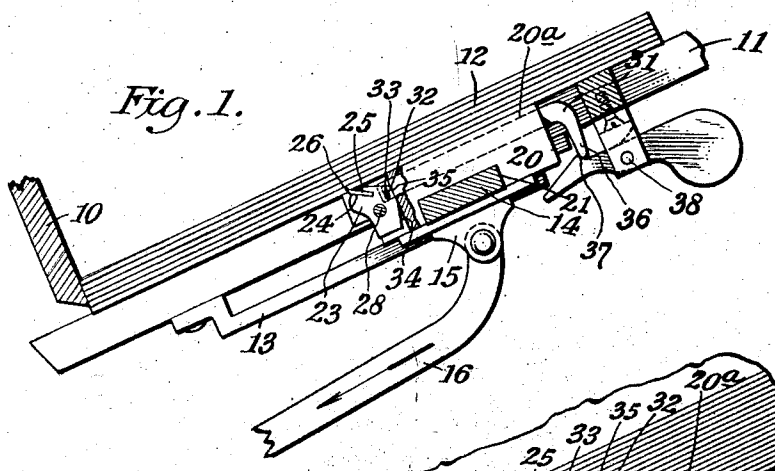
July 13, 1926. 1,592,367

J. HREN ET AL

SHEET FEEDING MECHANISM

Filed May 25, 1925

Fig. 1.



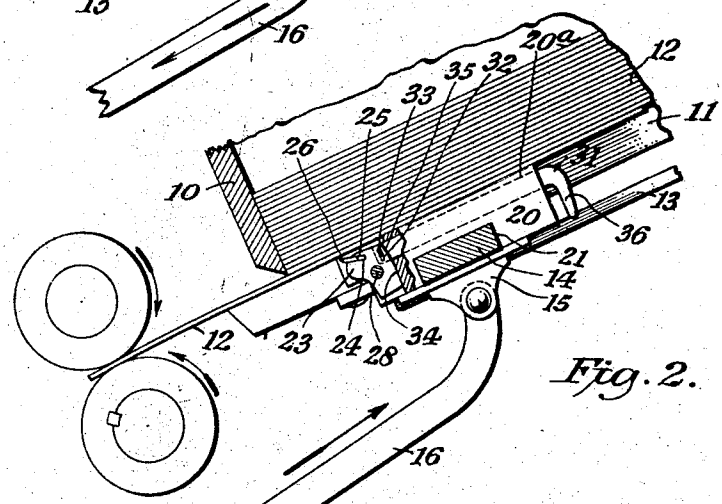


Fig. 2.

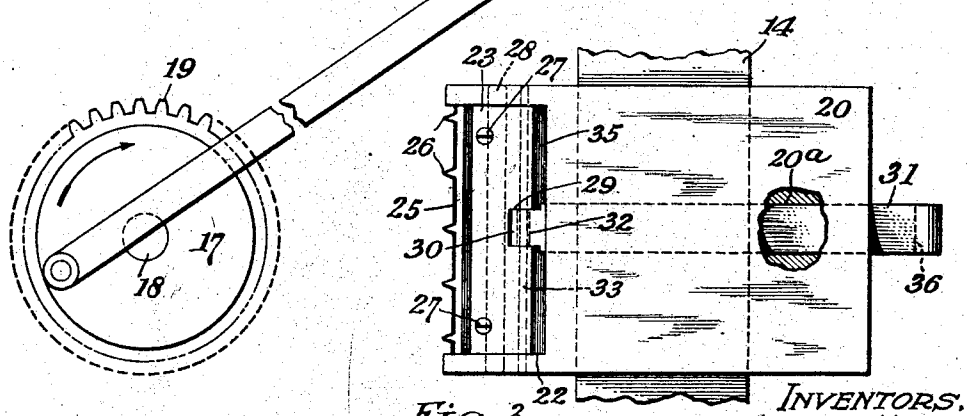


Fig. 3.

INVENTORS.
JOSEPH HREN.
CARL EISENLOHR.

BY A.R. Appleman
Attorney.

Patented July 13, 1926. 1,592,367

UNITED STATES PATENT OFFICE.

JOSEPH HREN, OF KINGSTON, NEW YORK, AND CARL EISENLOHR, OF NEWARK, NEW JERSEY.

SHEET-FEEDING MECHANISM.

Application filed May 25, 1925. Serial No. 32,669.

This invention relates to sheet feeding mechanism, the principal object being to provide effective means for positively engaging the bottom sheet of a stack of paper, cardboard, or other sheet material to draw or feed it out from under the stack and forwardly between suitable delivery rolls or other devices.

Our improvement, as herein shown is adapted for use in connection with a machine for making paper box blanks shown and described in an application for patent filed by us July 7, 1923, Ser. No. 650,024, but the invention may be applied to any machine handling stacked sheet material with slight changes.

To these ends, and to such others as the invention may pertain, the same consists, further, in a novel construction, combination, and adaptation of the parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

In the drawings forming part of this specification:—

Fig. 1 is a side elevation of the sheet feeding mechanism showing the feed at the beginning of its feeding stroke.

Fig. 2 is a view similar to Fig. 1, showing the feeding mechanism just after reaching the end of its stroke and beginning its return.

Fig. 3 is an enlarged plan view of a feed block forming part of our invention.

In describing the invention, a plate 10, is employed to form the front of a magazine having a suitable bed plate 11, on which the sheet material 12, is stacked.

Secured to the under face of the bed plate are guide brackets 13, (but one of which is shown) in which are slidably mounted the outer ends of a cross bar 14, provided with a pair of downwardly directed apertured lugs 15, to which a crank rod 16, is pivotally connected, said crank rod being driven by a crank disk 17, on a shaft 18, having a gear 19, to which power may be transmitted from any suitable source.

Supported on the cross bar 14, is a feed block 20, recessed as at 21, to receive the cross bar, and forked as at 22, to receive a rocker head 23, formed with a kerf as at 24, to receive a blade 25, formed with teeth 26, and securely held in place by screws or pins 27.

The rocker head is mounted loosely on a cross rod 28, and has a centrally arranged recess 29, to receive the forward end 30, of a float bar 31, slidably mounted in a longitudinal bore 20^a, said end having a slot 32, through which is passed a cross pin 33, to loosely connect the rocker head and float bar.

The rocker head has two beveled rear faces 34, and 35, which contact with the front wall of the feed block, one when the rocker head is in its operative feeding position and the other when said head is in its inoperative or non-feeding position as shown in Figs. 1 and 2 of the drawing.

The float bar has a depending drag finger 36, at the rear end, which when the parts are in the back position, engages a weighted retarding hook 37, tiltable on a pin 38, said hook acting, when the forward feed of block 20, begins, to slightly retard the float bar, thus causing the head 23, to rock backwardly and force the teeth 26, into the fiber of the lower sheet of material 12, which causes positive engagement therewith and as the sheet is fed forward it passes between a pair of delivery rolls A, driven at a speed greater than the feed action, thus drawing the sheet out quickly and releasing the teeth from the sheet as shown in Fig. 2.

It will be understood the blade 25, may be dispensed with and the teeth 26, formed integral with the head 23, if desired.

In the drawing, but one feed block is shown, but it will be understood that two or more may be employed for large sheets or for a multiple sheet feed and other structural modifications may be resorted to within the scope of the invention claimed.

What we claim and desire to secure by Letters Patent is:—

1. A mechanism for feeding sheet material consisting of a block having a fork at its forward end, a recessed bottom to receive a supporting bar, and a longitudinal bore, a rocker head mounted to tilt in said fork, a float bar slidable in said bore and pivotally connected to said head, teeth carried by said head, said float bar being provided with a drag finger, a weighted hook to engage the finger to retard the float bar when the feed begins, to rock the head and cause the teeth to engage the bottom sheet, and means for actuating the block.

2. A sheet feeding mechanism comprising a feed block, a rocker head and a float bar

carried thereby and connected one to the other, said head carrying teeth, said bar being provided with an integral drag finger, a weighted hook to normally engage said finger and cause said teeth to engage the bottom sheet at the start of the feed movement as described.

3. A sheet feeding mechanism comprising a feed block, a rocker head and a float bar carried thereby and connected one to the other, said head having teeth thereon, said bar having a lateral projection, and means for engaging said projection to retard the bar in its forward movement to cause the teeth to engage the bottom sheet at the beginning of the feed movement of the block.

In testimony whereof, we have signed our names to this specification, this 15th day of May 1925.

CARL EISENLOHR.
JOSEPH HREN.