(No Model.) 2 Sheets—Sheet 1.

A. A. RHEUTAN.

ENVELOPE COUNTING MACHINERY.

No. 350,504. Patented Oct. 12, 1886.

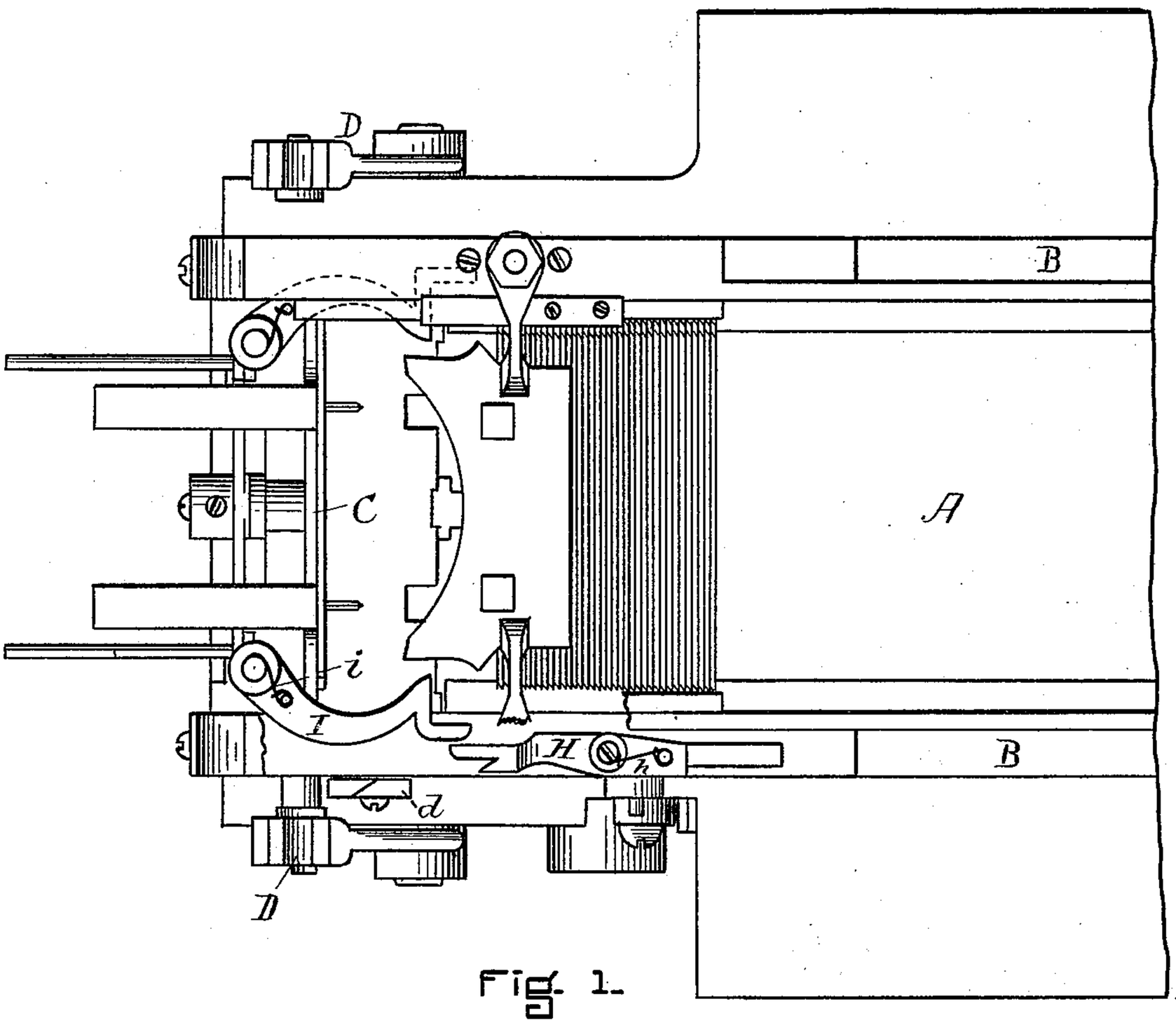

Fig. 1.

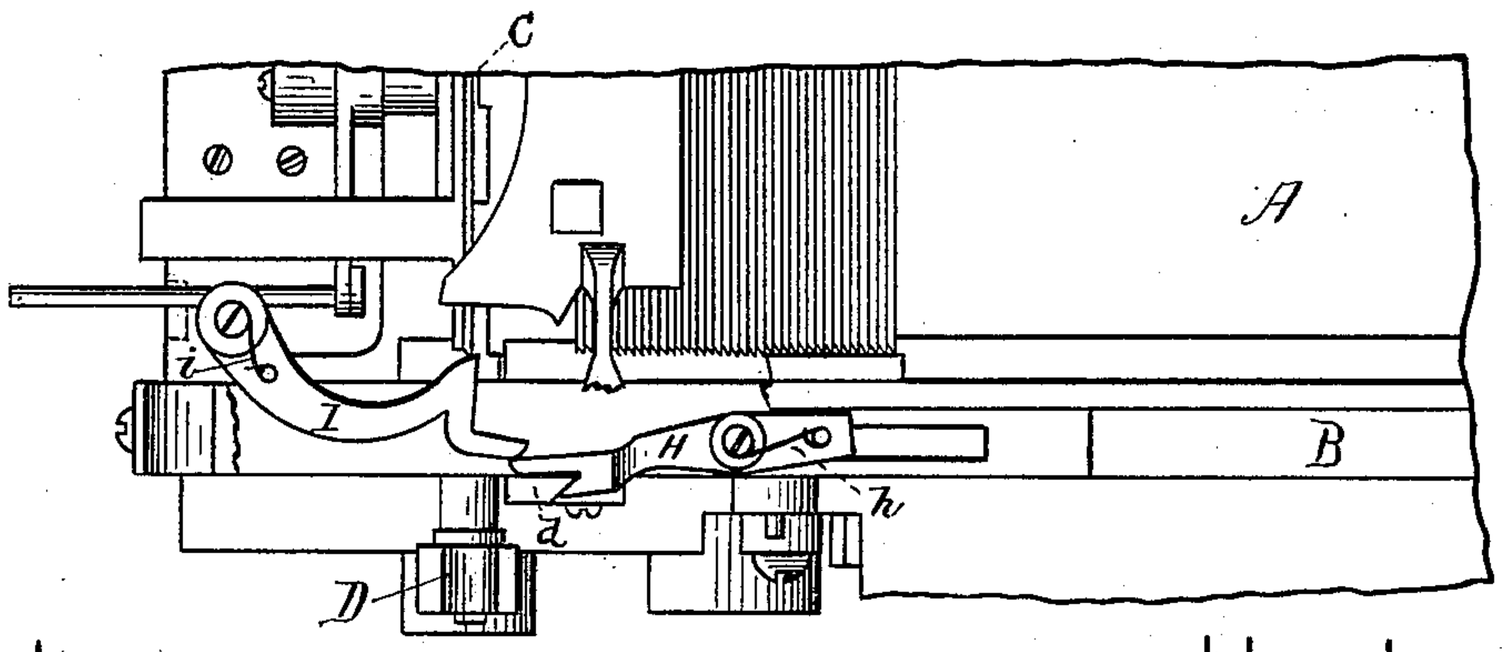

Fig. 2.

WITNESSES.

E. B. Tomlinson.

J. Henry Taylor

INVENTOR.

Abram A. Rheutan

by Alex. P. Browne,

attorney

(No Model.) 2 Sheets—Sheet 2.

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ENVELOPE COUNTING MACHINERY.

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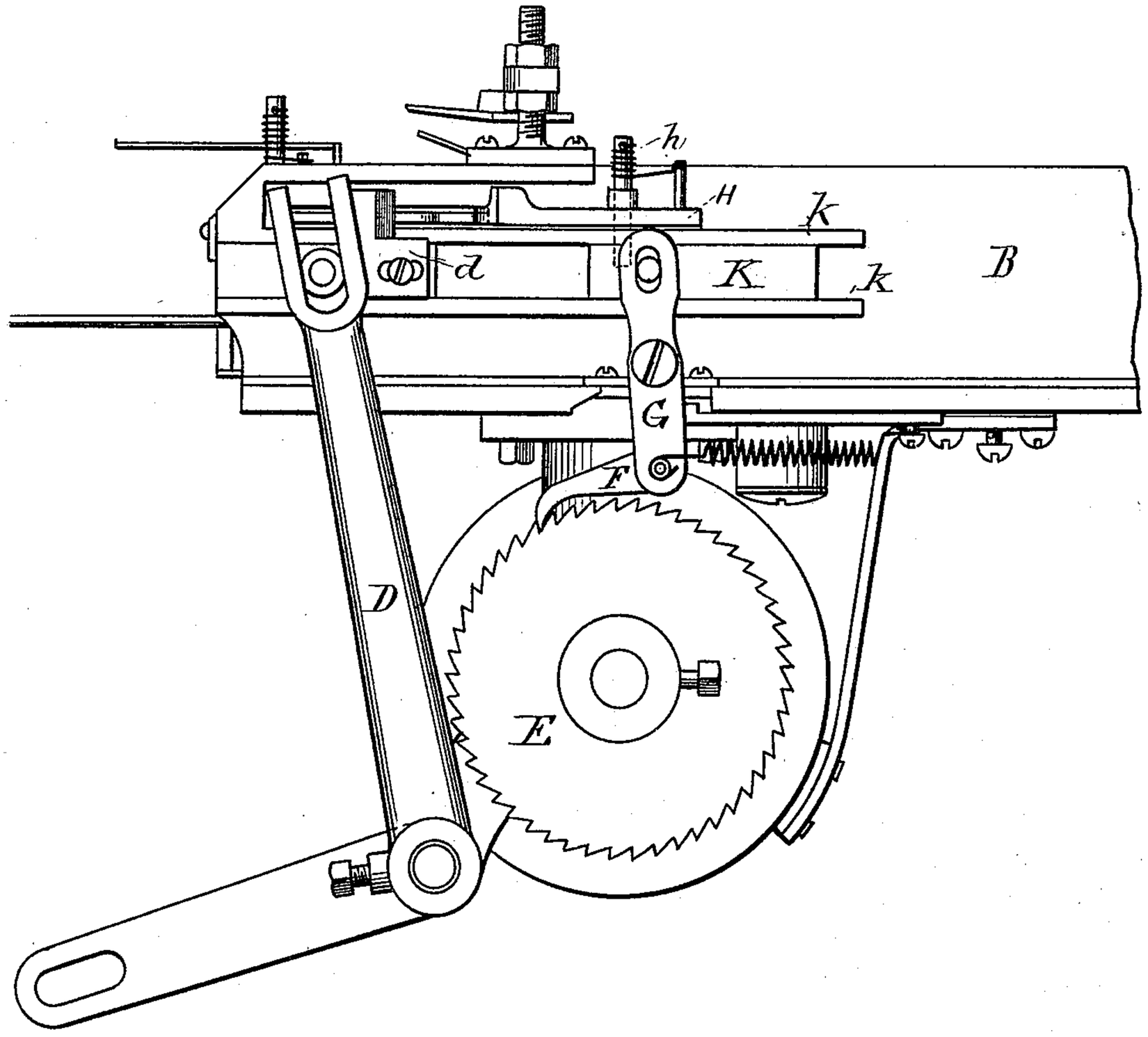

Fig. 3.

WITNESSES.

E. B. Tomlinson.
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INVENTOR.

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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. 350,504, dated October 12, 1886.

Application filed May 21, 1885. Serial No. 166,241. (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 envelope-counting machinery of the character shown in my application filed March 12, 1885, No. 158,524; and it has for its object to provide improvements in such machinery.

A prominent feature of my present improvement consists in the simplification of the mechanism shown in the application referred to whereby the envelope in the course of its passage through the machine is caused to affect the working of the counting mechanism.

By my present invention I have dispensed with the rock-shaft shown in my previous application, and also with the lever-and-link connection there shown for setting the pawl in place, and I have further simplified and improved the mechanism, as will be hereinafter pointed out.

In my present invention the finger which projects into the path of the envelope, and which is moved by it in its passage through the machine, is preferably located in the side of the trough, rather than in the bottom, as in the former case. The main function of this finger or projection, when moved out of the trough by the passing envelope, is to bring into the range of motion of the pusher or other corresponding regularly-moving part of the machine some part which normally lies outside of the line of travel of the pusher, and this part is also so arranged relatively to the pawl and its actuating mechanism that when moved, as described, into the line of motion of the pusher it shall also be in position to receive and transmit to the pawl the motion which it has itself derived from the pusher, the effect of this motion so transmitted to the pawl being to advance the counting-wheel one tooth. The finger may also be so arranged as to act as one of the back-stops for the envelopes, if desired.

Figures 1 and 2 show top plan views of this machine, and Fig. 3 a side elevation showing the counting-wheel.

In the machine the box or trough A, side walls, B, pusher C, with its regularly-reciprocating driving-arms D D′, the counting-wheel E, and the tilting table, which I prefer to use for giving a different angle to each pack of envelopes, are all of known construction, and need not be described in detail here.

The main feature of novelty lies in the mechanism whereby the passing envelope is made to effect the counting in the manner before described, thus insuring accuracy in the count. The pawl F, which engages with and drives the counting-wheel E, is itself mounted upon and operated by a lever, G. This lever G is also connected with a swinging toe-piece, H, normally held by a spring, *h*, outside the line of motion of a catch-piece, *d*, which is connected to and moves with the pusher C. A swinging finger, I, projecting normally within the path of the envelopes through the trough, is so arranged relatively to the toe H that when a passing envelope strikes the finger I it throws the toe H into the line of travel of the catch-piece *d*, (see Fig. 2,) and then the forward motion of this catch-piece *d*, which is caused by the pusher, and which engages with the toe-piece H, actuates the pawl-lever G, with which the toe-piece is in connection, and moves the counting-wheel one tooth. This is done through the medium of the sliding block K, to which each is attached. This sliding block travels in ways *k k*, the upper one of which is slotted to allow the travel of the pin on which the toe-piece H turns. In this way the counting progresses accurately, the wheel E being moved one tooth, as described, for each passing envelope. By the motion of this wheel the mechanism is worked which causes each successive pack of a given number of envelopes to assume a distinctive position, so that it can be readily taken up for banding. Such mechanism is well known in envelope machinery. Should an envelope for any reason fail to pass the finger I, the toe-piece H will not be put into engagement with the catch-piece *d*, and consequently no count will take place. In this way, as will be seen, the machine counts only those envelopes that pass into the pack, and thus certainty in the number of envelopes in each pack is assured. I prefer to employ what I have called a "pusher" as the direct

instrumentality by which motion is transmitted to the pawl to advance the counting-wheel, as described. Instead of the pusher, however, as is obvious, any other regularly-moving part of the machine may be used as the source of power to drive the counting-wheel in the manner described.

I hereby disclaim from this application as of my invention any of the matters or things claimed in my application No. 158,524, filed March 12, 1885, and particularly any construction of the finger which is struck by the envelope, and of the toe-piece by means of which the motion of some regularly-moving part of the machine is transmitted to the sorting device, which embodies the said finger and toe-piece, being attached to a common intermediate moving part in the nature of a rock-shaft, so that the motion of the finger is transmitted through the intermediate moving part to the toe-piece, the construction disclaimed being set forth in and covered by my said application No. 158,524.

I claim—

In an envelope-counting machine, the combination, with the counting-wheel and its pawl and pawl-actuating lever, and with the pusher, of a toe-piece connected with the said lever, as described, and lying normally outside the path of the pusher, and a finger lying normally within the path of the envelope and adapted to be moved by the passing envelope outwardly and against the toe-piece, whereby the latter is brought into engagement with the pusher to actuate the pawl-lever and pawl.

In testimony whereof I have hereunto subscribed my name this 15th day of May, A. D. 1885.

ABRAM A. RHEUTAN.

Witnesses:

HENRY E. HILL,

J. HENRY HILL.