No. 828,534. PATENTED AUG. 14, 1906.

W. F. CLAYTON & C. P. BENTLEY.

THIN PLACE DETECTOR FOR LOOMS.

APPLICATION FILED JULY 17, 1905.

Fig. 1.

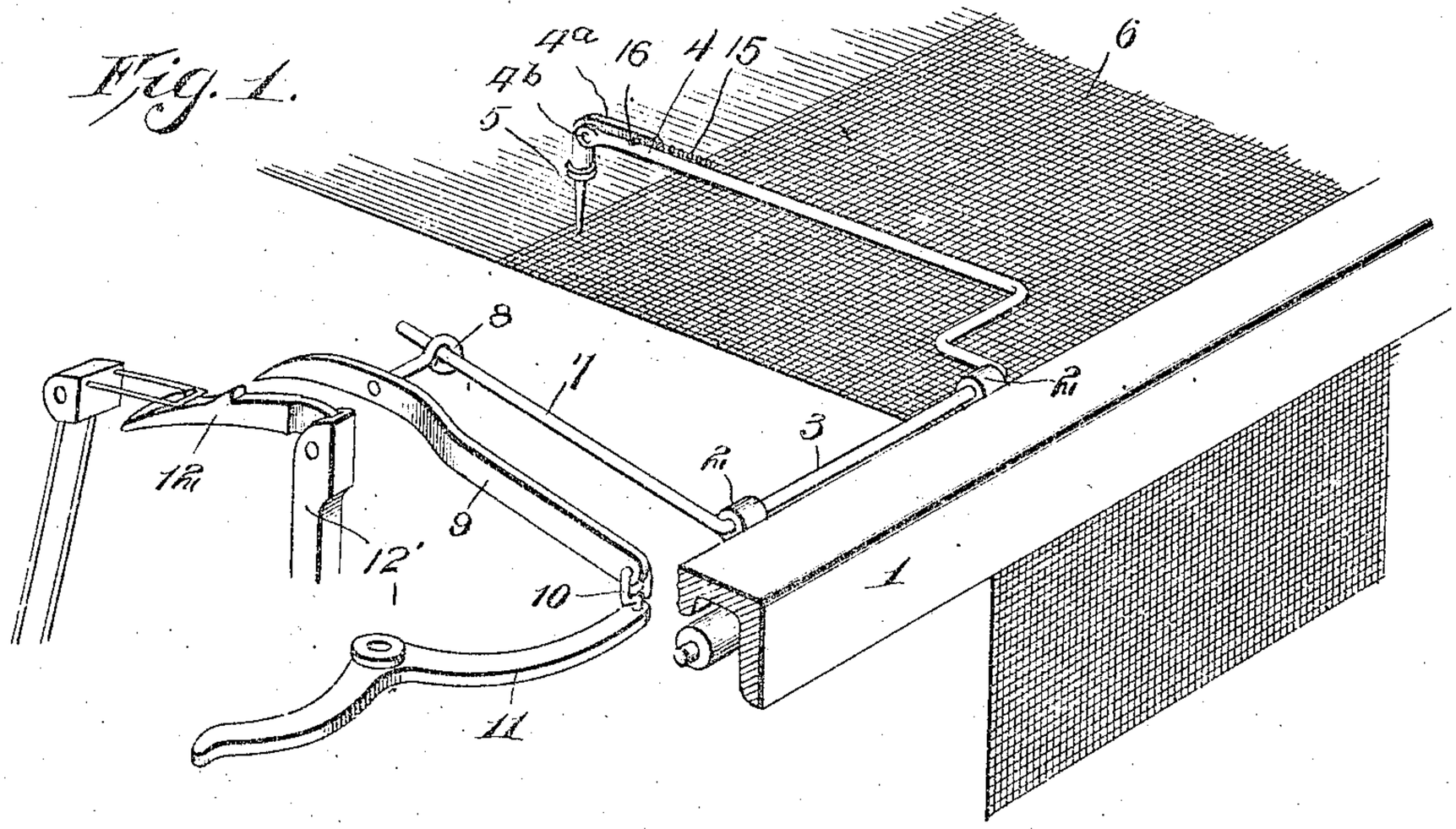


Fig. 3

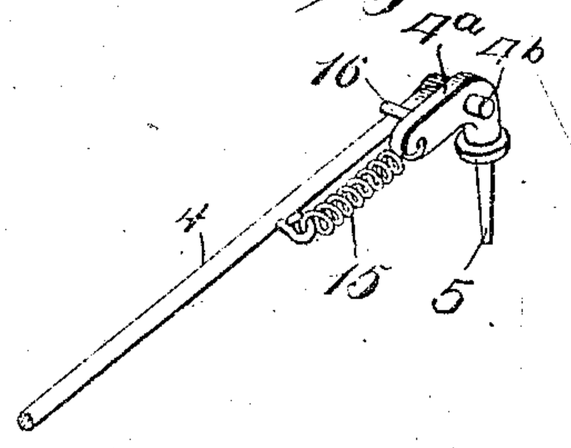
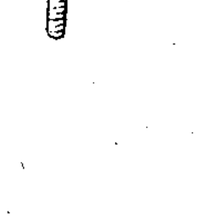


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM F. CLAYTON AND CLIFFTON P. BENTLEY, OF ATLANTA, GEORGIA, ASSIGNORS TO CLAYTON AND BENTLEY COMPANY, A CORPORATION OF GEORGIA.

THIN-PLACE DETECTOR FOR LOOMS.

No. 828,534. Specification of Letters Patent. Patented Aug. 14, 1906.

Application filed July 17, 1905. Serial No. 269,970.

To all whom it may concern:

Be it known that we, WILLIAM F. CLAYTON and CLIFFTON P. BENTLEY, citizens of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Thin-Place Detectors for Looms; and we do hereby 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.

Our invention relates to looms; and it is more particularly an attachment for automatically stopping the loom when the shuttle does not work or the filling misses one or more picks and when a thin or imperfect place is therefcre produced within the fabric.

The invention consists of the novel features of construction and combination of parts, which will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings we have shown the preferred form of our invention.

In said drawings, Figure 1 is a perspective view of a portion of the loom, showing our improved attachment thereon. Fig. 2 is a detail view showing the means for connecting the latch-bar to the knock-off lever, and Fig. 3 is a perspective view showing the outer end of the detector-rod and parts secured thereto.

Referring to the figures by numerals of reference, 1 is the breast-beam of a loom, the same having brackets 2 or the like thereon, in which is rotatably mounted a detector-rod 3. An arm 4 extends from one end of this rod and is provided at its free end with a bell-crank lever 4^a, the lever being pivotally secured to the arm 4 by means of a pivot-pin 4^b. The lower end of the bell-crank lever 4^a is provided with a finger 5, which is adapted to contact with the fabric 6 in the loom at about two picks from the shuttle. Another arm 7 extends through and loosely engages an arm 8, which extends laterally from a latch-bar 9. This latch-bar is connected by a loop 10 with a knock-off lever 11 of the loom and is adapted to fall into engagement with the notch in the snake-head or weft-hammer hook 12, mounted in the weft-hammer 12′.

It will be understood that as the woven fabric is taken up the finger 5 will be supported thereby always at about two picks from the shuttle; but should said shuttle fail to work or should the filler miss one or more picks and a thin or open portion be therefore produced in the fabric the finger 5 would drop as soon as said thin portion arrives in position thereunder, and therefore cause the arm 7 to swing downward and allow the latch-bar 9 to fall into engagement with the notch in the weft-hammer hook 12. With this attachment the mechanism of the loom will therefore be promptly stopped when a thin place is produced in the woven fabric.

The finger 5 is held normally at right angles to the arm 4 by means of a coil-spring 15, one end of which is secured to the free end of the bell-crank lever 4^a, while the opposite end thereof is secured to the arm 4, and that end of the bell-crank lever to which the spring 15 is secured is limited in its downward movement by means of a stop-pin 16, said pin being carried by the bell-crank lever 4^a and extended over the arm 4. It will therefore be seen that by pivoting the finger 5 upon the arm 4 there is no danger of the fabric becoming torn when the finger drops therethrough, because the spring 15 will allow the finger to swing out of engagement with the fabric when subjected to pressure.

We claim—

1. The combination with a beam of a loom; of an arm pivotally connected to the beam, a resilient finger depending therefrom and normally held by gravity upon fabric woven in the loom and means actuated by the arm for stopping the mechanism of the loom.

2. The combination with a beam of a loom; of a rod rotatably mounted upon the beam, an arm extending therefrom, a spring-controlled finger depending from the arm and normally contacting by gravity with fabric woven by the loom and means actuated by the arm for stopping the mechanism of the loom.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM F. CLAYTON.
CLIFFTON P. BENTLEY.

Witnesses:
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