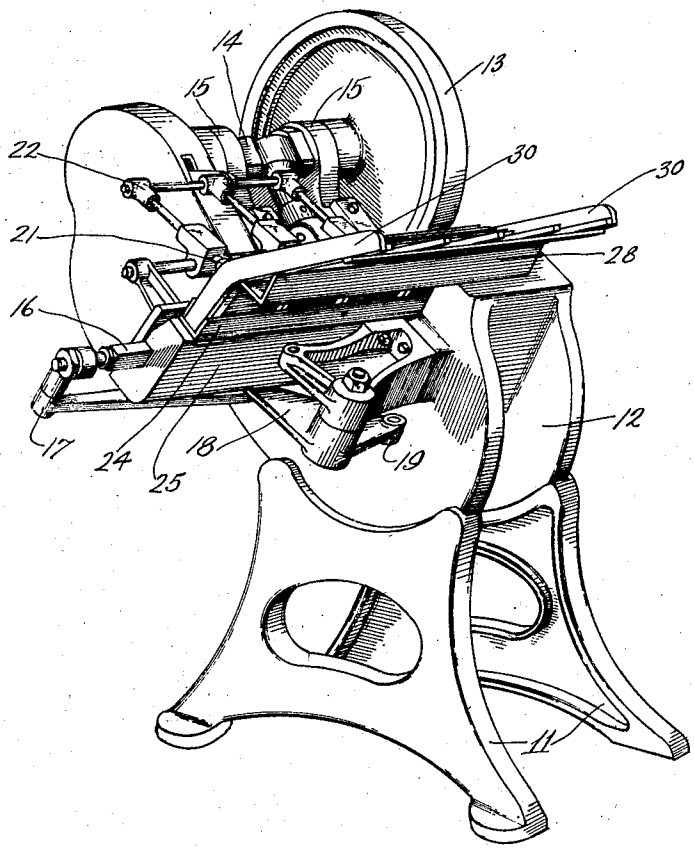
Feb. 4, 1930. J. HANSEN 1,745,616

STACKHOLDER FOR STRIP FEED PRESSES

Filed Feb. 14, 1927 2 Sheets-Sheet 1

Fig. 1



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Fig. 2

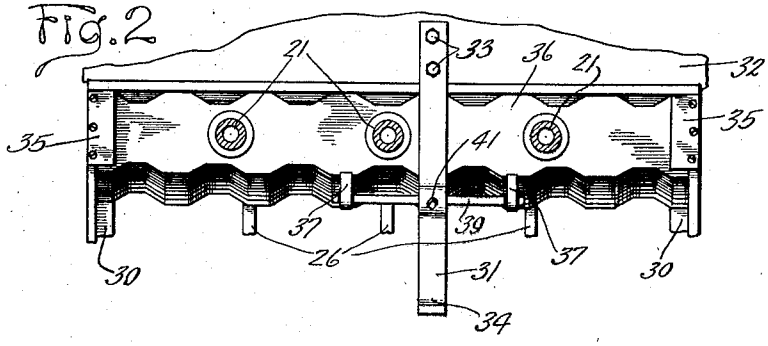


Fig. 3

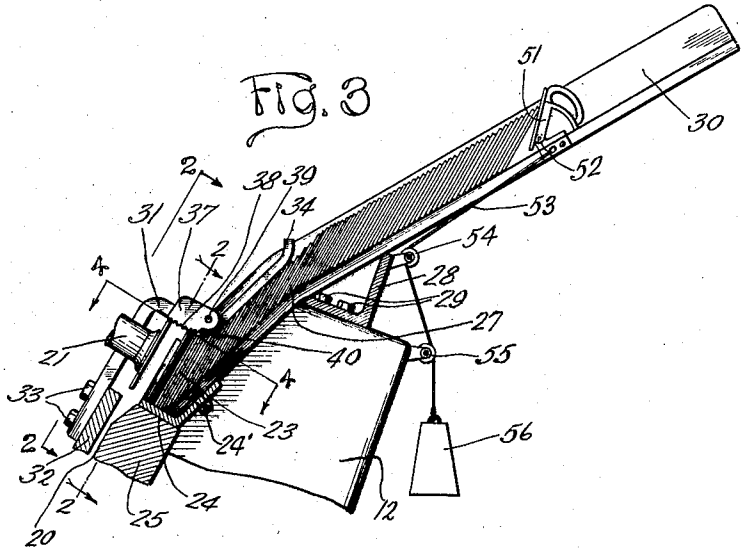
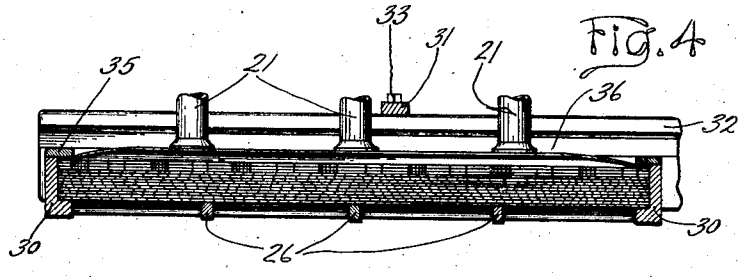


Fig. 4



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STACK HOLDER FOR STRIP-FEED PRESSES

Application filed February 14, 1927. Serial No. 167,979.

This invention relates to feeding devices for automatic strip feed presses and the like, and has for a principal object the provision for a continuous feeding of the strips to the press and from a stackholder or chute of sufficient capacity to permit a single operator to feed a considerable number of such presses. Prior to my invention, it has been usually the custom to merely provide a magazine or channel of relatively narrow width adjacent the feed slot of the press and into this an operator has arranged periodically a handful of sheets immediately in front of the usual suction separating devices. The restricted character of this magazine has required the positioning of strips in the magazine at too frequent intervals to permit an operator to attend to any considerable number of presses.

My invention contemplates in this regard the provision of a stack or chute in connection with such a magazine, wherein the blanks may be positioned in large numbers and at the side of the charge in the stack opposite that from which the blanks are removed by the suction members and deposited in the slot.

Another important object of my invention is the provision of a feeding magazine for a strip feed press which will insure the positive separation of the sheets, each from the other, as they arrive at feeding position, to reduce the likelihood of the feeding of more than a single sheet into the feed slot and through the feed slot to the cutting and forming dies.

Another important object of the invention is the provision for the feeding of additional blanks to the magazine of a strip feed press without the necessity of the operator inserting the blanks between those left in the magazine and the operative feeding mechanism removing the blanks for advancement to the dies.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a perspective general view of a strip feed press to which my present invention is embodied;

Fig. 2 is a section taken substantially on line 2—2 of Fig. 3;

Fig. 3 is a vertical section taken through the magazine and feed chute; and

Fig. 4 is a section taken substantially on line 4—4 of Fig. 3.

For the purpose of illustrating my invention, I have shown the base 11 of the strip feed press upon which the usual bed 12 is mounted. A crank-shaft 14 is mounted in bearings 15 extending upwardly and rearwardly from the bed and this crank-shaft reciprocates the movable die members as will be readily understood. The feed slide 16 is adapted to be reciprocated through links 17, bell cranks 18 and 19 in the usual manner. Reference character 21 indicates the usual suction heads adapted to move the strips from the magazine, as will be presently described, and into the feed slot 20 for advancement by the feed slide 16. The suction heads 21 are moved in and out through the usual reciprocating devices 22. The feed slot 20 is formed between press bed members 25 and 32 (see Fig. 3). The magazine in the present instance is formed of an angle member 24 secured upon the press part 25 which is arranged to extend out from the side of the bed 12 and at the front of the press. The upper face of the part 25 is at right angles to the feed slot 20 and the whole press bed is usually arranged in the inclined position shown in Figure 1, this being subject to adjustment as may be desired. The flanges of the angle member 24 are arranged preferably at substantially the angle shown in Fig. 3. Two angle members 30 are secured at their lower ends upon the inner faces of the upwardly extending flange of the angle 24 by bolts 24′ or other fastening devices. The angle members 30 extend upwardly and forwardly in the plane of the flange of the angle 24, to which they are attached for a distance to a point of bend 27 and thence outwardly at a lesser angle to the horizontal. The change of direction at the point of bend 27 of the angles 30 is conveniently arranged at a support or angle member 28 which is se-

cured upon the body or forward face of the bed 12 by bolts 29, the angle 27 extending out to the left (viewing Fig. 1) across the entire feed range of the press. If desired, intermediate strip supports 26 similarly bent may be arranged between the angles 30. The angles 30 and the supports 26, if the same be provided, together constitute a stackholder or chute which communicates with the magazine formed by angle 24, which constitutes the usual magazine of the strip feed press.

The strips are arranged in the chute on edge and move down into feeding position adjacent the suction heads 21, where they stand in the usual relation of strips in a strip feed press ready for successive removal by the suction heads. As the strips move down by gravity past the point of bend 27 in the chute, they are moved laterally with respect to each other, and the surfaces in contact are caused to slide one on the other. This effects the first separation of the strips. The continued downward movement of the strips as the feeding progresses finally brings them to adjacent the magazine where they move into the magazine, at which time a second sliding occurs effecting a second positive separation.

A retaining bar 31 is or may be provided and this is secured by screws 33 upon the guide member 32 forming the slot 20 with the bed member 25. The retaining member 31 extends up in parallelism with the slot to above the suction heads and thence inwardly over the sheets in feeding position to a point of bend 40, from which the retaining member 31 extends up in parallelism with the portion of the chute between the angle 24 and the chute point of bend 27. The upper end of the retaining member 34 is bent upwardly and the parts are so dimensioned that this retaining member engages the upper edges of the strips as they move down the chute, causing them to remain in contact with the chute bottom. A rod 39 is arranged in a bearing 41 on the retaining member, which bearing is located at the angle 40. This rod 39 is provided with a pair of gravity dogs 37 having serrated faces 38 engaging the top edges of the sheets at the feeding station. These dogs make a final separation of the sheets. This separation at the feeding station is facilitated by plates 35 arranged on the outer faces of the angles 30 which extend over the strip edges, so that the suction heads are compelled to bend each strip slightly in removing it as indicated in Fig. 4.

It will be manifest that additional strips in any quantity within the capacity of the chute may be added by raising the endmost strips then at the top of the chute and positioning the additional charge in place. In thus feeding the additional strips to the charge in the chute at the side of this charge opposite that from which the sheets are removed for feeding, the press may operate continuously at any desired speed without interruption or slowing down of speed for the insertion of additional strips.

If desired, a follower 51 may be arranged in the chute behind the charge of strips to hold them in upright positions and cause them to be positively fed down into the magazine. The follower 51 is mounted upon a slide base 52 which rests upon the chute parts, and a cord or cable 53 is secured to the slide base and passes around a sheave 54 on the lower part of the chute adjacent the angle 28, and also about a sheave 55 on the frame part 12 of the press. A weight 56 is secured to the end of the cord 53 and pulls the slide base 52 and follower 51 downwardly in the chute, holding the strips upright and pressing them toward strip feeding position.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. In a strip feed press, the combination of, members providing a feed slot through which strips of metal are adapted to be fed endwise to the operating mechanism, a magazine located above said seat and adapted to contain a plurality of said strips for feeding into said slot and a stackholder communicating with the side of said magazine and supporting a stack of strips on edge, said stack being inclined to permit said strips to move edgewise down into the magazine and behind the strips therein contained.

2. In a strip feed press, the combination of a magazine, feeding devices to move the strips successively from said magazine, and an inclined stackholder adapted to contain strips and to guide said strips into position to be engaged by the automatic feeding devices of the press, said stackholders guiding said strips edgewise as they move downwardly under the action of gravity and permitting the periodic adding of large numbers of strips to said magazine.

3. In a strip feed press, a magazine having means which present sheets in parallelism to the feeding devices of the press, a stackholder communicating with said magazine and having means supporting the sheets on edge as they move downwardly under the action of gravity, said stackholder being inclined with respect to said magazine to cause said strips to move edgewise with respect to each other as they pass from said stackholder to said magazine.

4. In a strip feed press, a magazine for containing strips to be fed into the press, a stackholder communicating with said magazine and transferring strips to said magazine as strips are moved from said magazine to said press, and means causing relative movement of the surfaces of adjacent sheets as they move into feeding position.

5. In a strip feed press, a magazine adapted to contain a plurality of sheets arranged in parallel relation and an inclined chute communicating with the rear of said magazine and supporting sheets on edge for progressive transfer from said chute into said magazine as sheets are fed from said magazine to the press, and means separating the sheets as they pass during their travel to a feeding position.

6. A feed magazine for automatic strip feed presses, comprising, a bar formed to provide a magazine bottom and side wall and adapted for attachment to the press, angle members extending from said bar and spaced apart to provide a chute, said angle members being formed to guide the strips edgewise while they are passing downwardly into position to be engaged by the strip feed mechanism of the press.

7. A feed magazine for automatic strip feed presses, comprising, a bar formed to provide a magazine bottom and side wall and adapted for attachment to the press, angle members extending from said bar and spaced apart to provide a chute, said angle members being formed to guide the strips edgewise while they are passing downwardly into position to be engaged by the strip feed mechanism of the press under the action of gravity, and fixed means for guiding the strips in said chute.

8. A feed magazine for automatic strip feed presses, comprising, a bar formed to provide a magazine bottom and side wall and adapted for attachment to the press, angle members extending from said bar and spaced apart to provide a chute, said bar being formed to guide the strips sidewise while they are passing downwardly into position to be engaged by the strip feed mechanism of the press under the action of gravity, fixed means for guiding the strips in said chute and arranged to cause relative movement of the surfaces of the strips for separating the strips, and means cooperating with said last mentioned means for positively preventing the feeding mechanism from picking up and feeding more than one strip at a time to the machine.

9. In a strip feed press the combination of a magazine, means for removing the outermost strips successively and flatwise from said magazine into position for endwise feeding, and guiding means leading to said magazine and holding the strips on edge and successively above each other, whereby the faces of the strips have a sliding movement one on another in the feeding operation and their sticking together is diminished.

10. In a strip feed press the combination of a magazine, means for removing the outermost strips successively and flatwise from said magazine into position for endwise feeding, and guiding means having a plurality of angles of inclination and leading to said magazine and holding the strips on edge and successively above each other, whereby the faces of the strips have a sliding movement one on another in the feeding operation and their sticking together is diminished.

JOHN HANSEN.