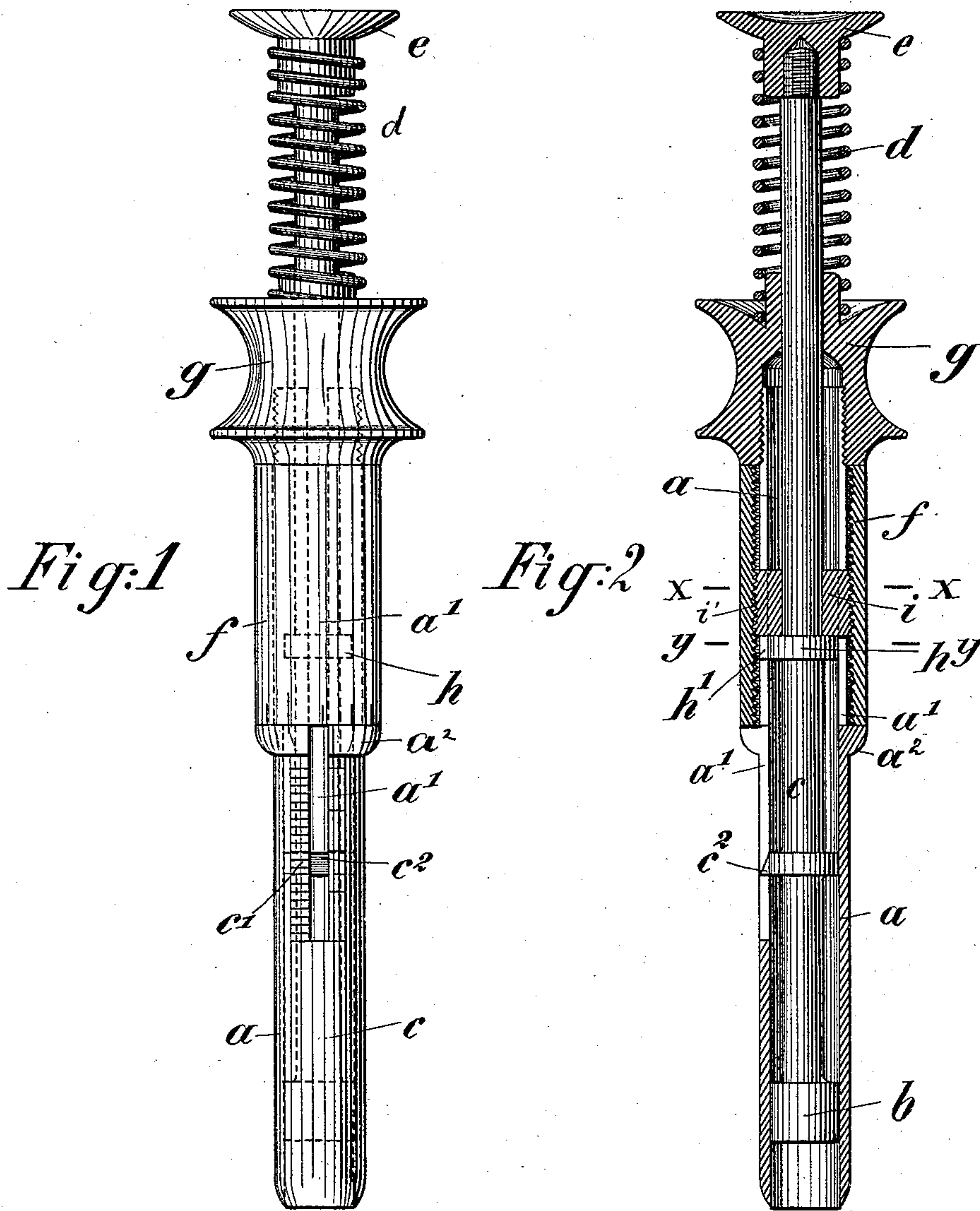


(No Model.)

C. F. HAUSMANN.
CAPSULE FILLER.

No. 487,886.

Patented Dec. 13, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

CASPAR FRIEDRICH HAUSMANN, OF ST. GALLEN, SWITZERLAND.

CAPSULE-FILLER.

SPECIFICATION forming part of Letters Patent No. 487,886, dated December 13, 1892.

Application filed June 18, 1892. Serial No. 437,134. (No model.) Patented in Switzerland December 5, 1891, No. 4,328.

To all whom it may concern:

Be it known that I, CASPAR FRIEDRICH HAUSMANN, a citizen of the Republic of Switzerland, residing at St. Gallen, in the Republic of Switzerland, have invented a certain new and useful Capsule-Filler, (for which I have obtained a patent in Switzerland, No. 4,328, dated December 5, 1891,) of which the following is a specification.

The object of my invention is to provide a new and improved device of simple construction for measuring small quantities of powders—for example, for medical doses—and to fill the same into proper receptacles, such as paper or gelatine caps, &c.

The invention consists in the combination, with a tube containing a plunger, of an adjustable stop-piece in said tube for the plunger and means for operating the plunger.

The invention also consists in the construction and combination of parts and details, which will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved device for measuring powders and filling them into receptacles. Fig. 2 is a vertical longitudinal central sectional view of the same. Figs. 3 and 4 are sectional views on the lines xx and yy of Fig. 2, respectively; and Fig. 5 is a detail side view of the adjustable sleeve.

Similar letters of reference indicate corresponding parts.

The tube a , which has its lower end tapered, contains a plunger b , attached to the rod c , provided at its upper end with a head or button e , between which and the upper end of the tube a a helical spring d surrounds said rod and draws the spring and the plunger upward. If the lower open end of the tube a is forced into powder, that part of the tube from the bottom of the same to the plunger b is filled with this powder, which remains in the tube when the latter is removed from the said powder. The powder in the end of the tube can be ejected by forcing down the plunger.

The device shown is provided with means for adjusting the plunger; and thereby regulating the amount of powder that is to pass into the tube. The tube a is provided at its upper part with two opposite longitudinal slots a' , and upon said tube a the sleeve f is

loosely applied, which sleeve f is provided with an internal screw-thread. Said sleeve f rests upon a flange a^2 of the tube a and is held in place on the flange a^2 by a nut g , screwed on the upper end of the tube. The rod c is provided with a collar h , having the tooth h' , that is guided in the slot a' for the purpose of preventing the rod c from turning on its axis, and said collar h is pressed by the spring d against a sleeve i , having a central aperture through which the rod c passes and provided with two diametrically-opposite lugs i' , which project through the longitudinal slots a' of the tube a and are provided on their outer edge with teeth adapted to engage the internal thread of the sleeve f , so that by turning said sleeve the sleeve i is moved up or down, thus permitting the spring d to draw the plunger b to a greater or less distance into the tube a . This permits of adjusting the device for receiving a greater or less quantity of powder, as may be desired or necessary.

For the purpose of facilitating the adjustment of the sleeve i , a graduated scale c' is provided on the outer surface of the tube a along the edge of one of the slots a' , and an indicator c^2 projects from a guide-collar on the rod c , showing on said scale c^2 the distance to which the plunger b is withdrawn. Furthermore, a scale in the nature of a micrometer-scale can be arranged on the surface of the sleeve f and the outer surface of the flange or collar a^2 , as is shown in Fig. 1. The position of the plunger b has been fixed by turning the sleeve f , and said sleeve is then locked in place by screwing down the nut g . The open end of the tube is inserted into the powder for the purpose of withdrawing a certain quantity of the same. The lower end of the tube is then inserted into the receptacle into which the powder is to be filled and the plunger b forced downward for the purpose of ejecting the powder.

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

1. In an apparatus for measuring and discharging powders, the combination, with a tube, of a plunger in the same, a rod to which the plunger is attached, a spring for pressing the rod upward, of an adjustable sleeve in the tube, and a collar on the rod, which collar on

the rod rests against the adjustable sleeve in the tube, substantially as set forth.

2. In an apparatus for measuring and dis-
charging powders, the combination, with a
5 tube, of a plunger in the same, a rod to which
the plunger is secured, a spring for pressing
the rod and plunger upward, a shoulder on
said rod, an adjustable stop-piece in the tube
provided with a screw-thread, and a sleeve
10 surrounding the tube and provided with an
internal screw-thread engaging the screw-
thread on the stop-piece to permit of adjust-
ing said stop-piece higher or lower in the
tube, substantially as set forth.

15 3. In an apparatus for measuring and dis-

charging powders, the combination, with a
tube, of a plunger in the same, a rod to which
the plunger is attached, a stop-piece for the
rod, a rotative sleeve surrounding the tube
and serving to adjust said stop-piece higher 20
or lower, and a graduated scale on the end of
said sleeve and on an adjacent part of the
tube, substantially as set forth.

In testimony whereof I hereunto sign my
name, in the presence of two subscribing wit- 25
nesses, this 4th day of June, 1892.

CASPAR FRIEDRICH HAUSMANN.

Witnesses:

HERMAN SCHLATT,
JOSEPH SIMON.