

No. 665,495.

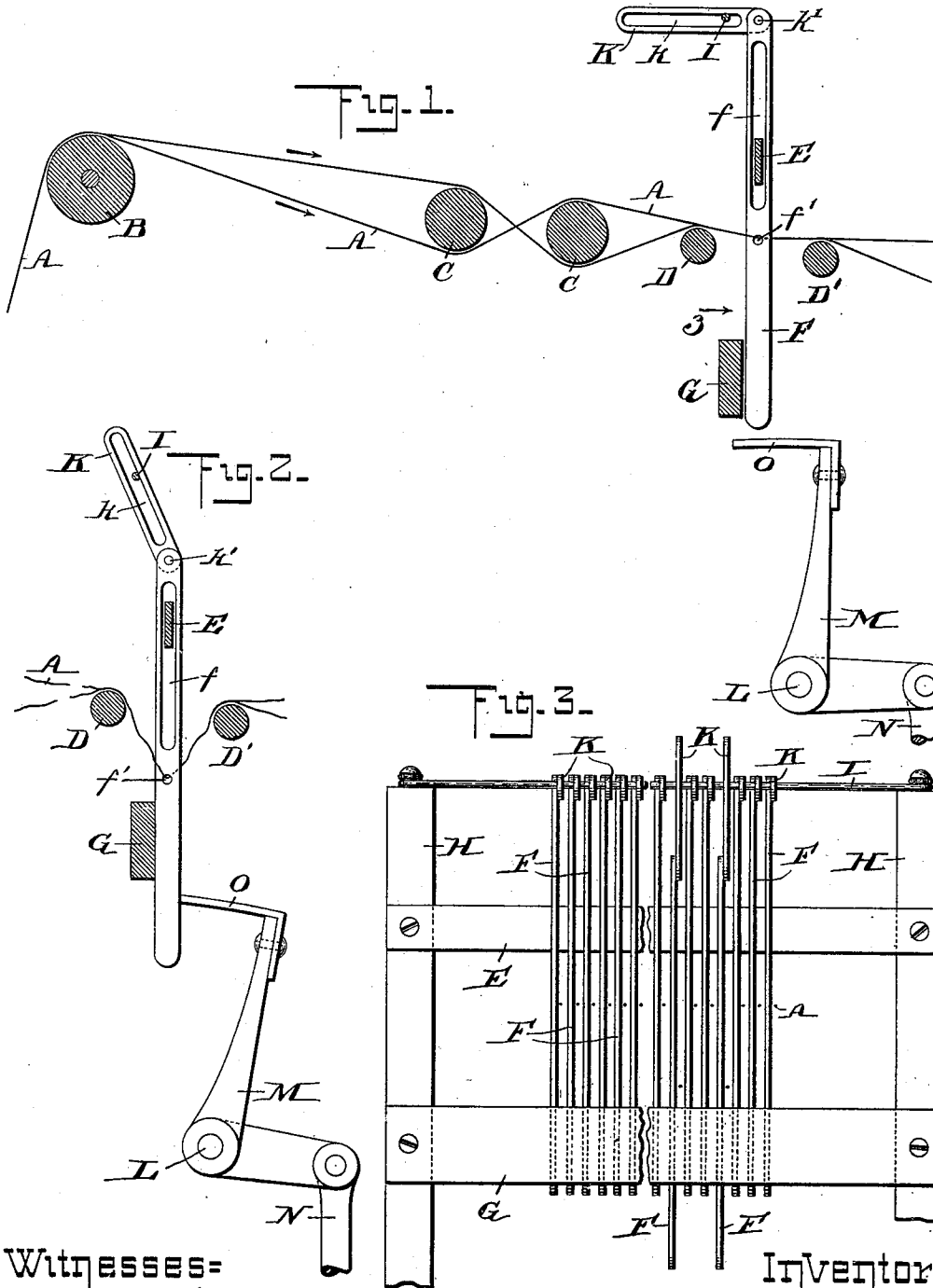
Patented Jan. 8, 1901.

J. H. WOLGER, L. E. BARNES & S. C. FOSS.

WARP STOP MOTION DETECTOR.

(Application filed Oct. 6, 1900.)

(No Model.)



Witnesses=  
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# UNITED STATES PATENT OFFICE.

JAMES H. WOLGER, LEWIS E. BARNES, AND SAMUEL C. FOSS, OF METHUEN,  
MASSACHUSETTS.

## WARP-STOP-MOTION DETECTOR.

SPECIFICATION forming part of Letters Patent No. 665,495, dated January 8, 1901.

Application filed October 6, 1900. Serial No. 32,236. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES H. WOLGER, LEWIS E. BARNES, and SAMUEL C. FOSS, citizens of the United States, residing at Methuen, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Detectors for Warp Stop-Motions, of which the following is a specification.

10 This invention relates to improvements in detectors for warp stop-motions for looms; and it has for its object to indicate to the weaver which of the warp-threads is broken when the loom is automatically stopped by the breaking of any one or more of the warp-threads, as will hereinafter be more fully shown and described, reference being had to the accompanying drawings, wherein—

20 Figure 1 represents a side elevation of our improved detector shown in normal position, in connection with a diagrammatic view of the warp-guides of a loom. Fig. 2 represents a similar view showing the detector in position during the breaking of one of the warp-threads and consequent stopping of the loom; and Fig. 3 represents a rear view of the detectors, the left-hand portion of which represents the detectors in their normal positions and showing in the right-hand portion some of the detectors in position during the breaking of the warp-threads.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

35 In Fig. 1, A A represent the warp-threads, B the whip-roll, C C the lease-rods, and D D' the warp-guides, on a loom, as usual. E is the stationary bar on which the detector F is guided, the latter having for this purpose a slotted perforation *f*, adapted to receive the bar E, as shown. *f'* is an eye in the detector F, through which the warp-thread is guided, as is common in warp stop-motions. Back of the lower end of the detector F is located the stationary rest-bar G, as shown.

45 In Fig. 3, H H represent the side frames of the loom, to which the bar E and rest-bar G are secured, as usual. To said frames H H is secured a transverse rod or wire I, which passes loosely through slotted perforation *k* in telltale or indicator levers K, pivotally

connected at *k'* to the upper end of each of the detectors F, as shown.

In connection with the detectors we use any ordinary or well-known automatic loom-stopping device, of which a portion is represented in Figs. 1 and 2, such stopping device consisting of a rock-shaft L, to which is attached a lever M, pivotally connected to a rod N, suitably connected to the automatic loom-stopping device, as is common in warp stop-motions for looms. To the rocker-shaft L is attached a plate or bar O, which during the normal position of the detectors is free to oscillate below the lower ends of the detectors, as shown in Fig. 1. If one of the warp-threads should break, the detector will drop down to the position shown in Fig. 2, thus causing the bar O to come to a stop against the lower end of such detector, as shown in Fig. 2, thereby causing the loom to be automatically stopped by the usual automatic shipper device ordinarily employed in warp stop-motions. We wish to state that we do not confine or limit ourselves to any particular form or construction of such automatic warp stop-motions, as our telltale or indicator may be used on detectors in connection with any desired or well-known automatic warp stop device without departing from the essence of our invention. If from any cause a warp-thread should break, the detector will drop by gravity to the position shown in Fig. 2, and in so doing its telltale or indicator lever K will automatically assume the vertical or nearly-vertical position shown in Fig. 2, thus notifying the weaver at a glance which particular warp-thread is broken, enabling him or her to quickly repair the break of the thread without loss of time.

Usually the detectors in a loom are closely arranged side by side, and when not provided with telltales it is quite difficult for the weaver to locate the broken warp-thread, whereas with our device such a break can instantly be located, as the upturned lever K will show at a glance which of the warp-threads is broken.

The invention is very simple and, if so desired, can readily be applied to detectors now in use.

What we wish to secure by Letters Patent and claim is—

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1. In a warp stop-motion for looms, a detector normally supported by the tension of the warp-thread, and adapted to drop after the breaking of its thread and to thereby effect the automatic stoppage of the loom, and having pivoted to its upper end a telltale or indicator lever adapted to be swung into a vertical or nearly-vertical position during the descent of the detector substantially as and for the purpose set forth.

2. In a warp stop-motion, a stationary bar, a series of slotted detectors guided thereon and having each a perforation for receiving the warp-thread, combined with a slotted telltale or indicator lever pivotally connected to the upper end of the detector and a stationary rod or wire inserted through the slotted perforation in said telltale or indicator lever substantially as and for the purpose set forth.

3. A loom-detector, having a slotted perforation for receiving the detector guide-bar, and a perforation for receiving the warp-thread, combined with a slotted telltale or indicator lever, pivoted to the upper end of

said detector, and a stationary rod or wire arranged through the slot in said telltale-lever for the purpose of causing the latter to automatically assume a vertical or nearly-vertical position when its warp-thread is broken, substantially as herein set forth and described.

4. In a warp stop-motion device, a detector normally supported upon a warp-thread under tension and having pivoted to its upper end a telltale or indicator lever normally held in a horizontal or nearly-horizontal position and adapted to swing into a vertical or nearly-vertical position, by the breaking of the warp-thread, as and for the purpose set forth.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JAMES H. WOLGER.  
LEWIS E. BARNES.  
SAMUEL C. FOSS.

Witnesses:

CHARLES E. COLLINS,  
GILBERT E. FOSS.