

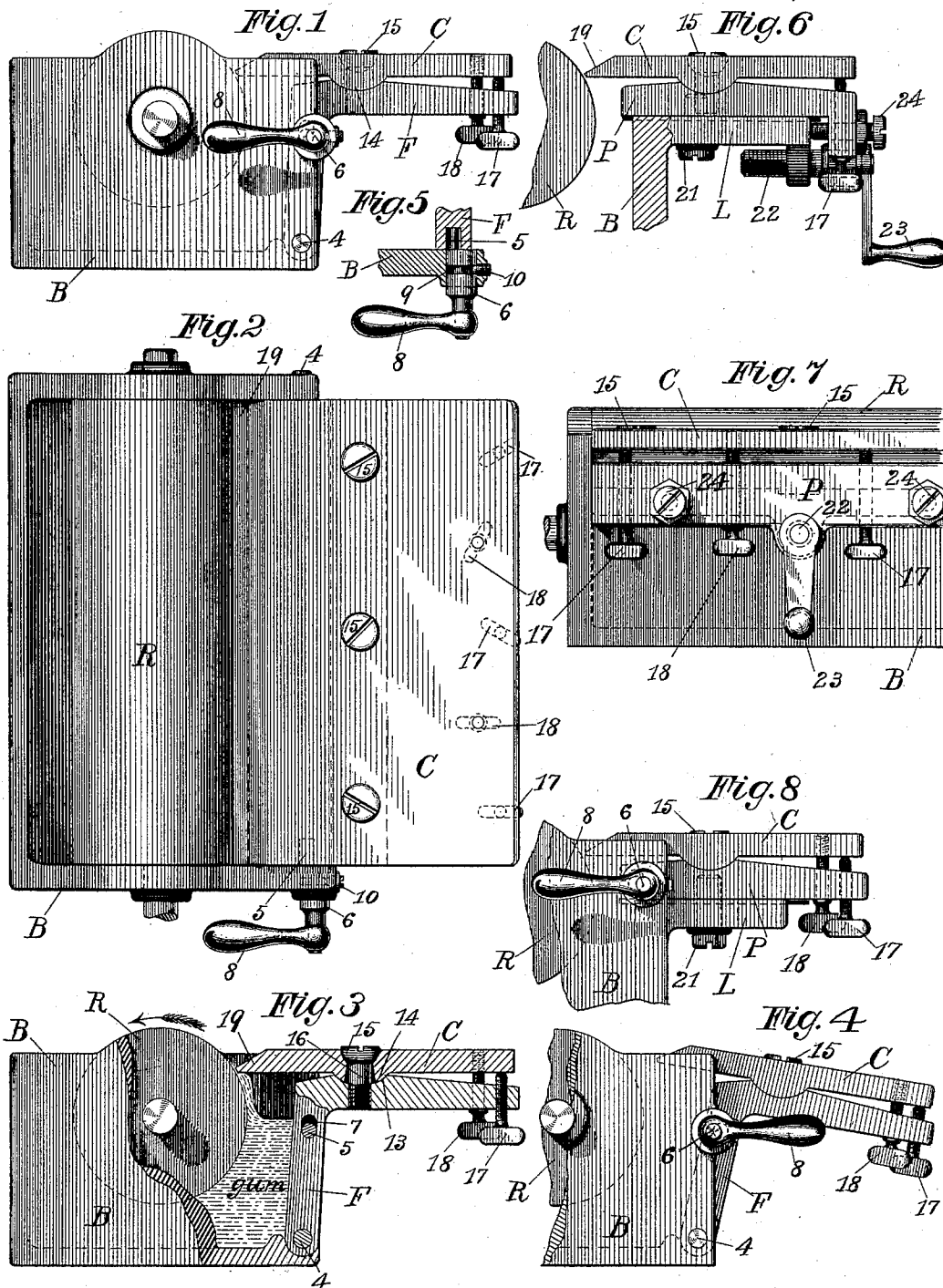
(No Model.)

F. H. RICHARDS.

GUM BOX FOR ENVELOPE MACHINES.

No. 396,711.

Patented Jan. 22, 1889.



Witnesses:
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GUM-BOX FOR ENVELOPE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 396,711, dated January 22, 1889.

Application filed November 15, 1886. Serial No. 218,873. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS H. RICHARDS, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Gum-Boxes for Envelope-Machines, of which the following is a specification.

This invention relates to the gum-boxes used on envelope-machines, the object being to furnish a more complete and convenient apparatus for adjusting the scraper and for quickly throwing the same away from the roll to remove obstructions without disturbing the adjustment.

To this end the invention consists in the improvements hereinafter described and claimed.

In the drawings accompanying and forming a part of this specification, Figure 1 is an end elevation of a gum-box embodying my improvements. Fig. 2 is a top view of the same. Fig. 3 is an end elevation partially in section. Fig. 4 is a partial end elevation showing the scraper thrown back for removal of obstructions. Fig. 5 is a horizontal section of one corner of the box, showing the preferred construction of the eccentric operating the swinging (or sliding) frame which carries the scraper. Fig. 6 is a partial end elevation showing a modification of the apparatus. Fig. 7 is a rear side elevation of the same, one end being broken away. Fig. 8 shows a modification of the apparatus shown in Fig. 6.

Similar characters designate like parts in all the figures.

The gum-box proper, for containing the gum solution, is of the usual description, it being a plain rectangular-sided box, B, having such proportions as are required by the machine in which this apparatus is to be used. This box is furnished with the ordinary roll, R, which is supposed to be provided with suitable means for rotating it in the direction of the arrow in Fig. 3. On the rear (or right-hand) side of the box (see Figs. 1 to 4, inclusive) there is a laterally-movable frame, F, which carries the scraper. This is a plate, C, in the nature of a broad lever, adjustably mounted on the upper side of said frame.

Both the frame and scraper should be made to fit closely (after the usual manner of fitting gum-box scrapers) between the ends of the box, as shown, for instance, in Fig. 2. The swinging frame F is pivoted at 4, and is operated by means of a crank-pin, 5, formed on the short shaft 6 and working in a slot, 7, formed in said frame. Said shaft 6 turns in a bearing formed in the box and is operated by a handle, 8, as will be readily understood from Figs. 2 and 5. For retaining that shaft in its bearing it has a groove, 9, formed around it, into which fits the point of screw 10, Fig. 5. By turning the crank over to the left hand of the axis of said shaft the frame is held in its working position, and by throwing the crank to the right hand the frame is swung out, as in Fig. 4.

The scraper is adjustably and rigidly mounted on the frame, as follows: The top of the frame has a concave groove formed therein, as shown in end view at 13, Fig. 3, and the scraper has a convex rib, 14, fitting said groove. The center of the circle of said rib and groove is about at the upper surface of the scraper, which is bored through at two or more points of its length for the holding-screws 15. These are made with a spherically-formed head, as shown, the center of the sphere coinciding substantially with the axis of the said concave and convex surfaces. This arrangement (the scraper being bored larger than the body 16, Fig. 3, of said screws) allows the scraper to swing on the frame and yet remain closely held thereto. For the purpose of adjusting said scraper by thus swinging it, I provide opposing sets of screws arranged as follows: One set, 18 18, pass through the frame and screw into the scraper. These act to draw down the outer end of it. The other set, 17 17, screw into the frame and act against the scraper, tending to throw it up. Thus one set checks the other, and between them both any desired adjustment within a limited range may be given the scraper, this being set, of course, when the frame is in its working position, to bring the scraper-edge 19 the correct distance from roll R.

The frame F, instead of swinging, as de-

scribed, may be constructed to slide, as in Figs. 6, 7, and 8. Here said frame consists in a plate, P, mounted on the shelf L, it being held thereon by screws 21, working in slots in said shelf, to insure the necessary parallelism of the motion. An ordinary traversing screw, 22, operated by crank 23, is provided to operate the sliding frame, while one or more fixed stops, 24, serve to limit its movement toward the roll. This form of laterally-movable frame, like the swinging one, may be actuated by the above-described crank, as shown in Fig. 8; but this device is believed to be most suitable for operating the swinging form of the frame. In all cases, however, the forward position of the frame is supposed to be a fixed and unvarying working position, which is not to be changed for adjusting the scraper.

The operation of the apparatus, it is thought, will be fully understood from the drawings and preceding description. The frame F being in its working position, as in Figs. 3 and 6, the scraper is next adjusted and the box supplied with gum and operated as may be required. Any obstruction, as a piece of paper or an undissolved bit of gum, being drawn in between the roll and scraper, the operator grasps the handle 8, (or handle 23,) and turning shaft 6 swings the frame back, as in Fig. 4, when the obstruction may be removed and the frame reset without in the least disturbing the scraper-adjustment. This long stroke or "quick" adjustment serves, as stated, for

the removal of obstructions, while the "fine" adjustment of the plate C on the frame P or F regulates the amount of clear space between the said scraper C and the roll R when the parts are in their working positions.

Having thus described my invention, I claim—

1. The combination and arrangement, in a gum-box and with the roll R thereof, of the movable scraper-carrying frame having a fixed stroke toward and from the roll, the scraper adjustably mounted rigidly on said frame and free of said roll, the actuating-handle having a forward and backward movement, and connecting mechanism, substantially as described, operating said frame from said handle, all substantially as shown and set forth.

2. The combination, in a gum-box, of the box and its roll, the laterally-movable frame carrying the adjustably-mounted scraper and having slot 7, and shaft 6, journaled in said box and having a crank-pin working in said slot, substantially as set forth.

3. The combination of a frame having a concave groove, the scraper C, having rib 14 fitting said grooves and bored to receive screws 15, and the spherical-headed screws 15, all substantially as set forth.

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Witnesses:

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