

(No Model.)

3 Sheets—Sheet 1.

F. H. RICHARDS.

GUM BOX FOR ENVELOPE MACHINES.

No. 366,186.

Patented July 5, 1887.

Fig. 1

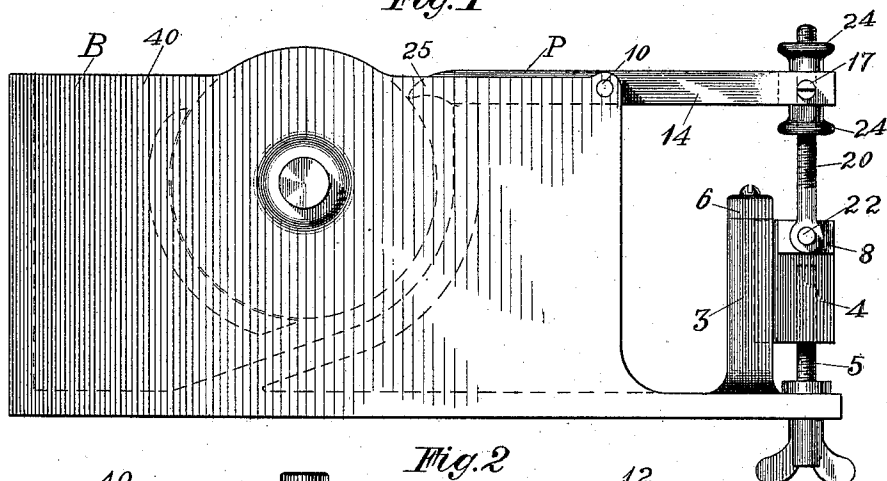
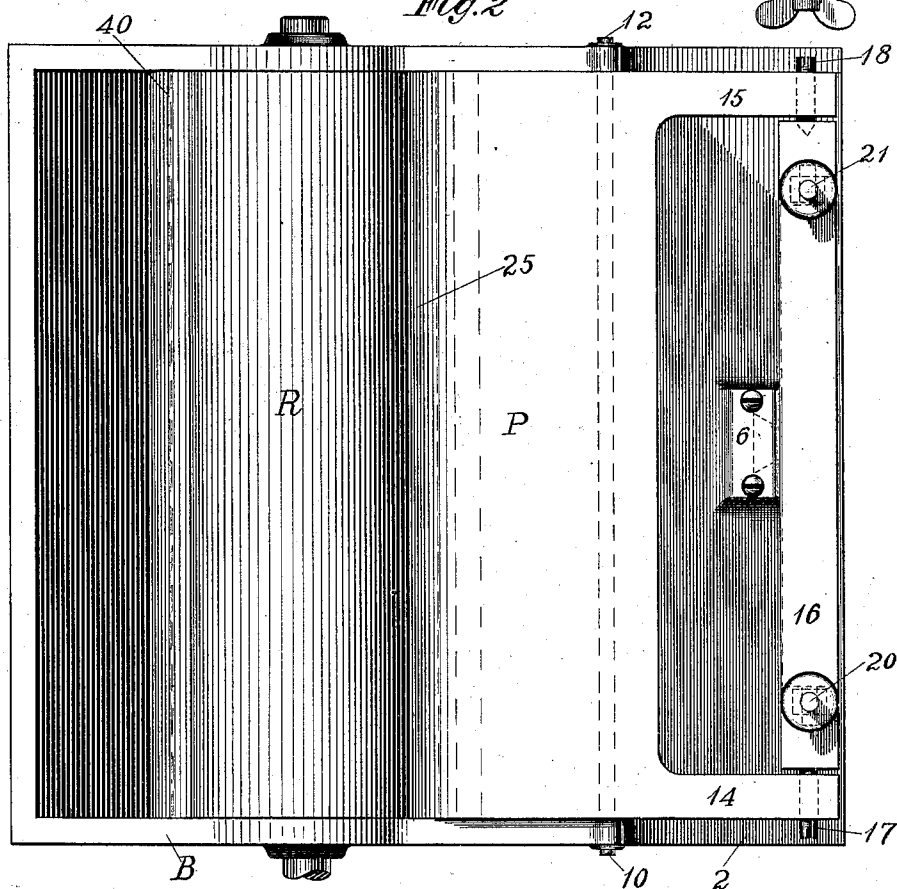


Fig. 2



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Fig. 3

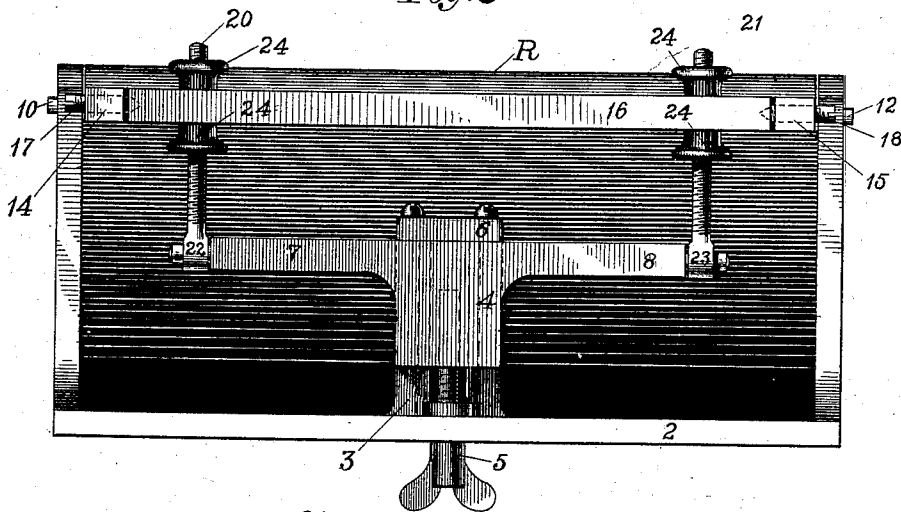


Fig. 4

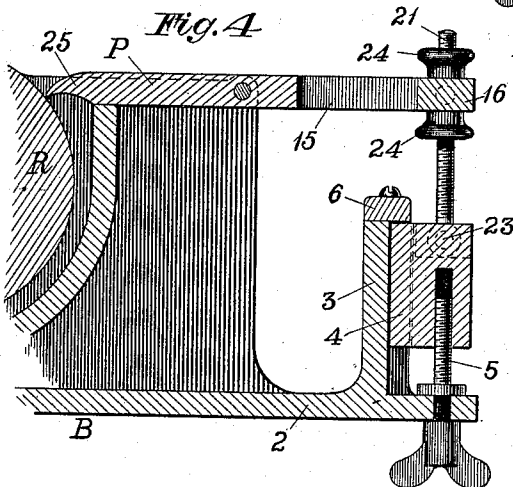


Fig. 5

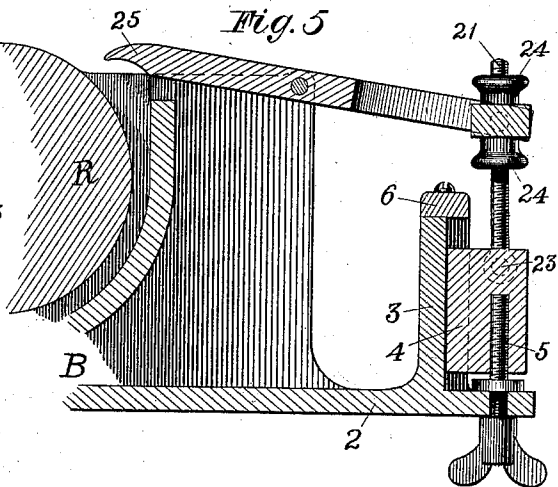
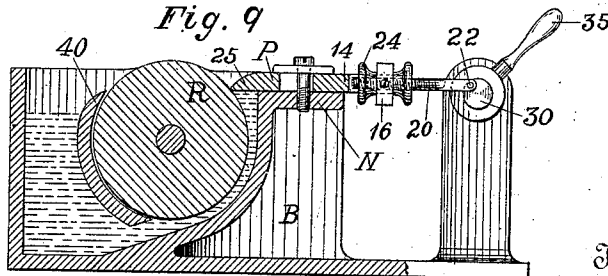


Fig. 9



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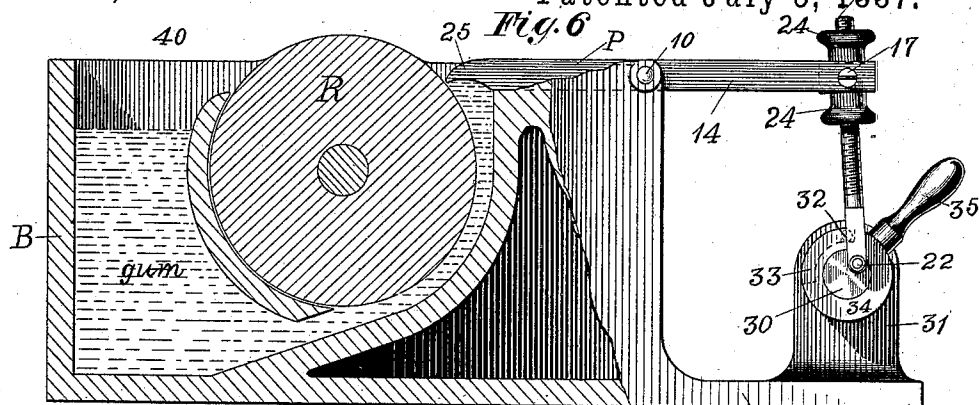
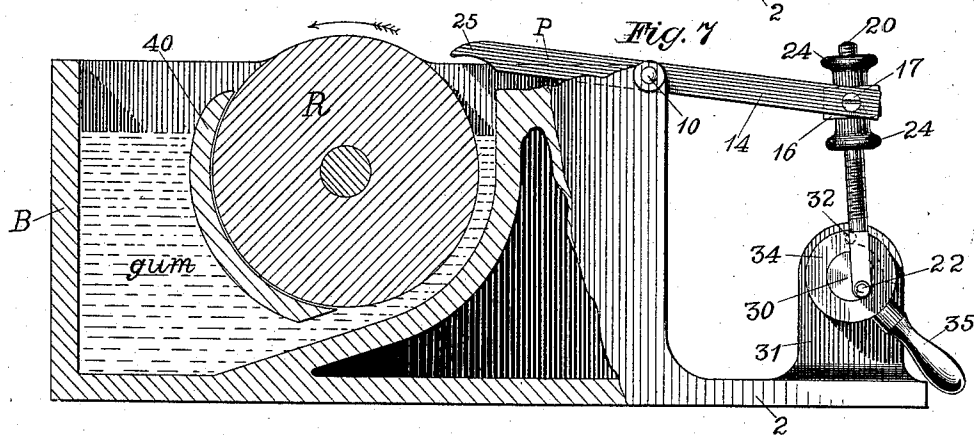
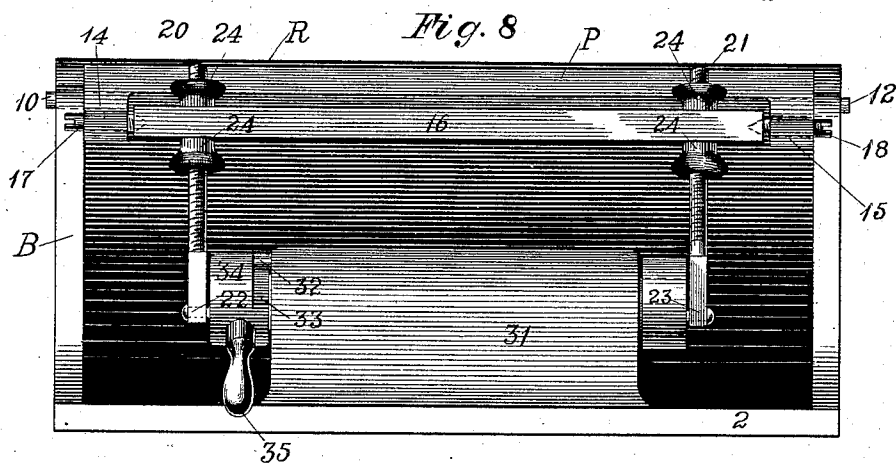
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Inventor:

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UNITED STATES PATENT OFFICE.

FRANCIS H. RICHARDS, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO THE PRATT & WHITNEY COMPANY, OF HARTFORD, CONNECTICUT.

GUM-BOX FOR ENVELOPE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 366,186, dated July 5, 1887.

Application filed November 15, 1886. Serial No. 218,869. (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 a rear side elevation. Fig. 4 is a partial vertical section taken in the middle of its length. Fig. 5 is a view similar to Fig. 4, showing the scraper thrown up to remove obstructions. Fig. 6 is an end elevation, partially in section, showing a modified arrangement for thus throwing up the scraper. Fig. 7 is a view similar to Fig. 6, showing the scraper thus thrown up. Fig. 8 is a rear side elevation of this modification, the parts being situated as in Fig. 7. Fig. 9 shows a modified arrangement of the apparatus.

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. 7. On its rear (or right hand) side the box is furnished with a swinging (or vibrating) scraper adjustably connected to a shifting block, whereby the scraper may be swung up and reset without affecting its adjustment. This shifting block may be constructed in a

variety of ways. One of these is illustrated in the first five figures of drawings. The lower plate, 2, of box B has a guide, 3, in which there are formed ways for a vertical slide, 4. This slide is operated by a screw, 5, shouldered on plate 2, its upward movement being limited by a stop, as 6, affixed to the aforesaid guide, or to some other part (not shown) of the apparatus. Said slide has (or may have) laterally-projecting arms or extensions 7 8, Fig. 3, which are adjustably connected to the scraper by any convenient means.

The scraper consists in the usual plate, P, which is pivoted to the ends of box B at 10 12, respectively. It has two arms, 14 15, pivotally connected to a bar, 16, by pivot-screws 17 18. Said bar 16 is connected to the shifting block by two threaded rods, 20 21, which are pivotally connected to the ends of said block at 22 23 and pass through holes in the bar, on each side of which each rod has an adjusting-nut, 24. When the block 4 is up close against stop 6, the nuts 24 are adjusted to bring the edge 25 of scraper P the proper distance from roll R. If, now, any obstruction becomes lodged against said edge, the said block may be drawn down, as in Fig. 5, the obstruction removed, and the block reset, thereby accurately resetting the scraper, all without in the least degree disturbing the proper adjustment between the scraper-edge and the roll. The same result may be attained by constructing the shifting block to revolve instead of to slide. This form and arrangement thereof is illustrated in Figs. 6, 7, and 8, all the minor connecting devices and the scraper adjustment being the same as in the preceding figures. Said block here consists in a shaft, 30, carried in a bearing, 31, formed on or affixed to plate 2, or to some other part (not shown) of the box. The pivots 22 and 23 are fixed in the ends of this shaft and constitute crank-pins operating the connecting-rods 20 21. A stop, 32, fixed in bearing 31 and working in slot 33, (formed in the hub 34 of handle 35,) serves to properly limit the stroke of the shaft. The two positions of this form of shifting block are fully shown in Figs. 6 and 7, respectively, the operation for the removal of obstructions being

the same as before described, with the single exception that the block revolves instead of sliding.

Another improvement consists in a guard-plate, 40, standing close to the front of the roll, as in Figs. 6 and 7. The object of this is to just scrape the surface of the roll, and thus prevent in a considerable degree the foaming of the gum by the air being drawn into it by the roll. The upper edge of the guard extends above the gum, while the lower edge extends well under the roll. In practice I find the guard should stand about as close or slightly closer to the roll as the scraper-edge is set. This correspondence will, however, vary somewhat with the consistency of the gum and the running speed of the roll. Any excess of gum on the roll will then flow down over the plate into the box again.

My improvements are applicable not only to the swinging scraper described, but also to a sliding scraper, as illustrated in Fig. 9. Here the scraper P is arranged to slide on the shelf N, and the shaft or shifting block 30 is located directly rearward of the scraper. The connecting devices, however, are (or may be) the same as shown in the preceding figures.

It will of course be understood that my improved gum-box, and especially the several details thereof, are capable of modification in various ways and degrees, after the manner of machines in general, without departing from my invention.

Having thus described my invention, I claim—

1. The combination, in a gum-box and with the roll thereof, of a scraper arranged to be moved toward and from said roll, a shifting block operating substantially as described, and adjustable connections between said block and the scraper, substantially as set forth.

2. The combination, in a gum-box and with the roll thereof, of the scraper, a revolving shifting block, and adjustable connections between said block and the scraper, substantially as set forth.

3. The combination, in a gum-box and with the roll thereof, of the guard-plate 40, set in front of said roll and within the box, substantially as shown and described.

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Witnesses:

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