Nov. 18, 1924. 1,516,283

J. W. FLEISHOUR

BAR MILL GUIDE

Filed Nov. 23, 1922

Fig. 1

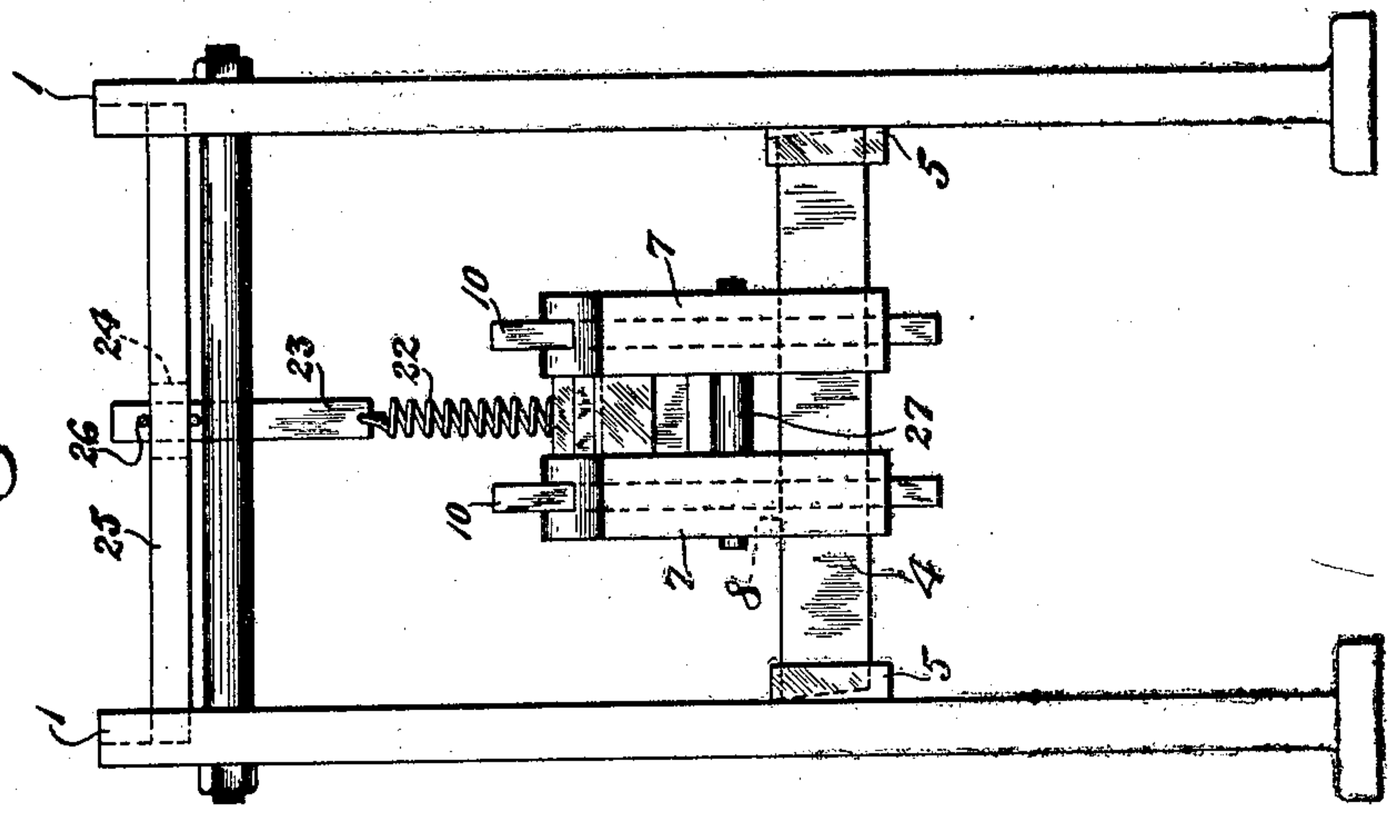
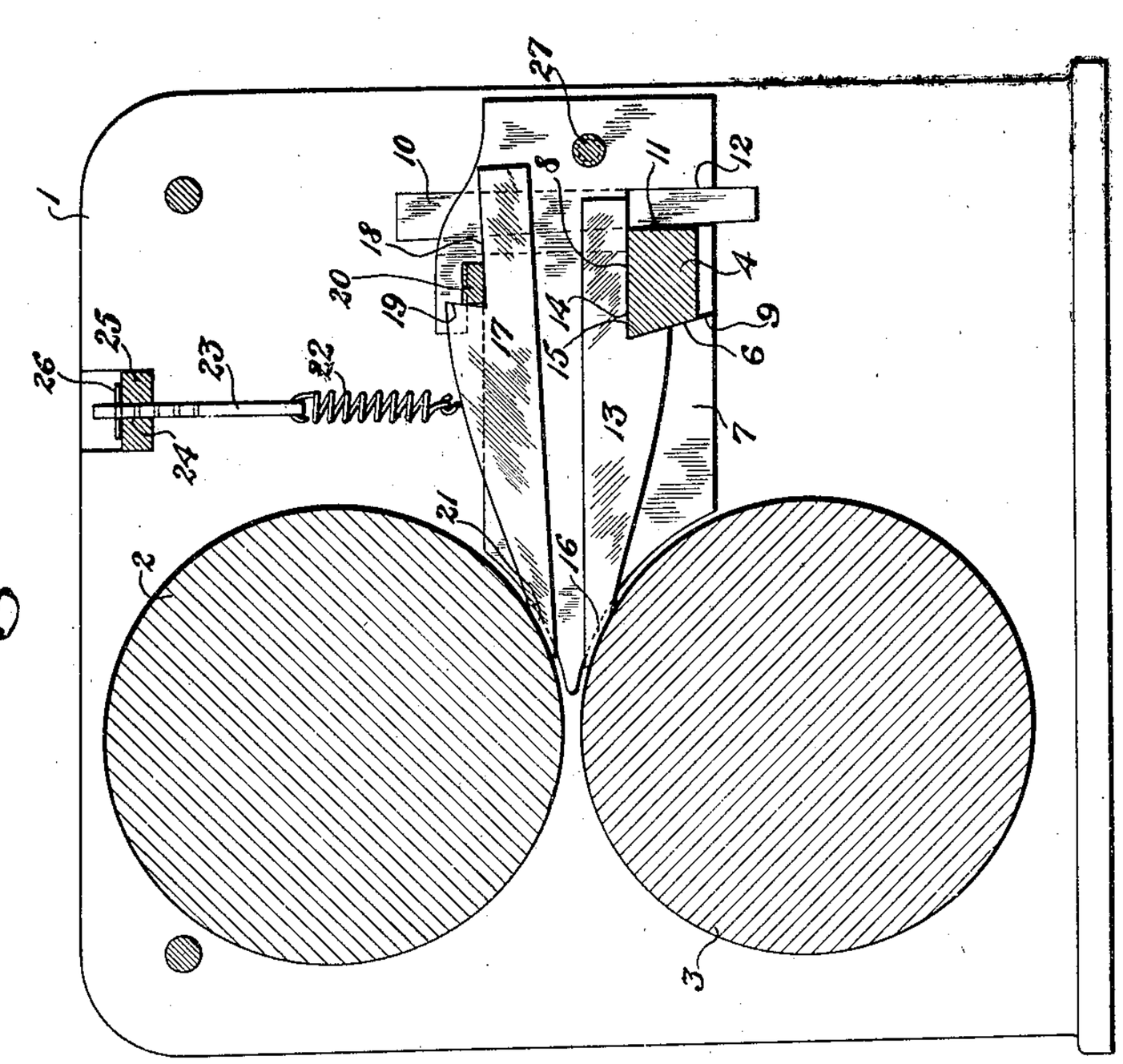


Fig. 2



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Patented Nov. 18, 1924. 1,516,283

UNITED STATES PATENT OFFICE.

JOHN W. FLEISHOUR, OF CANTON, OHIO.

BAR-MILL GUIDE.

Application filed November 23, 1922. Serial No. 602,773.

To all whom it may concern:

Be it known that I, JOHN W. FLEISHOUR, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Bar-Mill Guide, of which the following is a specification.

This invention relates to guides for rolling mills and more especially to guides for bar mills, and has for its objects to provide a guide for conducting the metal from a pair of rolls in such a manner as to obviate the liability of breakage or damage to the mill or injury to the workmen, and to generally simplify the construction of devices of this character.

The above and other objects may be attained by constructing the device in the manner illustrated in the accompanying drawings, in which—

Figure 1 is an end elevation of a bar mill provided with the improved guide embodying the invention; and

Fig. 2, a longitudinal sectional view through the same.

Similar numerals of reference indicate corresponding parts throughout the drawings.

A bar mill is shown conventionally and includes the usual housings 1 and upper and lower rolls 2 and 3 respectively, which may be of any usual and well known construction. The rest bar 4 is mounted in the usual grooved lugs 5 in the housings and differs from the usual rest bar in having the inclined inner surface 6.

The side guides 7 are provided in their under sides with the slots or notches 8 of greater width than the rest bar 4, the forward edge of each slot being inclined as at 9, a wedge 10 being driven downward through each side guide, between the outer face 11 of the rest bar and the adjacent, straight face 12 of the notch 8.

The side guides may be adjusted horizontally upon the rest bar, after which the wedges 10 are driven tightly into place, holding the side guides in the adjusted position. The lower guide 13 is provided with the cut-out, outer end 14, having the inclined shoulder 15 which engages the inclined face 6 of the rest bar, the inner end of the lower guide being tapered as at 16 and curved to rest upon the lower roll 3, as illustrated in Fig. 2 of the drawing.

The upper guide 17 is a hanging guide and is provided at its outer end with the cut-out portion 18, having the shoulder 19 which engages the cross bar 20, mounted between the side guides 7. The inner end of the upper guide is tapered as at 21 and curved to fit beneath the upper roll 2.

The upper guide is supported by means of the spring 22 connected to the lower end of the perforate link 23, which is suspended through a slot 24 in the cross bar 25, secured between the housings 1, a pin 26 being passed through one of the perforations in the link to place the desired amount of tension upon the spring 2, and holding the parts in the position best shown in Fig. 2.

A roller 27 is journaled between the side guides 7 at a point beyond the outer end of the lower guide 13, the top of the roller being spaced slightly above the top of the lower guide in order to receive the bar as it passes from the lower guide, raising the bar from engagement with the outer end of the lower guide, in order to prevent the edge of the guide from scraping the under surface of the bar, as it has been found that particles of metal scraped from the bar will accumulate upon the end of the lower guide and then cause considerable damage to the mill or injury to the workmen when the end of the next bar contacts with the same.

I claim:—

1. The combination with a rolling mill having upper and lower rolls and a rest bar, of a pair of side guides mounted upon the rest bar and extending between the rolls, a lower guide resting upon the rest bar and the lower roll and an upper guide extending beneath the upper roll and resiliently suspended from the upper portion of the mill housings.

2. The combination with a rolling mill having upper and lower rolls and a rest bar having a downwardly and forwardly inclined rear face, of a pair of side guides having tapered notches in their lower edges for engagement with the rest bar, a lower guide resting upon the lower roll and rest bar, and having an inclined notch in its forward end engaging the inclined face of the rest bar, a cross bar between the side guides, an upper guide having a notched, forward end for engagement with the cross bar, and tension means intermediate the extremities of the upper guide for holding the same in engagement with the upper roll and cross bar.

JOHN W. FLEISHOUR.