Sept. 22, 1931. W. G. TRAUTVETTER 1,824,639

ADJUSTABLE LOOM WARP BEAM

Filed Aug. 8, 1929

Fig. 1.

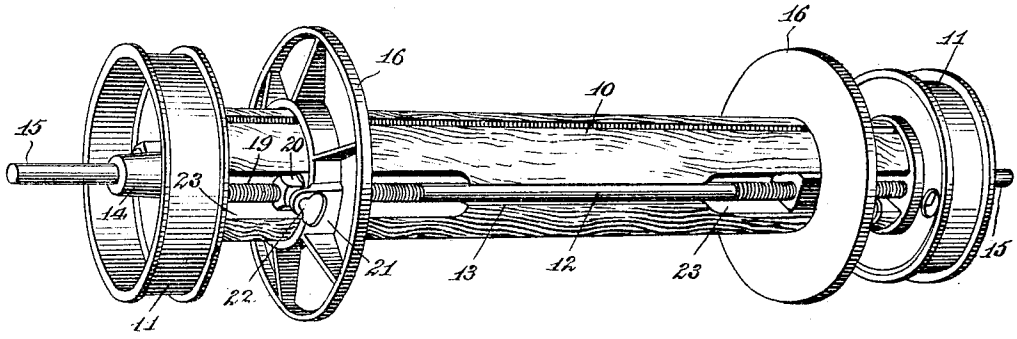


Fig. 2.

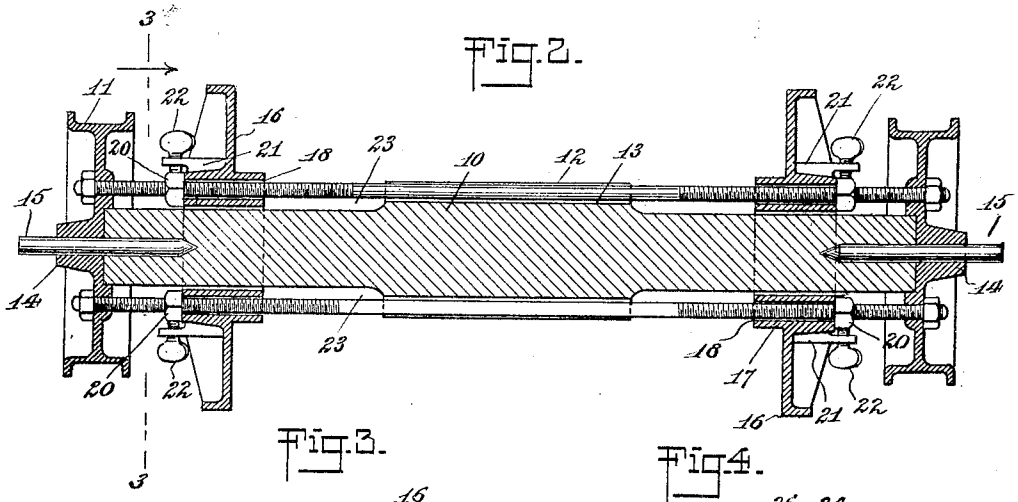


Fig. 3.

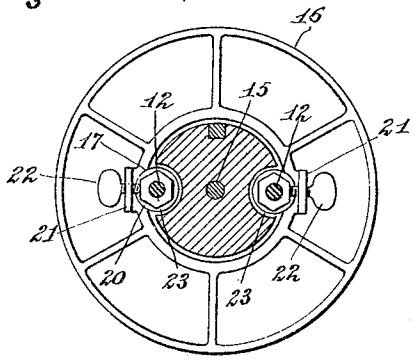
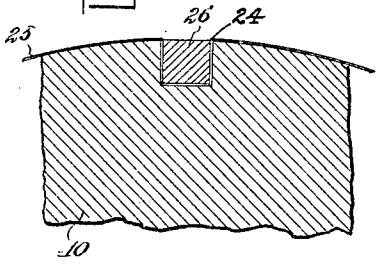


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE

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ADJUSTABLE LOOM WARP BEAM

Application filed August 8, 1929. Serial No. 384,303.

This invention relates to warp beams.

It is among the objects of the present invention to provide a novel and improved warp beam, which is simple in construction and operation and well designed to meet the demands of economic manufacture.

It is a further object of the present invention to provide an improved adjustable warp beam which may be readily adjusted to suit various widths of warp which may be wound thereon.

A further object of the present invention is to provide a novel and improved warp beam which includes a pair of longitudinally adjustable flanges between which the warp may be wound.

Other objects of the present invention are to provide novel and improved adjusting means for movable warp beam flanges, whereby the whole device provides novel improved construction and interrelation of parts whereby the same may be readily operated without the requirement of a skilled mechanic.

Other objects and features of the present invention will be apparent from a consideration of the following specification taken in conjunction with the accompanying drawings, in which

Figure 1 is a perspective view of one embodiment of the invention;

Fig. 2 is a longitudinal section of that form of the device shown in Fig. 1;

Fig. 3 is a section taken on lines 3—3 of Fig. 2;

Fig. 4 is a detail section showing the means for securing the warp upon the warp beam.

Referring more particularly to the drawings, the invention includes a warp beam body 10, which may preferably be formed of wood and which is cylindrical, its ends being provided with driving flanges 11 which are secured on the ends of the body 10 by longitudinally extending tie rods or bolts 12 which are received in longitudinally extending grooves 13 of the body 10. The central hubs 14 of the driving flanges 11 are apertured to receive therethrough gudgeons 15 which extend from the ends of the beam to support the same. Mounted upon the tie bolts 12 for free longitudinal movement thereover, warp flanges 16 are provided, which include a widened central hub 17, which is apertured as at 18 to provide elongated sleeves through which the tie bolts 12 may extend. The apertures 18 of the hub 17 are larger than the tie bolts 12 so that the flanges may be freely slidable thereover. For securing the flanges in their adjusted position, the outer ends of the tie bolts 12 are threaded as at 19 and carry adjusting nuts 20 which are adjusted on the threaded extremities 19 of the tie bolts to prevent outward movement of the flanges from their adjusted position. The nuts 20 are internally threaded for free threaded movement over the threaded extremities of the tie bolts 12 so that wrenches or the like are not required to rotate the nuts on the bolts, the threaded connection being such that they may be freely rotated by hand. For securing the nuts against accidental rotation, the hub 17 of the flanges 16 is provided with a rearwardly extending ear 21 through which is threaded a transversely extending thumb screw 22, which when screwed inwardly engages one of the faces of the nut 20 to prevent accidental rotation thereof. The groove 13 of the body 10 is enlarged at its extremities, as indicated by the numeral 23, to provide a free sliding movement for the hub of the flanges 16 therein and to provide for free rotation of the nuts 20.

For securing the warp upon the warp beam, the beam is recessed as at 24 in Fig. 4, the warp 25 being positioned in the recess, and a longitudinally extending securing strip 26 is then positioned in the recess 24 over the warp 25 to secure the same upon the body 10.

From the foregoing it will readily be seen that the invention provides a warp beam, the warp flanges of which may be readily moved longitudinally and secured in their adjusted position so that the device may be arranged to conform with various requirements in warp beam sizes. It will be readily understood that the drawings illustrate only one preferred embodiment of the present invention, and that changes, modifications and the full use of equivalents may be resorted to without departing from the spirit or scope of

the invention as outlined in the appended claims.

What is claimed is:

1. A warp beam, including a body, a pair of longitudinally adjustable warp flanges carried thereby, driving flanges mounted upon the extremities of said body, tie rods extending through all of said flanges for securing said flanges on said body, said warp flanges being freely movable longitudinally over said tie rods in one direction, and means carried by said rods for preventing movement of said warp flanges in the opposite direction.

2. A warp beam, including a body, a pair of longitudinally adjustable warp flanges carried thereby, driving flanges mounted upon the extremities of said body, a plurality of tie rods extending through said warp flanges for clamping the driving flanges to said body, securing said flanges on said body, said warp flanges being freely movable longitudinally over said tie rods in one direction, and nuts carried by said tie rods for preventing movement of the warp flanges in the opposite direction.

3. A warp beam, including a body, a pair of longitudinally adjustable warp flanges carried thereby, driving flanges mounted upon the extremities of said body, tie rods securing all of said flanges on said body, said warp flanges being freely movable longitudinally over said tie rods in one direction, nuts carried by said tie rods for preventing movement of the warp flanges in the opposite direction, and means carried by said warp flanges for securing said nuts against accidental displacement.

4. A warp beam, including a body provided with longitudinally extending grooves, a pair of longitudinally adjustable warp flanges carried thereby, driving flanges mounted upon the extremities of said body, tie rods securing all of said flanges on said body, said warp flanges being freely movable longitudinally over said tie rods in one direction, nuts carried by said tie rods for preventing movement of the warp flanges in the opposite direction, and screw means carried by said flanges for securing said nuts against accidental displacement, said tie rods being receivable within said longitudinally extending grooves.

5. A warp beam, including a body provided with longitudinally extending grooves having enlarged portions adjacent their extremities, a pair of longitudinally adjustable warp flanges carried thereby, driving flanges mounted upon the extremities of said body, tie rods securing all of said flanges on said body, said warp flanges being freely movable longitudinally over said tie rods, nuts carried by said tie rods to prevent movement of the warp flanges in one direction, and means carried by said flanges for securing said nuts against accidental displacement, said tie rods being receivable within said longitudinally extending grooves in said body, said enlarged extremities being adapted to receive said nuts and to permit free rotation thereof.

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