

(No Model.)

3 Sheets—Sheet 1.

P. H. WALSH.

STOP MOTION AND ALARM FOR WOOLEN FINISHER CARDS.

No. 576,749.

Patented Feb. 9, 1897.

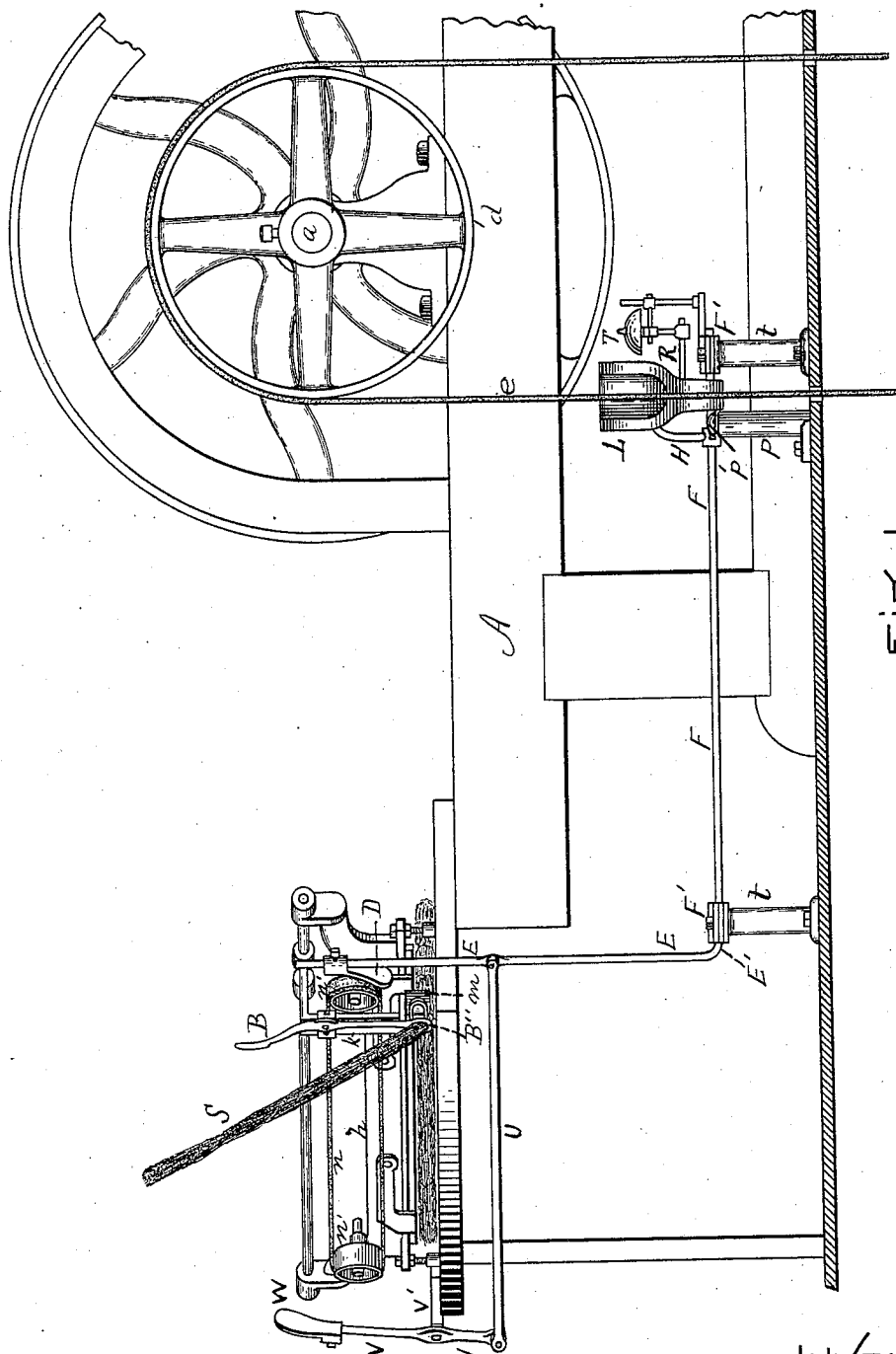


FIG. 1.

WITNESSES

A. A. Pomeroy.
G. Graydon.

INVENTOR

Patrick H. Walsh.
By his Atty
Henry Williams

(No Model.)

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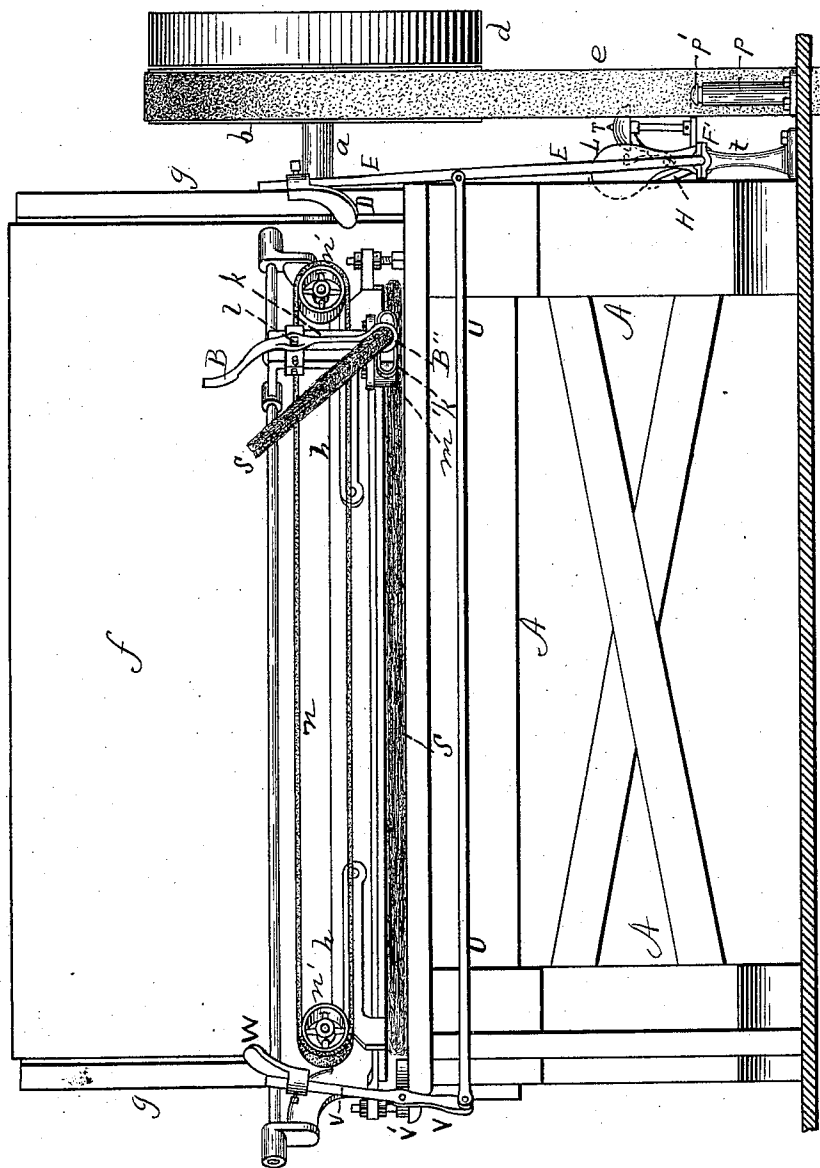


Fig. 2.

WITNESSES

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INVENTOR

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(No Model.)

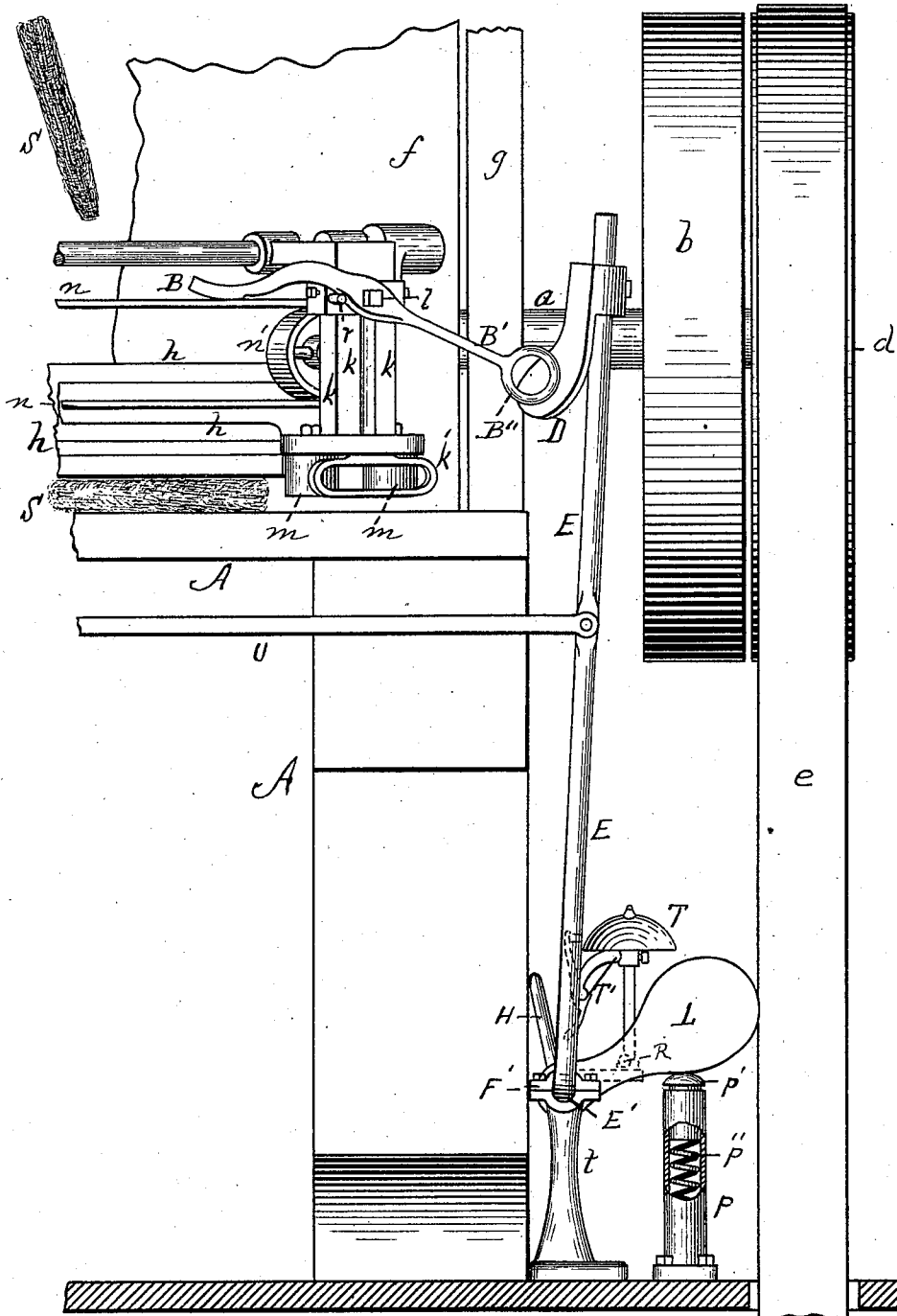
3 Sheets—Sheet 3.

P. H. WALSH.

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WITNESSES

A. A. Pouney.
L. G. Grayson.

Fig. 3.

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UNITED STATES PATENT OFFICE.

PATRICK H. WALSH, OF SAUGUS, MASSACHUSETTS.

STOP-MOTION AND ALARM FOR WOOLEN FINISHER-CARDS.

SPECIFICATION forming part of Letters Patent No. 576,749, dated February 9, 1897.

Application filed April 3, 1896. Serial No. 586,015. (No model.)

To all whom it may concern:

Be it known that I, PATRICK H. WALSH, a citizen of the United States, residing in Saugus, in the county of Essex and State of Massachusetts, have invented a new and Improved Stop-Motion and Alarm for Woollen Finisher-Cards, of which the following is a specification.

This invention relates to stop-motions and alarms for woollen finisher-cards; and it consists in the new and improved construction and arrangement of parts fully described below, and illustrated in the accompanying drawings, whereby the object is accomplished with greater efficiency and economy than has heretofore been the case.

In the accompanying drawings, in which similar letters of reference indicate corresponding parts, Figure 1 is a side elevation illustrating my improvement, enough of the machine being shown to indicate the operation of the mechanism in connection with an "Apperly feed." Fig. 2 is a front elevation of the same. Fig. 3 is an enlarged front elevation of a portion of the same, showing the "sliver" broken, the machine stopped, and the alarm given.

A represents the frame; *a*, the driving-shaft; *b* and *d*, the fast and loose pulleys, respectively, and *e* the belt.

f is the cylinder, and *g* the bracket-support for the strippers and workers, both shown diagrammatically or in simple outline.

h is the framework of the Apperly feed.

k is the traveler; *k'*, the guide therefor; *m*, the sliver-rolls, and *n n'* the belt and pulleys for driving the traveler.

All the above-named parts are constructed as usual and need no further description.

S represents the sliver.

A finger is pivoted at *l* to the traveler *k*, such finger consisting of the two portions B and B', the portion B being the heavier and the portion B' being formed at its end into a ring B''. This latter portion is swung down in order that the sliver S may pass through it into the guide *k'* and traveler-rolls *m*, as shown in Figs. 1 and 2, the weight of the sliver holding the finger in the substantially vertical position illustrated.

D is a plate, preferably of the curved or spoon shape shown, said plate being secured

to the rod or bar E. This swinging bar is integral with and bent at E' at right angles to the horizontal shaft F, having its bearings at F' in suitable uprights *t*. Near the opposite end of this shaft F a curved arm H is rigidly secured thereto, and the shaft has loose upon it a weight L. This weight is, when the sliver is unbroken, in a raised position, and the arm extends behind it, as shown, said weight resting against it.

When the sliver breaks, as shown in Fig. 3, its pressure on the finger B B' B'' ceases and said finger swings by gravity into the position indicated in Fig. 3 and the ring end B'' strikes the plate D and swings the upper end of the bar E from it or toward the pulleys. This of course partially rotates the shaft F and causes the arm H, which is fast on it, to push the weight, causing it to topple over against the belt *e* and shift it from the fast pulley *b* to the loose pulley *d*, thus stopping the machine. For convenience a spring-rest is provided for this weight, such rest consisting of the tubular post P, provided with an integral spring P'', which supports a head P', upon which the weight drops without undue jar. The finger B B' rests on the pin *r*, extending horizontally from the traveler. The weight is provided with a finger R, which, when said weight drops, trips the striker-arm T' of a gong T, supported by the frame, and causes the gong to sound, thus giving notice of the breaking of the sliver. When the break is repaired, the parts are swung into their original positions and the weight is raised.

In order that the above-described effect may be produced from either end of the machine, a rod or link U connects the bar E with an arm V, pivoted at V' to a bracket on the frame, and provided with a plate W, exactly similar to the plate D, and adapted to be struck by the finger B if the break occurs when the traveler and finger are at that end of the machine.

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

1. In a stop-motion for woollen finisher-cards, the finger consisting of the heavier arm B, and lighter arm B' provided with the ring B'', the traveler and sliver-rolls and support-

ing mechanism, said finger being pivoted to the traveler in such position that the sliver passes through said ring to the rolls; the horizontal shaft F supported in suitable bearings and provided with the upwardly-extending arm E; a plate or spoon secured to said arm adapted to be engaged by the lighter end of the finger when the sliver breaks; a weight loose on said shaft; and an arm H extending up from said shaft at such an angle as to support the weight when said weight is swung up, and the driving-belt and connecting mechanism; whereby the engagement of the finger with said plate or spoon topples the weight over against the driving-belt and stops the machine, substantially as set forth.

2. In a stop-motion for woolen finisher-cards, the finger consisting of the heavier arm B, and lighter arm B' provided with the ring B'', the traveler and sliver-rolls and supporting mechanism, said finger being pivoted to the traveler in such position that the sliver passes through said ring to the rolls; the horizontal shaft F supported in suitable bearings and provided with the upwardly-extending arm E; a plate or spoon secured to said arm and adapted to be engaged by the lighter end of the finger when the sliver breaks; a weight loose on said shaft; an arm H extending up from said shaft at such an angle as to support the weight when said weight is swung up, and the driving-belt and connecting mechanism, whereby the engagement of the finger with said plate or spoon topples the weight

over against the driving-belt and stops the machine; an alarm-bell supported in position near the weight; and a finger extending from said weight and adapted as the weight falls to trip the hammer of said alarm-bell, substantially as described.

3. In a stop-motion for woolen finisher-cards, the finger consisting of the heavier arm B and the lighter arm B' provided with the ring B'', the traveler and sliver-rolls and supporting mechanism, said finger being pivoted to the traveler in such position that the sliver passes through said ring to the rolls; the horizontal shaft F supported in suitable bearings and provided with the upwardly-extending arm E; a plate or spoon secured to said arm and adapted to be engaged by the lighter end of the finger when the sliver breaks; a weight loose on said shaft; an arm H extending up from said shaft at such an angle as to support the weight when said weight is swung up, and the driving-belt and connecting mechanism, whereby the engagement of the finger with said plate or spoon topples the weight over against the driving-belt and stops the machine; and a spring rest or support for said weight when it is down, whereby the fall of the weight is accomplished without undue jar, substantially as set forth.

PATRICK H. WALSH.

Witnesses:

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