No. 822,101. PATENTED MAY 29, 1906.

H. COPLESTON.

MACHINE FOR FORMING PILL MASS ROLLS.

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Fig. 1.

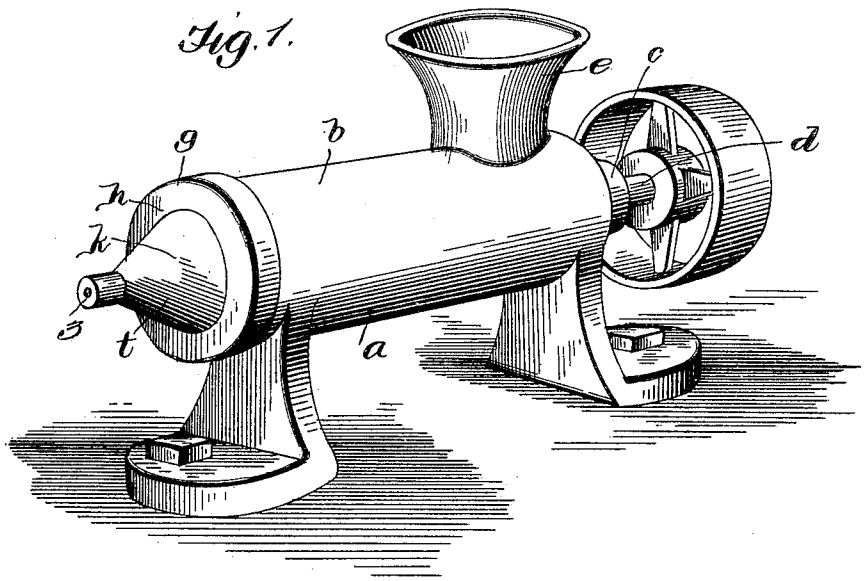
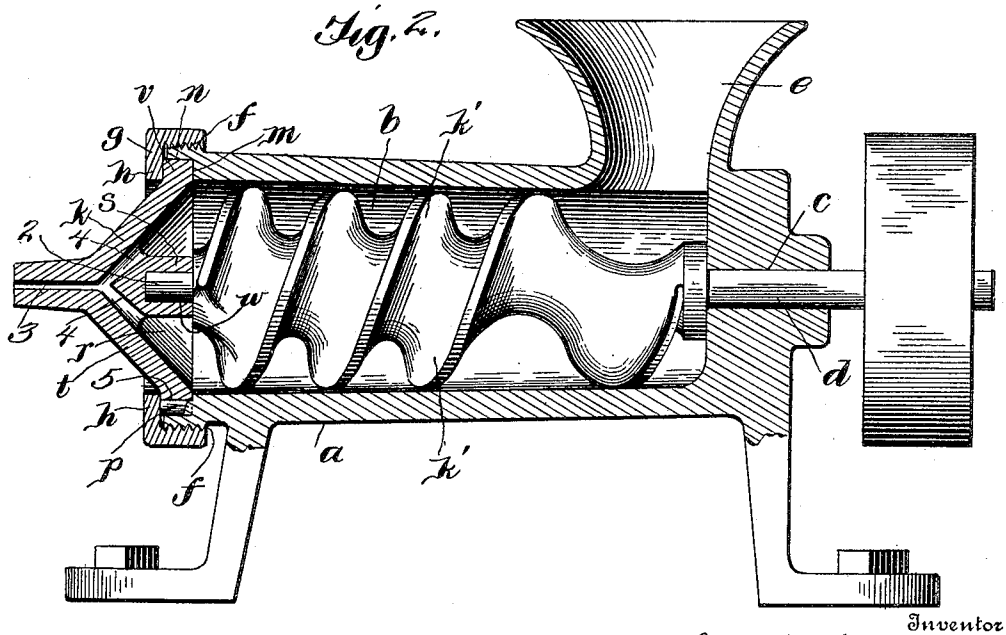


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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MACHINE FOR FORMING PILL-MASS ROLLS.

No. 822,101. Specification of Letters Patent. Patented May 29, 1906.

Application filed October 3, 1905. Serial No. 281,158.

To all whom it may concern:

Be it known that I, HENRY COPLESTON, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have made a certain new and useful Invention in Machines for Forming Pill-Mass Rolls; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of my machine. Fig. 2 is a central longitudinal section of the same.

The invention has relation to machines for making small rolls from plastic masses chiefly designed for the manufacture of pills; and it consists in the novel construction and combinations of devices as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the letter *a* designates the frame of the machine, which is provided with a horizontal chamber *b*, having at one end thereof a bearing *c* for a rotary shaft *d*. Communicating with the upper portion of the chamber *b* at this end is a hopper *e*. The other end of the chamber is provided with a threaded marginal portion *f* for the engagement of a securing-ring *g*, which is flanged at *h* and serves to hold the molding-head *k*, which is removable.

The chamber *b* is smoothly finished inside in cylindrical form, although it may be slightly tapering from the threaded end toward the bearing end. The shaft *d* is provided with a spiral compressor-flange *k'*, the edge of which is finished to fit neatly the wall of the chamber *b*, while sufficient play is allowed for rotary motion. The end of the shaft *d* projects from the bearing *c* for the application of suitable power.

The threaded end of the chamber *b* is provided with an inside annular shoulder *m* and a rim-wall *n*, having a stop projection *p*. Located on said shoulder within the rim-wall is the molding-head *k*. This head consists of a conical portion *t*, the base of which is provided with an annular flange *v*, extending outward and of the proper size to fit the annular shoulder-seat *m* within the rim-wall. This flange is made a little thicker than the height of the rim-wall, so that it will be engaged by the securing-ring *g* when the latter is screwed home. It is provided with a notch 5 to engage the stop projection of the annular seat. The cone *t* is conically recessed, as indicated at *r*, and is provided with a central body portion *s* of tubular form, which extends axially, forming an inner axial extension *s'*, provided with a bearing-recess *w* for the inner journal 2 of the shaft, and an outer axial extension s^2, having a central discharge-perforation 3, which has converging branches within the body portion in rear of the inner axial extension *s'* and opening at 4, within the cone-recess at its junction with said body portion. When the pill mass is pressed by the flanged compressor into the cone-recess, it becomes lessened in diameter as it approaches the apertures of the branches of the discharge-perforation, so that the pressure action is intensified and a rapid discharge effected of the pill material in the form of a long roll or pencil of the diameter of the discharge-aperture.

The spiral compressor is readily removed through the large opening at the threaded end of the chamber when the securing-ring is taken off and the molding-head taken out, so that the chamber and the hopper communicating therewith are easily cleaned, as are the molding-head and the securing-ring.

Several molding-heads may be employed, and they may have discharge-perforations of different diameters, according to the size of the pill-roll required.

Having described the invention, what I claim, and desire to secure by Letters Patent, is—

A pill-roll-forming machine, having a cylindrical chamber one head of the cylinder being provided with a journal-seat, a hopper at the same end of the cylinder as said seat, a conically-recessed molding-head at the other end of said chamber, said molding-head having an axial outward extension provided with a central perforation and an axial integral

inner extension provided with a journal-seat, and converging passages formed in the wall joining said inner axial extension with the molding-head in rear of the inner axial extension opening into the conical recess of the head and joining the central perforation of the outer axial extension to which they have a branched relation, and a spiral compressor having bearings in said journal-seats, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY COPLESTON.

Witnesses:
E. F. RILEY,
VERA GASCH.