W. WATTIE.

LAY FOR LOOMS.

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923,223. Patented June 1, 1909.

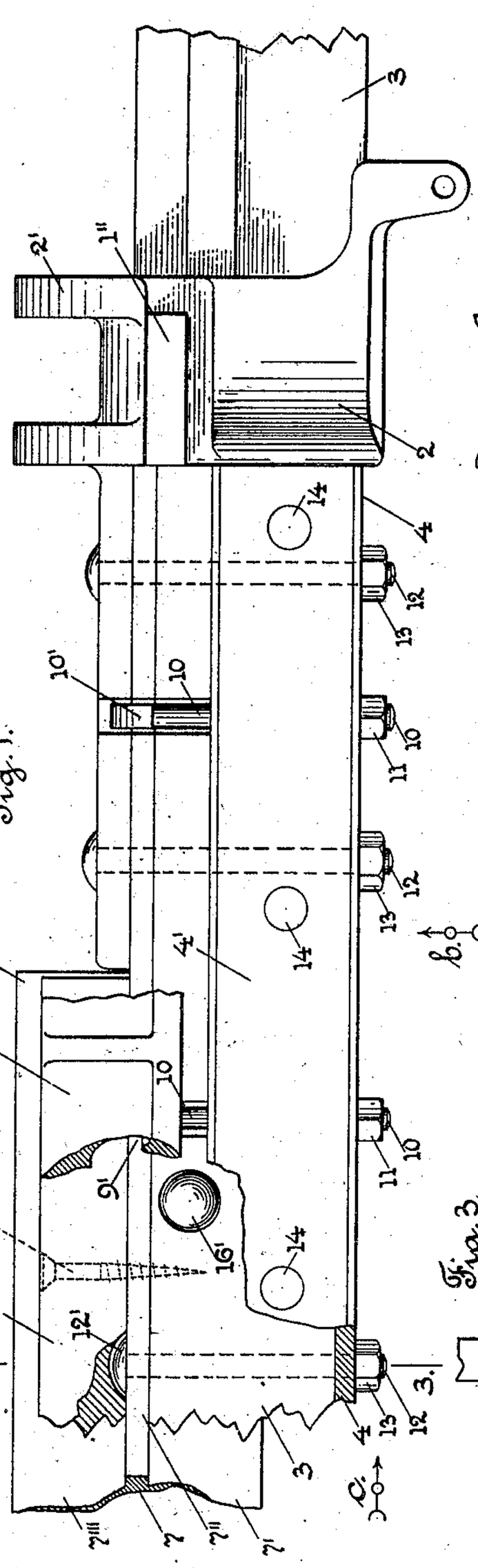

Fig. 1.

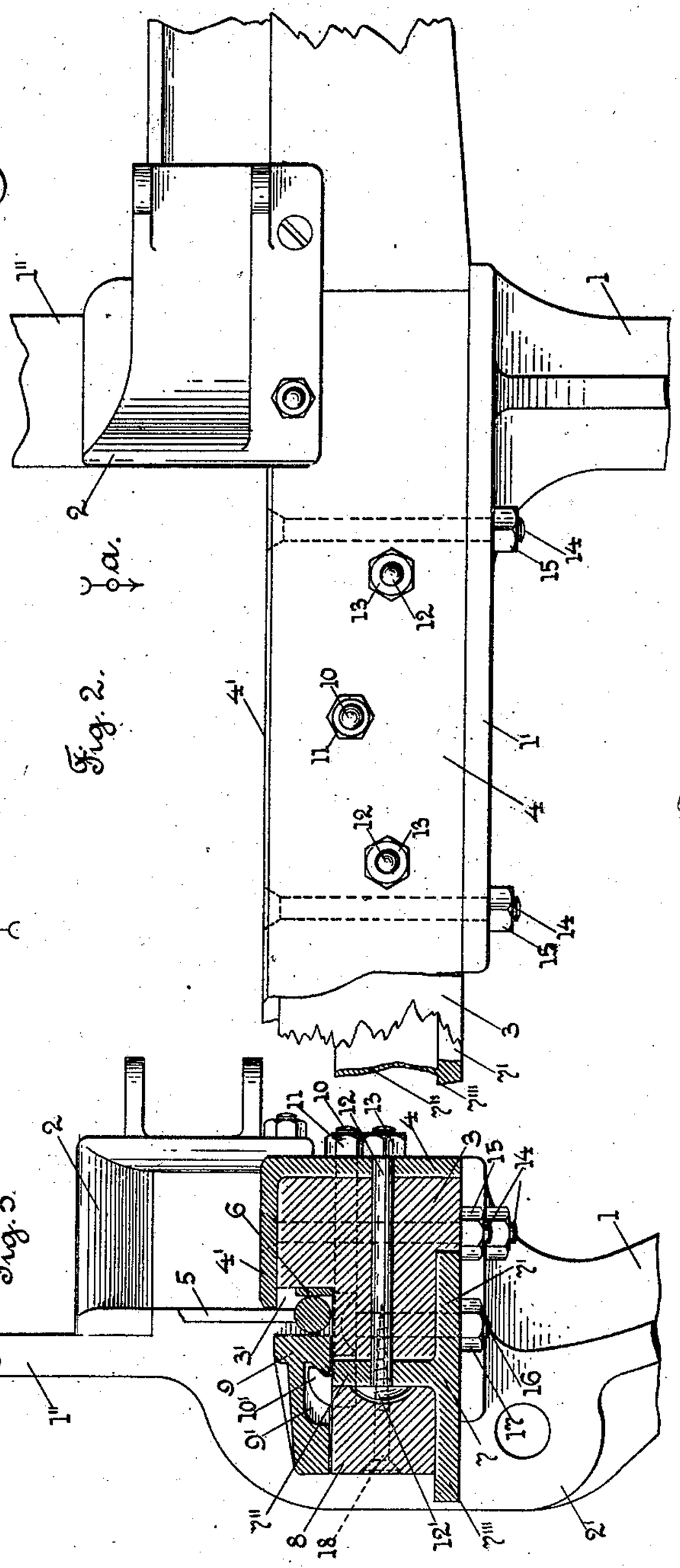

Fig. 2.

Fig. 3.

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LAY FOR LOOMS.

No. 923,223. Specification of Letters Patent. Patented June 1, 1909.

Application filed March 12, 1908. Serial No. 420,542.

To all whom it may concern:

Be it known that I, WILLIAM WATTIE, 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 Looms, of which the following is a specification.

My invention relates to the lay of a loom, and particularly to a lay of the type shown and described in my U. S. Letters Patent, No. 789,943.

The object of my invention is to improve upon the construction of the lay shown and described in said patent, and to provide a lay of increased strength and rigidity, and particularly adapted for heavy looms, as duck looms.

In my improved construction, I combine with the wood beam of the lay, and the angle metal bar forming the top and the front of the lay, a T shaped metal bar, located at the rear of the lay beam, and extending on the lower surface of the lay beam at the rear part thereof, and also on the back of the lay beam, and also forming a shelf or support for a bar preferably of wood at the rear of the lay, upon which is supported a longitudinally extending metal bar forming a back stay for the lower part of the reed.

I have only shown in the drawing a detached part of the lay of a loom 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 plan view of a lay embodying my improvements, looking in the direction of arrow *a*, Fig. 2, and showing at the left some parts not shown in Fig. 2, which parts are partially broken away to show the parts otherwise concealed. Fig. 2 is a front view of the parts shown at the right in Fig. 1, looking in the direction of arrow *b*, same figure. Fig. 3 is a section, on line 3, 3, Fig. 1, looking in the direction of arrow *c*, same figure, and showing some parts broken away in Fig. 1.

In the accompanying drawing, 1 is the lay sword, having the horizontally extending plate 1′ on its upper end, which forms a support for the several parts of the lay beam. 1″ is the horn of the lay, to which, and to the front upper part of the lay, is secured the flaring shuttle box mouth 2, having at its lower part rearward projections 2′ for the connector to the crank shaft, not shown.

Supported upon the shelf or extension 1′ of the lay sword 1 of the loom, and extending in the direction of the length of the lay, is in this instance a wood beam 3. Extending upon the front and upper side of the wood beam 3 is a rigid metal bar 4, of angle shape in cross section, and forming the upper surface or race-way 4′ of the lay, and also the front side of the lay. The upper rear surface of the beam 3 is preferably recessed or cut out, as shown at 3′ in Fig. 3, for the bottom of the reed 5.

Extending upon the front vertical edge of the cut out portion 3′ is preferably a thin metal strip 6, secured to the beam 3. The lower rear part of the beam 3 is cut out to receive one side or flange 7′ on the horizontally extending T shaped rigid metal bar 7; said side 7′ forms the lower rear surface of the lay beam, see Fig. 3. The vertically extending portion 7″ of the T shaped metal bar 7 extends upon the rear of the beam 3 and forms the rear side thereof. The other side or flange 7‴ of the T shaped metal bar 7 extends rearwardly from the lay beam, and forms a support or shelf for a bar 8, preferably made of wood. Upon the upper side of the bar 8 and of the vertically extending part 7″ of the T shaped metal bar 7 extends a bar 9, preferably made of metal, and recessed upon its under side, as shown at 9′, Fig. 3, to receive the hooked end 10′ on a horizontally extending bolt 10, which extends through a hole in the beam 3 and the front side of the angle metal bar 4, and is drawn up to secure the bar 9, by a nut 11. The bar 9 forms the back stay for the lower part of the reed 5, and is readily attached after the other parts of the lay are assembled, by means of the hooked end bolts 10, and drawn toward the front of the lay, to hold the lower part of the reed 5, by screwing up the nuts 11 on the bolts 10.

The metal angle shaped bar 4 is secured upon the beam 3 and to the T shaped metal bar 7, preferably by a series of bolts 12, which extend through holes in the beam 3, and have their headed ends 12′ upon the back side of the vertically extending part 7″ of the T shaped metal bar 7, and a nut 13 secured upon their outer threaded ends.

Vertically extending bolts 14, with their

heads countersunk in the horizontally extending aprt of the angle metal bar 4, and passing through holes in the beam 3, and having nuts 15 on their lower ends, secure in this instance the horizontally extending flange 7′ of the T shaped metal bar 7 to the beam 3.

Vertically extending bolts 16, see Fig. 1, having their heads 16′ extending in recesses in the rear upper part of the beam 3, and passing through openings in said part and in the side or flange 7′ of the T shaped metal bar 7, with nuts 17 on their ends, see Fig. 3, secure the T shaped metal bar to the rear part of the beam 3.

The bar 8 is preferably secured to the rear part of the beam 3 by screws 18, which extend through openings in said bar 8, and in the vertically extending part 7″ of the T shaped metal bar 7, and into the rear part of the beam 3, see Fig. 1.

From the above description in connection with the drawing, the advantages of my improvements in lay beam will be readily appreciated by those skilled in the art.

I provide the wood core or center of the lay beam, in case a wood beam center is used, with a metal top and front, extending the full length of the lay beam, and I also provide the rear part of the beam 3 with a metal bottom and rear side, and in addition provide a shelf or support for a bar at the rear of the lay beam, upon which is supported the detachable back stay bar for the lower part 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. A lay beam for a loom, comprising a wood beam, a rigid angle-shaped metal bar on the top and front of said beam, and a rigid T-shaped metal bar on the bottom and rear of said beam, and means for securing said bars to said wood beam.

2. A lay beam for a loom, comprising a rigid angle-shaped metal bar forming the top and front of said beam, and a T-shaped metal bar forming the bottom and rear of said beam, and also forming a shelf or support at the rear of said beam, and means for holding said bars in position.

3. In a lay beam of a loom, the combination with a wood beam, of two independent rigid metal bars, one of angle shape forming the top and front, and the other of T shape forming the bottom and rear of the lay beam, and the T shaped bar forming also a shelf and support for a bar at the rear of the lay beam, and means for holding said metal bars in position and securing them together.

4. In a lay beam of a loom, the combination with a wood beam, of two independent rigid metal bars, one of angle shape forming the top and front, and the other of T shape forming the bottom and rear of the lay beam, and the T shaped bar forming also a shelf and support for a longitudinally extending bar at the rear of the lay beam and means for holding said metal bars in position and securing them together, and a longitudinally extending bar at the rear of the lay beam forming the back stay for the lower part of the reed, and means for supporting and detachably securing said back stay bar.

5. In a lay beam of a loom, the combination with a wood beam, of two independent rigid metal bars, one of angle shape, and the other of T-shape, the angle-shaped bar forming the top and front of the lay, and the T-shaped bar extending on the bottom and rear of said wood beam, and forming a shelf and support for a wood bar at the rear of the lay, and said bar, and a metal bar at the rear of the lay over said wood bar, and forming the back stay of the lower part of the reed, and means for detachably securing said back stay bar.

6. In a lay beam of a loom, the combination with a wood beam, of two independent rigid metal bars, one of angle-shape on the top and front of said wood beam, and the other of T-shape on the bottom and rear of said wood beam, and said T-shaped bar forming also a support for a bar at the rear of the lay beam, and means for securing said metal bars in position.

7. In a lay beam of a loom, the combination with a wood beam, of two independent rigid metal bars, one of angle-shape on the top and front of said wood beam, and the other of T-shape on the bottom and rear of said wood beam, and the T-shaped bar forming also a support for a bar at the rear of the lay beam, and said bar, and means for securing said metal bars in position, and a longitudinally extending bar at the rear of said wood beam, forming the back stay for the lower part of the reed, and means for supporting and detachably securing said back stay bar.

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