

(No Model.)

C. P. BROWN.
APPLICATOR.

No. 605,386

Patented June 7, 1898.

Fig. 2.

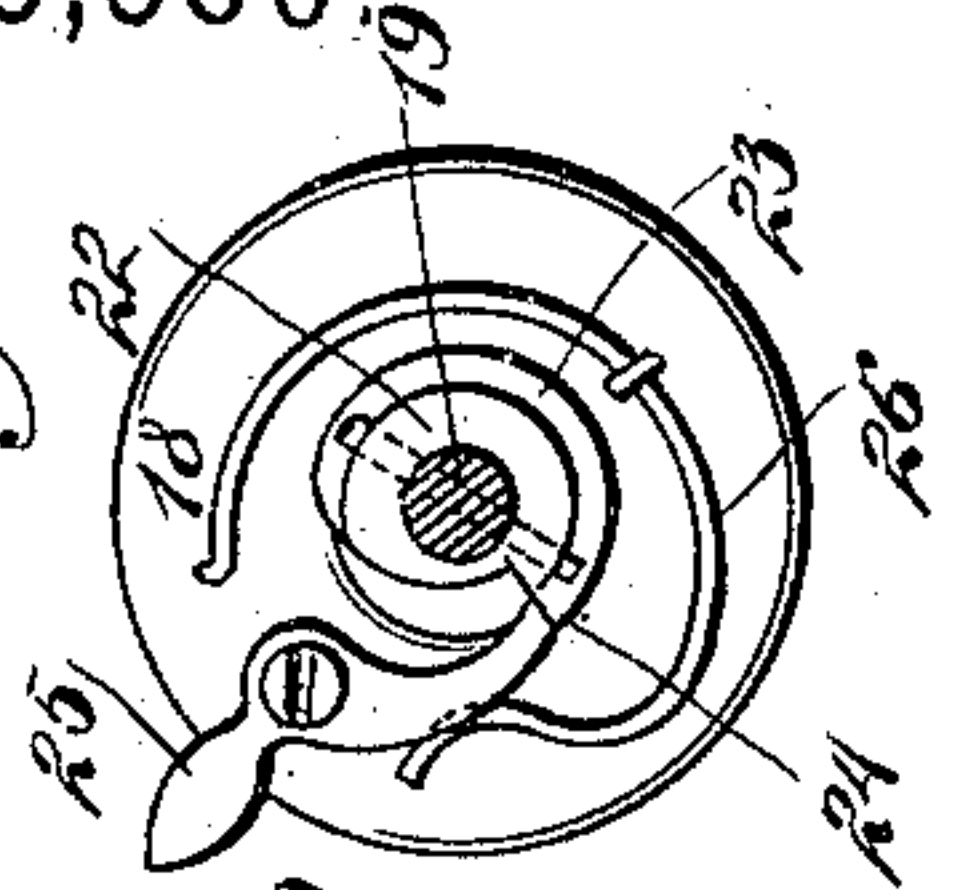


Fig. 1.

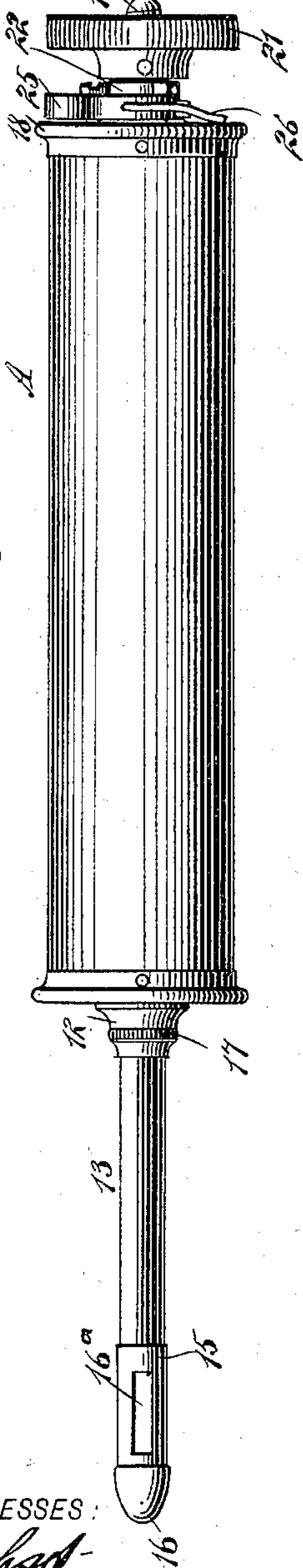


Fig. 5.

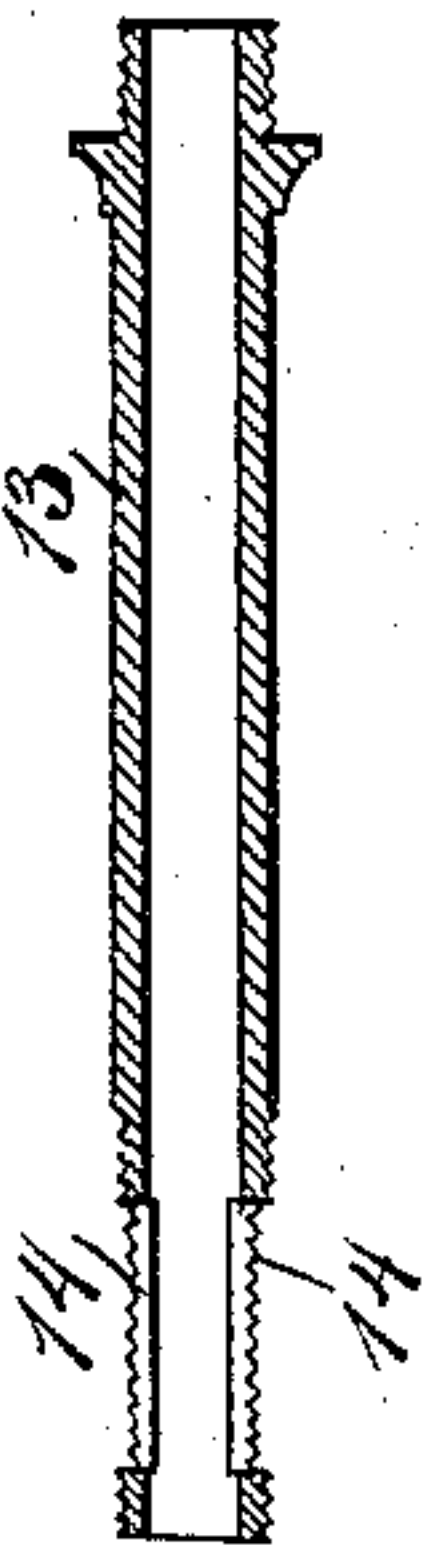


Fig. 4.

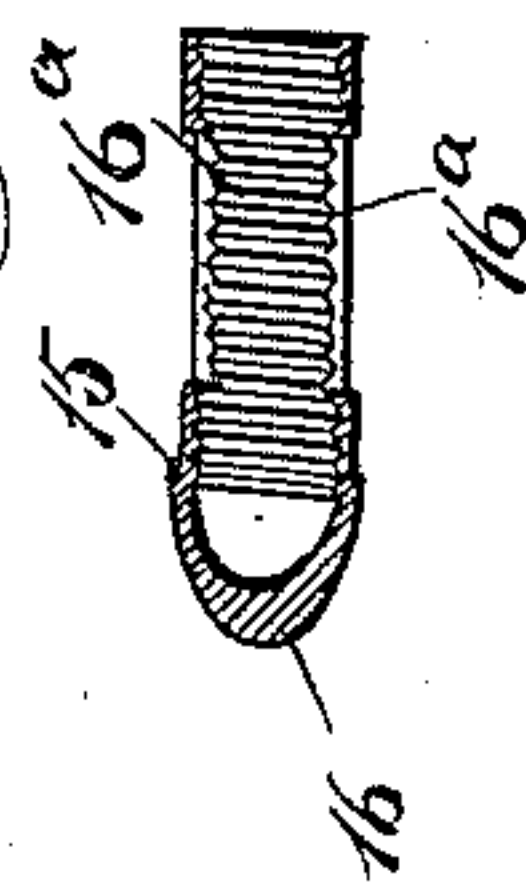
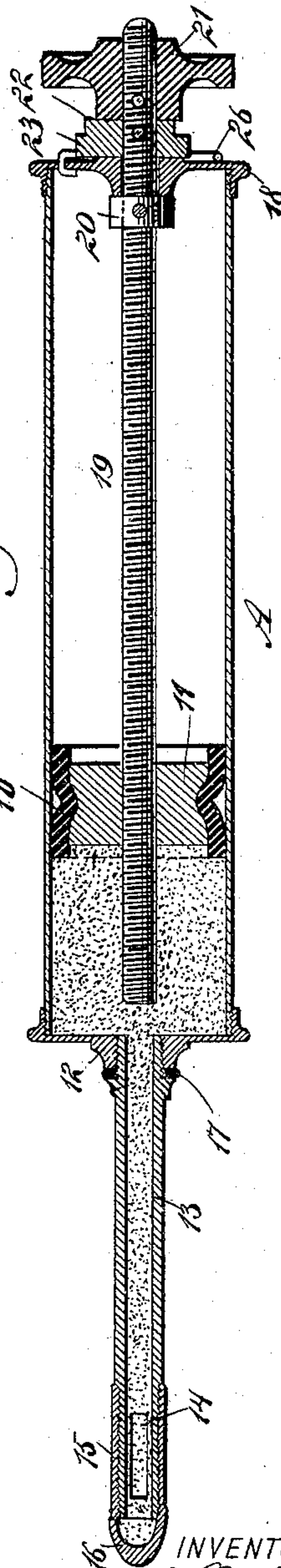


Fig. 3.



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CYRIL P. BROWN, OF SPRING LAKE, MICHIGAN.

APPLICATOR.

SPECIFICATION forming part of Letters Patent No. 605,386, dated June 7, 1898.

Application filed June 19, 1897. Serial No. 641,414. (No model.)

To all whom it may concern:

Be it known that I, CYRIL P. BROWN, of Spring Lake, in the county of Ottawa and State of Michigan, have invented a new and Improved Applicator, of which the following is a full, clear, and exact description.

My invention relates to that class of devices used, primarily and as of first importance, in evacuating the contents of the rectum—such, for instance, as syringes in their various forms and manner of use and devices for applying glycerin suppositories as found on the market—and, secondarily, for introducing into the rectum such ointments, jellies, or other medicated preparations as may be required for treating hemorrhoids or other rectal diseases and the mucous cavities or other canals of the body that may be reached by various modifications in the size and shape of the tube used in connection with the device and as events may require.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the instrument. Fig. 2 is an end view thereof, partly in section. Fig. 3 is a longitudinal section through the instrument. Fig. 4 is a longitudinal section through the cap, and Fig. 5 is a longitudinal section through the tube which connects the cap with the body of the instrument.

A cylinder A is employed in which a piston 10 is held to slide, the piston being in close contact with the inner surface of the cylinder, and at the core of the piston a nut 11 is secured. An opening of suitable size is made in the bottom of the cylinder, surrounded by a collar 12, the collar being interiorly threaded to receive the upper or inner end of a tube 13, which tube is provided with an exterior flange where it connects with the collar, and at the bottom or outer end of the tube usually two opposing longitudinal openings or ports 14 are made, and the lower or outer portion of the tube 13 is exteriorly threaded to receive a correspondingly interiorly-threaded cap 15.

The cap is preferably provided with a conical head 16 of slightly greater diameter at its base than the diameter of the body of the cap, and the said cap; between its inner end and the head, is usually provided with openings or ports 16^a, capable of registry with the openings or ports 14 in the tube 13. A washer 17 is made to intervene the flange on the tube 13 and the collar 12. The upper head 18 of the cylinder is removable, being usually screwed thereto. A screw 19 is held to turn loosely in the removable head 18, extending beyond the outer face of the said head and within the cylinder to a point near its bottom. The screw 19 is prevented from leaving the cylinder by securing a collar 20 on the said screw, having bearing against the inner face of the removable head 18, as shown in Fig. 3. A hand or a thumb wheel 21 is secured upon the outer end of the screw 19, and a disk 22 is attached to the screw between the thumb-wheel 21 and the removable head 18 of the cylinder. The disk 22 is provided with a peripheral cam-surface 23, which gradually rises from the peripheral face of the disk, increasing in width until it terminates short of its starting-point in a decided shoulder 24. (Shown in Fig. 2.) A pawl 25, which may be operated by the finger, is pivoted on the removable cylinder-head 18, and the said pawl is held in engagement with that portion of the disk 22 on which the cam-surface 23 is formed by means of a spring 26, also shown best in Fig. 2.

In operation the upper cylinder-head, threaded spindle, and piston or plunger having been removed from the cylinder the latter is filled with the required preparation to the required extent. The parts of the instrument are then returned, and the cylinder-head may be screwed to the cylinder. The ports in the cap 15 and those in the tube 13 are now brought into registry, thus allowing the contents of the cylinder to escape under pressure. The cap is inserted into the rectum or other mucous cavity or canal, the patient or attendant holding the instrument by one hand, while with the other hand the patient or attendant actuates the threaded spindle, and the plunger will descend, expressing a portion of the contents of the cylinder through the open ports in the cap and tube within

the rectum or such cavity or canal as may be under treatment. The pawl is held in close contact with the disk 22 by means of the spring 26, and thereby the threaded spindle cannot be turned in a wrong direction, and the said pawl will give an audible click at the completion of each revolution of the spindle, by which means the exact amount expressed from the tube may be known. After sufficient material has been expressed the tube is withdrawn and the cap is revolved sufficiently to close the ports in the tube, preventing leakage and contamination of the contents of the instrument by contact with the atmosphere.

The instrument is capable of speedy application, and it is cleanly, safe, effectual, and always ready for use, producing in infancy, adult life, or old age a free and painless evacuation of the contents of the rectum at the will of the operator or of an individual desirous of having the bowels move.

The above object is unsatisfactorily obtained by the use of a syringe, and that device is inconvenient, never cleanly, and its use often results in soiling the clothing and bedding and exhausting the patient.

With my instrument, which I term a "glycerin-gun," I am enabled to use a glycerin jelly containing ninety-eight per cent. or more of glycerin, and by the tube as a means of introduction I am enabled to carry the material as far as may be desired into the rectum, subdividing the jelly as it passes through the ports of the tube 13 and cap 15, thus positively securing a rapid absorption of the drug and a correspondingly speedy and painless movement of the bowels. The click of the pawl announces the completion of each revolution of the spindle, and the amount of jelly expressed being governed by the diameter of the cylinder, size of the ports, and number of threads to an inch the exact amount of expressed material at each revolution of the threaded spindle is definitely known.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An instrument comprising a cylinder, a spindle held against end movement in the cylinder, a plunger mounted to travel on said spindle, a tube secured at the outlet of the cylinder and having ports in its sides near its outer end, and a cap mounted on the tube and having a closed outer end, the said cap being provided with similar ports in its sides capable of being brought into register with the ports in the sides of the tube, substantially as described.

2. An applicator, consisting of a cylinder, a plunger, a spindle on which said plunger is mounted to travel, the said spindle being held against end movement, means for turning said spindle, and a click-pawl for indicating each revolution of the spindle.

3. In an applicator, a cylinder, a threaded spindle mounted to turn in said cylinder and

held against end movement, a plunger held to travel on said spindle, a tube secured at the outlet end of the cylinder and having ports in its sides near its outer end, and a cap mounted on the tube and provided with similar ports in its sides adapted to register with the ports in the sides of the tube.

4. In an applicator, a cylinder, a plunger having a threaded opening, and a threaded spindle upon which the plunger is mounted, the said threaded spindle being held against end movement in the cylinder, and means for turning the said spindle.

5. In an applicator, a cylinder, a plunger having a threaded opening, a threaded spindle upon which the plunger is mounted, the said threaded spindle being held against end movement in the cylinder, means for turning said spindle, and a device engaging with the spindle and carried by the cylinder, arranged to indicate when the said spindle has completed a revolution, as and for the purpose specified.

6. The combination, with a cylinder, of a plunger held to slide in the said cylinder, a screw-spindle held against end movement within the said cylinder and capable of rotary movement, the said threaded spindle engaging a threaded surface in the plunger, an outlet for the cylinder, and means for controlling the extent of the opening of the said outlet and for closing the same as desired.

7. The combination, with a cylinder, a plunger held to slide in the said cylinder, and a threaded spindle engaging with a threaded surface of the plunger, the said spindle being capable of revolving within the cylinder and of being held against end movement, of a cam-surface formed near the outer end of the said threaded spindle, and a spring-pressed pawl held in engagement with said cam-surface, for the purpose specified.

8. The combination, with a cylinder, a plunger held to slide in the said cylinder, and a threaded spindle engaging with a threaded surface of the plunger, the said spindle being capable of revolving within the cylinder and of being held against end movement, of a cam-surface formed near the outer end of the said threaded spindle, a spring-pressed pawl held in engagement with the cam-surface, a tube secured at the outlet end of the cylinder, having ports in its lower portion, and a cap adjustable on the said tube, provided with ports corresponding to those in the tube and capable of being brought in registry therewith, for the purpose described.

9. The combination with a cylinder having an outlet, a spindle mounted to turn in said cylinder and held against end movement, and a plunger mounted to travel on said spindle, of means for turning said spindle, and a device for indicating when the spindle has completed a revolution, substantially as set forth.

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Witnesses:

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