Dec. 13, 1955 E. W. DOLAMORE, JR 2,726,859

STOCK GUIDING DEVICE

Filed Jan. 5, 1953

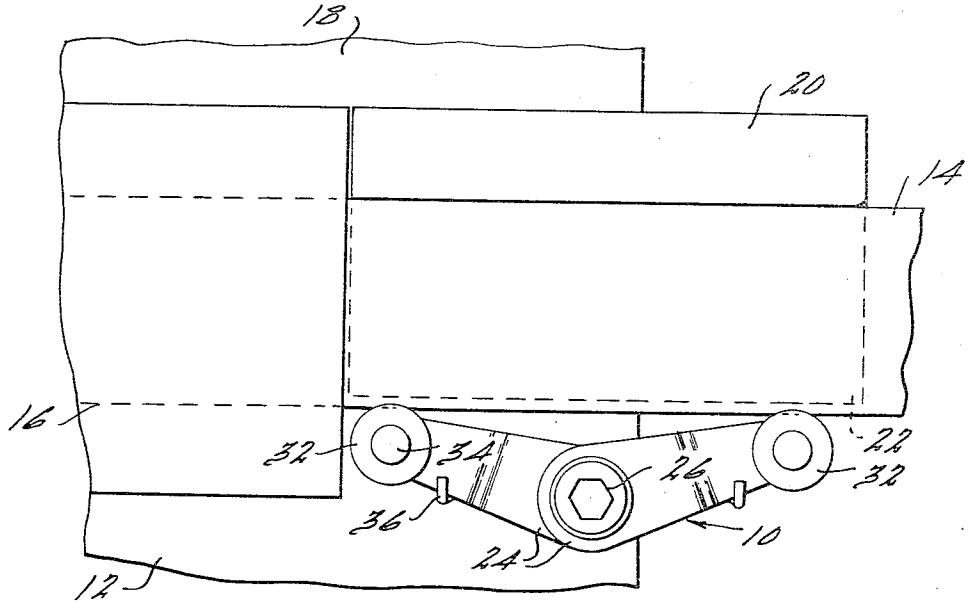


Fig. 1.

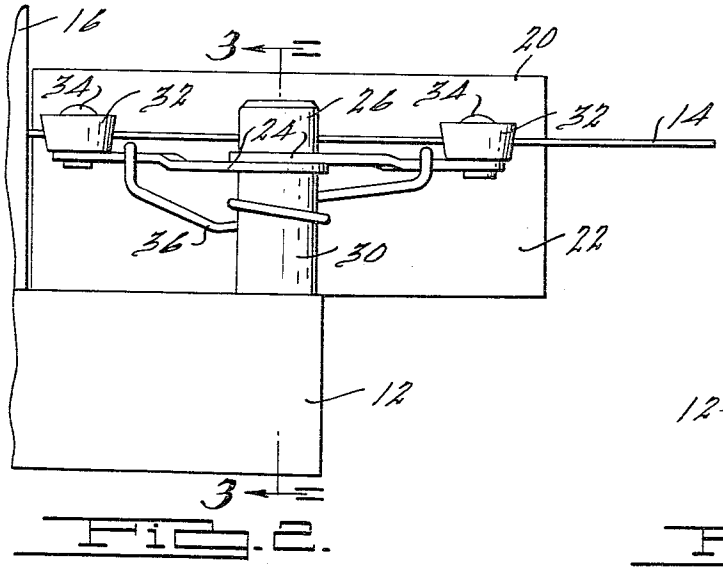


Fig. 2.

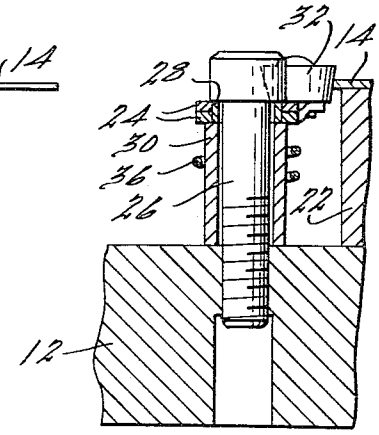


Fig. 3.

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United States Patent Office 2,726,859
Patented Dec. 13, 1955

2,726,859

STOCK GUIDING DEVICE

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Application January 5, 1953, Serial No. 329,717

2 Claims. (Cl. 271—2.6)

This invention pertains to devices for guiding sheet or strip stock or plates into a machine where some operation is performed thereon. While my device has been designed particularly for use in guiding stock into a die-set, it is by no means so limited in its application.

It frequently happens that metal sheets and strip intended to be fed to a die or machine for work operations has been sheared or rolled unevenly and is not of uniform width. Some device is therefore necessary for guiding the stock as it moves into the machine if a uniform product is to be produced without breakdowns and without constant attention by the operator. Such a guiding device must be of simple design, economical to manufacture and easy to install. In addition, it must offer little or no resistance to the movement of stock into the machine, must provide a wide range of adjustment to accommodate stock of varying sizes and must be readily adapted for installation on dies or machines of different types and sizes.

The object of my invention is to provide a stock guiding device possessing the desirable characteristics mentioned.

Reference is made to the accompanying drawing which shows a preferred form of my improved device and on which reference characters designate like parts referred to in the following description.

In the drawing:

Fig. 1 is a plan view of the stock guide showing a typical application thereof;

Fig. 2 is a side elevation of the Fig. 1 device; and

Fig. 3 is a sectional view taken along the line 3—3 of Fig. 2.

It may be seen that I have shown the device, generally designated by the reference character **10**, mounted on the base **12** of a machine into which strip stock **14** is being fed for a punching or cutting or like operation. A die **16** is mounted in the machine adjacent a die-shoe **18**.

The stock **14** is fed toward the die by mechanism not shown and is guided along one edge by the machine back-rail **20** which in this instance is part of the platform **22**. The latter supports the stock as it feeds into the die.

The guide mechanism **10** comprises a pair of arms **24** swingably mounted on a standard socket-head cap screw **26**. The latter constitutes the sole mounting for the guide and it is thus apparent that drilling and tapping a suitable hole is all that is necessary in order to mount the device on a machine or die.

The arms **24** are mounted on the screw **26** by means of a pair of spacers **28** and **30**. The spacer **28** is in the form of an elongated washer of a thickness just slightly greater than the combined thickness of the two arms **24**. The spacer **30** is of cylindrical stock and of thicker section and, as can be more clearly seen from Fig. 3, may be of any suitable length to accommodate different heights of platforms in relation to the mounting base of the guide.

When the cap-screw **26** is tightened, the spacer **30** determines the position of the arms **24** and the spacer **28** is of the right thickness to provide rigid support for the arms yet permit free swinging of the same about the axis of the screw.

If desired, the spacers **28** and **30** may be a unitary piece, the spacer **28** being formed as a reduced portion of the sleeve **30**.

Each arm at its outer end carries a tapered roller **32**. Details of the roller mountings are not shown but it will be understood that a shoulder-rivet **34** or some equivalent means may be used, it being only necessary that the rollers be mounted for free turning on the arms.

A coil spring **36** is wound around the spacer **30** and has oppositely extending portions which bear on the respective arms **24** at points adjacent the rollers **32**. The spring **36** is biased to urge the arms toward each other and toward the stock moving into the die. The taper of the rollers **32** exerts a force on the stock with which they are in contact tending to keep the stock flat on the platform and prevent wrinkling or looping.

It can be seen, therefore, that I have provided an extremely simple guide which can be mounted on a machine or die by drilling and tapping a single hole, which device is adjustable to different types and sizes of machines and dies and which will accommodate wide ranges in size of stock and will guide stock having uneven edges of considerable range.

It should be noted that the device is not limited in its application to a horizontal mounting as shown, but operates with equal facility when mounted vertically or on an angle as may be required when stock is being fed to other types of machines.

No particular skill is required to adapt my device to different applications, nor is any particular care necessary for adjustment or maintenance. While I have shown a preferred form of guide for illustrative purposes, it is to be understood that I do not limit the invention to the precise details shown as I contemplate that persons skilled in the art will make changes in the size, arrangement and mounting of the parts in accordance with the demands of the particular application.

I claim:

1. In combination with a machine having a guideway for stock being fed into the machine including a back-rail, a guiding device for guiding stock as it is fed into the machine comprising a post disposed perpendicular to the plane of stock movement, a pair of arms mounted on said post for swinging about the axis thereof, a roller mounted at the outer end of each of said arms adapted to engage the edge of the stock while the opposite edge thereof engages said back-rail, and a spring carried by said post and operably associated with said arms whereby said arms are urged to swing toward one another whereby guiding pressure is transmitted to the stock at spaced points.

2. In combination with a machine having a guideway for stock being fed into said machine including a back-rail, a stock guiding device comprising, a post, a pair of arms mounted in stacked relation on said post for swinging movement, rollers mounted on said arms and adapted to engage said stock, said post having a head thereon against which one of said arms bears, a spacer disposed between the post and said arms, said spacer being just slightly longer than the combined thickness of said arms, a second spacer carried by the post, said second spacer being of thicker section than the first spacer and in engagement therewith whereby said arms are supported rigidly between the head and said second spacer but freely swingable around the axis of the post, and a spring carried by said second spacer in engagement with said

arms thereby to cause said rollers to exert yielding guiding pressure on the edge of the stock opposite said backrail as it is fed into the machine.

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