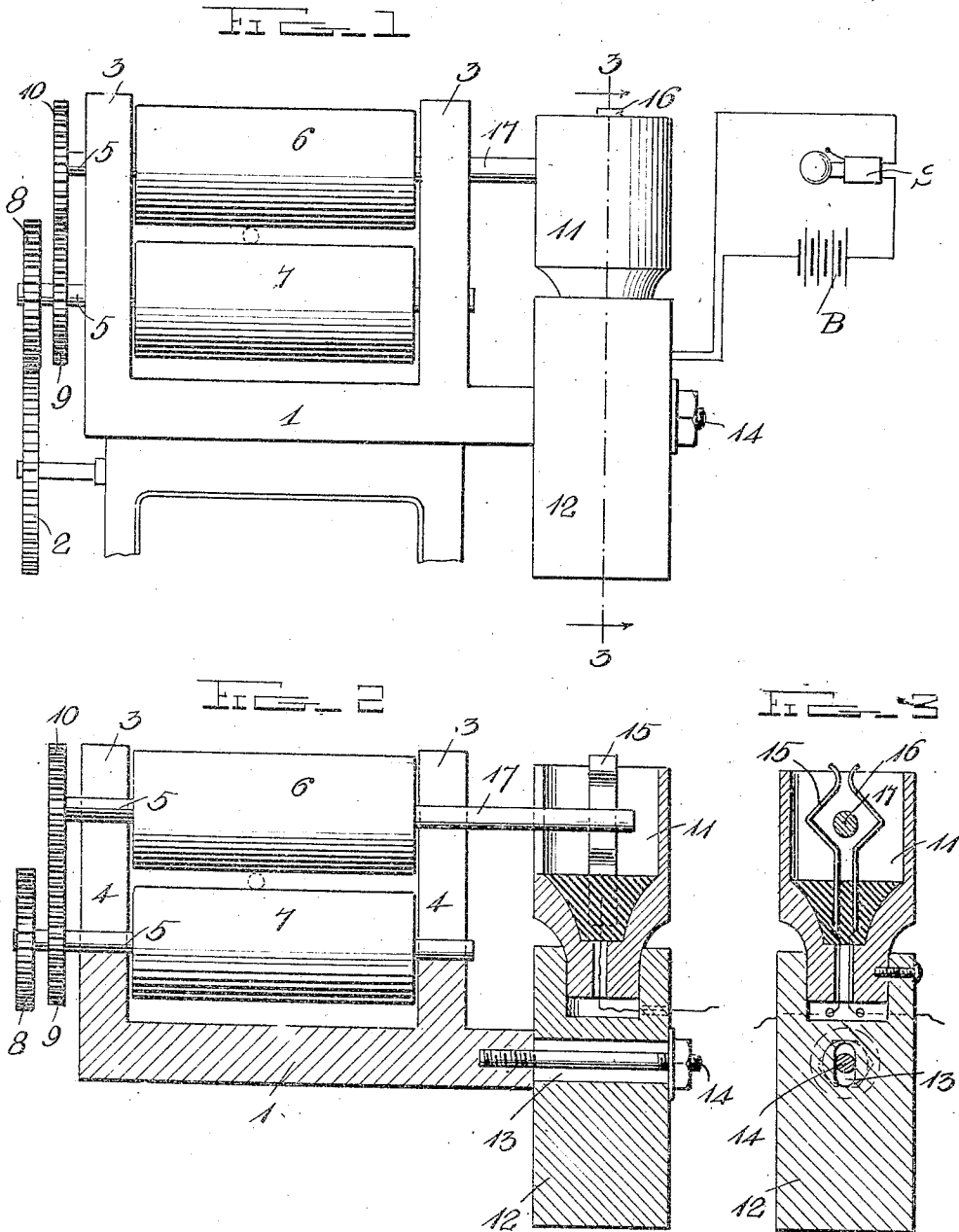


E. P. SCHMITT.
ALARM FOR CARDING MACHINES.
APPLICATION FILED APR. 16, 1908.

939,750.

Patented Nov. 9, 1909.



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UNITED STATES PATENT OFFICE.

EUGENE P. SCHMITT, OF SEYMOUR, INDIANA.

ALARM FOR CARDING-MACHINES.

939,750.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed April 13, 1908. Serial No. 427,430.

To all whom it may concern:

Be it known that I, EUGENE P. SCHMITT, a citizen of the United States, residing at Seymour, in the county of Jackson and State of Indiana, have invented certain new and useful Improvements in Alarms for Carding-Machines, and do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to alarms for carding machines.

The object of the invention is to provide a device of this character which will notify the operator of the conditions of the roving so that he may correct the difficulty. A number of devices have been devised for this purpose but they have many defects. For instance if an alarm is made to sound when the roving breaks it will not sound when the roving becomes bunched under the rollers, or if it is made to sound when the roving is bunched it will not sound when the roving is broken.

It is the object of my invention to obviate these difficulties, and broadly speaking to provide an alarm which will be actuated by any abnormal condition of the roving, such as a too fine or too thin roving owing to the neglect on the part of the operator to fill the feed box, or to notify the operator if the comb belt breaks or slips off, which causes a choking up of the machine.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

Figure 1 is a front elevation, Fig. 2 is a longitudinal section, and Fig. 3 is a transverse vertical section on the line 3—3 of Fig. 1.

Referring more especially to the drawings, 1 represents the base of a suitable frame, which is attached to the carding machine in any preferred manner, and is driven thereby by suitable gearing 2. This frame comprises a pair of uprights 3, vertically slotted at 4, to receive the pintle 5, of the roving rollers 6 and 7. The lower roller 7 is provided with a pair of gears 8 and 9, the former meshing with the gear 2 and the latter meshing with the gear 10, carried upon the outer pintle. The gears 9 and 10 have

relatively long teeth so that when the upper roller is raised by the roving the gears 9 and 10 will not be separated or disengaged. The inner pintle of the roller 6 is extended so as to enter a terminal box 11, carried upon the adjustable block 12, which is slotted at 13, to receive the adjusting screw 14, passing through the block into the base 1.

As shown in Fig. 3 I employ a pair of circuit terminals 15 and 16, which are held within the terminal box 11, separated from each and from the box by an insulating compound such as plumbers' wax or any suitable substance which may be poured in a molten state and hardens when its temperature is reduced. These springs are close together at the bottom and intermediate their length are spread apart in substantially U-shaped formation, so as to permit the free movement of the extended pintle 17, of the roller 6. The springs are close together at their top so as to prevent the passage of the pintle without contacting with both of them. When the roving is of normal size and running freely through the rollers the contacting end of the pintle 17 is raised sufficiently from the lower part of the terminals 15 and 16, so as to prevent engagement therewith. If the roving breaks or becomes thin by reason of the operator failing to fill the supply box the top roller will drop down and the contacting end of the pintle 17 will engage the contacts at their lowest part within the box and close the circuit of the alarm bell S, which is included in the circuit with the battery B. If the roving becomes bunched or the machine becomes choked the roller 6 will rise owing to the excess amount of material traveling between the rollers 6 and 7 and cause the contacting end of the pintle 17 to engage the upper member of the terminals and close the circuit of the alarm bell. By operating the adjusting screw 14 it will be seen that any suitable adjustment may be made.

It will be seen that as the pinion end of the roller 6 is the heavier, the roller will rise higher at its pintle end when lifted by the roving, and thereby bring the pintle into engagement with the contacts. When the roving becomes thin or breaks and allows the roller to drop, the pinion on the roller 6 has its teeth in engagement with the bottom of the groove between the teeth of the lower pinion and therefore cannot drop any farther. The end having the pintle 17 is

therefore permitted to drop into engagement with the contacts and thus close the circuit.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

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

1. A device of the class described, the combination with a frame, of a pair of roving rollers revolubly mounted therein, one of which is adapted to move toward and from the other roll in accordance with changes in the size of the roving, a terminal box carried by said frame adjacent said rollers, a pair of terminals therein, an electrical alarm circuit including said terminals, means for adjusting the terminals with respect to the

rollers, and means carried by the movable roller for bridging the terminals in the extreme movement thereof in either direction.

2. A roving alarm, comprising a vertically movable roving roller, a contact carried thereby, an electric circuit, and a single pair of terminals arranged on either side of said contact and adapted to be bridged by the moving contact in the extreme movement of said roller in either direction.

3. A roving alarm comprising a vertically movable rotary roller, an electric alarm circuit, a pair of separated terminals therein, and a contacting device lying between said terminals but normally out of engagement therewith, said contacting device being controlled by said roller and adapted to engage said terminals in the extreme movement of said roller in either direction.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EUGENE P. SCHMITZ

Witnesses:

JACOB W. BERGDOLL,
JOHN CONGDON.