

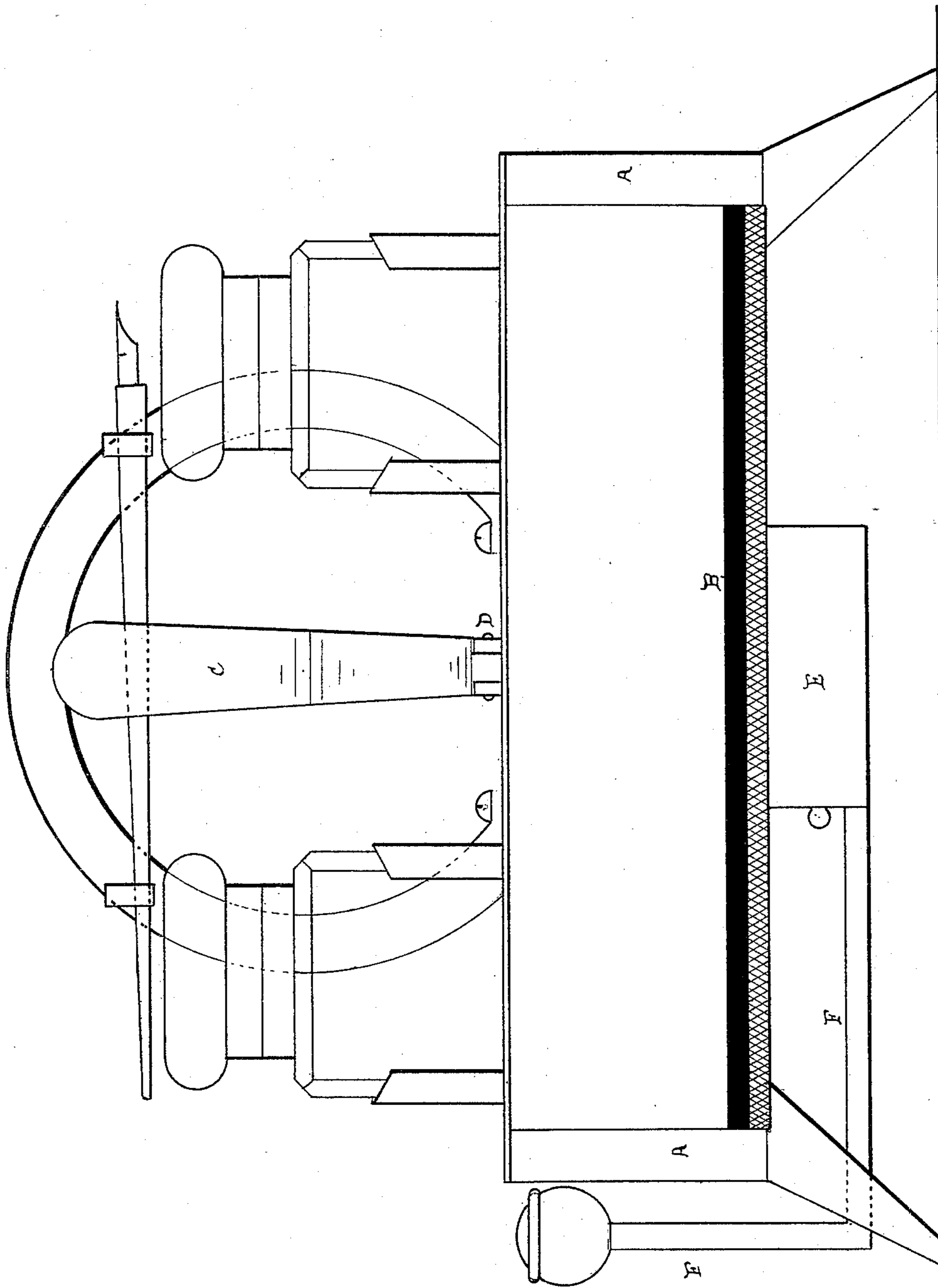
(No Model.)

4 Sheets—Sheet 1.

H. J. H. SCHUETT.  
ENVELOPE DAMPING MACHINE.

No. 411,355.

Patented Sept. 17, 1889.

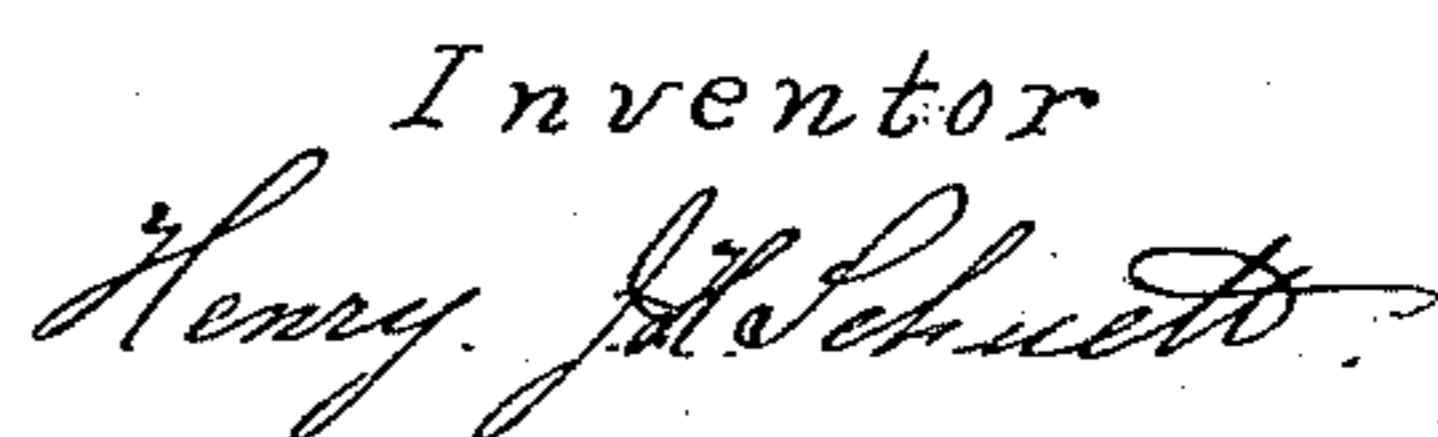


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4 Sheets—Sheet 2.

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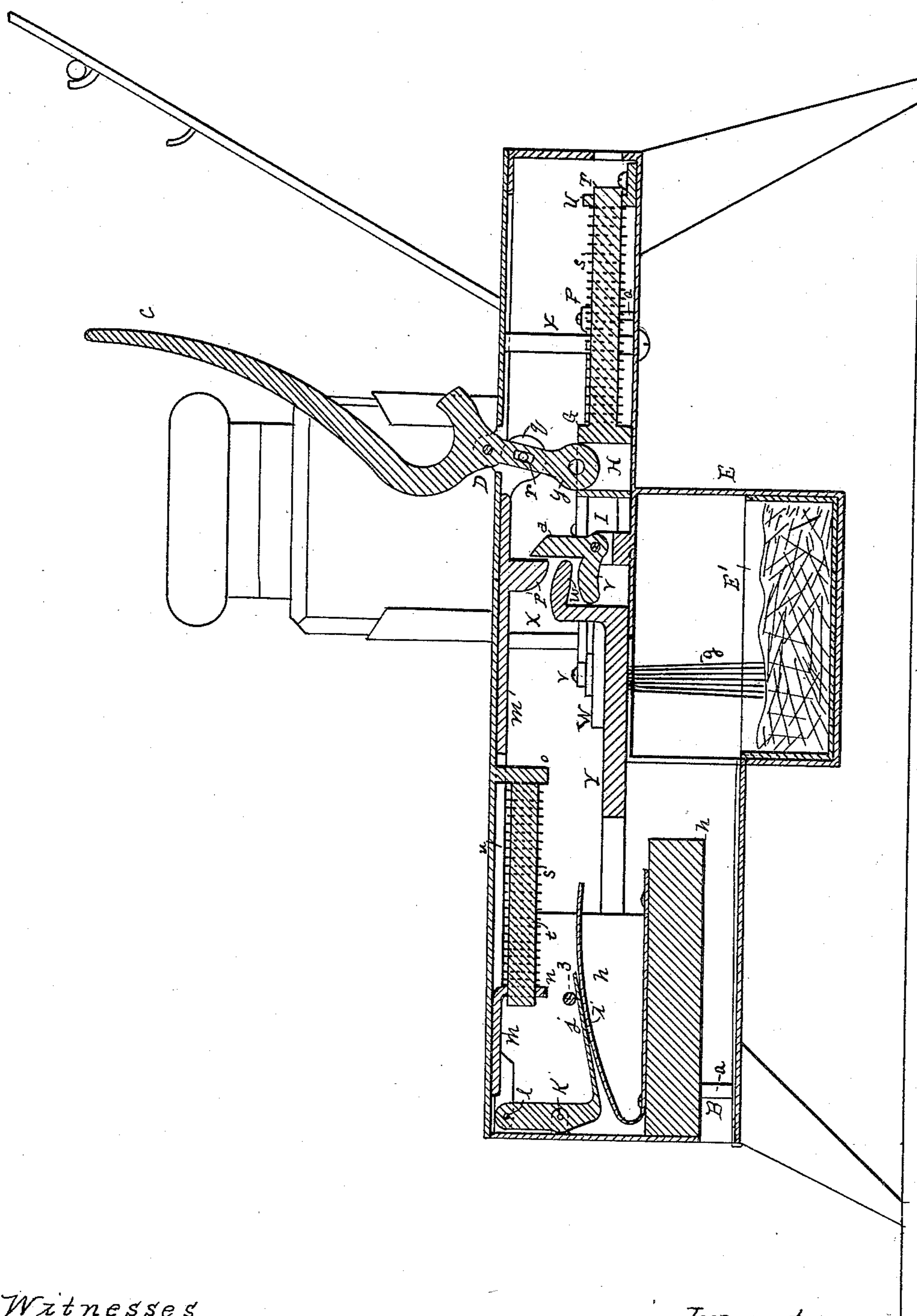


Fig. 3

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4 Sheets—Sheet 4.

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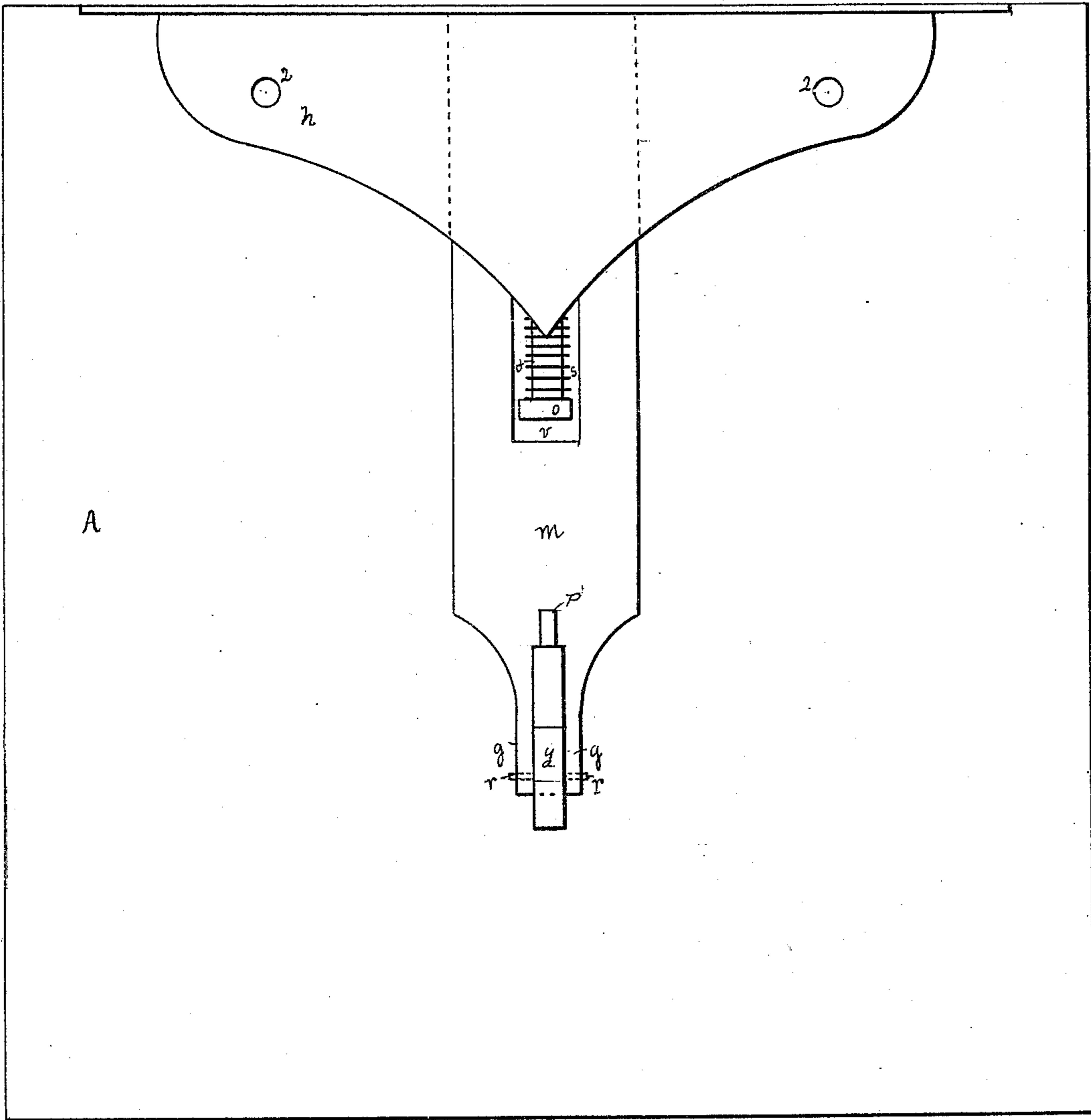


FIG. 4

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# UNITED STATES PATENT OFFICE.

HENRY J. H. SCHUETT, OF DETROIT, MICHIGAN.

## ENVELOPE-DAMPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 411,355, dated September 17, 1889.

Application filed January 17, 1889. Serial No. 296,645. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY J. H. SCHUETT, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Envelope-Damping Machines, of which the following is a specification.

My invention consists in a machine for moistening the flaps of envelopes, hereinafter fully shown and described.

Figure 1 is a front elevation. Fig. 2 is a top plan view with the cover removed. Fig. 3 is a section on line *xx*, Fig. 2, and Fig. 4 is a detail plan view looking at the under side of the pressure-block and the lower end of the operating-lever.

A represents the frame of the machine, which is substantially a rectangular box, the front part of which (shown at the left, Fig. 3) I usually make somewhat deeper than the rear part.

B represents a slit in the bottom of the front part of box A, opening the whole width thereof, the bottom of the box back of this slit being preferably lined with cloth B', and the opening thus made into the box is made at its rear end approximately the reverse of the shape of an envelope-flap by the two wooden blocks 4 4, secured to the bottom of the box A.

O O represent two levers pivoted at the points N N to the bottom of the rear or shallower part of the box A, and R R represent two connecting-rods pivoted at the points P P to the levers O and pivoted at the points V V to two brushes W W, the blocks of which slide in the grooves *ff* cut in a forked sheet of metal Y, whose ends are pivoted by the hinges *b* to posts *a*, whose lower ends are secured in the bottom of the box, and which hold the piece of sheet metal Y above the blocks 4 4.

*g* represents the bristles of the brushes W, and these project through the slots *ff* far enough to touch the cloth B' on the bottom of the box A.

Q Q represent two raised metal supports on which the free ends of the levers O slide.

T represents a sliding bolt, one end of which slides in a hole in a fixed block V, and this bolt T is encircled by a spiral spring S and terminates in a head G, adapted to slide on the bottom of the box. In this head G is

formed a slot H to receive the end *y* of the short arm of the actuating-lever C, which is fulcrumed in the cover of box A at the point D.

To the two sides of head G are pivoted short links I I, which are also pivoted to the ends of two levers J J, fulcrumed to the bottom of box A at the points K K, and whose other ends are connected by the links L L with the levers O at the points M M, so that when the head G is moved by lever C, by means of the links I, levers J, and links L, it moves both of the levers O and gives the ends P of said levers a much longer stroke than the motion of the head G, because said head is connected with the short arms of lever J, and the long arms of levers J are connected with levers O at a point between their center and their fulcra. The result is that a short motion of head G causes the brushes W to travel a much greater distance in the tracks or slots *f*.

*w* represents a lug on the inner end of sheet-metal piece Y.

*d v* represent the two arms of a bell-crank lever pivoted between lugs *e* on the bottom of the box.

*m* represents a sliding plate on the under side of the cover of box A, one end of which terminates in a fork *q*, through which and a slot in the short arm of lever C is passed a pin *r*, by which the motion of lever C is communicated to slide *m*.

U represents a slot in plate *m*, through which projects a stud *o*, secured to the cover of box A, in which is secured a bolt *t*, surrounded by a spiral spring *s*, one end of which bears against the stud *o* and the other against a downward projection *n* of the plate *m*, by which the plate *m* is constantly forced toward the front end of the box.

P' represents a projecting stud on plate *m*, adapted to come in contact with the arm *d* of bell-crank lever *d v* and to actuate said bell-crank lever to cause the arm *d* to strike the lug *w*, and thus raise the sheet-metal piece Y and the brushes W W.

*h* represents a block of wood lying in the forward part of box A, its lower surface being in the shape of the flap of an envelope, but smaller, having in its center a slot, (indicated by dotted lines in Fig. 4 and shown in Fig. 3,) across which passes a pin 3.

*i* represents a spring fastened in block *h* at the lower side of the slot thereof, its free end passing below pin 3 and pressing against the end of the arm *j* of a bell-crank lever, which also passes below pin 3. This bell-crank lever is fulcrumed at the point *K'* to the front of the box *A*, and its other arm *l* is pivotally connected with the sliding plate *m*, so that when plate *m* is moved the arm *j* presses the block *h* downward with a yielding pressure through the medium of the spring *i*, and the lower surface of block *h* clamps the flap of the envelope between itself and the cloth *B'*, thus holding the envelope firmly in position while being operated upon by the brushes *W W*.

*E* represents a box held in projections on the bottom of box *A* to hold a wet sponge *E'*, (or simply water, if so desired,) to which water is supplied from a reservoir and pipe marked *F*. *ZZ* represent guide-pins to steady the free end of the sheet-metal plate *Y* in its motion.

The operation of my invention is as follows: The machine being in a position shown in Figs. 1, 2, and 3, the bristles *g* of the brushes *W W* rest on the sponge *E'* and are moistened, while the presser-block *h* is maintained in a raised position through the action of springs *s*, tending to raise the arm *j* of the bell-crank lever. The flap of the envelope, with the gummed side up, is now inserted in the slit *B* until the edges of the flap come in contact with the blocks 4. Lever *C* is forced toward the left, Fig. 3—that is, the handle of said lever is drawn toward the front of the machine and the short arm of said lever operates the two slides *m* and *G*. The motion of the slide *m* brings the stud *P'* in contact with the arm of the bell-crank lever *dv*, and thus raises the free end of the sheet-metal piece *Y*, and with it the brushes *W*, so as to lift the bristles *g* off from the sponge *E'*. The motion of plate *m* also rocks the bell-crank lever *lj* on its fulcrum *K'*, causing the arm *j* to press upon the spring *i*, and thus force the pressure-block *h* down on the flap of the envelope with a yielding pressure, thus holding the flap steady under the action of the brushes. This motion of course compresses the spring *s*. The motion of the head *G*, which goes on at the same time, by means of the links *I I*, operates the levers *J J*. These levers, by means of the links *ll*, operate the levers *O O*, and these last-named levers, by means of the connecting-rod *R R*, cause the brushes *W* to sweep over the tracks *f f*, thus carrying the bristles *g* of the brushes *W* over the gummed edge of the flap and moistening the same, and this operation of course compresses the spiral spring *S*. On releasing the lever *C* the force of the spiral springs *S s* restores the head *G* and the sliding plate *m* to their original position, carrying the brushes back to their normal positions and releasing bell-crank lever *dv*, thereby permitting the bristles *g* to again come in contact with the sponge *E'*, and

also raising the pressure-block *h* from the flap, so that the envelope can be withdrawn.

*X* represents screw-posts by which the top plate of the box *A* is fastened to the box.

The machine may also be fitted to carry ink-wells and pen-rack on its top without interfering with its operation.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine for damping envelopes, the combination, with an actuating-lever, of a spring pressure-block adapted to hold the flap in position, and two brushes playing in tracks each substantially the shape of one-half the gummed edge of the envelope-flap, substantially as shown and described.

2. In a machine for damping envelopes, the combination, with an actuating-lever, of a spring pressure-block adapted to clamp the flap in position to be damped, substantially as shown and described.

3. In a machine for damping envelopes, the combination, with a stop for determining the position of the flap when inserted, of a sheet-metal piece having therein two tracks above the gummed portion of the flap, a movable brush in each of said tracks, and an actuating-lever connected with said brushes, substantially as shown and described.

4. In a machine for damping envelopes, a sheet-metal piece having therein tracks extending in line with the gummed portions of the flap when inserted and hinged at one end, a brush lying in each of said tracks, a water-reservoir beneath the inner end of said tracks, and an actuating-lever connected both with the free end of said sheet-metal piece and with said brushes, whereby the brushes are first raised and then caused to traverse said tracks, substantially as shown and described.

5. In an envelope-damping machine, the combination of the water-reservoir *E*, the hinged metal piece *Y*, having therein the tracks *f* and the projection *w*, the bell-crank lever *dv*, and the actuating-lever *C*, connected both with said brushes and with said bell-crank lever *dv*, substantially as and for the purposes set forth.

6. In a machine for damping envelopes, the combination, with an actuating-lever, of two brushes playing in tracks each substantially the shape of one-half the gummed edge of the envelope-flap, substantially as shown and described.

7. In a machine for damping envelopes, the combination of a sheet-metal piece having therein two tracks above the gummed portion of the flap, a movable brush in each of said tracks, and an actuating-lever connected with said brushes, substantially as shown and described.

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