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F. T. NOAH

1,753,247

SPINNING STOP MOTION

Filed Feb. 16, 1929

FIG. 1.

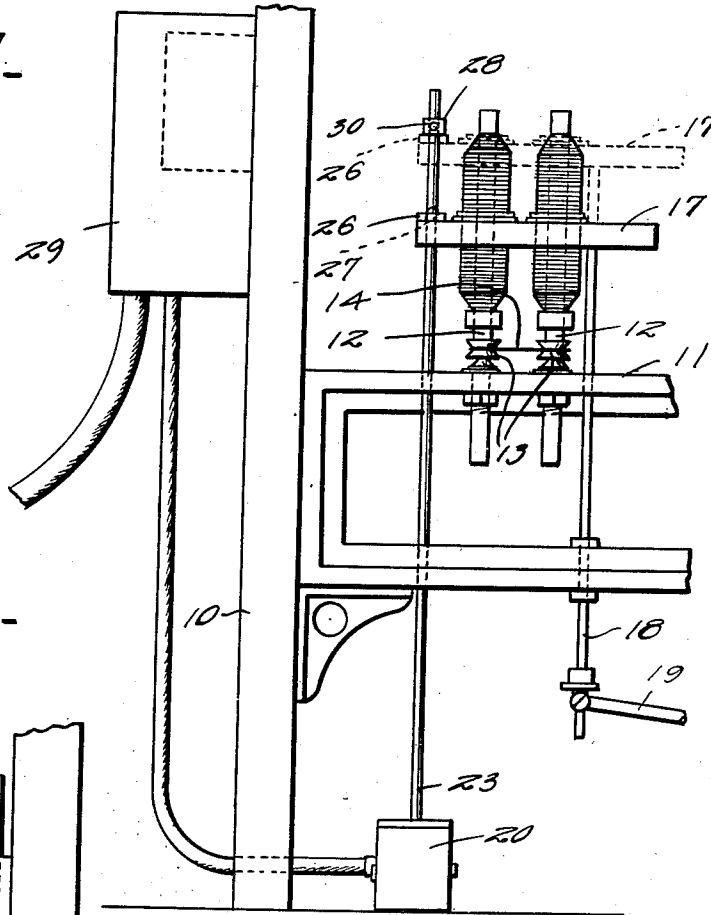


FIG. 2.

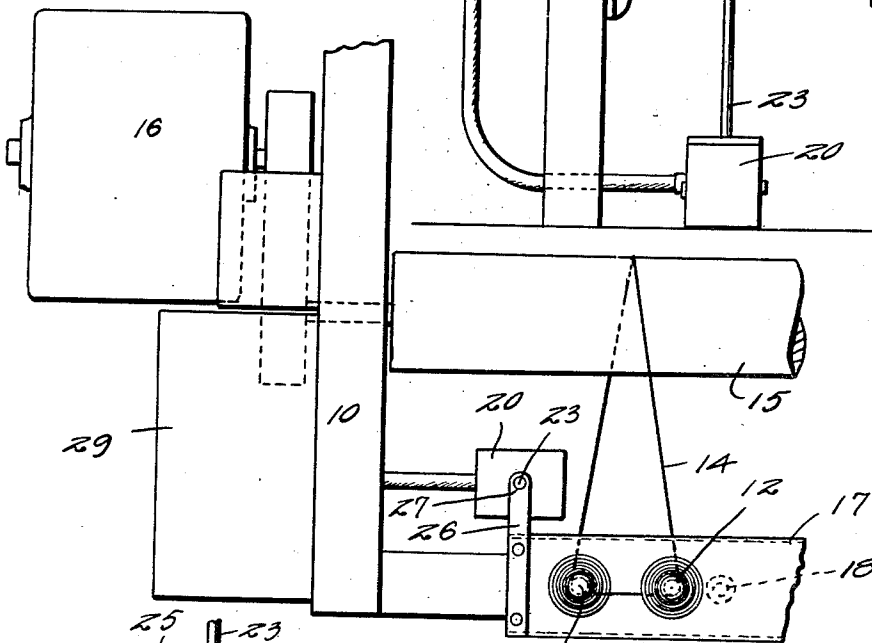
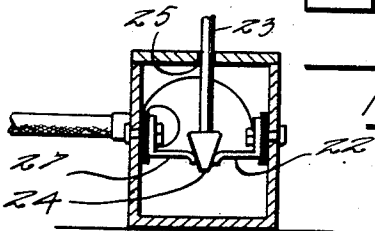


FIG. 3.



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SPINNING STOP MOTION

Application filed February 16, 1929. Serial No. 340,591.

This invention relates to new and useful improvements in spinning machines, and particularly to stop motions therefor.

In spinning machines, great waste is experienced by the running over of the bobbins, thereby causing tangling of the yarn, and necessitating the unwinding and straightening out of the yarn. A considerable amount of yarn is lost, and the labor required to straighten it out is loss of money to the manufacturer. The operator must keep a close watch on the machine, and be ready to stop the machine instantly before any of these things occur, to prevent the loss of time and material.

One object of the invention is to provide a device which will overcome these difficulties, and permit the machine to be automatically stopped before such things occur.

Another object is to provide a novel and improved means whereby the traverse is utilized to effect the stopping of the driving means of the spindles, when such traverse reaches the upper ends of the spindles or bobbins, or before the yarn becomes tangled or broken.

Another object is to provide a device of this character which is readily adjustable so that the traverse may stop the machine at any desired point.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is an elevation of a portion of a spinning machine showing the invention applied thereto.

Figure 2 is a top plan view of the same.

Figure 3 is an enlarged vertical sectional view through the circuit breaker 20.

Referring particularly to the accompanying drawing, 10 represents a portion of the frame of a spinning machine, in connection with which the present invention is particularly adapted for use. This frame has the rail 11 on which are mounted the spindles 12, which receive yarn, as is well understood, such spindles being provided with the pulleys 13, driven by the belts 14, from the main

driving drum or shaft 15, which in turn is driven by the electric motor 16, located at one end of the spinning machine. Operable vertically, in a reciprocatory manner is the ring rail, or traverse 17, such traverse being operated by the well known builder motion, a portion of which is illustrated at 18, and 19, respectively. Mounted below the rail 11 is a circuit breaker box 20, within which are disposed the spaced contact members 21 and 22, and suspended above these contacts, for movement toward and away therefrom, is a reciprocable rod 23, the lower end of which is provided with a head 24 adapted to simultaneously engage the two contacts to close a circuit, said rod being properly guided in an opening 25, in the upper end of the box. Secured to one end of the traverse 17, and extending therefrom, is a plate or arm 26, having an opening 27 therein through which is slidably received the upper portion of the rod 23. Detachably and adjustably secured on the upper end of the rod 23 is a collar 28, which is arranged to be engaged by the apertured end of the arm 26, when the rail or traverse rises far enough to engage therewith, and when said arm engages the collar and lifts the rod, said rod will be elevated from engagement with the contact members 21 and 22, to break the circuit. An automatic electro-magnetic switch 29 is connected with the contact members 21 and 22, and with the motor 16, so that when the rod 23 is elevated by the traverse, and the lower end of said rod is disengaged from the contact members 21 and 22, the circuit will be broken in the automatic switch 29, whereby to stop the motor, and consequently the machine. It will be understood that, normally, the rod 23 stands with its lower end on the contact members 21 and 22, so that the current may flow uninterruptedly to the motor, through the automatic switch 29, and permit the proper operation of the machine.

It will be noted that the collar 28 is attached to the upper end of the rod 23 by means of the screw 30, so that the operator may adjust said collar to the desired position on the rod, thus causing the traverse to en-

gage therewith at such position as is desired to stop the machine.

What is claimed is:

1. In a spinning machine stop motion, the combination with the motor driven spindles and the vertically movable traverse thereof, of an electric circuit including said motor, a switch in the circuit including contact members, a reciprocable member normally bridging the contacts to maintain the circuit, and means on the traverse for engaging and moving the reciprocable member to break the circuit and stop the machine.

2. In a spinning machine stop motion, the combination with the motor for driving the spindles and the traverse, including an electric circuit, of a circuit breaker including spaced contacts in said circuit, an apertured arm on the traverse, a switch in the circuit and controlled by said circuit breaker, and a vertically reciprocable rod disposed through said arm having its lower end normally bridging said contacts and adapted to be elevated from said contacts by said apertured arm.

3. In a spinning machine stop motion, the combination with the motor driven spindles and the vertically movable traverse of a spinning machine, of an automatic switch, a circuit breaker for controlling the automatic switch including a circuit closing member arranged in the path of the traverse and adapted to be engaged and moved thereby to open the circuit breaker whereby to open the automatic switch.

4. In a spinning machine stop motion, the combination with the motor driven spindles and the vertically movable traverse thereof, of an electric circuit including the motor, an automatic switch in the circuit, a circuit breaker having contact members, and a reciprocable member engaged with the contact members and arranged in the path of the traverse to be elevated by said traverse to open the circuit in the circuit breaker, whereby to open the automatic switch and stop the machine.

In testimony whereof, I affix my signature.
FLOYD T. NOAH.

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