

A. A. RHEUTAN.

ENVELOPE COUNTING MACHINERY.

No. 349,745.

Patented Sept. 28, 1886.

Fig. 1.

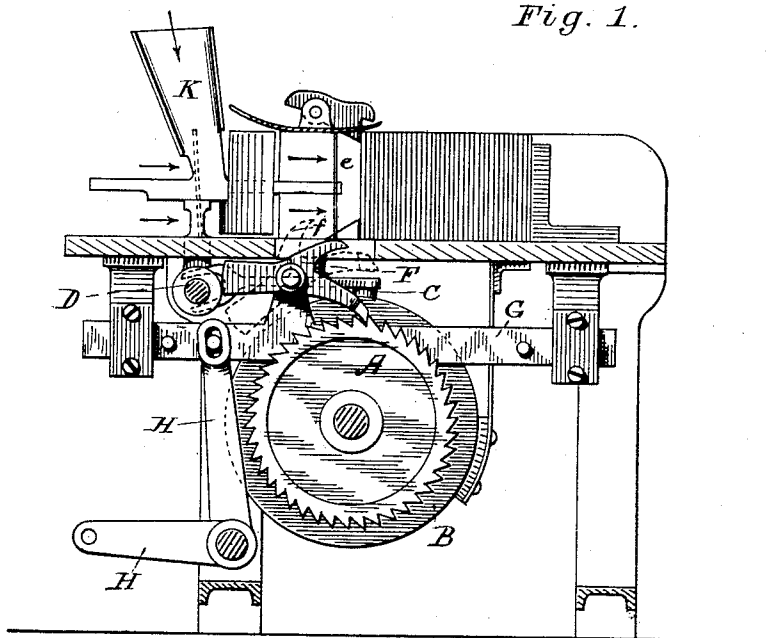
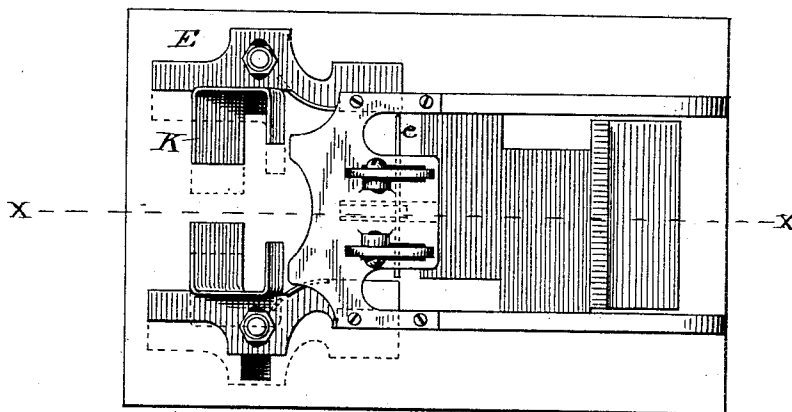


Fig. 2.



WITNESSES.

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Fig. 3.

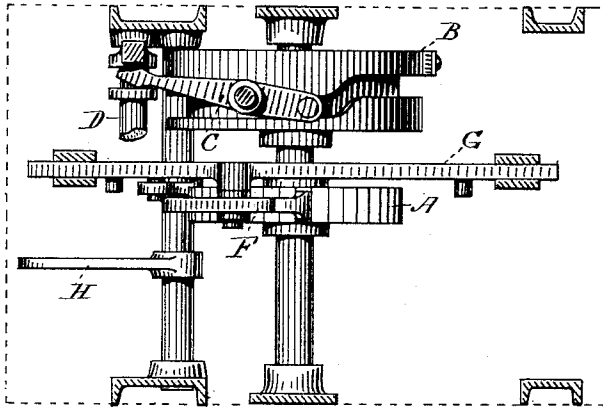
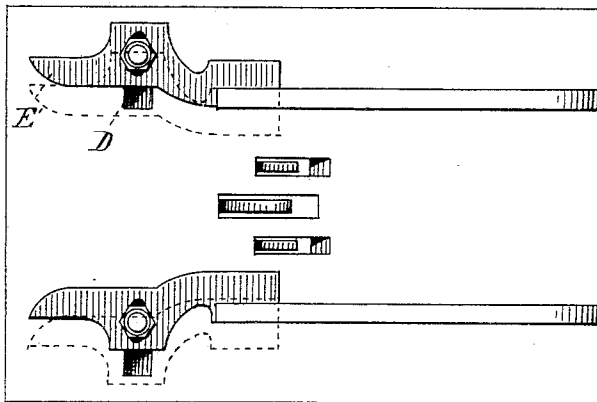


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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

ENVELOPE-COUNTING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 349,745, dated September 28, 1886.

Application filed June 22, 1885. Serial No. 169,388. (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, a citizen of the United States, have invented certain new and useful Improvements in Envelope-Counting Machinery, of which the following is a specification.

My present invention relates to that class of machinery by which the envelopes are arranged in separate packages, each package containing a predetermined number, commonly twenty-five, for the purpose of being readily banded by the operator. In such machines it has been found advantageous, in order to insure the correctness of the count, that the counting-wheel should be moved one tooth forward for each envelope that passes, and my present invention relates to improvements in the mechanical construction by which this result is obtained.

In previous machines of this class invented by me I have employed a pawl engaging with the counting-wheel, and in such engagement arranged to be driven forward by power derived in any suitable manner from that which runs the machine, a finger projecting into the path of the passing envelope, and intermediate mechanism whereby the motion of the finger given to it by the passing envelope has been made to throw the pawl into position to engage with a tooth of the counting-wheel. A machine of this class was patented to me in Reissue Letters Patent No. 9,755, dated June 14, 1885.

With the object of dispensing with the connecting mechanism just mentioned, and thereby simplifying and improving the machine and its operation, I have now devised an arrangement whereby such connecting or intermediate mechanism is dispensed with; and I will now proceed to describe the machine shown in the accompanying drawings, in which my invention is embodied in the form now best known to me. This machine, so far as the mechanism is concerned, whereby the motion of the counting-wheel is made to effect the sorting of the packages or of giving them distinct locations, is substantially like that shown in Letters Patent No. 248,564, granted to me October 18, 1881, and I will therefore particu-

larly describe in this specification only the improvement in the devices, as above mentioned, whereby the passing envelope actuates the pawl.

In the drawings, Figure 1 is a side view in vertical section through the line *xx* of Fig. 2, which is a top plan view of the machine. Fig. 3 is a view of the machine with the trough and bed removed, and Fig. 4 is a partial top view illustrating a slight modification in the envelope-guides that will be hereinafter explained.

A represents the counting-wheel, best seen in Fig. 1. The function of this counting-wheel, as shown in Fig. 3, is to turn a cam-wheel, B, (see Fig. 3,) by which motion is transmitted through the lever C to the sliding-shaft D which shifts the guide-plates to and fro, whereby different packs of envelopes are caused to assume distinctive positions, as shown in Fig. 2. This particular arrangement of devices for converting the motion of the counting-wheel into the motion by which the packs of envelopes are caused to assume different positions may be replaced by any other of the numerous devices of this sort—as, for example, that shown in Reissue Letters Patent No. 9,755, above mentioned.

F represents the pawl by which the counting-wheel is turned, and this pawl, as will be observed, is so constructed that when it is in its normal position or out of the tooth of the counting-wheel, as shown in Fig. 1 by the dotted lines, a finger, *f*, connected with it, lies within the path of motion of the passing envelope. The motion of the pawl which moves the tooth I obtain, in the present instance, by mounting it upon a slider, G, which is timed to move regularly to correspond with the motion of the pusher-plate or other device (not shown) by which the envelopes are carried forward through the machine. To impart this motion to the slider G a slotted lever, H, may be employed, which is to be suitably oscillated by a cam on the main shaft of the machine.

To cause the pawl F to normally occupy its vertical position, or that indicated by the dotted lines in Fig. 1, it may be overbalanced, as shown, or a spring or other device may be employed, as desired.

Instead of deriving the to-and-fro motion

just described of the pawl F by means of a special slide-bar connected with the main shaft, I may connect the pawl to and drive it by some constantly-moving portion of the envelope-forwarding mechanism, or in any other suitable way obtain the required motion, which is a forward motion of the pawl at each forward motion of the pusher, sufficient in extent to move the counting-wheel forward one tooth should the pawl be in engagement with it.

The parts being arranged as described, the operation of the machine is as follows: The pawl F or its projection *f* lies normally within the path of the passing envelope. When an envelope passes, therefore, it causes the pawl to assume the position shown by the full lines in Fig. 1, where *e* represents the passing envelope—that is to say, in engagement with a tooth of the counting-wheel. The pawl being in this position, its forward motion moves the counting-wheel forward one tooth. This operation, when repeated a definite number of times, commonly twenty-five, will, as above explained, produce a package of twenty-five envelopes having a given distinctive location in the box or trough provided, and if further repeated twenty-five more times will give a second pack having its distinct location. This is illustrated in Fig. 2, and the distinctive location of the pack of envelopes enables the operator to pick them up with readiness and certainty for banding. Should an envelope for any reason, however, fail to pass through the machine, it will be observed that the pawl will not be thrown into engagement with the counting-wheel, and therefore will not move it. It follows from this that, irrespective of the number of times that the pusher may have moved forward and back, the counting-wheel will be moved only as the envelopes pass, and consequently the number of envelopes in each pack will always be accurately determined. This is specially desirable at those times when it becomes necessary to feed new blanks into the machine in which the envelopes are completed, for in the time required for this there is great liability of the machine making several revolutions without the corresponding number of envelopes passing, and this would result in short packs were it not for the counting by the envelope as above described.

The machine illustrated in the drawings is adapted to receive envelopes entering it either vertically or horizontally, as indicated by the arrows around the trough K. (Shown in Fig. 1.) When the machine in which the envelopes are completed is located above the counting-machine, the envelopes enter the latter by falling one by one through the trough; but when, as is often the case, it is desirable to introduce the envelopes into the counting-machine from a machine on the same level, the troughs are dispensed with and the outer ends of the guide-plate E may conveniently be arranged as shown in Fig. 4.

In the form shown in the drawings the pawl and its projecting finger are made integral; but it is obvious that this is not essential to the embodiment of my invention, as above set forth.

I claim—

1. In a machine for counting and packing envelopes, the combination, with the counting-wheel to operate the sorting devices, of a pawl held normally out of engagement with the counting-wheel and a projecting finger lying normally within the path of motion of the passing envelope and connected with the pawl, as set forth.

2. In a machine for counting and packing envelopes, the combination, with the counting-wheel to operate the sorting devices, of a pawl held normally out of engagement with the counting-wheel, a projecting finger lying normally within the path of motion of the passing envelope and connected with the pawl, as set forth, and devices, substantially as described, for imparting a regular forward motion to the pawl, all as and for the purpose set forth.

3. In a machine of the character described, the combination, with the counting-wheel A, of a pawl, F, with its finger *f* normally projecting into the path of the envelope, and a slider, G, as set forth.

In testimony whereof I have hereunto subscribed my name this 12th day of June, A. D. 1885.

ABRAM A. RHEUTAN.

Witnesses:

J. HENRY TAYLOR,
E. B. TOMLINSON.