(No Model.)

J. T. HOYT.

PAPER FEEDER.

No. 342,100. Patented May 18, 1886.

Fig 4.

Fig. 1.

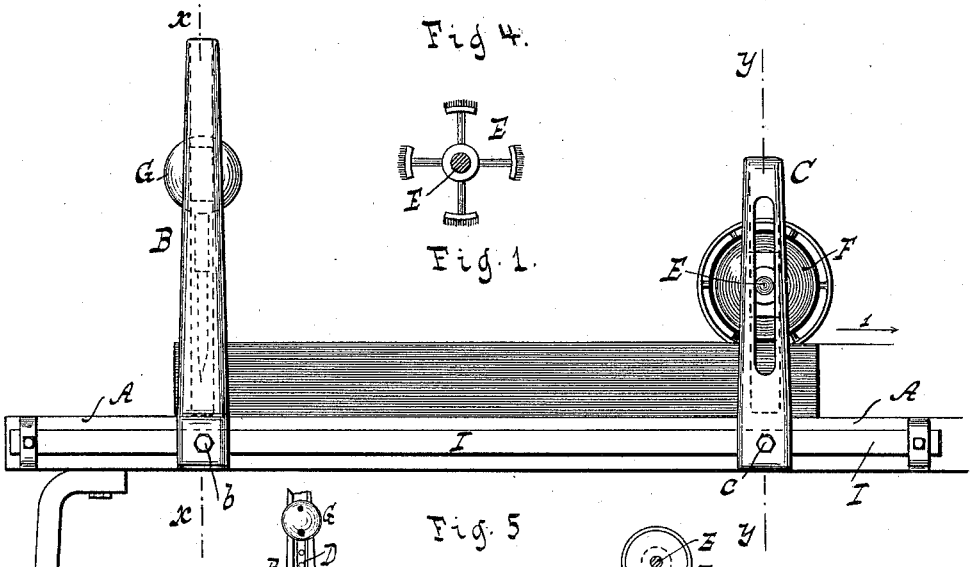


Fig. 5

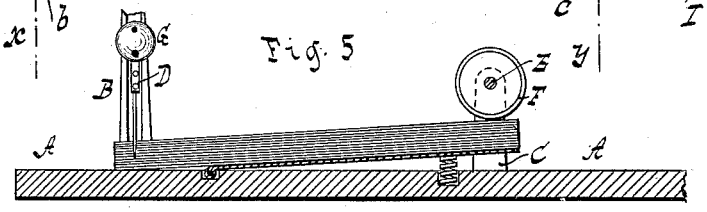


Fig. 2.

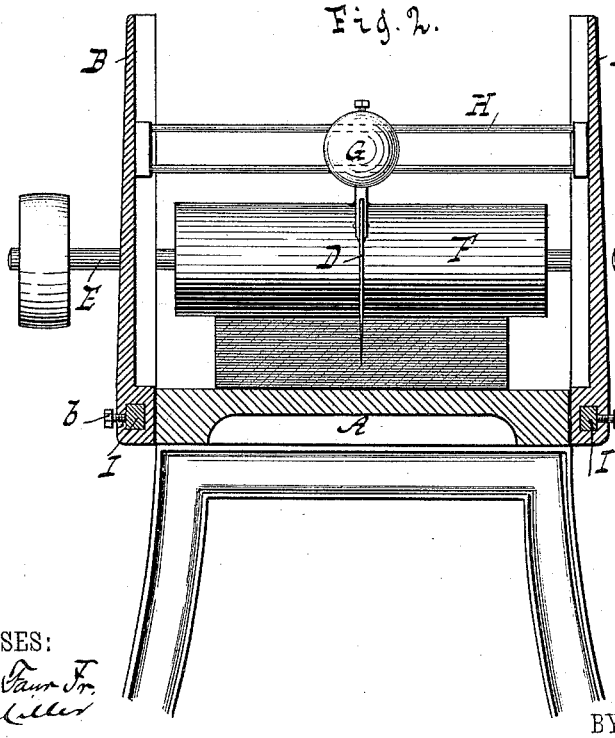
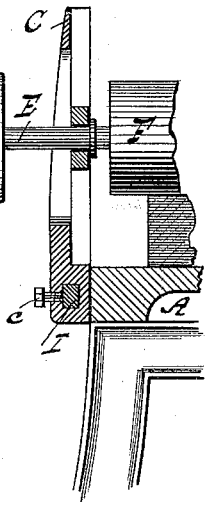


Fig. 3



WITNESSES:

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JAMES T. HOYT, OF NEW YORK, N. Y.

PAPER-FEEDER.

SPECIFICATION forming part of Letters Patent No. 342,100, dated May 18, 1886.

Application filed July 9, 1885. Serial No. 171,130. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. HOYT, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Paper-Feeders, of which the following is a specification.

This invention relates to an apparatus for feeding single sheets of paper from a pile or package; and it consists in the novel combination of devices hereinafter described and claimed, reference being had to the accompanying drawings, illustrating my invention, in which—

Figure 1 represents a side view. Fig. 2 is a transverse section in the plane *x x*, Fig. 1. Fig. 3 is a similar section in the plane *y y*, Fig. 1. Fig. 4 shows a modification of the scraper. Fig. 5 is a sectional view of a modification.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates the bed or feed-table which forms the support for the pile of paper, and which may be placed in a vertical, inclined, or horizontal position. On the opposite edges of this feed-table are secured two pairs of standards, B B and C C, respectively, the standards B being intended to guide the awl D, while the standards C C are slotted vertically and serve as guides for the bearings of the shaft E, which carries the scraper F. In the example shown in the drawings the awl is secured in a weight, G, which can be adjusted laterally on a frame, H, the ends of which fit into guide-grooves in the standards B B. If desired, two or more awls may be mounted on the frame H.

The object of the weight G is to cause the awl to pass gradually through the successive sheets of paper which form the pile supported by the feed-table; but, if desired, the awl can be forced through the entire pile of paper at once, so that the weight G can be dispensed with.

Instead of the awl, any other suitable retaining device can be used which passes through the pile of paper, such as a wire or a cord, which may be tied in the form of a loop or stretched between two fixed points.

The standards B B C C are adjustable on the sides of the feed-table, so that the distance between the awl and the scraper can be regulated to correspond to sheets of paper of different length. In the example shown in the drawings said standards are fitted upon guide-bars I I, which are firmly secured to the edges of the feed-table, and set-screws *b c* serve to adjust the standards in the required position. It is evident, however, that various means may be employed for adjustably securing the standards to the edges of the feed-table, as will readily suggest themselves to a skilled mechanic. The standards are, by preference, so adjusted that the awl will penetrate the sheets of paper near one end of the pile, while the scraper bears upon said pile near its opposite end, as shown in Fig. 1.

In the example shown in the drawings the scraper F is made in the form of a roller, which is wholly or partially covered with india-rubber, felt, or other suitable material; but the scraper may be made in the form of a brush, and, instead of making it in the form of a cylinder, it may be made with two or more arms, as shown in Fig. 4, and in all these cases the shaft E, on which the scraper is mounted, receives a continuous revolving motion by a belt and pulley or by any other suitable means. The scraper may, however, be made in the form of a single arm, and in this case an oscillating motion is imparted to its shaft, and at the same time the shaft is raised when the scraper swings back and lowered, so as to bring its edge or face to bear upon the paper during its forward movement.

In the example shown in the drawings the bearings of the shaft E, which carries the scraper, are fitted into guide-grooves in the standards C C, so that the scraper bears upon the pile of paper by its own gravity.

By the action of the scrapers upon the topmost sheet of paper in the pile said sheet is drawn away from the retaining device and pushed forward in the direction of arrow 1, Fig. 1, and I have found that only one sheet at a time is moved forward, the second sheet being held by the retaining device until the scraper is brought to bear directly upon it.

If desired, a presser-plate (see Fig. 5) may be introduced between the feed-table and the bottom of the pile of paper, which, by means of one or more strings, or equivalent, placed

between said presser-plate and the feed-table, will continually force the paper toward the scraper, and in this case the scraper may be mounted on a shaft having stationary bearings in the standards C C. This arrangement will be required if the apparatus is used for feeding paper to printing-presses, for instance, where it is desirable that each sheet shall be fed forward at the same level.

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

1. The combination of a table, A, having at each side an attached guide-bar, I, the standards B, fitted at their lower ends upon said guide-bar and adjustable along the length thereof, a frame, H, mounted in said standards and carrying a retaining device, and a scraper, F, substantially as described.

2. The combination of a table, A, having at each side an attached guide-bar, I, the standards B, fitted at their lower ends upon said guide-bars and adjustable along the length thereof, a frame mounted in the standards and carrying a retaining device, the slotted standards C, and the scraper F, having the ends of its shaft adapted to rise and fall in the slots of the standards, substantially as described.

3. The combination of the table A, having a guide at each side, the two pairs of standards B and C, having their lower ends connected with and adjustable along said guides, a retaining device adjustable with one pair of the standards, and the scraper F, carried by and adjustable with the other pair of standards, substantially as described.

4. The combination of the table A, having at each side a guide, the standards B, having their lower ends connected with and adjustable along said guides, the frame H, carrying a retaining device and having its ends fitted to and adapted to rise and fall on the said standards, the standards C, carried by the table, and the scraper F, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

JAMES T. HOYT. [L. S.]

Witnesses:

E. F. KASTENHUBER,

A. FABER DU FAUR, Jr.