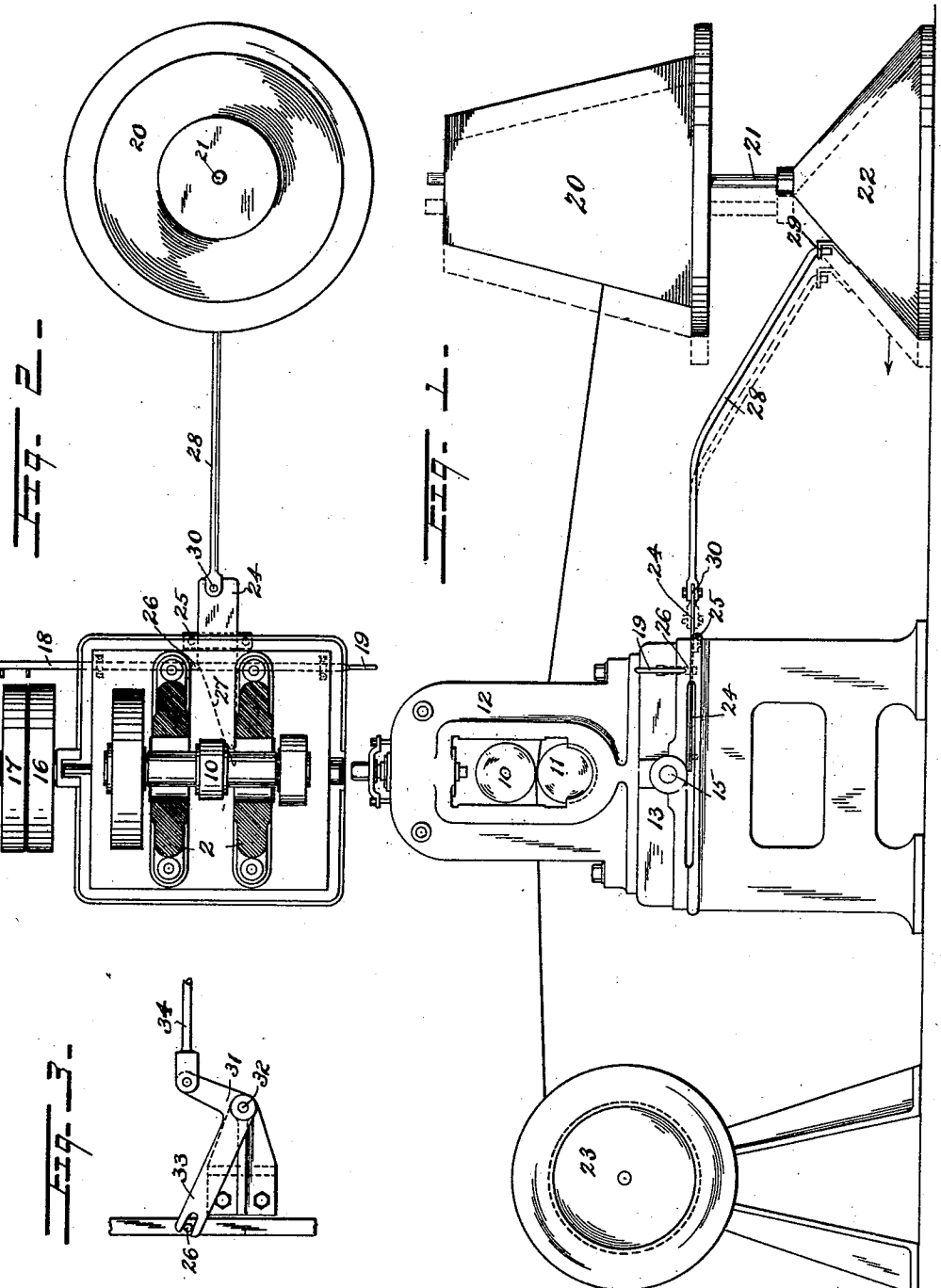
No. 714,120. Patented Nov. 18, 1902.

H. H. WHITE.

AUTOMATIC STOP MECHANISM FOR WIRE MILLS.

(Application filed Sept. 2, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

HARRY H. WHITE, OF READING, PENNSYLVANIA, ASSIGNOR TO THE CARPENTER STEEL COMPANY, INCORPORATED, OF READING, PENNSYLVANIA.

AUTOMATIC STOP MECHANISM FOR WIRE-MILLS.

SPECIFICATION forming part of Letters Patent No. 714,120, dated November 18, 1902.

Application filed September 2, 1902. Serial No. 121,848. (No model.)

To all whom it may concern:

Be it known that I, HARRY H. WHITE, a citizen of United States of America, and a resident of Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Stop Mechanism for Wire-Mills, of which the following is a specification.

My invention relates to wire-rolling apparatus; and it consists in an improved mechanism for automatically stopping the rolls in case of the wire, which is being fed thereto from the delivery-reel, becoming snarled or its free movement in any way obstructed, so as to put an undue strain thereon, tending to break it or otherwise interfere with the proper operation of the apparatus.

The invention is fully described in connection with the accompanying drawings, and the novel features are specifically pointed out in the claims.

Figure 1 is a side elevation of a portion of a wire-rolling apparatus having my improvements applied thereto in preferred form. Fig. 2 is a plan view of the same. Fig. 3 illustrates a modification.

In the drawings, 10 and 11 represent the rolls between which the feed-wire is drawn and reduced. 12 is the housing in which they are mounted, as usual; 13, the suitably-supported bed-plate therefor, in which is mounted the driving-shaft 15 for the rolls. This driving-shaft is provided with tight and loose pulleys 16 and 17, and a belt-shifting lever 18, suitably guided in the bed-plate 13, is movable in a line parallel with the rolls by means of a handle 19 to start or stop the rolls. The delivery or feed reel 20, from which the wire is fed to the rolls, is rotatably mounted, as usual, on a reel-stand spindle 21, which rises vertically from a base 22, resting upon the floor, and the reduced wire is taken from the rolls upon a suitable reel 23, as usual.

To provide for automatically moving the lever 18 to shift the belt to the loose pulley in case the wire from any cause fails to feed properly from the reel to the rolls, I employ an operating device therefor and means for directly actuating the same from the reel-stand, which latter is movable toward the rolls in case of an undue strain upon the wire, such as occurs when it fails to feed properly from the reel. This device, as indicated in the preferred construction shown in Fig. 1, consists merely of a wedge-shaped operating-plate 24, located in a guideway 25 in the roll-carrying frame, which guideway extends at right angles to the shifting-lever 18 below the same across its path. To provide for engaging the lever, so as to move the latter as described when the operating-wedge 24 is forced inward across the lever-path, I provide the lever with a depending pin 26, with which the wedging edge 27 of the operating-plate 24 contacts as the latter is pressed inward to the position indicated in Fig. 1, moving the lever at right angles to the wedge-plate movement to shift the belt and stop the rolls, and at the same time preventing a return of the lever until the wedge-plate is withdrawn to its normal position.

The inward movement of the wedge-plate directly and positively follows any movement of the reel-stand produced by undue tension on the feed-wire, as already described and as indicated by the dotted lines and arrow in in Fig. 1, owing to its direct connection with the stand by means of a rigid rod 28, secured at its opposite ends to the wedge-plate and stand, respectively. This connecting-rod, as shown, is pivotally engaged with the wedge-plate and stand, respectively, as indicated at 29 and 30, so as to permit of its disengagement and swinging out of the way when desired.

In the modification indicated in Fig. 3 a bell-crank 31, suitably pivoted at 32, is employed instead of the wedge-plate 24, one arm 33 of said crank being arranged to engage the lever-pin 26 and the other being connected to one end of the connecting-rod 34, the opposite end of which is secured to the spindle of the reel-stand, the movement of which latter automatically operates the belt-shifting lever, as in the case of the preferred construction already described.

What I claim is—

1. The combination with a wire-rolling mechanism, a stop-lever therefor and a feed-reel mounted on a movable stand, of a shifting device for said lever and a rigid connection between said device and the stand whereby the movement of the latter under

undue strain upon the feeding-wire directly and automatically operates said stop-lever substantially as set forth.

2. In a wire-rolling apparatus the combination with the roll mechanism having tight and loose pulleys and a belt-shifting lever therefor, and with the feed-reel mounted on a movable stand, of an operating-wedge for said lever located in a guideway arranged at right angles to said lever and adapted to engage the latter, and a rigid connecting-rod between said operating-wedge and the stand whereby the movement of the latter under undue strain causes the automatic shifting of said lever to stop the rolls substantially as set forth.

Signed at Reading, Pennsylvania, this 28th day of August, 1902.

HARRY H. WHITE.

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