No. 828,535. PATENTED AUG. 14, 1906.

W. F. CLAYTON.

THIN PLACE DETECTOR FOR LOOMS.

APPLICATION FILED JAN. 22, 1906.

Fig. 1

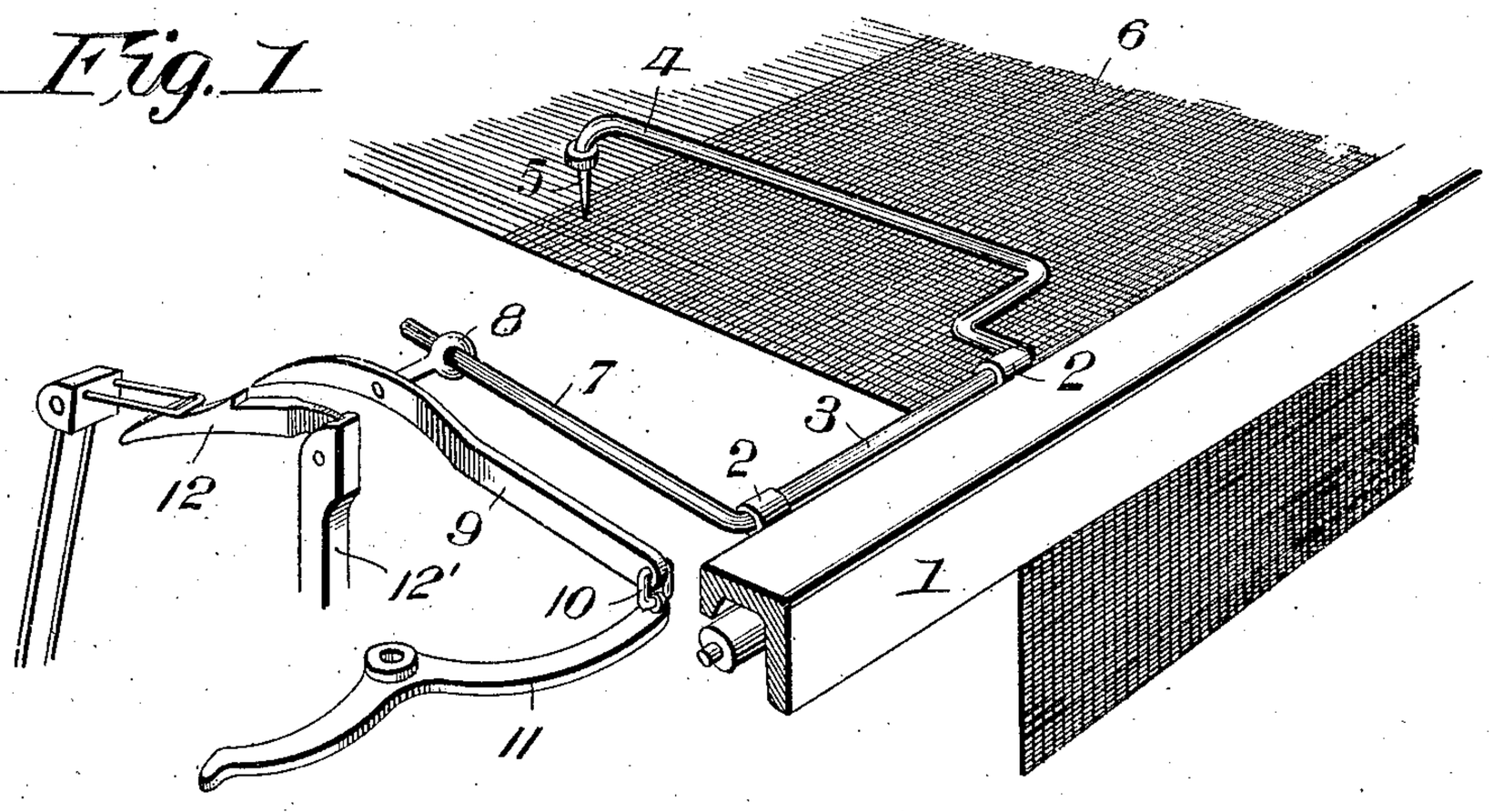


Fig. 3.

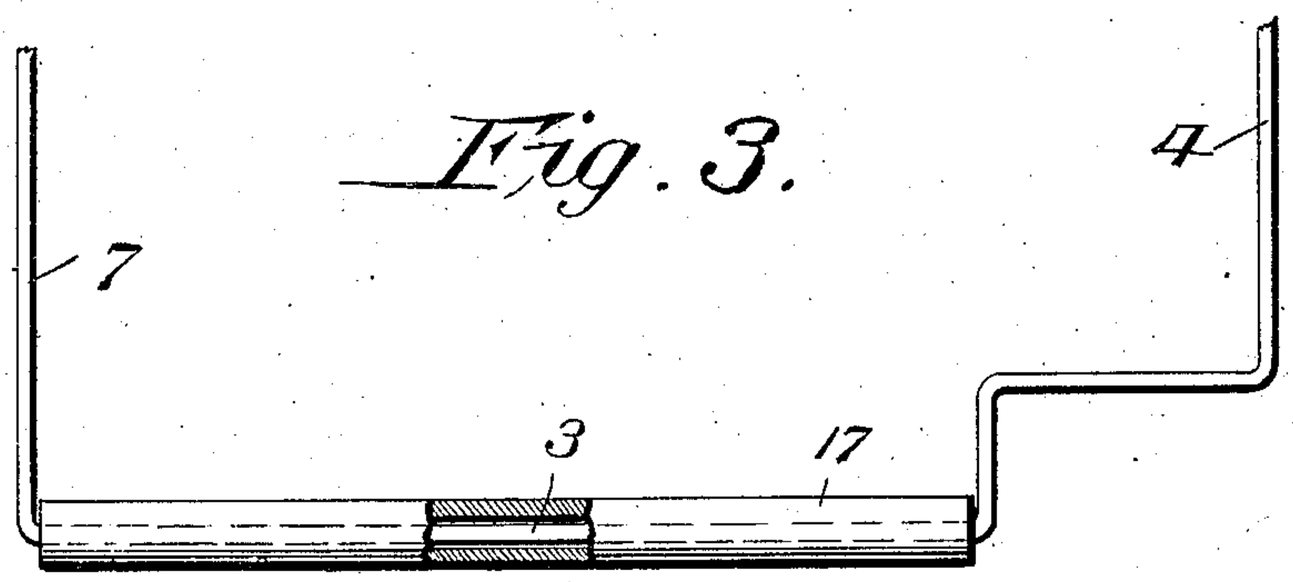
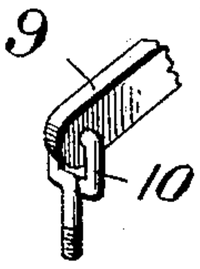


Fig. 2.



WITNESSES.

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WILLIAM FRANKLIN CLAYTON, OF ATLANTA, GEORGIA, ASSIGNOR TO CLAYTON AND BENTLEY COMPANY, A CORPORATION OF GEORGIA.

THIN-PLACE DETECTOR FOR LOOMS.

No. 828,535. Specification of Letters Patent. Patented Aug. 14, 1906.

Application filed January 22, 1906. Serial No. 297,199.

To all whom it may concern:

Be it known that I, WILLIAM FRANKLIN CLAYTON, a citizen 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 I 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.

My 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 therefore 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 I have shown the preferred forms of my invention, and in said drawings—

Figure 1 is a perspective view of a portion of a loom, showing my improved attachment thereon. Fig. 2 is a detail view showing the means for connecting the dog to the knock-off lever. Fig. 3 is a view, partly in elevation and partly in section, showing a portion of a modified form of attachment.

Referring to the figures by numerals of reference, 1 is the breast-beam of a loom, the same having brackets 2 thereon, in which is rotatably mounted a detector-rod 3. An arm 4 extends from one end of this rod and has a downwardly-projecting 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 the 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 on the weft-hammer 12′.

It will be understood that as the woven fabric is taken up the finger 5 of arm 4 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 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.

It will also be understood that, as shown in Fig. 3, the detector-rod 3 can be rotatably mounted within a sleeve 17. This sleeve is utilized when it is desired to fasten the attachment to the templet, under which circumstances the templet is swung backward and the sleeve 17 clamped within the loop thereof.

What I claim is—

1. In a mechanism of the class described, the combination with the knock-off lever, of a pivoted detector-rod, an arm upon the rod, a latch-bar supported by the arm and pivoted to the knock-off lever provided with a projection, a weft-hammer, and a weft-hammer hook adapted to engage the projection when the hammer advances.

2. In a mechanism of the class described, the combination with the knock-off lever, hammer, and weft-hammer hook, of a pivoted detector-rod, a latch-bar pivoted to the knock-off lever provided with a projection in the line of travel of the hammer-hook, and means upon the detector-rod for normally supporting the latch-bar out of engagement with said hook.

3. In a mechanism of the class described, the combination with the knock-off lever, weft-hammer, and hammer-hook, of a pivoted detector-rod, a latch-rod pivoted to the knock-off lever having a projection adapted to engage the hammer-hook, and an arm upon the detector-rod for normally keeping the latch-bar out of engagement with the hammer-hook.

4. In a mechanism of the class described, the combination with the knock-off lever, weft-hammer, and hammer-hook, of a pivoted detector-rod, a finger upon the rod adapted to rest upon the cloth, an arm upon the rod, a latch-bar provided with a projection supported by the arm above the hammer-hook, when the finger is resting upon the cloth, and permitting the projection to en-

gage the hammer-hook when the finger descends, and pivoted connections between the shipper-lever and latch-bar.

5. A detector-rod mounted with its point upon the cloth and having an extension, a knock-off lever and weft-hammer, a latch-bar connecting with the knock-off lever and supported by said extension to engage the weft-hammer when the point enters the cloth.

6. A pivotally-mounted detector-rod having a cloth-engaging point and an extension, a weft-hammer, a latch-bar supported by said extension above said hammer and means to utilize the movement of the latch-bar when the latter is struck by the weft-hammer incident to the point entering the cloth.

7. The combination with the knock-off lever; of a detector-rod having an arm, a latch-bar supported by the arm and a weft-hammer designed to cause the latch-bar to operate the knock-off lever.

8. The combination with the knock-off lever; of a pivoted detector-rod, an arm upon the rod, a latch-bar supported by the arm and connected with the knock-off lever and a weft-hammer designed to engage the latch-bar and operate the knock-off lever.

9. The combination with the knock-off lever and weft-hammer; of a detector-rod, a latch-bar connecting with the knock-off lever and means upon the detector-rod for normally supporting the latch-bar out of engagement with the weft-hammer.

10. The combination with the knock-off lever, weft-hammer and hammer-hook; of a detector-rod, a latch-bar connecting with the knock-off lever and having a projection designed to be engaged by the hammer-hook, an arm upon the detector-rod adapted to normally support the latch-bar out of engagement with the hammer-hook.

11. The combination with the knock-off lever and weft-hammer; of a pivoted detector-rod, a finger upon the rod to rest upon the cloth, an arm upon the rod, a latch-bar supported by the arm out of the path of the weft-hammer when the finger is resting on the cloth whereby the latch-bar will move into engagement with the weft-hammer when the finger passes through the cloth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM FRANKLIN CLAYTON.

Witnesses:
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J. W. DEAN.