

No. 646,827.

Patented Apr. 3, 1900.

A. F. HARRIS.

FEEDER OR PUSHER FOR PRINTING PRESSES.

(Application filed Mar. 27, 1899.)

(No Model.)

FIG. 1.

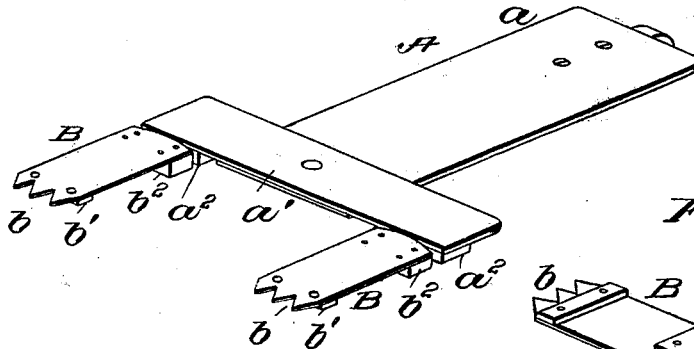


FIG. 5.

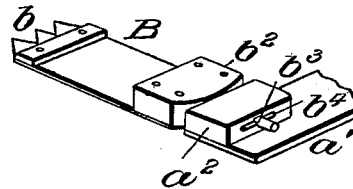


FIG. 2.

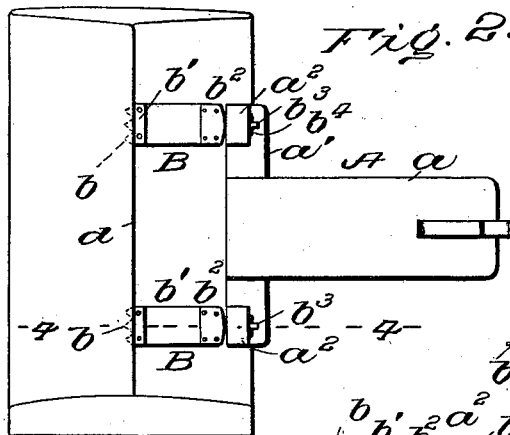


FIG. 6.

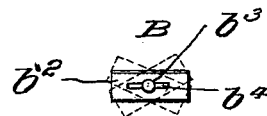


FIG. 4.

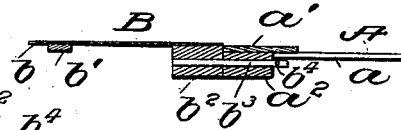
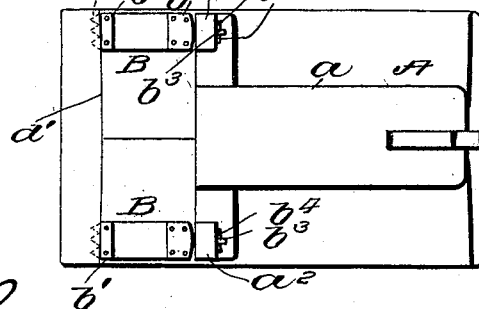


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

ALFRED F. HARRIS, OF NILES, OHIO, ASSIGNOR TO THE HARRIS AUTOMATIC PRESS COMPANY, OF SAME PLACE.

FEEDER OR PUSHER FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 646,827, dated April 3, 1900.

Application filed March 27, 1899. Serial No. 710,626. (No model.)

To all whom it may concern:

Be it known that I, ALFRED F. HARRIS, of Niles, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Feeders or Pushers for Printing-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention contemplates certain new and useful improvements in feeders or pushers for printing-presses.

The object of the invention is to provide simple and inexpensive means for feeding stock from the bottom of a pile thereof.

In rapid-operating printing-presses the stock is automatically fed from a pile, the feeding being from the bottom of the latter. Heretofore apparently insurmountable difficulties have been experienced in automatically feeding certain classes of stock, owing in a large measure to the inability to secure engagement with the article to be fed, the pile of stock frequently being irregular and not presenting a flat surface in contact with the feeder. The present invention is primarily applicable for feeding bags, sacks, and envelops of various weight of paper. It comprises a carrier having one or more plates axially mounted and limited in both directions in its rotary movements. The outer or forward end of the plate is serrated to secure engagement with the stock at the seam or point of union of any of the flaps. A stop carried by the plate limits the movement of the serrated end and causes the stock to travel with the forward movement of the carrier. Two such plates are preferably employed, so that the stock will be moved on a straight line.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective. Fig. 2 is a bottom plan view showing the feeder in engagement with a bag. Fig. 3 is a similar view showing a different engagement. Fig. 4 is a sectional view on line 4 4, Fig. 2. Fig. 5 is a view of

one of the feeder-plates detached. Fig. 6 is a rear end view showing one of the feeder-plates in several positions.

Referring to the drawings, A designates the carrier, which consists of a flat plate *a*. The plate may be connected to any suitable mechanism for imparting to it a reciprocal longitudinal movement. At its forward end this plate has lateral projections *a'*, preferably a second plate secured transversely to plate A. Small blocks or thickened portions *a''* are on the under side of the projections *a'*, and in them are holes paralleling the plate *a*.

B B designate two feeder-plates, each of which comprises a flat plate axially hung at its inner end and having teeth or serrations *b* formed in its outer end and a stop *b'* on the under side adjacent the inner ends of the teeth. From lower block *b''* projects a rod *b'''*, which extends through the opening in block *a''* and is held by a cross-pin *b''''*, which by engaging at its ends with the under sides of the lateral projections of the carrier limits the axial movements of the feeder-plate. The stop *b'* may be composed of a thin strip secured to the under side of the plate, or it may be a thickened portion of the latter.

In Fig. 2 I have shown how the serrated ends of the feeder-plates engage the longitudinal seam *d* in the back of a small paper bag, while in Fig. 3 the engagement is shown to be with the seam *d'* of the bottom flap. In the former instance the bags are piled transversely to the carrier and in the latter longitudinally thereof. The longitudinal reciprocation of the carrier insures the engagement of the serrated ends of the feeder-plates with the seam of the lowermost bag or other article, the extent of insertion of the ends of the plates being limited by the contact with stops of the seam-flap. If all the teeth or serrations of a feeder-plate do not uniformly engage the article, the contact of even one of them will suffice to enable such article to be fed forward. As the article is fed from the pile it is taken up by the printing or other press in connection with which the feeder is used.

The feeder-plates being free to move axially to a limited extent, they will readily con-

form themselves to any unevenness in the stock, and thus insure engagement at each operation.

I claim as my invention—

- 5 1. A feeder or pusher for engaging stock at the bottom of a pile thereof, comprising a longitudinally-movable carrier and means at the forward end of such carrier for engaging the stock, such means comprising a flat plate
10 on the same horizontal plane as the forward end of the carrier and having a limited axial movement at right angles to its line of travel with the carrier, and provided with teeth or serrations in its outer end, as set forth.
- 15 2. A feeder or pusher for engaging stock at the bottom of a pile thereof, comprising a longitudinally-movable carrier and means at

the forward end of such carrier for engaging the stock, such means comprising a flat plate on the same horizontal plane with the forward 20 end of the carrier and having a limited axial movement at right angles to its line of travel with the carrier, provided with teeth or serrations in its outer end, and a stop on its under side adjacent to the inner ends of the 25 teeth or serrations, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALFRED F. HARRIS.

Witnesses:

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W. W. BARNEY.