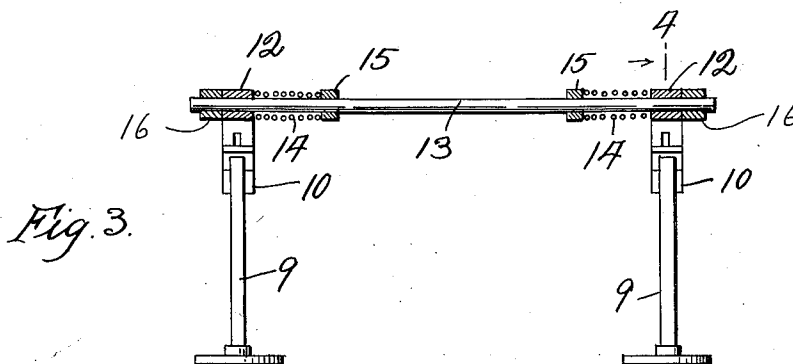
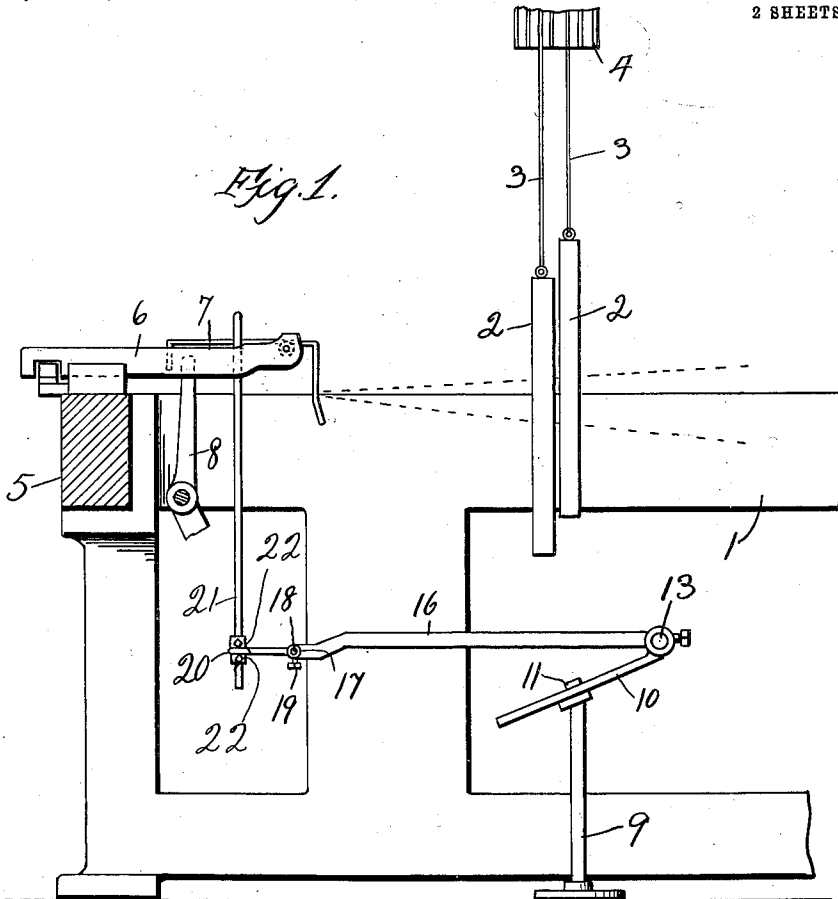


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HARNESS STOP FOR LOOMS.
APPLICATION FILED MAR. 21, 1913.

1,079,455.

Patented Nov. 25, 1913.
2 SHEETS—SHEET 1.



Witnesses
Robert M. Sutphen
A. L. Hind

By

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Attorney

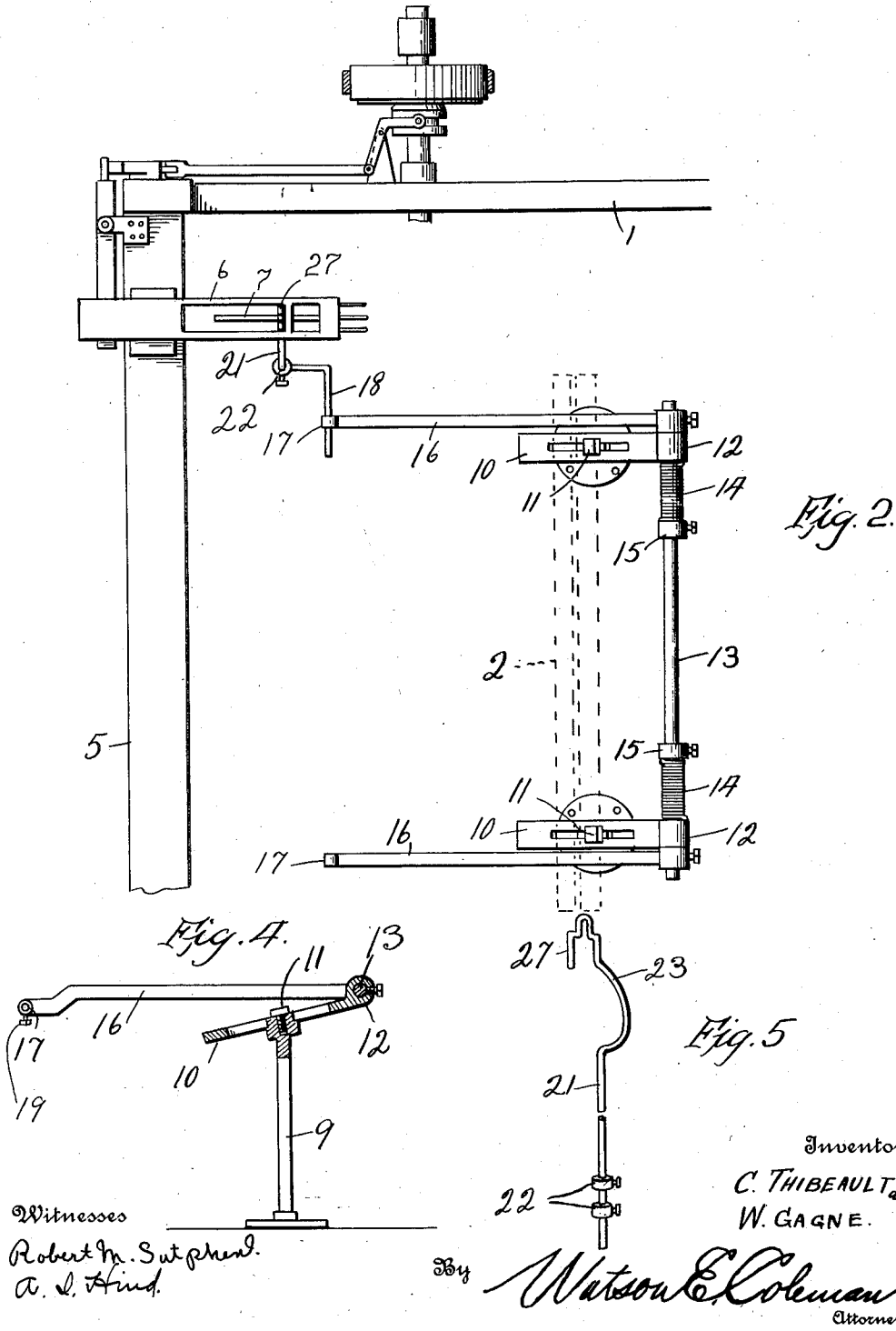
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UNITED STATES PATENT OFFICE.

CHARLES THIBEAULT AND WENCESLAS GAGNE, OF LAWRENCE, MASSACHUSETTS.

HARNESS-STOP FOR LOOMS.

1,079,455.

Specification of Letters Patent.

Patented Nov. 25, 1913.

Application filed March 21, 1913. Serial No. 758,037.

To all whom it may concern:

Be it known that we, CHARLES THIBEAULT and WENCESLAS GAGNE, citizens of the United States, residing at Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Harness-Stops for Looms, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to new and useful improvements in looms and more particularly to a harness stop motion therefor and the primary object of the invention is to provide a device of this character which will positively stop the loom upon the breaking or snapping of one of the straps or other flexible connections used for retaining the harness frames in position.

15 A still further object of the invention resides in providing an attachment which is disposed below the harness frames and upon which the latter are adapted to drop and another object resides in providing a device which has engagement with the weft lever and slide for stopping the machine.

20 A still further object of the invention resides in providing a device which is simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

25 With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

30 In the accompanying drawings forming a part of this application, Figure 1 is a fragmentary side elevation of the machine showing our attachment applied to use thereon. Fig. 2 is a plan view with parts in section. Fig. 3 is a vertical longitudinal section through the attachment. Fig. 4 is a transverse section therethrough. Fig. 5 is a perspective view of the stop rod proper.

35 In describing our invention, we shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which—

40 1 indicates the frame of a loom having the harness frames 2 operatively mounted therein, said frames being connected by means of the straps or other flexible connections 3 to the operating levers 4 on the frame.

45 Mounted on the breast beam 5 in the usual or any preferred manner, is the slide 6,

which has coöperation with the weft lever 7 and weft hammer 8, in the usual or any preferred manner.

Our invention contemplates a means for stopping the loom almost immediately upon the breaking or snapping of one of the straps or other flexible connections used for connecting the levers 4 with the harness frames 2 and to this end, we provide a frame, first consisting of a pair of standards or uprights 9. These standards or uprights are adapted to be mounted on the floor in spaced relation to one another and immediately below the harness frames 2. Adjustably mounted on the upper ends of these standards or uprights 9 are the plate-like members 10, the same being provided with slots through which extend set screws 11 engaged with the standards 9 to afford adjustability between the latter and said plate-like members. The one ends of said plate-like members 10 are provided with bearings 12 alining with one another and in which is oscillatingly mounted a longitudinally disposed rod 13. Encircling this rod 13, adjacent the bearings 12, are the coil spring members 14, which have one of their ends engaged with the bearings 12 and the other ends thereof engaged with adjustable and removable collars 15 also mounted on the rod 13. In this manner, it will be seen that the tension of the springs 14 is adapted to dispose the rod 13 in a particular direction.

The ends of the rod 13 projecting beyond the bearings 12 have adjustably and removably secured thereto the lever arms 16 which are arranged to extend in substantially horizontal planes below the harness frames 2. The free ends of these lever arms 16 are offset and provided with bearings 17 which receive therethrough the rods 18. These rods are held in any adjusted position by means of the set screws 19 extending into the bearings 17 and said rods 18 are bent intermediate of their ends to provide a laterally extending portion, the extreme free ends of the latter being also provided with bearings or eyes 20. Disposed through these bearings 20 and adapted to extend substantially in vertical positions are the stop rods 21 which may be adjusted to extend at various heights above the bent portions of the rods 18 and held in view of the provision of the adjusting nuts 22 thereon. The upper ends of said stop rods are bent arcuately as shown at 23, and the extreme free

ends of the same are again bent, as shown at 24 to be engaged with the weft lever 7. From this construction it will be seen that should anyone of the straps or flexible connections 3 be broken or snapped during the operation of the device, the harness frames connected therewith will drop downwardly to rest upon the lever arms 16. The weight of the harness frames on the lever arms will force the same downwardly, thereby causing the rod 13 to be oscillated in the bearings 12 under tension of the springs 14 and such downward movement of the levers 16 will indirectly draw downwardly upon the stop rods 21. This operation of the stop rods will, obviously, act upon the weft lever and in turn cause the slide to be moved, whereby the machine will be stopped within one or two picks after the snapping or breaking of the connection 3.

From the foregoing it will be seen that we have provided a simple, inexpensive and efficient means for carrying out the objects of the invention and while we have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described this invention, what is claimed is:—

1. In a harness stop motion for looms, the combination with a loom frame, harness and filling stop mechanism; of a pair of spaced standards arranged within said frame below the harness, a pair of plate-like members adjustably connected to the upper ends of said standards and inclined upwardly therefrom, a shaft extending longitudinally of the frame and mounted to oscillate in the uppermost ends of the inclined plate-like members, spring means in connection with said plate-like members and said shaft to normally retain the latter in one position, a pair of laterally extending arms adjustably connected to the ends of said shaft and adapted to receive the harness frames thereon when the supporting standards of the latter become broken, and connecting means between the outer ends of said arms and the filling stop mechanism.

2. In a harness stop motion for looms, the combination with a loom frame, harness and filling stop mechanism; of a pair of spaced standards arranged within said frame below the harness, a pair of plate-like members adjustably connected to the upper ends of said standards and inclined upwardly therefrom, a shaft extending longitudinally of the frame and mounted to oscillate in the uppermost ends of the inclined plate-like

members and said shaft to normally retain the latter in one position, a pair of laterally extending arms adjustably connected to the ends of said shaft and adapted to receive the harness frames thereon when the supporting standards of the latter become broken, and adjustable means connecting the outer ends of said arms with the filling stop mechanism.

3. In a harness stop motion for looms, the combination with a loom frame, harness and filling stop mechanism; of a pair of standards arranged within the frame below the harness, plate members adjustably mounted on the upper ends of said standards and inclined upwardly therefrom, the uppermost ends of said plate members being designed to form bearings, a shaft extending longitudinally of the frame and mounted to oscillate in said bearings, spring means in connection with said bearings and shaft to dispose the latter normally in one position, a pair of arms adjustably secured to the ends of said shaft and extending laterally therefrom, and a pair of vertically extending arms adjustably connected with the free ends of said laterally extending arms, said vertical arms having an arcuate portion formed therein, terminating in a hook for engagement with the weft fork of the filling stop mechanism.

4. In a harness stop motion for looms, the combination with a loom frame, harness and filling stop mechanism; of a pair of spaced standards arranged within said frame below the harness, a pair of plates adjustably mounted on the upper ends of said standards and inclined upwardly therefrom, the uppermost ends of said plates terminating in bearings, a longitudinal shaft mounted to oscillate in said bearings, arms adjustably connected to the ends of said shaft and extending laterally therefrom, the outer ends of said arms being offset and provided with bearings, angular rods adjustably carried in the bearings of the last mentioned arms, and vertically extending arms adjustably engaged with the angular rods, said last mentioned arms having portions thereof arcuately designed and terminating in hook members for engagement with the weft fork of the filling stop mechanism.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

CHARLES ^{his} ~~X~~ THIBEAULT.
mark
WENCESLAS ^{his} ~~X~~ GAGNE.
mark

Witnesses:

JOHN JAS. McKEON,
FRANK POOLE.