerous other mandrils in like manner. A single capsule or envelope, such as I have described, is suitable for medicines the action of which it is desired should be felt speedily in the
10 stomach; but as a covering to other medicines, such as the balsam of capivi for instance, I use a double envelope, that is prepared by merely drawing a piece of the membrane over the mandril on which there is a capsule already. In the process of drying, the two unite together and form one homogeneous body. When dry a coat of gelatine is applied, which gives substance, but
15 this may be dispensed with; the capsules are removed from the mandrils to be filled. In drawing the capsules off the mandrils it is done by reversing them so that the part which was inside on the mandril becomes the outside.

I have described the capsule of a single membrane, and also of a double membrane. The capsules now formed have to be filled, and, for example's
20 sake, I will suppose the medicine to be employed to be the balsam of capivi. For filling the capsules an instrument, represented in Figure 3, is used. It is a small cylinder *c*, in which is placed the balsam of capivi; *d* is a small pump screwed on the upper part of the cylinder *c*. This pump is destined to force air upon the capivi, thereby compressing it and obliging it to run from
25 the cock *e*. This cock *e* is small, terminated by a point, and having a very small passage, so that the capivi is discharged vigorously, but little in quantity. The foot of this apparatus is of lead, in order to keep it without the risk of upsetting. The interior of the apparatus is tinned to guard against verdigris. The cylinder is only filled to the extent of about two thirds with capivi,
30 leaving space for the air which is to be introduced to compress the capivi. In proportion as the capivi diminishes air is forced in until it be emptied; on taking off the pump a fresh supply is put in. It is thus the capsules are filled. The operator before filling a capsule inserts it into a small mandril, and with a brush he slightly wets the outside as low down as the place where
35 the tying will take place. The mandril is then taken out and the capivi filled in. Two persons should be engaged for filling and tying. The capsule should be taken with the left hand, and the end pinched with the finger and thumb so as to reserve a small part where the capivi cannot penetrate. It is then held to the cock, which is opened with the right hand; when a sufficient

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quantity has fallen the right hand quits the cock to lay hold of the upper part of the capsule, the second person ties on the thread, which is to be strong and fine, then the bottom of the capsule which was held between the thumb and finger is let go. This portion of the capsule being empty now affords larger space for the capivi, the thread is cut, and also the excess of the capsule. 5 Without the above precaution the expansion of the capivi might burst the thread. The capsule being now filled and closed the end where the tie exists should be dipped in gelatine or liquid gum to give it a uniform appearance. When dry medicines are to be enveloped, the medicine is to be placed in a capsule, and the same tied and finished as above described. 10

Having thus described the nature of the Invention, I would have it understood that I do not confine myself to the precise details, so long as the peculiar character of the Invention be retained. But what I claim is, the mode of enveloping medicines by applying an organic substance or membrane, as above described. 15

In witness whereof, I, the said Moses Poole, have hereunto set my hand and seal, this Twelfth day of April, in the year of our Lord One thousand eight hundred and forty-four.

MOSES (L.S.) POOLE.

DUCKWORTH. **AND BE IT REMEMBERED**, that on the Twelfth day of April, in the 20 year of our Lord 1844, the aforesaid Moses Poole came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose. 25

Enrolled the Twelfth day of April, in the year of our Lord One thousand eight hundred and forty-four.

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Portion of
Membrane



FIG. 1

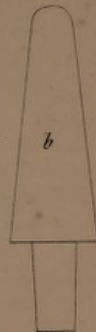


FIG. 2

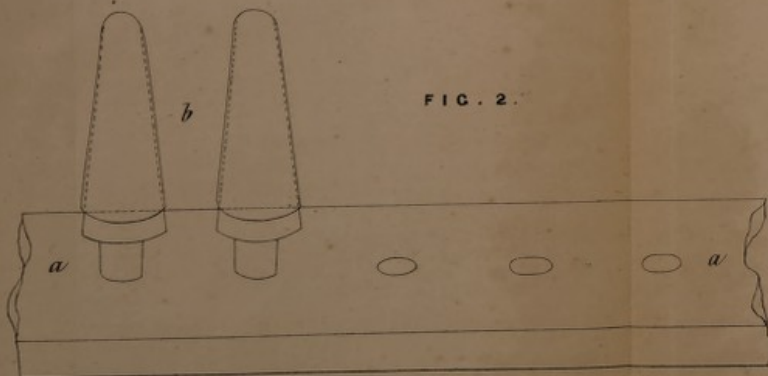
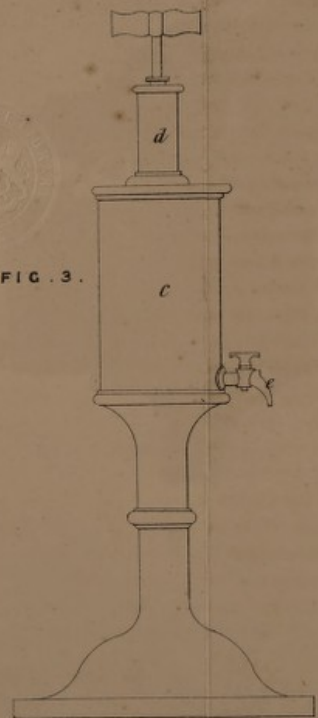


FIG. 3



The encolled drawing is partly colored.

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