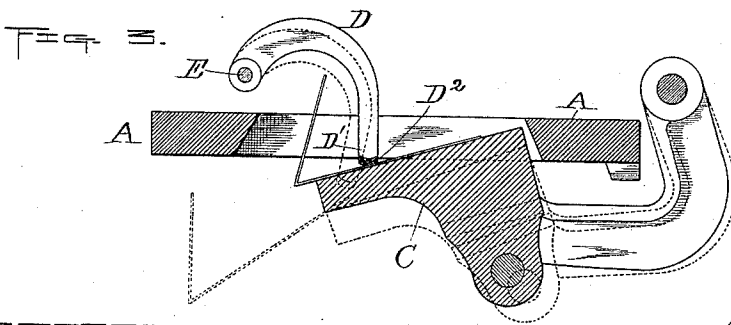
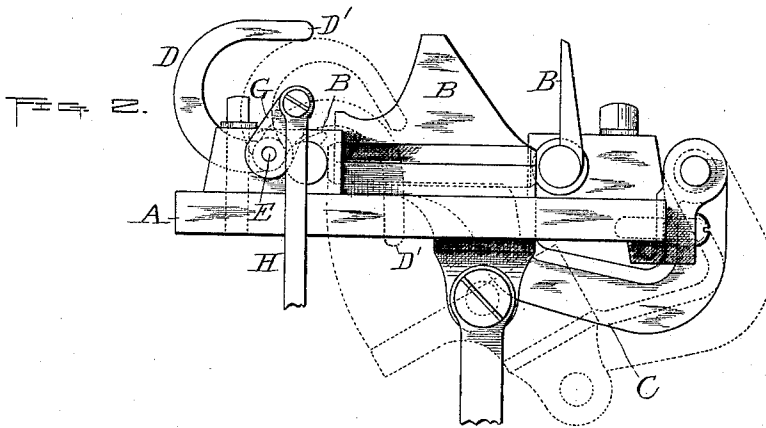
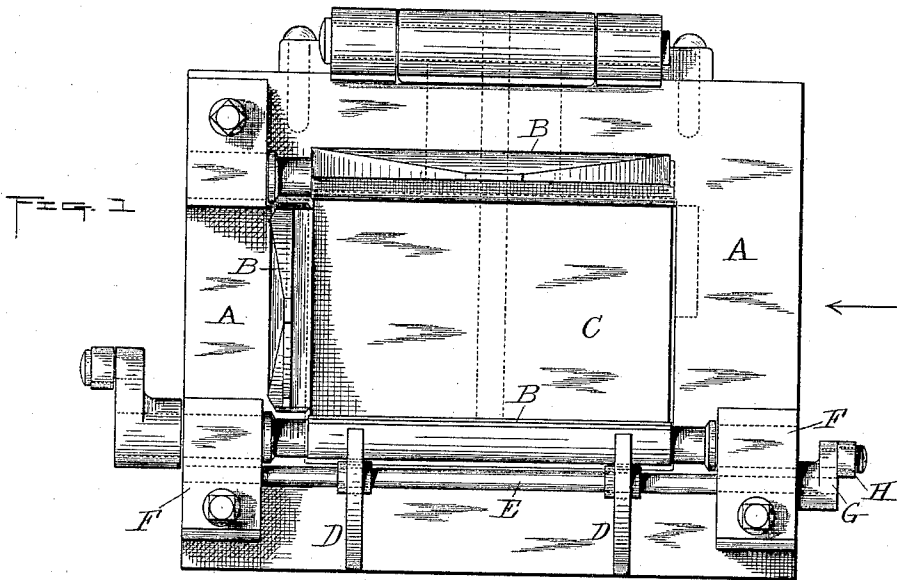


(No Model.)

A. A. RHEUTAN.
ENVELOPE MACHINE.

No. 466,924.

Patented Jan. 12, 1892.



Witnesses,
Walter B. Nourse,
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UNITED STATES PATENT OFFICE

ABRAM A. RHEUTAN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO
WADE H. HILL, OF SAME PLACE.

ENVELOPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 466,924, dated January 12, 1892.

Application filed March 30, 1891. Serial No. 386,913. (No model.)

To all whom it may concern:

Be it known that I, ABRAM A. RHEUTAN, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Envelope-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents so much of the folding apparatus of an envelope-machine as is necessary to illustrate my aforesaid improvements. Fig. 2 is a side view thereof, looking in the direction of the arrow in said Fig. 1, and Fig. 3 is a vertical section showing the parts relating more particularly to my invention.

It is a well-known fact in the manufacture of envelopes that the folded envelopes often catch at the edges in the folders and do not follow the folding-bed when the latter is lowered, and also at other times they are liable to adhere to the surface of said folding-bed, and consequently do not pass out of the way of the next succeeding envelope, thus causing confusion, crushing of the envelopes, and loss in the production; and to obviate this objection by providing a positive and sure means for starting each envelope in its downward course in the discharging operation is the main purpose of my invention, which consists in combining with the stationary and folding bed or table a rock-shaft arranged above said bed, having means whereby power may be connected therewith to operate the same; also, having mounted thereon one or more discharging-fingers or lateral projections whose ends, when they are swung down, are adapted to come in contact with and force down the envelope out of the folders in case it sticks therein as well as impart a quick lateral push to each envelope as the folding-bed descends with said envelope lying thereon, said fingers obliging the envelope to follow the folding-bed in its descent, and thereby positively insuring its proper discharge, as hereinafter more fully set forth.

In order that others may better understand the nature and purpose of my invention, I will now proceed to describe it more in detail.

In the drawings, A represents the station-

ary bed or table of an envelope-machine, upon which are mounted the usual folders B, three of which are shown in this instance. Said folders are constructed and operate to fold the envelopes as they are delivered on the pivoted folding-bed C in the ordinary way, and therefore require no detailed description.

The discharging-fingers D D previously alluded to are arranged above the stationary bed A, being mounted on and secured to a rock-shaft E, so as to be operated thereby, and said shaft is fitted to turn in suitable bearings F F, secured at each side of the top of said stationary bed or table A. One end of said shaft is provided with a crank or eccentric G, to which is pivoted the end of a connecting rod or lever H, which may in practice be combined with any suitable actuating mechanism for imparting to said rock-shaft and its fingers D D the required rocking motions.

The operation of the discharging-fingers in connection with that of the folding-bed in the discharging operation is as follows: The gummed envelope-blank having been folded on pivoted folding-bed C, as usual, said bed is lowered to allow of the envelope being discharged therefrom. As shown in Fig. 2, the top surface of said bed, when in its upper position ready to have the envelope folded thereon, comes about upon a level with the centers of the pivots or bearings of the folders B. Therefore when the envelope is folded thereon its edges impinge or bear against the inner sides of the folders, which form a square box or frame at this point above and around the usual vertical opening in the stationary bed A and often stick in the folders at said point, so that when the folding-bed descends instead of following the same they remain suspended and must be forced down from between the folders by some special means. For this purpose I employ the ejecting or discharging fingers D D, which not only force the envelope from between the folders, but also, by following the folding-bed as it descends with their outer ends D' in contact with the top surface of the envelope, oblige the latter to descend in contact with it. At the same time, owing to the circular movement of said fingers in descending, imparting to said envelope a lateral downward push,

which impels it down over the surface of the folding-bed, said operation being facilitated by the opposite swinging movement of said bed in descending, and which may also be
 5 further facilitated by providing the ends of the fingers with rubber pads D³, as is shown in Fig. 3. Having been thus started down the surface of the folding-bed, it readily continues its course by force of gravity after
 10 passing out of the action of the fingers, and discharges itself therefrom, as is indicated by dotted lines in Fig. 3.

By the use of my discharging device it will at once be seen that the operation of discharging the envelopes from both the folders and
 15 the folding-bed is positive and sure, thereby preventing one envelope crowding upon another in confusion and thus crushing and causing waste of stock as well as time, as is
 20 now often the case where such a provision is not made.

It is obvious that my invention is applicable to an envelope-machine having a folding-bed operating vertically instead of with swinging
 25 movements, as herein shown and described, and may be applied thereto.

I am aware of the United States Patent, No. 442,091, to J. Ball, dated December 9, 1890, which covers the use of "envelope-ejectors"
 30 arranged under the bed, that impinge or strike against the edge of each envelope to force it laterally from the folding-bed after said bed

has commenced to descend in the discharging operation, and make no claim thereto:

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

1. In an envelope-machine, the combination of the usual folders, stationary bed, and folding-bed with discharging-fingers arranged above the stationary bed and secured to a
 40 shaft fitted to turn in suitable stationary bearings, said fingers also projecting laterally over the usual folding-bed table and adapted when swung down to bear upon the top surface of the envelopes folded thereon, substantially as
 45 and for the purpose set forth.

2. In an envelope-machine, the combination of the usual folders, stationary bed, and folding-bed with the rock-shaft E, arranged above the stationary bed and fitted to turn in
 50 stationary bearings F F, also having means whereby power may be connected therewith to operate the same, and fingers D D, fastened to and projecting laterally from said shaft over the folding-bed and adapted when
 55 swung down to bear upon the top surface of the envelope to push it down from between the folders, as well as discharge it from the folding-bed, substantially as and for the purpose set forth.

ABRAM A. RHEUTAN.

Witnesses:

A. A. BARKER,
 W. B. NOURSE.