No. 697,169. Patented Apr. 8, 1902.

A. K. PRATT.

VIBRATOR FOR WARP STOP MOTIONS.

(Application filed May 21, 1901.)

(No Model.)

Fig. 1.

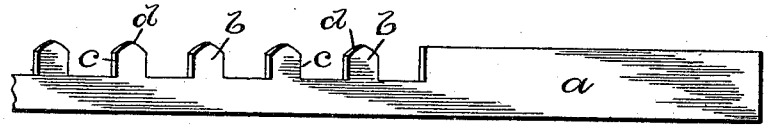


Fig. 2.

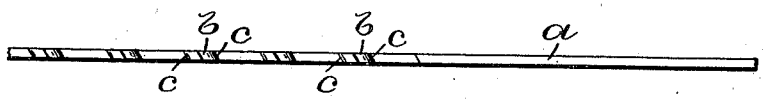


Fig. 3.

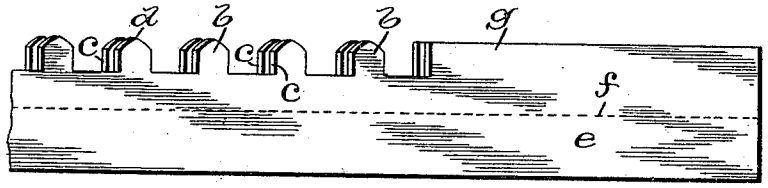


Fig. 4.

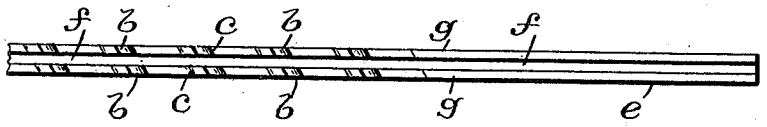
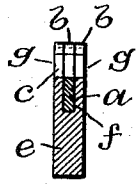


Fig. 5.



WITNESSES:

Chas. H. Luther Jr.

B. M. Simms.

INVENTOR:

Albert K. Pratt

by Joseph A. Miller & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALBERT K. PRATT, OF WHITINSVILLE, MASSACHUSETTS, ASSIGNOR TO THE WHITIN MACHINE WORKS, INCORPORATED, OF WHITINSVILLE, MASSACHUSETTS.

VIBRATOR FOR WARP STOP-MOTIONS.

SPECIFICATION forming part of Letters Patent No. 697,169, dated April 8, 1902.

Application filed May 21, 1901. Serial No. 61,319. (No model.)

To all whom it may concern:

Be it known that I, ALBERT K. PRATT, a citizen of the United States, residing at Whitinsville, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Vibrators for Warp Stop-Motions for Looms, of which the following is a specification.

This invention has reference to an improvement in the vibrator and guide used in the class of warp stop-motions for looms in connection with detector-plates supported on the individual warp-threads.

In the class of warp stop-motions in which a thin sheet-metal blade is supported on each warp-thread and drops to engage with the vibrator when a warp-thread breaks to arrest the vibrator and through suitable mechanism stop the loom the operator in charge of the loom cannot readily see the warp-thread that has been broken.

The object of this invention is to point out to the weaver the particular broken warp-thread; and to this end the invention consists in arranging the stops on the guide in which the vibrator moves obliquely to the movement of the vibrator and obliquely to the plane of the detector-plates, whereby the detector-plate that has dropped on the breaking of the warp-thread may be clamped obliquely to the rest of the detector-plates, as will be more fully set forth hereinafter.

Figure 1 is a side view of my improved vibrator-blade, showing the abutments oblique to the plane of the vibrator-blade. Fig. 2 is a view of the upper edge of the same. Fig. 3 is a side view of the guide in which the vibrator-blade moves, showing the abutments oblique to the longitudinal plane of the guide. Fig. 4 is a view of the upper edge of the same. Fig. 5 is a transverse sectional view of the guide and the vibrator-blade.

In the drawings, *a* indicates the vibrator or feeler blade, and *b b* the preferred form of teeth, having each two abutments *c c* and pyramidical ends *d*. The abutments *c c* are oblique to the edge of the blade *a*. The guide *e* has the groove *f* extending longitudinally between the sides *g g*. The teeth *b b* are placed on the sides oblique to the longitudinal plane.

The vibrator-blade *a* is inserted into the groove *f* and is reciprocated longitudinally by the usual reciprocating mechanism.

When a warp-thread breaks, the detector-plate supported by the warp-thread drops onto the vibrator and is clamped between the oblique abutments *c c* of the guide and one of the oblique abutments *c* of the vibrator, thereby placing the detector-plate in the position oblique to the other detector-plates, separating the adjacent detector-plates, and forming a conspicuous change readily observed by the overlooker or weaver and saving time in detecting the broken warp.

I do not wish to confine myself to the exact construction or form of the teeth *b*, as this form may be altered, and the usual saw-tooth form heretofore used may be used provided the clamping-abutments *c c* are oblique to the plane of the guide and preferably also oblique to the plane of the vibrator-blade.

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

1. A vibrator-blade for warp stop-motions for looms having teeth the vertical clamping edges of which are oblique to the plane of the blade, as described.

2. A guide-plate for warp stop-motions for looms, having two lines of teeth, the clamping edges of which are on a plane oblique to the guide-plates, as described.

3. In a vibrator feeler device for warp stop-motions for looms, a tooth having the clamping edge oblique to the plane of the tooth, as described.

4. In a warp stop-motion for looms, the combination with a guide-plate having two lines of teeth separated by a vibrator-blade having a line of teeth, the clamping edges of said teeth being oblique to the plane of the movement of the vibrator-blade, as described.

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

ALBERT K. PRATT.

Witnesses:
B. M. SIMMS,
JOSEPH A. MILLER.