No. 707,062. Patented Aug. 12, 1902.

S. E. HEINEMAN.

COUNTING MACHINE.

(Application filed Mar. 24, 1902.)

(No Model.)

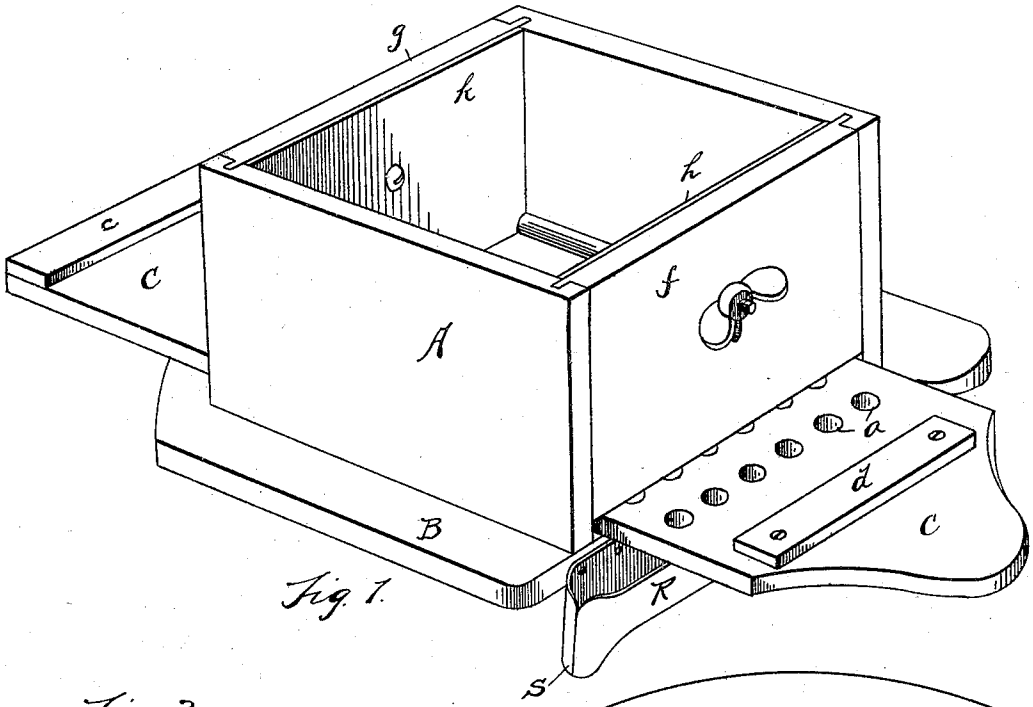
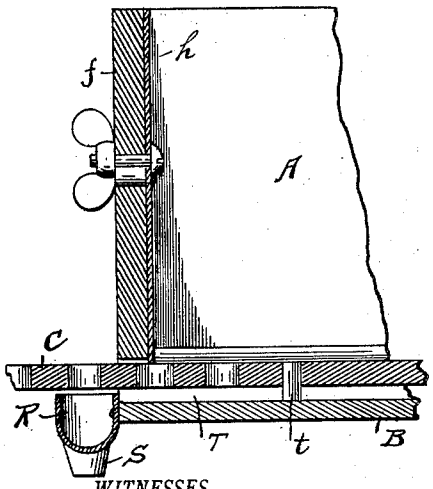


Fig. 1.

Fig. 2.



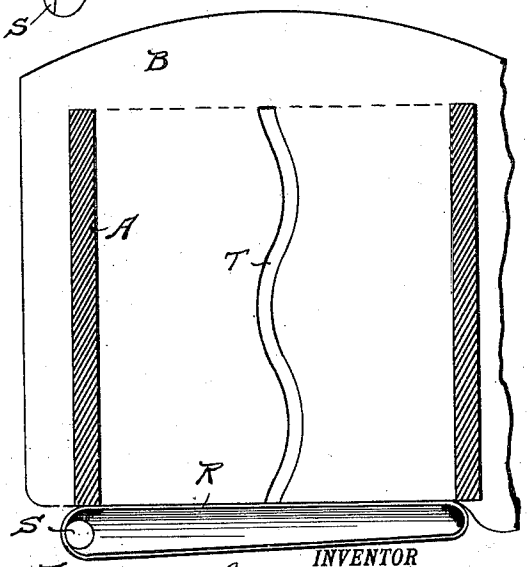


Fig. 3.

WITNESSES

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SOLOMON E. HEINEMAN, OF DETROIT, MICHIGAN, ASSIGNOR TO THE MERZ CAPSULE COMPANY, OF DETROIT, MICHIGAN.

COUNTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 707,062, dated August 12, 1902.

Application filed March 24, 1902. Serial No. 99,579. (No model.)

To all whom it may concern:

Be it known that I, SOLOMON E. HEINEMAN, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Counting-Machines; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to counting-machines, and has for its object an improved appliance to be used to withdraw from a receptacle in which articles are stored a definite number of such articles and to deliver them in a raceway, whence they may be gathered directly into another receptacle.

In the drawings, Figure 1 shows the counter in perspective. Fig. 2 is a vertical longitudinal section showing a part of the slide and the adjustable front wall. Fig. 3 is a plan of the fixed bottom beneath the slide.

A indicates a hopper into which articles to be counted are placed, and this preferably consists of a rectangular box supported on a fixed base B, over which there is a slide C. The slide C has a length equal to something more than twice the length of the hopper and at the front is provided with a projection which is used for a handle. The front half of the sliding base is provided with a definite number of holes *a*, which extend entirely through it. The back half of the slide C is imperforate. A cross-rib *c* on the back end outside the hopper provides a stop to limit the forward travel of the slide, and a cross-rib *d* on the projecting front end furnishes a stop to limit the backward travel. The front and rear sides *f* and *g* of the hopper are provided with vertical slots and are lined with vertically-adjustable linings *h k*, held to the front and rear sides by bolts and thumb-nuts. The front side *f* and the rear side *g* are each spaced from a bottom board or base B sufficiently to permit the use of the thickest of several slides C, and a slide is selected which accords with the size of the article to be counted—as, for example, in counting pills a board is selected in which the holes *a* are of a size such that each hole admits of a single pill and the slide is of a thickness such that a single pill has a diameter equal to the thickness of the board. If small pills are to be counted, a thin board is chosen and one in which the holes are correspondingly small in diameter.

At the front of the machine is a raceway R with a delivery-spout. Articles placed in the hopper drop into and substantially fill the holes in the slide C, and are drawn forward and out from the hopper with said slide, and as the slide passes over the raceway R the articles that have been drawn from the hopper drop through the holes into the raceway and immediately run down and drop out of the spout S into a receptacle held or placed there to receive them.

With this counter an operator can count and bottle a definite number of pills with a single forward and backward movement of the slide, accurately counting twenty-four or thirty-six or one hundred pills, according to the dimensions of the machine, with a single movement.

The bottom board or base B is provided with a serpentine slot or groove T, into which projects a pin *t* from the slide C, and this serpentine slot causes the slide to vibrate from side to side as it is moved across in the hopper and serves to shake down into the holes the articles to be counted in those cases when, as sometimes happens, two such articles have bridged across a hole.

What I claim is—

1. A counter comprising in combination a hopper, a fixed base to said hopper, a slide arranged to slide under said hopper and above said fixed base, and provided with perforations, said fixed base provided with a serpentine groove, and a pin extending from said slide into said groove.

2. In a counter for small articles, the combination of a hopper with adjustable front and aft walls, a slide arranged to engage under the hopper and provided with a perfo-

rated and an imperforated section, and a raceway arranged to receive articles withdrawn from the hopper and dropping out from said perforations, substantially as described.

3. In a counter for small articles, the combination of a hopper, a slide arranged to slide under said hopper provided with a perforated section and an imperforate section and means for producing a lateral vibratory motion of the slide, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

SOLOMON E. HEINEMAN.

Witnesses:

CHARLES F. BURTON,

MAY E. KOTT.