

June 30, 1953

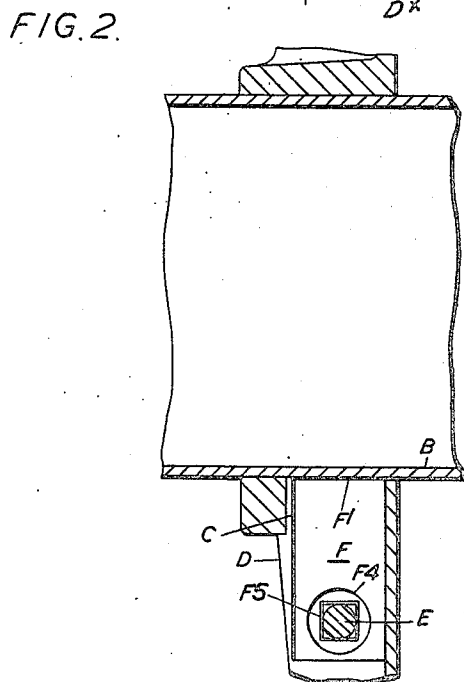
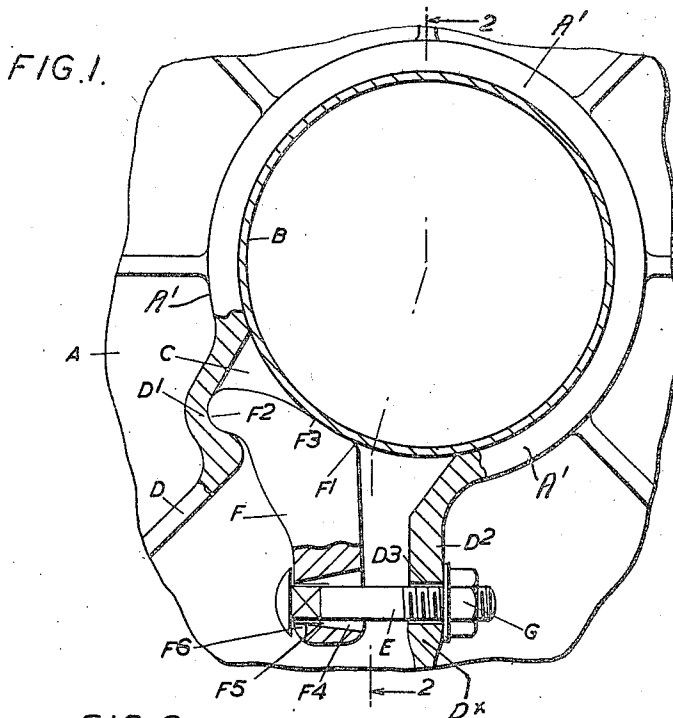
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2,643,902

MANUFACTURE OF WARP AND OTHER FLANGED BEAMS

Filed June 1, 1950

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

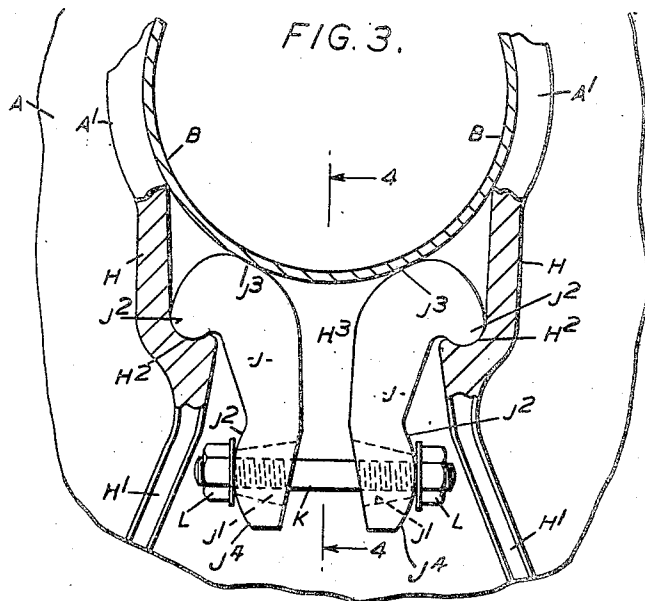
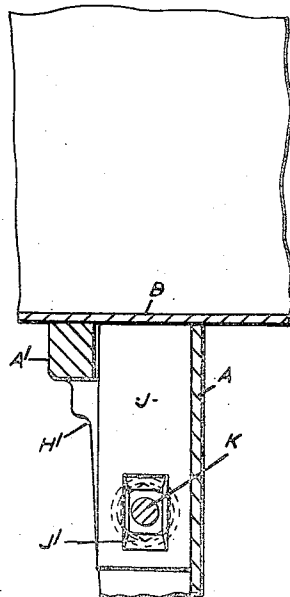


FIG. 4.



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UNITED STATES PATENT OFFICE

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MANUFACTURE OF WARP AND OTHER
FLANGED BEAMS

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Application June 1, 1950, Serial No. 165,441
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3 Claims. (Cl. 287—20)

1

This invention relates to the manufacture of warp and other flanged beams for use in the textile industry and has for its chief object to introduce an improved method of clamping the flanges to the barrels.

According to this invention the warp beam flange is clamped to the barrel by means of one or more levers each of which is formed with two bearing points one of which is caused to bear on the barrel and the other on an abutment on the beam flange when a nut or a bolt or screw which passes through a hole in the lever and through a hole in a projection on the warp beam flange is tightened with the result that a slight tightening of the nut, bolt or screw firmly fixes the flange upon the barrel.

The flange bore fits the barrel so that the flange will run truly thereon when the nut, bolt or screw is tightened.

In a modified construction two levers are employed each of which is formed with two bearing points respectively caused to bear on the barrel and on an abutment on the beam flange by means of a bolt passing through the levers and provided at each end with a nut which when tightened causes the bearing points to be forced against the barrel and against the abutments on the beam flange and firmly fix the latter in position on the barrel.

If the lever is used on a beam having a wooden barrel it may be provided with a sole piece of increased area to prevent it from denting the wood.

In the accompanying drawings—

Fig. 1 is a section taken through part of a warp beam flange provided with a clamping device in accordance with this invention.

Fig. 2 is a section taken on line 2—2 of Fig. 1 looking in the direction of the arrows and

Figs. 3 and 4 are similar views to Figs. 1 and 2 showing a modified construction of clamping device.

A indicates a portion of the warp beam flange, A' a boss projecting from one face thereof and B the barrel which in the example shown consists of a metallic tube on which the flange is made a good sliding fit. A portion of the boss A' is formed with a gap-defined pocket C between two adjacent ribs D, D^x, and one end of the pocket is formed with a hook form recess D¹ and the rib D^x is formed with a thickened portion D² in which is a hole D³ for a bolt E. F indicates a lever which is formed with a heel F¹ and with a toe F² and with a sole portion F³. It is also formed with a conical hole F⁴ for the bolt E a

2

portion of such hole being made square as shown at F⁵ to fit a square portion E¹ of the bolt E, and with a convex surface F⁶ for the head of the bolt to bear against and provide for the slight turning movement of the lever F¹.

The latter is placed in the pocket C as shown, the bolt placed in the hole F⁴ and hole D¹ and the nut G is tightened up thereby causing the lever to function in the manner previously described and clamp the beam flange upon the barrel.

In the construction shown in Figs. 3 and 4 two walls H extend from the boss A¹ of the warp beam flange A and are continued in the form of ribs H¹. These walls are formed with concave abutments H² and in the recess or pocket H³ between the walls H two levers J are placed back to back as shown in Fig. 3 and operated by a bolt K which passes through tapered holes J¹ in the levers. Each such lever is formed with a rounded projection J² which engages its concave abutment H² in the wall H and with a portion J³ that is adapted to be forced against the barrel B when nuts L on the bolts K are tightened up. These nuts or washers thereon bear against curved surfaces J⁴ on the levers which provide for the turning movement thereof.

What I claim as my invention and desire to secure by Letters Patent in the United States is:

1. In a warp beam having a flange for use in the textile industry, the beam flange having a bore adapted to fit the beam barrel, two ribs projecting laterally from said flange, each rib being formed with an inwardly projecting ledge, two levers situated between said ribs, each lever being formed with two bearing surfaces one of which is adapted to contact with a portion of the beam barrel and the other to interlock with the ledge, a bolt passing through a hole in each of the aforesaid levers and at least one nut mounted on said bolt for imparting a turning movement to the levers and causing their bearing surfaces to bear hard against a portion of the beam barrel and the inwardly projecting ledges.

2. In a warp beam or the like for use in the textile industry and having at least one shiftable end flange, said end flange having a gap-defining pocket exposing a portion of said beam, said pocket having generally opposed walls, a device for clamping said beam flange to the beam barrel and comprising at least one lever as a separate element from the beam flange and beam barrel and located in said pocket, said lever having toe, heel and leg portions, one wall of said pocket

3

having a hook form recess in which the lever toe engages, the heel portion of said lever being disposed in close opposition to the beam barrel, and clamp means carried by one of said pocket walls and engaging the leg portion of said lever and operable to actuate said lever leg toward said last mentioned pocket wall whereby to clamp said heel portion against said exposed portion of said beam barrel.

3. The combination set forth in claim 2, and said clamp means comprising a bolt and a nut threaded thereon, said bolt engaged with said

4

lever and carried by said last mentioned pocket wall.

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10