N. GUZOWSKI.

AUTOMATIC LOOM STOP.

APPLICATION FILED MAR. 19, 1920.

1,434,539. Patented Nov. 7, 1922.

Fig. 1.

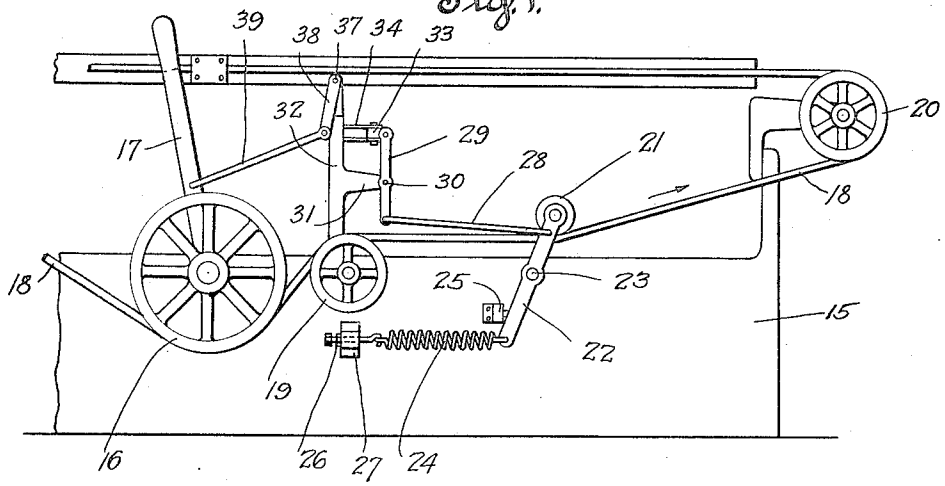


Fig. 2.

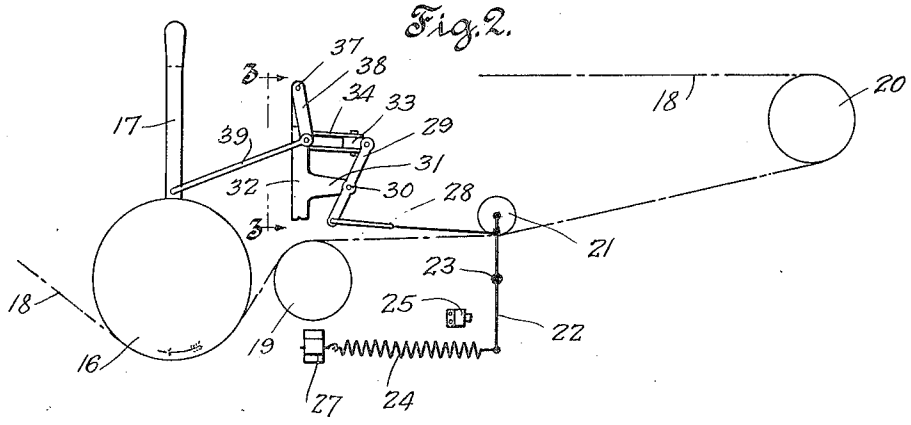


Fig. 3.

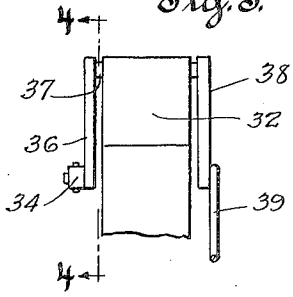
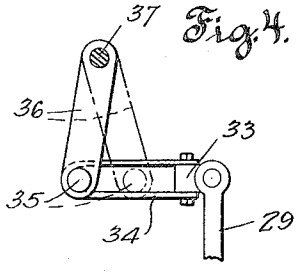


Fig. 4.



INVENTOR

Nicholas Guzowski

BY Marvin R. Ellwood

ATTORNEY

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UNITED STATES PATENT OFFICE.

NICHOLAS GUZOWSKI, OF THOMPSONVILLE, CONNECTICUT.

AUTOMATIC LOOM STOP.

Application filed March 19, 1920. Serial No. 367,235.

To all whom it may concern:

Be it known that I, NICHOLAS GUZOWSKI, citizen of the United States of America, residing at Thompsonville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Automatic Loom Stops, of which the following is a specification.

This invention relates to automatic stops for looms, particularly such as are used in the weaving of carpets, and also other belt driven mechanisms, its principal object being to provide an automatic stop which will bring the control lever into stop position whenever the mechanism becomes jambed or otherwise overloaded, causing abnormal tension upon the driving rope or belt.

Another object is in the provision of a device which can be attached to any loom or belt driven mechanism and which will operate positively each time an abnormal load is placed on the operating or working parts, so that the operation of the machine is instantly checked, thus preventing injury to the mechanism.

With the above and other objects in view, the invention consists in certain new and useful constructions, combinations and arrangements of parts described in the following specification and illustrated in the accompanying drawing, in which:—

Figure 1 is a partial side elevational view of a conventional type of loom equipped with an embodiment of the invention.

Figure 2 is a similar view of the same, showing the parts in another position, the view being largely diagrammatic.

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 2.

Figure 4 is a sectional view taken on line 4—4 of Figure 3, showing in broken lines another position of the lever.

In the drawing, the numeral 15 designates the side frame of the mechanism, in which is mounted a drive pulley 16 controlled by a clutch (not shown) operated by a hand lever 17 and driving an endless rope or belt 18 to convey rotary motion to another pulley 19, thence over an idler pulley 20 back to the rear of the machine.

The belt 18 is normally stressed by a tightener pulley 21 interposed midway between pulleys 19 and 20 to a desirable tension sufficient to cause the belt to drive the mechanism.

Said pulley 21 is rotatably mounted at the upper end of a lever 22 pivoted on a stud 23 fixed in the frame 15 and drawn by the tension spring 24 against a fixed stop 25, said spring being adjustably secured by a bolt 26 engaged in a bracket 27.

From the foregoing it will be apparent that if the belt 18 being unduly stressed by reason of parts becoming jammed or overloaded, the belt will tend to rise or straighten out, causing the tightener 21 to rise, moving the lever 22 into a more upright position, as shown in Figure 2.

Attached to the upper part of the lever 22 is a link 28 connecting at its opposite end with the lower end of a vertical lever 29 pivoted at its center on a pin 30 set in an arm 31 extending towards the front from a bar 32, the same being part of the machine frame.

A block 33 is pivotally engaged with the upper end of the lever 29 and secured to the block is a strap link 34, the bight of the link engaging a pin 35 carried at the lower end of an arm 36, said arm being fixed at its upper end to a spindle 37.

The spindle 37 is rotatably mounted in the upper end of the fixed element 32 and has fixed at its opposite end another arm 38 engaging a link 39 operatively connected with the hand control lever 17.

As the lever 22, carrying tightener 21, is moved towards the rear under the increased tightening of the belt, it will, by the link 28, rock lever 29 to draw the arm 36 to the right, and by the parts associated with said arm, move the hand control lever also to the right, releasing the clutch and stopping the mechanism.

Due to the strap link 34 being open, the hand lever can at any time be manually operated without interference with the device, thus affording a safe and certain automatic stop for the machine.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In an automatic stop for belt driven mechanism comprising a spring impelled lever, a pulley carried thereby to engage the belt, a control lever for the mechanism, and operative connections between said levers, one of said connections permitting independent action of said control lever.

2. In an automatic stop for belt driven mechanism comprising a control lever, an open strap link connected therewith, a lever

for shifting said link, a member adapted to be shifted by the driving belt and operative connections between said members and said shift lever.

3. In an automatic stop for belt driven mechanism comprising a frame, a lever pivoted on said frame, a pulley carried by said lever adapted to engage the driving belt, a spring normally holding said pulley in engagement with the belt, a stop limiting the movement of the pulley, a second lever pivoted on said frame, a link connecting said levers, a control lever, connections between said second lever and said control lever, and means in said connection permitting said control lever to be independently operated.

Signed by me at Thompsonville, Conn.

NICHOLAS GUZOWSKI.