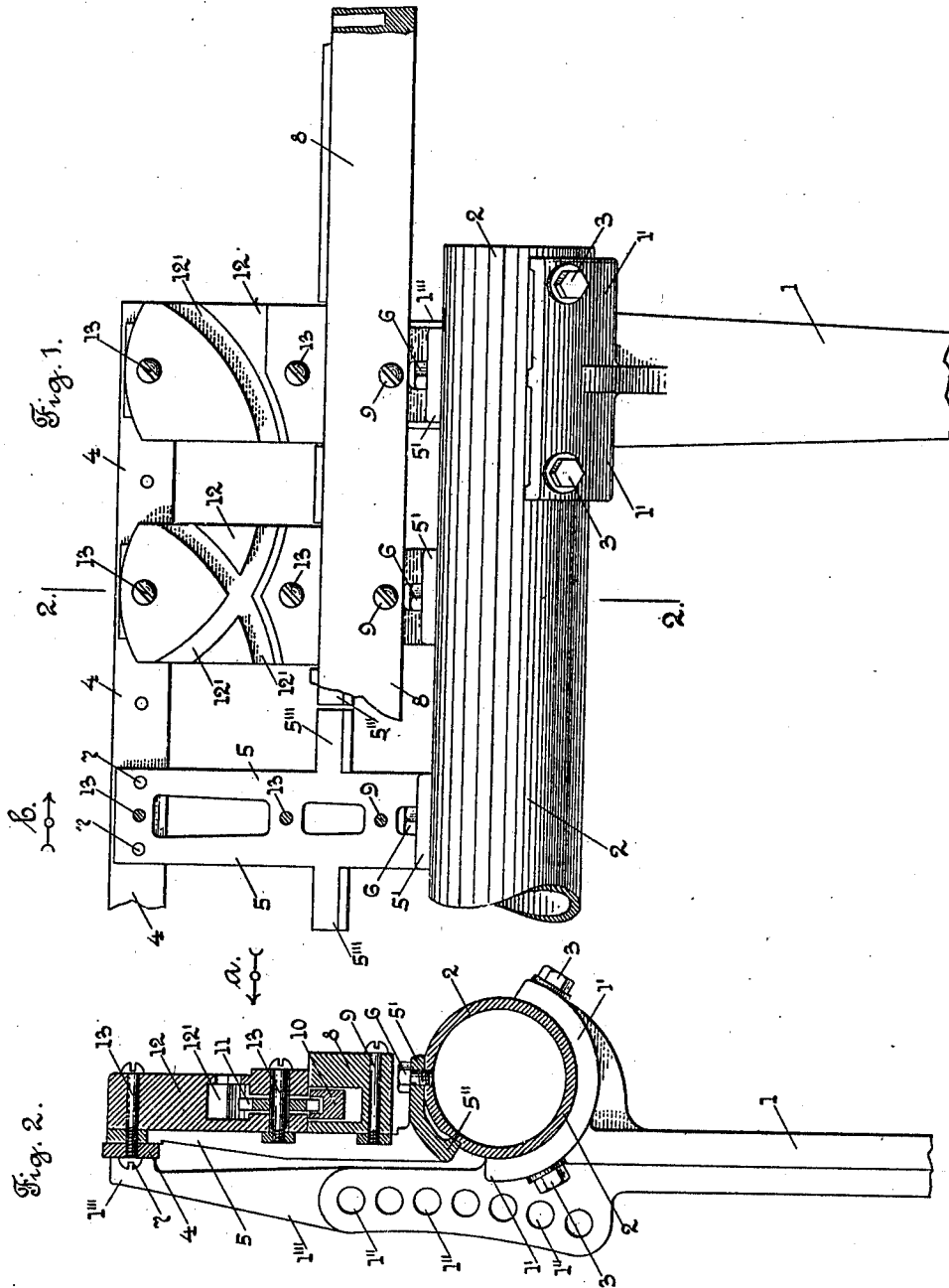


E. R. HOLMES.
 LAY FOR NARROW WARE LOOMS.
 APPLICATION FILED MAR. 31, 1908.

956,854.

Patented May 3, 1910.



Witnesses

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LAY FOR NARROW-WARE LOOMS.

956,854.

Specification of Letters Patent.

Patented May 3, 1910.

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To all whom it may concern:

Be it known that I, ELBRIDGE R. HOLMES, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Lays for Narrow-Ware Looms, of which the following is a specification.

My invention relates to narrow ware looms, and particularly to the lay of a narrow ware or ribbon loom, and the object of my invention is to improve upon the construction of the lay of a narrow ware or ribbon loom, as ordinarily made.

In my improved construction of the lay, I do away with the wooden beam, ordinarily used, and substitute a tubular metal pipe. I combine with said metal pipe a series of vertically extending stands, preferably made separate from each other and having a wood bar detachably secured on the front side thereof, which bar has a longitudinal recess or groove therein to receive the reciprocating rack, which operates the series of pinions which drive the swivel shuttles, and causes them to move in guide-ways in guide blocks, in the usual and well known way. The guide blocks are preferably secured at their upper and lower ends to said vertically extending stands. An iron bar or rail extends transversely across the loom, and is secured to the upper part of said vertically extending stands, to form the hand rail, and also the holding part for the upper edge of the reed.

My invention consists in certain novel features of construction of my improvements as will be hereinafter fully described.

I have only shown in the drawing a detached portion of one end of a lay and the lay sword, embodying my improvements, sufficient to enable those skilled in the art to understand the construction and operation thereof.

Referring to the drawing:—Figure 1 is a front view of the right hand end of a lay embodying my improvements, and showing the upper end of the lay sword, looking in the direction of arrow *a*, Fig. 2. Fig. 2 is a section on line 2, 2, Fig. 1, looking in the direction of arrow *b*, same figure.

In the accompanying drawing, 1 is the upper part of one of the lay swords, having thereon on its front side a circular shaped extension or bracket 1', with a concaved recessed upper surface, to form a support

for one end of a tubular metal pipe 2, which pipe extends the full width of the loom and forms the lay beam of the loom. The tubular pipe 2 is in this instance rigidly secured at one end in the bracket or support 1' on the upper end of the lay sword 1, by bolts 3, two at the front of the bracket 1', and two at the rear of said bracket.

The lay sword 1 has in its upper rear part a series of holes 1'' for the crank connector to the crank shaft, not shown, and also a projection 1''' extending up therefrom, to the upper end of which is rigidly secured one end of a transversely extending hand rail 4. Extending up from the tubular pipe 2, at regular intervals, are a series of vertically extending stands 5, each having a foot 5', the outer part of which extends upon a flattened surface on the upper side of the tubular pipe 2, and is secured thereto by a bolt 6, and the rear part 5'' of which extends into an undercut portion on the rear of the tubular pipe 2, see Fig. 2, to hold the stands 5 in position, and prevent them from slipping.

The upper end of each stand 5 has secured thereto, by screws 7, or otherwise, the hand rail 4. Each stand 5 has horizontally extending projections 5''' thereon, which form the lower pocket and holder for the lower edge of the reed, not shown. The reed, not shown, extends between the stands 5 and is secured at its upper edge to the rail 4.

Extending along the front side of the vertically extending stands 5, is a wood bar 8, which is preferably detachably and adjustably connected to the vertically extending stands 5, by screws 9. The upper side of the bar 8 is recessed or cut out longitudinally, to receive the longitudinally moving rack 10, see Fig. 2, which is operated in the usual way by straps, not shown, passing over rolls or sheaves, not shown, carried on the lay. The rack 10 engages with and drives a series of pinions 11, and the pinions 11 engage and operate the swivel shuttles, not shown, to cause them to move in the guide-ways 12' in the guide blocks 12, in the usual and well known way. The guide blocks 12 are secured at their upper and lower ends, in this instance by screws 13, to the vertically extending stands 5. Each lower screw 13 in this instance forms the fulcrum or axis for a pinion 11.

The advantages of my improvements will

be readily appreciated by those skilled in the art.

I provide a lay comprising a tubular metal pipe, by means of which greater rigidity is obtained, and perfect alinement, and I combine with said metal pipe vertically extending stands for the shuttle rack bar, and for the shuttle guide blocks, and for the hand rail. The vertically extending metal stands also have side extensions, which form pockets or brackets for the lower edge of the reed.

It will be understood that the details of construction of my improvements may be varied if desired.

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

1. In a narrow ware loom, the combination with the lay swords provided with extensions or brackets having concave seats, of a tubular lay beam extending across the loom and secured in said concave seats, and a series of vertically extending stands each of which is provided with a foot partly encircling the upper part of the said tubular lay beam and rigidly attached thereto.

2. In a narrow ware loom, the combination with the lay swords, having a circular shaped extension or bracket thereon, and a

tubular pipe secured to said extensions or brackets, of a series of vertically extending stands, each having a foot, the outer part of which extends upon a flattened surface on the upper side of said tubular pipe and is secured thereto, and the rear part of which extends into an undercut portion on the rear of said tubular pipe.

3. In a narrow ware loom, the combination with the lay swords, having a circular shaped extension or bracket thereon, and a tubular pipe secured to said extensions or brackets, of a series of vertically extending stands, each having a foot, the outer part of which extends upon a flattened surface on the upper side of said tubular pipe and is secured thereto, and the rear part of which extends into an undercut portion on the rear of said tubular pipe, and a wood bar extending upon the front side of said stands and secured thereto, for a longitudinally moving rack, and guide blocks for the swivel shuttles secured to said vertically extending stands.

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