No. 744,468. PATENTED NOV. 17, 1903.

O. A. BREMER.

AUTOMATIC ALARM FOR COTTON FEEDERS.

APPLICATION FILED JULY 5, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

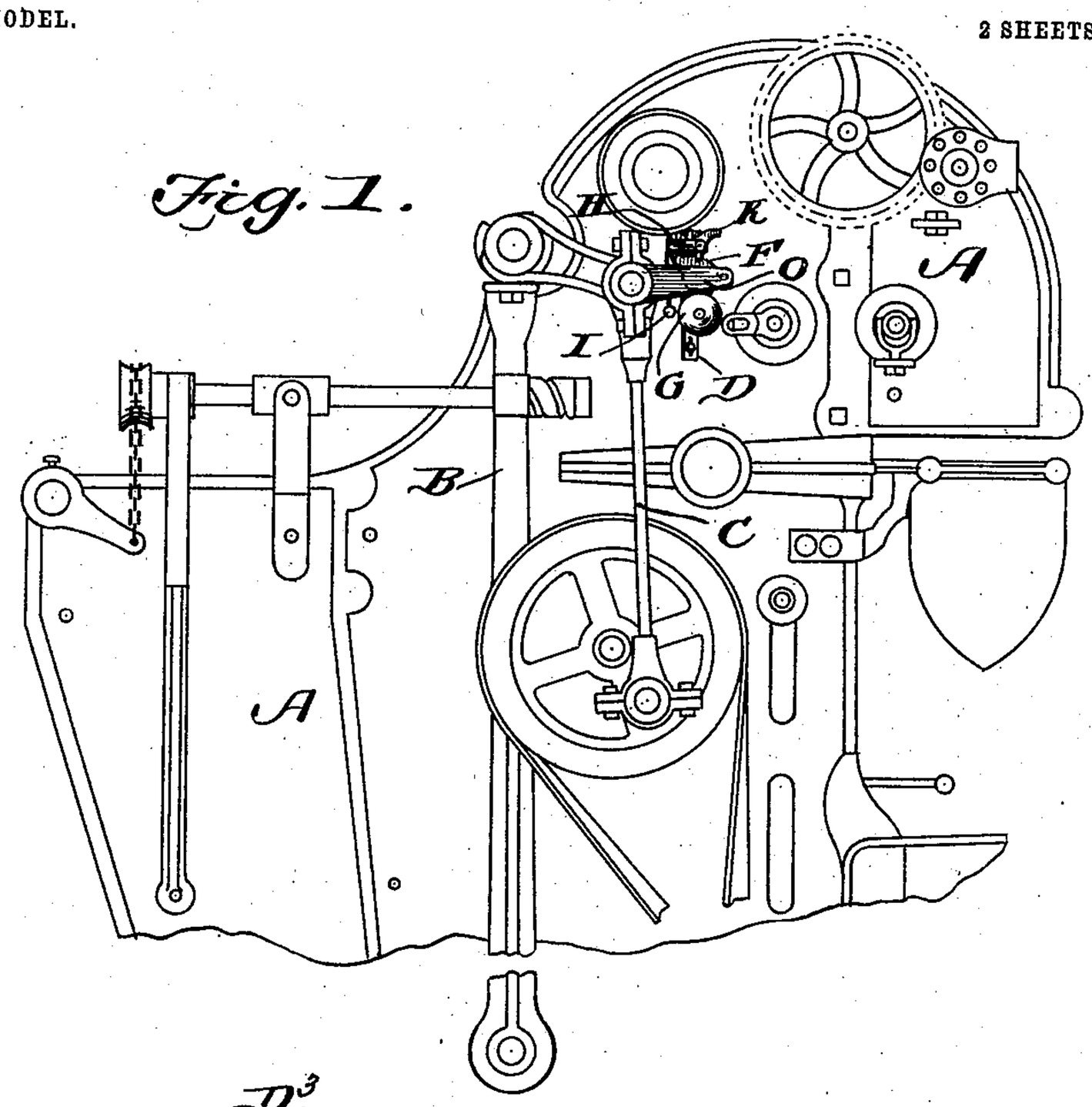


Fig. 5.

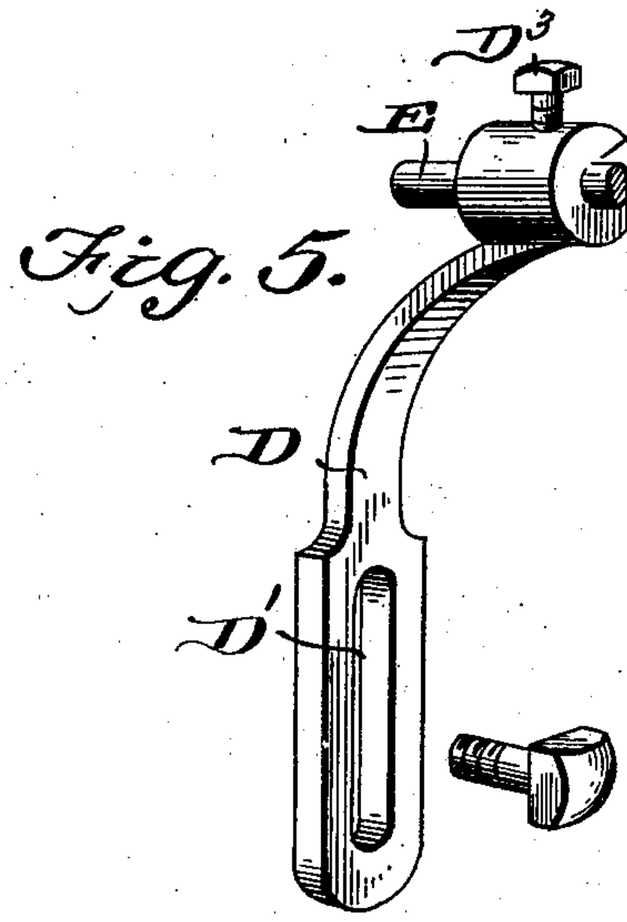


Fig. 6.

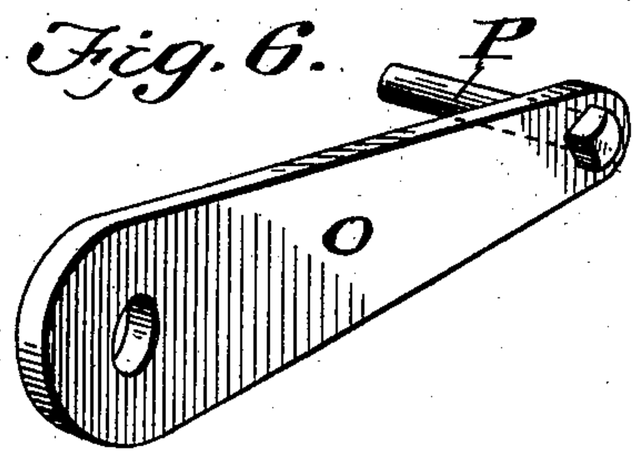
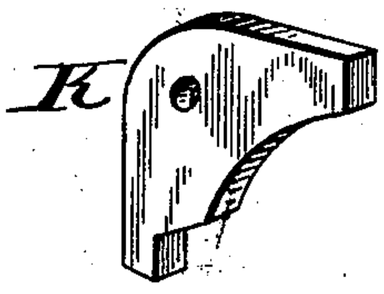


Fig. 7.



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AUTOMATIC ALARM FOR COTTON FEEDERS.

APPLICATION FILED JULY 5, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

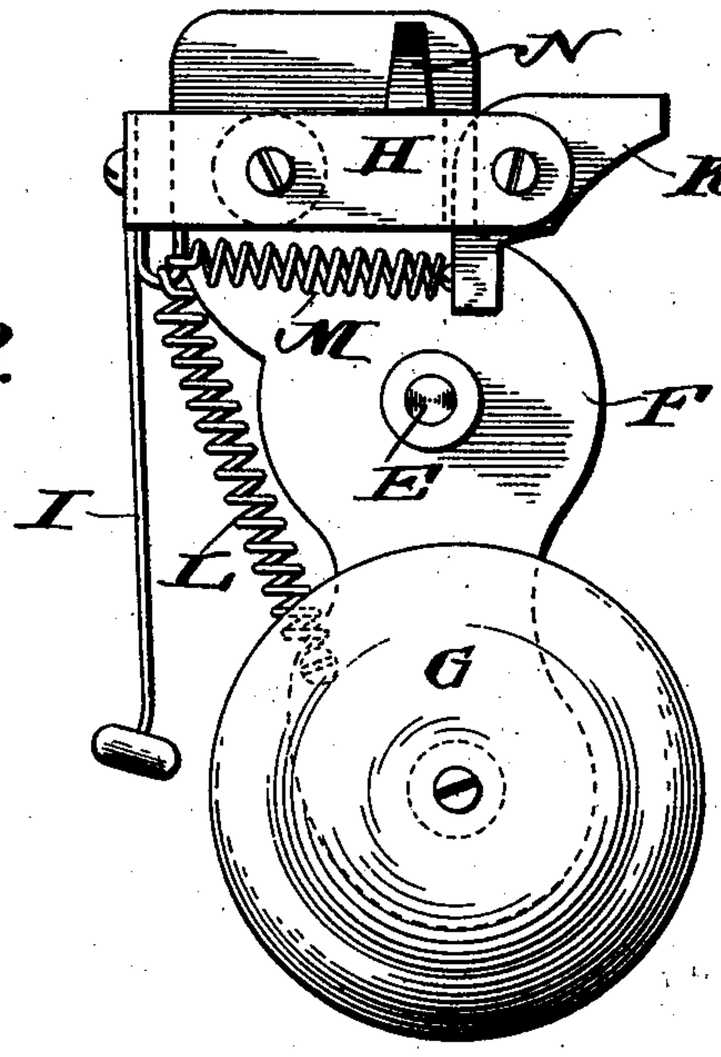


Fig. 3.

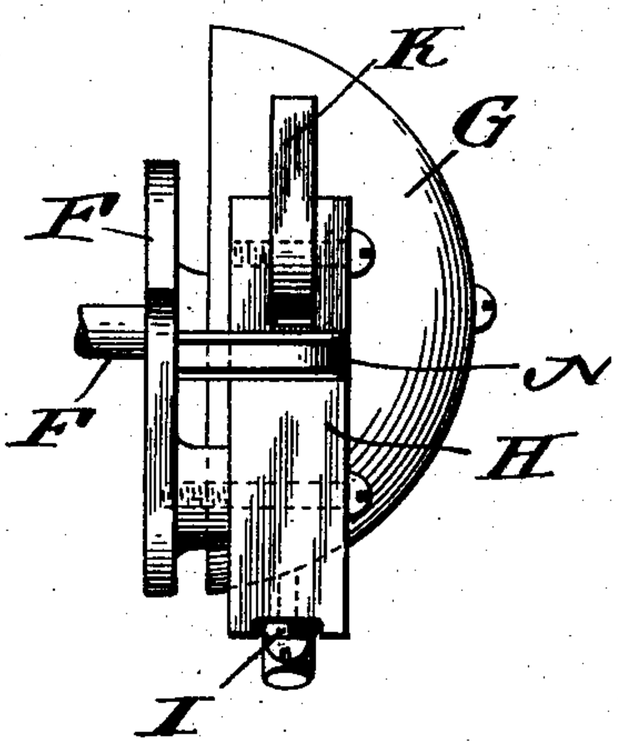
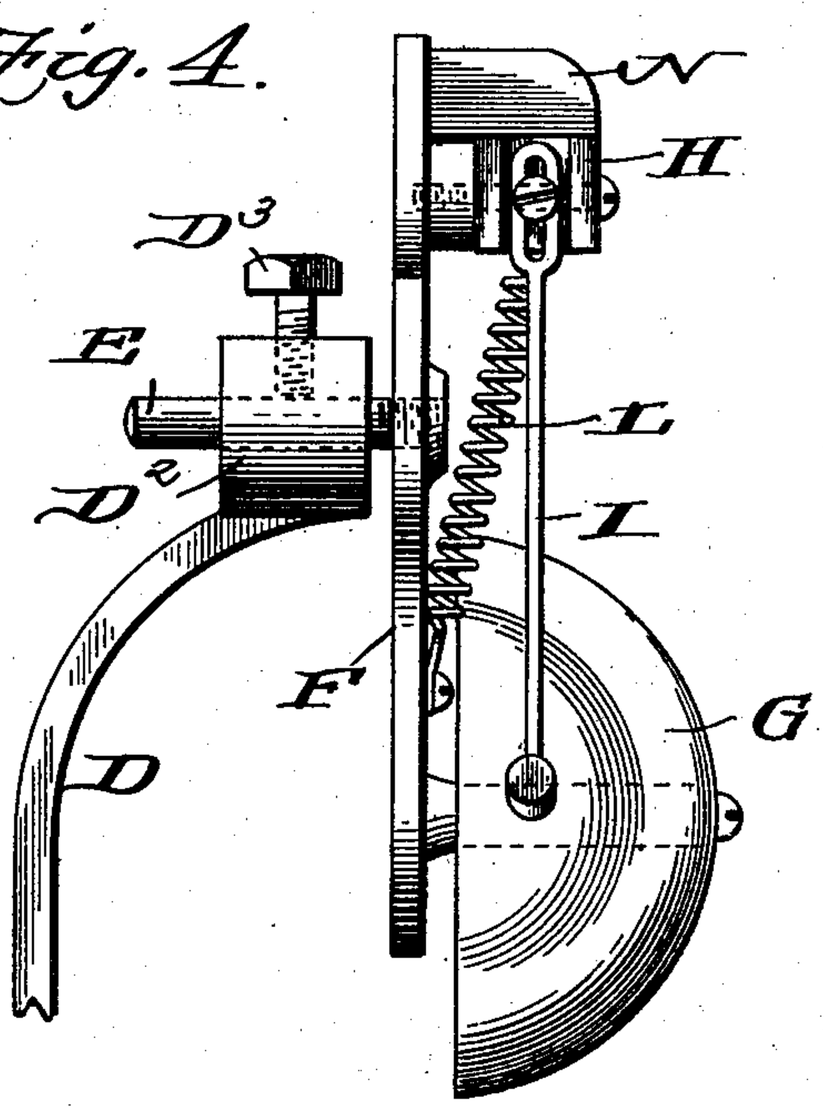


Fig. 4.



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No. 744,468. Patented November 17, 1903.

UNITED STATES PATENT OFFICE.

OTTO A. BREMER, OF BURLINGTON, IOWA.

AUTOMATIC ALARM FOR COTTON-FEEDERS.

SPECIFICATION forming part of Letters Patent No. 744,468, dated November 17, 1903.

Application filed July 5, 1902. Serial No. 114,428. (No model.)

To all whom it may concern:

Be it known that I, OTTO A. BREMER, a citizen of the United States, residing at Burlington, in the county of Des Moines and State of Iowa, have invented a new and useful Automatic Alarm for Cotton-Feeders, of which the following is a specification.

This invention is an automatic alarm for a cotton-feeder, said feeder being used in connection with a machine known as the "Bramwell" machine. In machines of this class cotton is fed to the carding or matting cylinders, and it is necessary that the hopper of the feeder should always be kept sufficiently filled to maintain an even feed of cotton therefrom. Otherwise the sliver or mat will become thin; and it is with the object of always keeping the hopper well filled with material that I have devised an automatic alarm which will begin to sound the moment the hopper has become exhausted beyond a predetermined point and will continue to sound until the hopper has been replenished.

With this object in view the invention consists in the novel features of construction, combination, and arrangement hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a view showing a portion of a Bramwell feeder with my invention applied thereto. Fig. 2 is a side elevation of my improved alarm mechanism. Fig. 3 is a top plan view. Fig. 4 is an end view of the same. Fig. 5 is a detail perspective view of the bracket for supporting the alarm. Fig. 6 is a detail perspective view of the arm carrying the tripping-pin. Fig. 7 is a detail perspective view of the lever for operating the alarm.

Referring to the drawings, A indicates a portion of a Bramwell feeder, which, being of the usual construction, needs no further description.

B indicates a movable arm connected with the feed-board or feed mechanism and which moves forwardly or rearwardly, according to the condition of the hopper with respect to the amount of material contained therein.

C indicates a pitman forming a part of the mechanism of the Bramwell feeder. My alarm device is arranged upon the side of the feeder adjacent to the upper end of the pitman C, and in connecting my alarm I employ a bracket D, which is slotted vertically, as shown at D′, so that the said bracket can be adjusted to the exact point. The upper end of the bracket terminates in a bearing D^2, in which is secured a stub-shaft E by means of a set-screw D^3. A plate F is secured upon the outer end of the stub-shaft E, said plate having a bell or gong G mounted upon the lower end thereof. A lever H is pivoted upon the front face of the plate F and carries an adjustable striker-arm I at one end, the hammer I being adapted to strike the bell or gong G. An angular finger K is pivotally connected to the opposite end of the lever, said finger being capable of an upward movement, but incapable of any downward movement except in unison with the lever H. A spring L, connected to the plate F, is attached to the end of the lever H adjacent to its pivotal point, the purpose of said spring being to return the lever to its normal position with a quick motion. A spring M connects the lower end of the finger K to the opposite end of the lever H, the purpose of said spring being to normally hold the upper end of the finger K in its lowered or horizontal position. A stop N projects from the plate F above the lever H and serves to limit the upward movement of the said lever. An arm O is rigidly connected to the upper end of the pitman C and carries a pin P, which is adapted to engage the angular finger upon the downward movement of the arm O whenever the arm B moves the pitman C into such position that the pin P will engage the end of the finger K. This will occur whenever the hopper has become exhausted beyond a predetermined point and at each downward stroke of the arm O the pin will strike the finger K, press the lever H downwardly, and the spring L in returning the lever to its normal position will cause the spring striker-arm to strike the gong or bell, and consequently sound the alarm. Upon the forward movement of the arm O the pin P will strike the under side of the angular finger K and trip same forwardly, the spring M immediately returning the finger to its proper position the moment the pin has passed beyond it, so that upon the downward movement of the arm and pin the tripping-finger of the lever will be engaged, as

heretofore described. The alarm will continue to sound until the hopper has been replenished, which moves the striker-pin out beyond the tripping-finger K, and the alarm will not be sounded again until the hopper becomes exhausted beyond a predetermined point.

It will thus be seen that I provide an exceedingly cheap, simple, and efficient construction of alarm mechanism particularly adapted for use in connection with the Bramwell machine for the purpose of sounding an alarm the moment the hopper shows signs of being exhausted and will continue to sound until the hopper has been replenished.

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

1. In an automatic alarm for cotton-feeders, the combination with a feed device, comprising a reciprocating pitman, and means for imparting a forward-and-backward movement to said pitman, of an arm secured to the upper end of the pitman and provided with a laterally-projecting pin, a pivoted lever, carrying a striker-arm at one end and a pivoted tripping-finger at its other, said tripping-finger being adapted to be engaged by the pin of the said arm to operate the striker-arm, and a bell adapted to be engaged by the striker-arm, as specified.

2. In an automatic alarm for cotton-feeders, the combination with a feed device comprising a reciprocating pitman, and means for imparting a forward-and-backward movement to said pitman, of an arm secured to the upper end of the pitman and provided with a laterally-projecting pin, a pivoted and spring-pressed lever carrying a striker-arm at one end, a pivoted and spring-pressed tripping-finger at the other end of the said lever, said tripping-finger being adapted to be engaged by the pin on the said arm on its downward movement to operate the lever and thereby the striker-arm, and a bell adapted to be struck by the striker-arm, as specified.

3. The combination with the supporting-bracket, of a plate carrying a bell, a lever pivoted upon the said plate and having a tripping-finger at one end, and an adjustable striker-arm at the opposite end, a spring connecting the lever and plate, spring connecting the lever and angular tripping-finger, the stop for limiting the upward movement of the lever, pin for depressing the lever, and the movable arm for carrying the pin, all arranged and adapted to operate as specified.

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