

(No Model.)

2 Sheets—Sheet 1.

L. K. EASTMAN.
CAPSULE MACHINE.

No. 581,703.

Patented May 4, 1897.

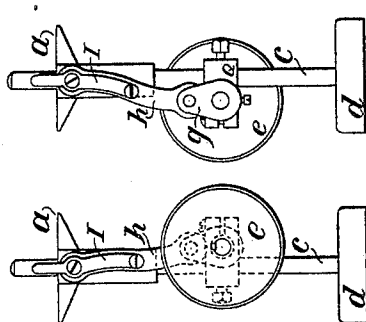


Fig. 2. Fig. 3.

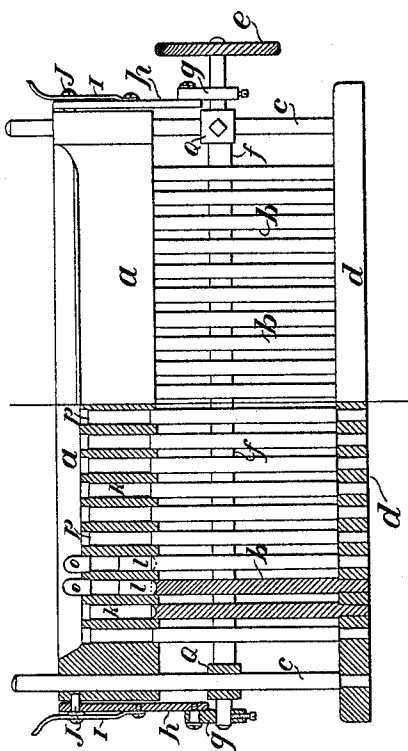


Fig. 1.

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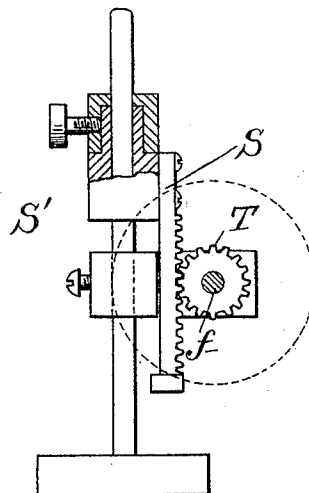
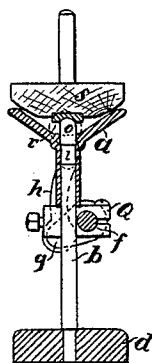
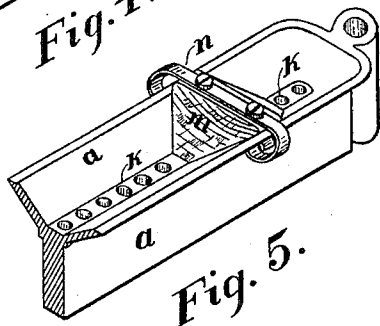
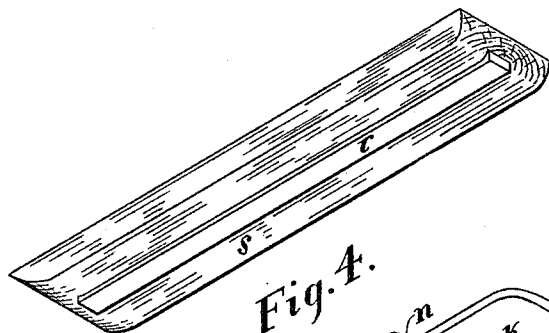
(No Model.)

2 Sheets—Sheet 2.

L. K. EASTMAN.
CAPSULE MACHINE.

No. 581,703.

Patented May 4, 1897.



Witnesses.

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UNITED STATES PATENT OFFICE.

LOUIS K. EASTMAN, OF DETROIT, MICHIGAN.

CAPSULE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 581,703, dated May 4, 1897.

Application filed April 13, 1896. Serial No. 587,320. (No model.)

To all whom it may concern:

Be it known that I, LOUIS K. EASTMAN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Powder-Dividers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention consists in the construction of a machine by which a powder (such, for instance, as a powder for a prescription) in bulk may be accurately divided into any desired number of equal parts, and, further, whereby the powder when thus divided may be filled into capsules of the proper size, capped, and discharged from the machine; further, in the construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

In the drawings, Figure 1 is a side elevation, partly in central longitudinal section, of my device. Figs. 2 and 3 are end elevations thereof, looking, respectively, from the right and left of Fig. 1. Fig. 4 is a perspective view of the presser-block. Fig. 5 is a perspective view of a portion of the powder-trough. Fig. 6 is a cross-section through the device, and Fig. 7 is a sectional end elevation showing a slightly-modified form.

a is a suitable base, on which are secured a series of pins *b* and the guide-pins *c* at the end.

a is a block having guide-apertures engaging the pins *c* and a series of apertures *k*, which register with the pins *b* and opening at their upper ends into a trough formed in the upper part of the block *a*. For convenience I will refer to this block *a* as a "trough" and to the apertures in the bottom as "pockets."

The trough may be moved upon the guide-pins by any suitable means, such as the shaft *f*, journaled in blocks *Q* on the pins *c* and having a hand-wheel *e* and plates *g* with crank-pins thereon connected with links *h*, provided with engaging pins *J*, which enter the ends of the trough, being held from accidental disengagement by spring *I*, or, as shown in Fig. 7, racks *S* on the sliding blocks *S'* and pinions *T* on the shaft *f*, the trough being detachably supported on the blocks.

Where I am using the device for filling cap-

sules of different sizes, I use troughs having pockets of corresponding size, and for this use of my machine the construction shown in Fig. 7 is preferable, as the trough is more readily attached and detached.

In practice, the operator, having a prescription to compound and divide into a given number of powders, first moves the adjustable end block *m* so as to divide the trough to the proper length, exposing the required number of pockets, the block being held in this position by any suitable device, such as the spring *n*. He next places the capsules *l* into the pockets *k*, pressing them against the plungers *b*, and then puts the compound into the trough, spreading it about until it is all lodged in the pockets *k*.

Should it happen that there is not enough of the mixture to completely fill all of the pockets, so that some of them contain more than others, the wheel *e* may be turned, lowering the trough *a* upon the plungers *b*, so as to diminish the depth of the pockets and force the powder contained in the full ones into the trough, which may be again spread around to fill the other pockets. Thus the capacity of the pockets may be increased or diminished to exactly contain the whole of the compound. The caps *o* of the capsules are next placed in the pockets, which are provided with enlargements or counterbores *p* at their upper ends, adapted to receive the ends of the caps. The operator now places a suitable stop against these caps, such as the block *s*, provided with the rubber pad *r*, and then by turning the wheel *e* forces the capsule *l* into the caps *o*, finally removing the block *s* and forcing the filled capsules completely out of the pockets.

I make the pins *b* small enough for the smallest-sized apertures in the trough, and they will support and move the larger-sized capsules just as well, each machine for prescription use being provided with a series of troughs, each having apertures to hold capsules of a given size.

It is evident that when the pins *b* fill the pockets in the trough without the capsules, a powder being placed in the trough may be accurately divided into as many equal parts as desired.

What I claim as my invention is—

1. The combination with a trough or pow-

der-holder having a series of capsule-pockets formed in the bottom thereof, and enlargements or counterbores *p* at the upper ends thereof, adapted to receive the cap of the capsule, pins or plungers in said pockets, means for changing the relative position of the trough to the pins, and a stop for the said caps, substantially as described.

2. In a powder-divider, the combination of a base, guide-pins thereon, a series of pins *b* held on said base, a trough provided with a series of pockets in alinement with said pins slidably mounted on said guide-pins, a rotatable shaft mounted in bearings on the guide-pins, and means between the shaft and trough for reciprocating the latter, substantially as described.

3. In a powder-divider and capsule-filler, the combination of a series of plungers or pins, a trough-actuating device beside the same, removable troughs having a series of capsule-holding apertures adapted to engage

over the pins and be moved by said actuating device relative to the pins, and a detachable connection between the trough and said actuating mechanism.

4. The combination with a trough or powder-holder having a series of capsule-pockets *k* formed in the bottom thereof, and enlargements or counterbores *p* at the upper end thereof, adapted to receive the cap of the capsule, of a longitudinally-adjustable end block adapted to cut off said trough to include only the required number of pockets, plungers *b* in said pockets adapted to be raised or lowered therein, and an abutment such as the block *s* for the purpose specified.

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

LOUIS K. EASTMAN.

Witnesses:

JAS. WHITTEMORE,
OTTO F. BARTHEL.