No. 709,339. Patented Sept. 16, 1902.

D. M. LESTER.

ADJUSTABLE PLATEN.

(Application filed Feb. 24, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

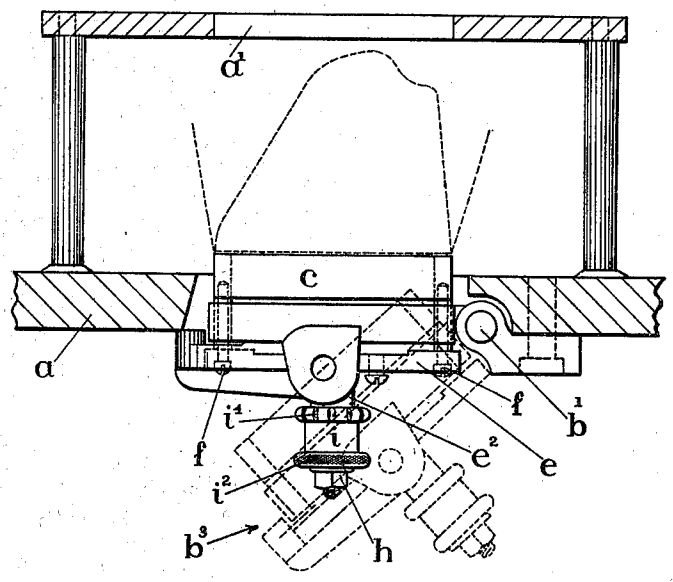
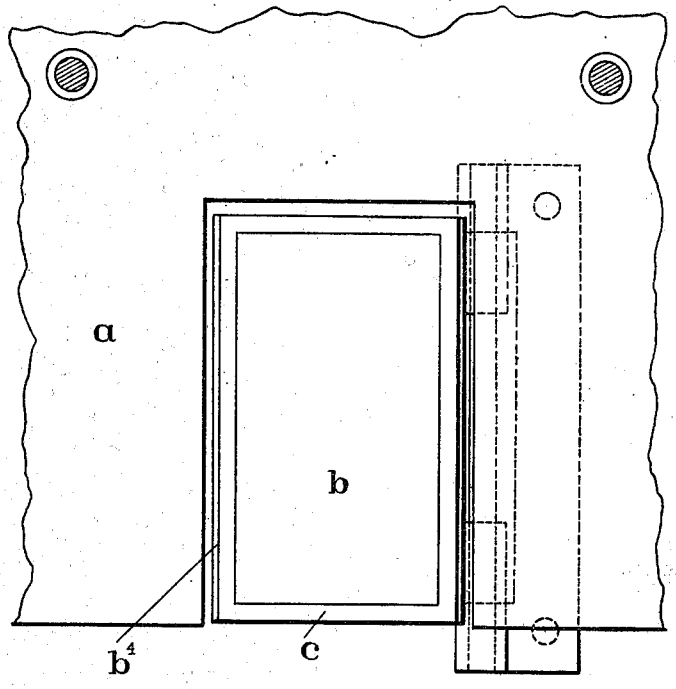


Fig. 2.



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Fig. 3.

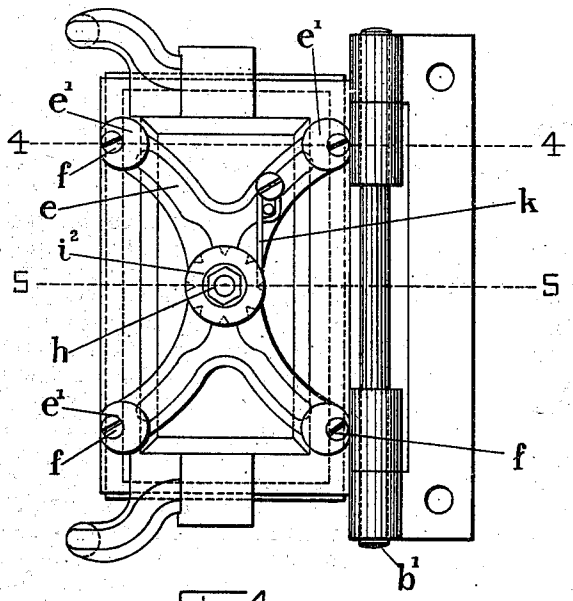


Fig. 4.

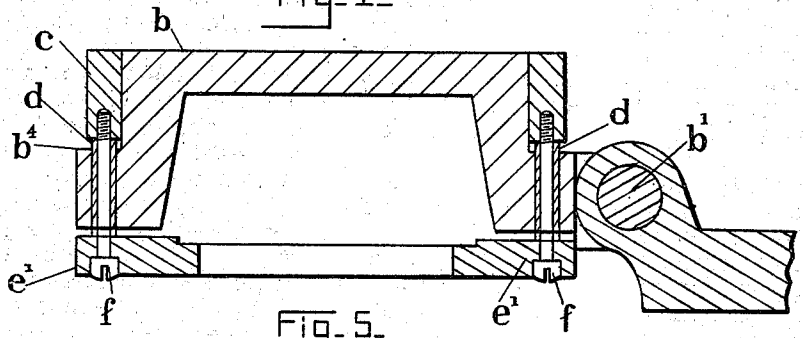
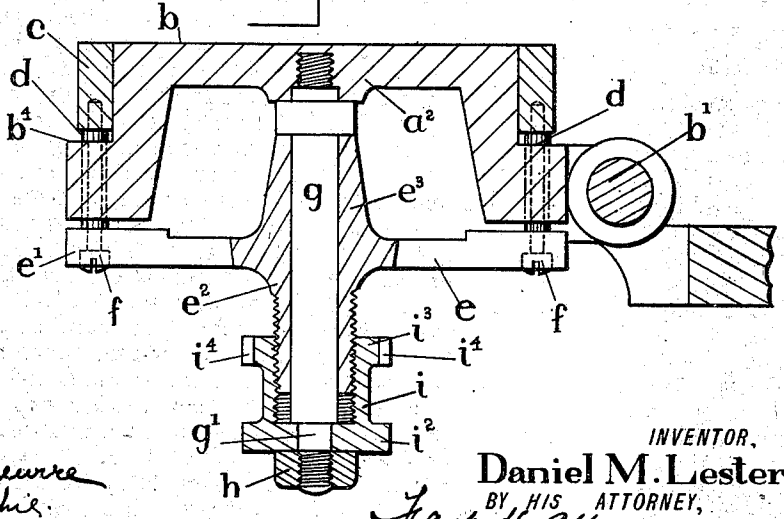


Fig. 5.



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UNITED STATES PATENT OFFICE.

DANIEL M. LESTER, OF NORWICH, CONNECTICUT.

ADJUSTABLE PLATEN.

SPECIFICATION forming part of Letters Patent No. 709,339, dated September 16, 1902.

Application filed February 24, 1902. Serial No. 95,203. (No model.)

To all whom it may concern:

Be it known that I, DANIEL M. LESTER, a citizen of the United States, residing at Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Adjustable Platens, of which the following is a full, clear, and exact description.

This invention relates to the hinged platens or impact-plates of envelop-machines, my chief object being to provide a simple and reasonably cheap attachment for such platens that may be readily adjusted to change and control the thickness of envelops folded thereon.

Briefly described, my said invention consists of a rim or strap surrounding the platen and forming an extension thereof and means consisting of an adjusting-screw, of peculiar construction, by means of which the said rim may be adjusted relatively to the inclosed platen.

In order that my invention may be clearly understood, I have provided the accompanying drawings, in which—

Figure 1 is an end elevation of a platen embodying my improvements, showing also the adjacent portions of the table of an envelop-machine to which the said platen is hinged and the folding-throat over said platen. Fig. 2 is a plan view of the same, and Fig. 3 is a plan of the under side of said platen and its adjusting mechanism. Fig. 4 is a cross-sectional view taken on line 4 4 of Fig. 3, and Fig. 5 is a similar view taken on line 5 5 of said Fig. 3.

In the drawings, the reference-letter *a* indicates the table of an envelop-machine, and *b* the platen, the latter being hinged to the said table, as at b', in such manner that it (the platen) may be dropped to the angle indicated by the dotted lines b^3 in the said Fig. 1, to deliver the folded envelops into any suitable drying mechanism located below the table *a*. The platen *b* is rabbeted, as at b^4, and surrounding the rabbeted portion is a loose rim *c*, that may be raised and lowered within certain limits—that is to say, it may be raised until its upper edge portion is flush with the upper face of the platen or it may be lowered to carry its said upper edge below the level of the platen. During the operation of folding an envelop in this class of machines the gummed blank is forced down through a folding-throat a' (see Fig. 1) and left upon the platen *b* partly folded, as seen in dotted lines in Fig. 1. Hinged folders (not shown) then fold the flaps down upon the body of the envelop in proper succession and by the same operation pinch the edges of the envelop between the said folders and the rim *c*, which latter is, in fact, an extended portion of the platen. If it is desired to fold the envelops down very thin and flat, the rim *c* is raised flush with the main platen *b*; but if it is desired to fold the edges of the envelops loosely, and thus leave them of considerable thickness, the rim *c* should be lowered below the surface of the platen, the thickness of the folded envelop being governed by the position of the rim *c*. It will thus be understood that the envelop may be folded to any variation of thickness within the limits of the adjustment of the rim. In changing from thin to thick folds, and vice versa, it thus becomes necessary to adjust the rim *c*, and this occurs very frequently. Heretofore it has been most common to support the rim with respect to the platen by means of four independently-operated screws, all of which must be adjusted with great precision in order that the upper face of the rim shall be level. If otherwise, the envelops will be folded thicker on one end or side, as the case may be, than on the opposite end or side. In practice it has been found to be very difficult to reach this nicety of adjustment, the work of adjusting the several screws being the more difficult because of the fact that the said screws are usually hidden from sight among a complication of other machine parts. My present invention reduces the operative adjusting mechanism to a single thumb-nut and also provides simple means for indicating both to the sight and sound of the operator the degree of adjustment attained at any time.

Having thus described in general terms the nature and advantages of my invention, I will proceed to explain in detail the construction and operation of the same.

The rim *c* is, by preference, about one-fourth of an inch in thickness. The flange b^4 is bored through vertically near its corners to receive bushings *d*, that are somewhat longer than the height of the said flange.

The reference-letter *e* denotes a plate of spi-

der form, having bosses e', that register with the vertical holes in which the bushings d are located, the said bosses being drilled to receive screws f, that extend through the spider e and through the said bushings and are screwed firmly into the rim c. By reference to the drawings it will be seen that the rim c is somewhat less in height than the rabbeted portion of the platen and that the bushings d are of such length that their opposite ends abut the rim c and spider e, respectively. Thus the screws f when screwed home bind the spider and rim together as if they were a single structure, and it will be obvious that if the spider is adjusted with respect to the platen b the rim c will be correspondingly moved upon the said platen, thus varying the upper face of the rim relatively to the upper face of the platen, the extent of such variation being limited to the space between the lower edge of the rim and the upper face of the flange b^4, as seen in Fig. 1 of the drawings.

The spider e is formed with a central boss e^2, that is threaded circumferentially and is bored centrally to receive a post g, that is screwed or otherwise fixedly secured to the platen b, the hole in the boss e^2 being large enough to permit the spider and boss to slide freely on the said post. The post g extends downward—that is to say, below the end of boss e^2—a distance at least equal to the space between the rim c and flange b^4, above referred to, and is then somewhat reduced in diameter, as at g', the extreme end portion of the post being threaded to receive a nut h.

The letter i denotes a thumb-nut that is threaded to screw upon the boss e^2, the hole in the lower end of said thumb-nut being adapted to fit easily upon the reduced portion g' of the post g, as is best seen in Fig. 5 of the drawings. With a construction as described it will be obvious that if the thumb-nut i be rotated it will cause the threaded boss of the spider e to travel within said thumb-nut either downward or upward, according to the direction of rotation of the thumb-nut, thus causing the connected rim c to move correspondingly upon the platen b. By preference the thumb-nut is formed with two annular flanges i^2 i^3, the former of which is milled, and the latter is provided with a number of notches i^4, that receive the free end of a spring k, whose other end is secured to the spider e. When the thumb-nut i is partially rotated to change the elevation of the rim c relatively to the upper face of the platen, the spring k snaps from notch to notch with sufficient force to be both heard and felt by the machine attendant, and after the adjustment of the rim is completed the spring k then serves as a stop to prevent the accidental rotation or disarrangement of the thumb-nut.

On the inner face of the platen is a boss a^2, and upon the confronting face of the spider is a similar boss e^3. When the parts are adjusted to raise the rim, the two bosses a^2 e^3 contact with each other just as the upper face of the rim is flush with the upper face of the platen, and the said bosses then operate as a positive stop to insure the perfect registering of the faces of the rim and platen. With such a construction it is not necessary that the adjuster shall see the operative parts of the adjusting mechanism. It is only necessary that he shall be able to reach the thumb-nut i and partially rotate it until the rim c is lowered or raised to the desired position, and such position may be accurately and quickly determined by noting the number of clicks made by the spring k as the latter snaps into the notches i^4.

Heretofore it has been the common practice in envelop-factories to employ an expert adjuster whose special duty is to go from machine to machine throughout the factory and adjust the rims c; but with the adoption of my present improvement such adjustment can be quickly performed by the machine attendant.

In attaching my adjusting device to envelop-machines as now most commonly constructed no expensive changes are necessary, and the cost of the said attachment is very small when compared with its marked advantages over the old methods.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In combination with the platen of an envelop-machine, and a rim mounted to slide thereon, a spider as set forth, means for rigidly connecting the said spider and rim, and means for adjusting the combined spider and rim relatively to the said platen.

2. In combination with a platen and a rim mounted to slide thereon, a spider, and means consisting of bushings and screws, as herein set forth, for rigidly connecting the said spider and rim.

3. In combination with a platen having flanged sides, a rim mounted to slide on said platen, a spider, and means for rigidly connecting the rim and spider consisting of bushings and screws as set forth; the said bushings being slidably mounted in holes in the flange of the platen.

4. In combination, a platen, a rim slidably mounted on said platen, a threaded boss, means for rigidly connecting said boss with the said rim, a thumb-nut screwed upon the said boss, and means for retaining the said thumb-nut in a given relation to the platen whereby the rotation of the thumb-nut will cause the boss and connected rim to be adjusted relatively to the platen.

Signed at Norwich, Connecticut, this 6th day of February, 1902.

DANIEL M. LESTER.

Witnesses:
FRANK A. FOSTER,
FRANK H. ALLEN.