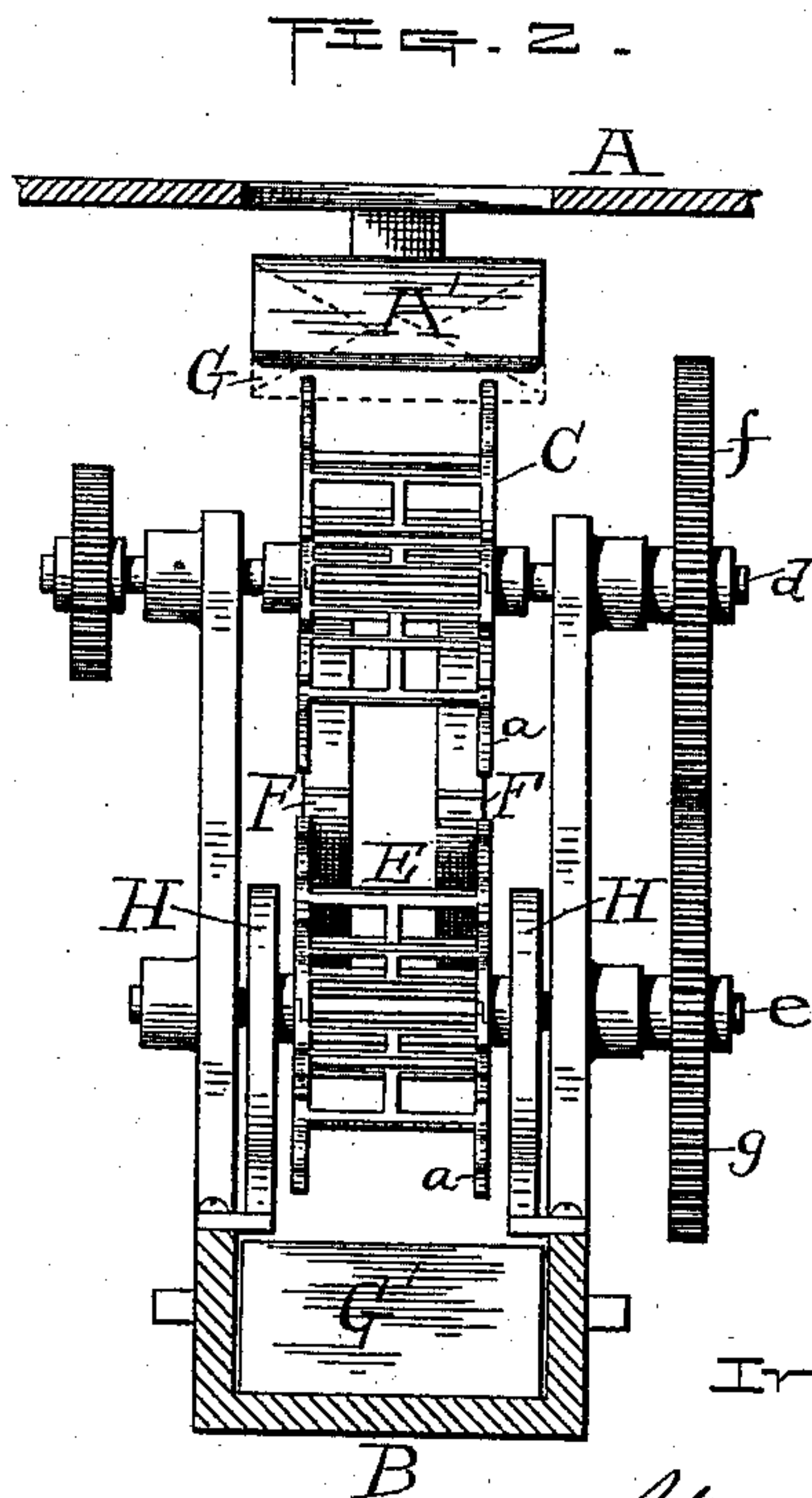
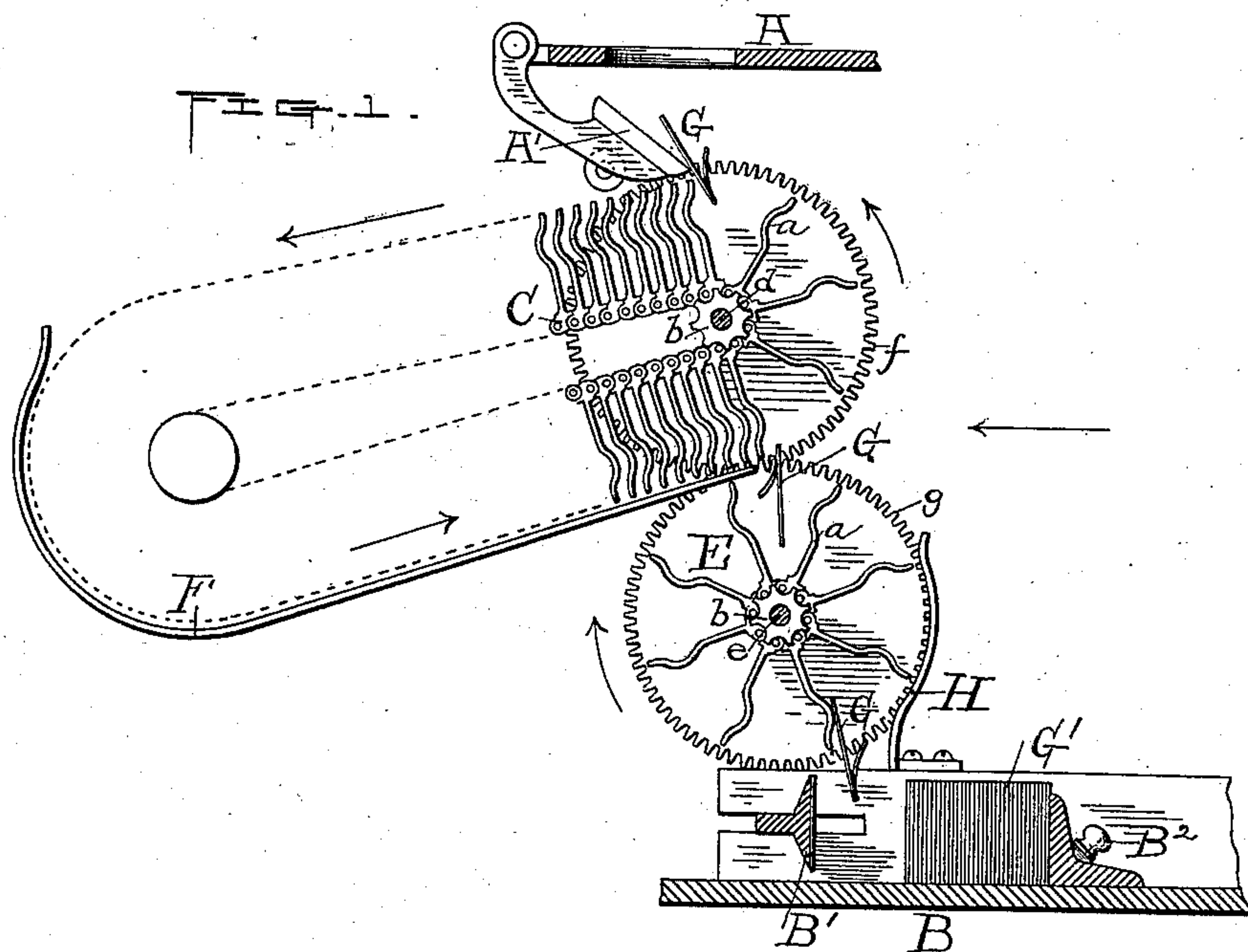


(No Model.)

A. A. RHEUTAN.
ENVELOPE MACHINE.

No. 370,890.

Patented Oct. 4, 1887.



Witnesses;

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UNITED STATES PATENT OFFICE.

ABRAM A. RHEUTAN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO
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ENVELOPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 370,890, dated October 4, 1887.

Application filed July 16, 1886. Serial No. 202,182. (No model.)

To all whom it may concern:

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

Figure 1 represents a vertical longitudinal section of so much of an envelope-machine as is necessary to illustrate my improvements thereon, and Fig. 2 is a vertical transverse
15 section thereof, showing an end view of my said improvements, looking in the direction of the arrow, Fig. 1.

My invention relates particularly to the drying-chain of an envelope-machine and the
20 delivery of the envelopes therefrom.

The object of my improvements is to provide a better and more perfect means of conveying the envelopes from the folding-box to the counting-box of said machine, the envelopes
25 being, as usual, dried during said transit from one box to the other.

Said improvements consist in arranging under the usual drying-chain a star-wheel, (having arms like or similar to a drying-chain,) which receives the envelopes from the usual
30 chain bottom side up and deposits them in their proper position in the counting-box, said star-wheel being arranged in the proper position to receive the envelopes as they drop out of the usual chain, and to turn with a slow intermittent motion corresponding to said usual
35 chain, consequently causing the envelopes to be carried around and transposed from an inverted to their proper positions, and thus dropped into the counting-box, as hereinafter more fully set forth.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe it more
45 in detail.

In the drawings, the part marked A represents the bottom of the folding-box, which is provided with the usual opening for the envelopes to pass down through and with the
50 hinged folding-bed A'.

B represents a part of the usual counting-

box, and C part of an envelope-drying chain of ordinary construction, and which in practice has a slow intermittent rotary motion imparted to it in the usual well-known way. Said
55 drying-chain C is ordinarily made of the proper length to dry the envelopes in making one circuit from the place where they are dropped in to the point at which they are removed therefrom; and in all machines made previous
60 to my invention the construction thereof has necessitated the employment of special mechanism to remove the envelopes from the chain.

In most machines the envelopes are removed from the chain under its driving-pinion and
65 while in an inverted position—that is, with their seal-flaps at the top. It is therefore necessary to employ some kind of mechanism for turning said envelopes over, so as to bring said seal-flaps at the bottom or in an upright proper
70 position.

The essential feature of my invention consists in dispensing with the usual mechanism employed for pushing or drawing the envelopes from the chain and dropping them directly from said chain into a star-wheel, E,
75 having fingers *a*, similar to those of an ordinary drying-chain, said star-wheel being arranged to catch the envelopes as they arrive at the proper point and drop down out of the
80 chain C.

The envelopes are delivered from the folding-box with their seal or front flaps downward, and are thus deposited in the chain C. They are then carried around by said chain in
85 the direction indicated by the arrows in Fig. 1, until arriving about under the driving-pinion *b* and the point at which they were dropped into the chain, when they are then allowed to drop out and into the star-wheel. Said envelopes are prevented from dropping out as they
90 are moved along in the under part of the chain until they arrive at the place where they are discharged by means of holding-bands F F, which extend from where the envelopes are
95 dropped out along the bottom of the chain and over its outer end, as shown in Fig. 1, with the inner faces thereof just a little outside of the ends of the fingers *a*.

The envelopes are prevented from falling
100 out of the star-wheel, until arriving at the proper place to be dropped into the counting-

box B, by means of holding bands or guards F', which in this instance extend from the top of the counting-box to a little above the level of the driving-pinion *b*, as shown in Fig. 1.

- 5 Driving-power is imparted from the shaft *d* of the chain C to the shaft *e* of the star-wheel E by means of a spur-gear, *f*, on shaft *d*, which meshes with and drives a gear, *g*, on the shaft *e*, said gear connection, as will be observed,
 10 causing a reverse motion to be imparted to the star-wheel E from that of the chain C, and in consequence causing the envelopes G to be turned from an inverted to an upright position with their seal-flaps at the bottom and in
 15 front, after having been dropped from the chain C into the top of the star-wheel and prior to their dropping out at the bottom of said star-wheel into the counting-box B, as previously described, and fully shown in Fig. 1.
 20 It will be understood that I do not limit myself to the especial arrangement of the chain C and star-wheel E, shown in the drawings, as the same result may be accomplished by placing the same in other positions, the holding
 25 bands or guards and driving-gears in such case being, of course, varied to correspond therewith.

In practice, as the envelopes are deposited

from the star-wheel E into the counting-box B they are pushed forward one after another 3c by means of a pusher-plate, B', made and arranged to operate in the usual way. The pile of envelopes G', as they are counted into bunches and pushed forward, as aforesaid, being held in position by the sliding weight B². 35

As the counting mechanism constitutes no part of my invention an illustration and description thereof is unnecessary.

Having described my aforesaid improvements in an envelope-machine, what I claim 40 therein as new and of my invention, and desire to secure by Letters Patent, is—

In an envelope-machine, the hinged folding-bed and the drying-chain, the latter having envelope-holding bands and operated as usual, 45 in combination with a star-wheel having suitable arms or fingers, also envelope-holding bands and operated in a similar manner to an ordinary drying-chain, and the envelope counting box or receiver, all constructed and arranged substantially as shown and described, 50 for the purpose stated.

ABRAM A. RHEUTAN.

Witnesses:

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