June 11, 1957 P. DE LA MOTTE 2,795,418

REVERSIBLE SLIDE FEED

Filed Dec. 13, 1954

Fig. 1

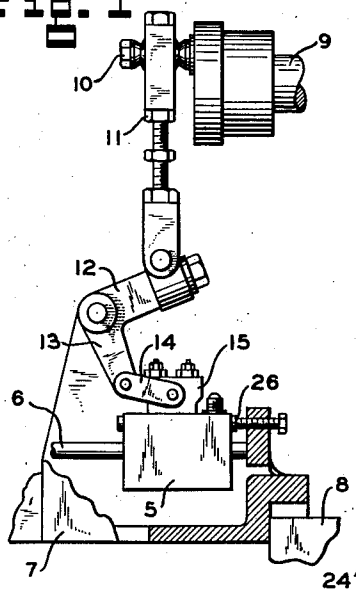


Fig. 2

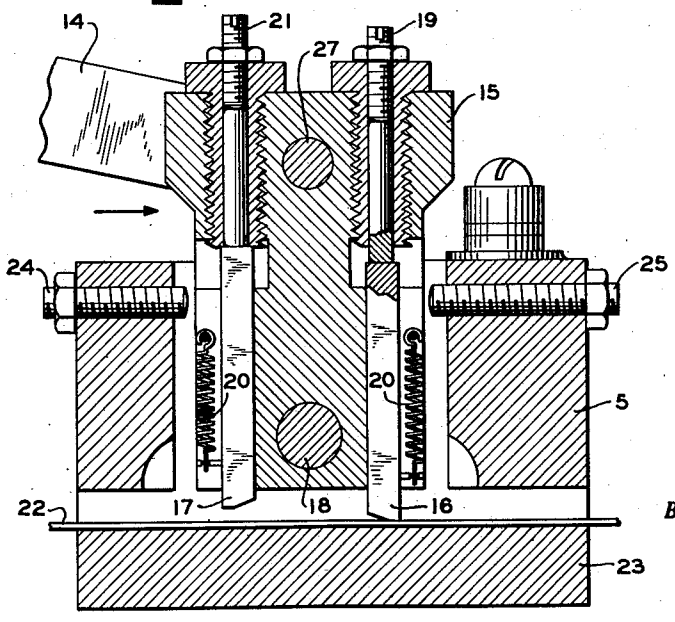
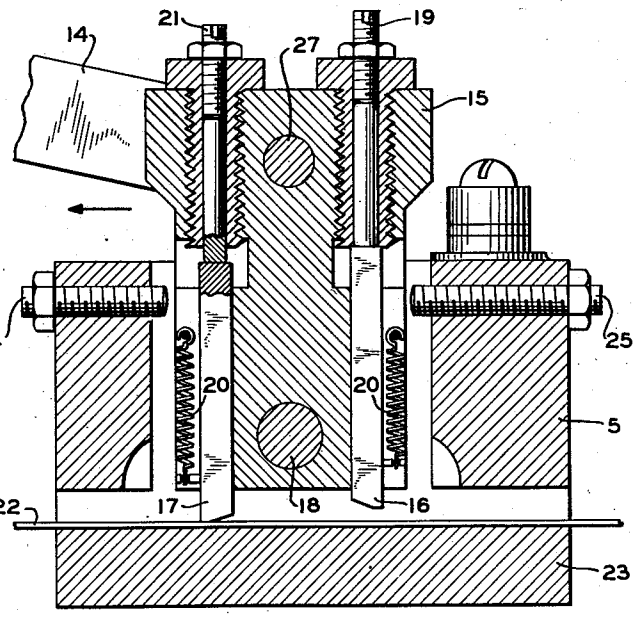


Fig. N



INVENTOR.
PIERRE de la MOTTE

BY Philip S. McLean.
ATTORNEY

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REVERSIBLE SLIDE FEED

Pierre De La Motte, Nutley, N. J., assignor to U. S. Tool Company, Inc., Ampere, N. J., a corporation of New Jersey

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1 Claim. (Cl. 271—2.5)

The invention herein disclosed relates to slide feeds and the main purpose of the invention is to provide a slide feed which can be operated to feed stock in either direction.

Particularly it is a purpose of the invention to provide such mechanism in a simple, practical form which can be substituted in place of one-way slide feeds presently in use.

These objects and others are attained by novel features of construction, combination and relation of parts, all as set forth in detail hereinafter.

The drawing accompanying and forming part of this specification illustrates a practical commercial embodiment of the invention, but structure may be modified and changed as regards the immediate illustration, all within the true intent and broad scope of the invention as hereinafter defined and claimed.

Fig. 1 in the drawing is a broken, part sectional side elevation of a present embodiment of the reversible slide feed mounted and connected for operation on an ordinary punch press;

Fig. 2 is an enlarged broken sectional view taken through the feed block and showing the right-hand feed blade lowered and the left-hand feed blade raised for effecting feed of stock in the right-hand direction;

Fig. 3 is a similar view showing the left-hand feed blade lowered and the right-hand blade raised for effecting feed of stock in the left-hand direction.

In Fig. 1 a feed block is indicated at **5** mounted to slide on guide rods **6** carried by a frame **7** fixed to bolster **8** of a press or other machine.

This feed block is reciprocated in the illustration from the cam or crankshaft **9** of the machine by means of a crank **10** connected by link **11** with the upper arm of a rocker **12**, the latter having a lower arm **13** connected by pivot link **14** with a grip lever **15** pivoted to oscillate in the feed block.

Figs. 2 and 3 show this gripper lever to be of novel design and construction in that instead of the usual single feed blade, it carries two feed blades **16** and **17** at opposite sides of the center of oscillation **18** and which can be selectively positioned for use depending on the direction of feed desired.

Fig. 2 shows the right-hand feed blade lowered by adjustment of screw **19** and the left-hand feed blade **17** raised and retracted by spring **20** through adjustment of screw **21**.

With this setting of the parts the right-hand feed blade will be rocked downwardly to grip the stock **22** against bottom plate **23** with pressure of link **14** in the direction of the arrow, such movement being occasioned by lifting of the rocker **12**, Fig. 1, in anti-clockwise direction.

In this right-handed feed movement the left-hand feed blade **17** will be lifted further clear of the stock and the backstop screw **24** for this operation will be positioned to limit the backward or left-hand rocking movement of gripper lever **15** so that blade **17** will remain clear of the stock during the left-hand recovery stroke of the feed block.

For reverse conditions the feed blades are adjusted as in Fig. 3, with the left-hand blade **17** lowered to grip the stock on left-hand movement of the block and the right-hand feed blade **16** raised to remain clear of the stock on oscillating movement of the gripper lever **15** in both directions. In this instance the right-hand stop screw **25** is adjusted to stop the right-hand rocking movement of the gripper before the raised feed blade **16** can possibly reach the stock.

The usual front and back stops for the feed block may be provided as indicated at **26**, Fig. 1, and other more or less conventional features may be employed.

Without materially or objectionably increasing size or number of parts, the invention makes it possible to effect feed of stock in either direction and all from the same side of the machine, the side where the power is taken off to operate the slide feed.

All that is necessary to shift from feed in one direction to feed in the opposite direction is to raise one feed blade to inactive position and to lower the other feed blade into position for engagement with the stock.

In Figs. 2 and 3 the pivotal connection between link **14** and the upper end of the rocking gripper lever is indicated at **27**.

What is claimed is:

Slide feed for feeding stock in either of two directions, or in both directions, comprising the combination of a horizontally reciprocating slide block having a bottom plate, an upright gripper lever fulcrumed near its lower end on said slide block above said bottom plate, an actuating member pivotally connected with the upper end of said lever having movement for rocking said lever in opposite directions and for reciprocating the slide block in opposite directions, stock feed blades slidably mounted on opposite sides of said lever at opposite sides of said fulcrum center and slidably adjustable toward and away from said bottom plate, means at the upper end of said upright gripper lever for independently adjusting said blades in respect to said bottom plate and whereby one or the other, or both, may be rendered effective or ineffective to grip stock on the bottom plate in the reciprocation of the slide block in opposite directions, and stop screws on opposite ends of the slide block in line with opposite sides of the gripper lever and adjustable independently of each other for determining rocking movement of the gripper lever in opposite directions whereby to determine the stroke of the gripper lever in opposite directions independently of adjustment of the blades in respect to the bottom plate.

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