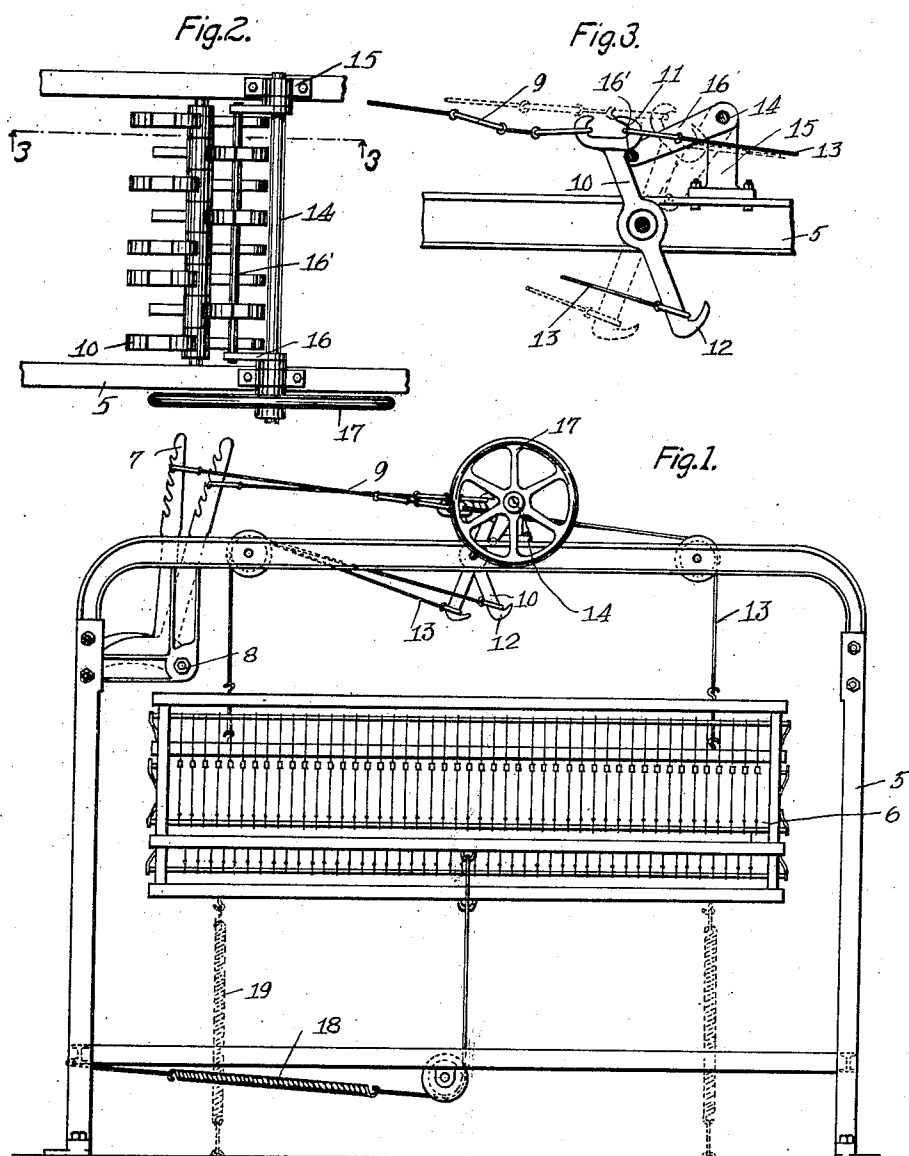


A. H. LANDRY.
HARNESS RETRACTOR.
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1,427,604.

Patented Aug. 29, 1922.



WITNESSES
E. Scheyer

J. H. Smoot

INVENTOR
A. H. LANDRY

BY *Mumford*
ATTORNEYS

UNITED STATES PATENT OFFICE.

ADOLPHUS H. LANDRY, OF LOWELL, MASSACHUSETTS.

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Specification of Letters Patent. Patented Aug. 29, 1922.

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To all whom it may concern:

Be it known that I, ADOLPHUS H. LANDRY, a citizen of the United States, and resident of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Harness Retractor, of which the following is a full, clear, and exact description.

In connection with looms, it is a well appreciated fact that considerable difficulty has been experienced in the delay involved when the weaver is compelled to level his harness.

It is also well understood that the structure relied upon to exert the proper tension upon the harnesses, and to actuate the same in the manner desired is extremely cumbersome and consequently expensive to manufacture.

With this in view I have now constructed a harness evener or retractor more particularly adapted for use in connection with looms, by means of which it will be possible by a simple manipulation of the parts, to properly even the harness or retract the same.

By this construction a weaver will be enabled to locate his heddle more quickly, and to properly insert the thread subsequent to which a harness may be instantly returned to its normal position.

A further object of my invention is the construction of a harness evener or retractor which shall be extremely simple in construction, and by means of which numerous conventional parts of the loom as heretofore constructed may be eliminated.

Reference is had to the attached sheet of drawings as illustrating one practical embodiment of my invention, and in which—

Figure 1 shows a loom having my improved retractor applied thereto.

Figure 2 is a fragmentary plan view of the same, and

Figure 3 is an enlarged sectional view taken along the line 3—3 of Figure 2.

In these views the reference numeral 5 indicates the loom frame, and 6 the conventional harnesses attached thereto. By virtue of my improved construction, the conventional lower portions of the jacks 7 may be dispensed with, which jacks, as will be noted, are pivotally secured as at 8 in the usual manner to the frame 5.

Stirrup connections 9 are also attached in the conventional manner at one of their

ends to the jacks 7, their opposite ends being secured to the conventional stirrup levers 10 comprising, as is well known, a double hooked upper end 11, and a hooked lower end 12, or other suitable means permitting of the connection of the leads 13 extending to the harnesses.

As will be noted, reference being had to Figures 1 and 3, the stirrup connections 9 extend between the jacks 7 and one of the hooks of the double hooked upper end 11. The opposite hook of this end portion of the lever 10 has secured to it one of the leads 13, the second lead being attached to the hooked end 12.

Contrary to the conventional construction, a shaft or other suitable actuating member 14 is rotatably secured to the frame 5, as has been indicated by the reference numeral 15. Crank arms 16 are rigidly secured to the shaft 14 at points beyond the outermost stirrup levers 10, such crank arms mounting a rod 16'.

Now upon the hand wheel or other actuating member 17 associated with the shaft, being actuated, the rod 16' will be caused to bear against the stirrup levers 10, thus moving these members to a position at which they will align one with the other correspondingly evening the harnesses 6.

In this connection it will be noted that the bottom harness wire usually used, is dispensed with, and in lieu thereof, a spring 18 is utilized, which spring 18 has one of its ends secured to the frame 5, its opposite end connecting with one of the harnesses 6. Each of these springs, as will readily be appreciated serves to normally exert a downward pull upon the harnesses 6, to which it is attached, and further springs 19 interposed between a fixed element and the harnesses 6 serve also to produce this result.

Obviously it will be appreciated that a weaver may quickly even or retract the various harnesses by simply operating the shaft 14 or other actuating element which, as aforescribed, will serve to align the stirrup levers 10, and consequently the corresponding harnesses. This will permit the weaver to readily find his heddle and to properly position the thread. Subsequent to the accomplishment of this object, a retraction of the parts operated will serve to move the rods 16' out of engagement with the stirrup levers 10, and to permit the same to move to their normal position.

Obviously numerous modifications of structure might readily be resorted to without in the least departing from the spirit of my invention, which I claim as—

- 5 A harness retractor of the character described, including a plurality of harnesses, a frame supporting said harnesses, a plurality of levers pivoted to said frame above
10 said harnesses, connecting means extended between said levers and said harnesses, means retracting the motion of said harnesses against the pull of said levers, a

shaft journaled to said frame extending parallel to the axis of the levers, a crank arm rigidly secured to each end of said shaft, a rod extending parallel to said shaft and secured to said crank arms, and a hand operated wheel rigidly secured to the end of the shaft for operating the same and move said rod against said levers force the same into an aligned position with respect to each other and thereby evening the harnesses with respect to each other.

ADOLPHUS H. LANDRY.