Sept. 29, 1925. 1,555,184

P. F. CHOATE ET AL

CLOTH ROLL BEARING

Filed March 26, 1924

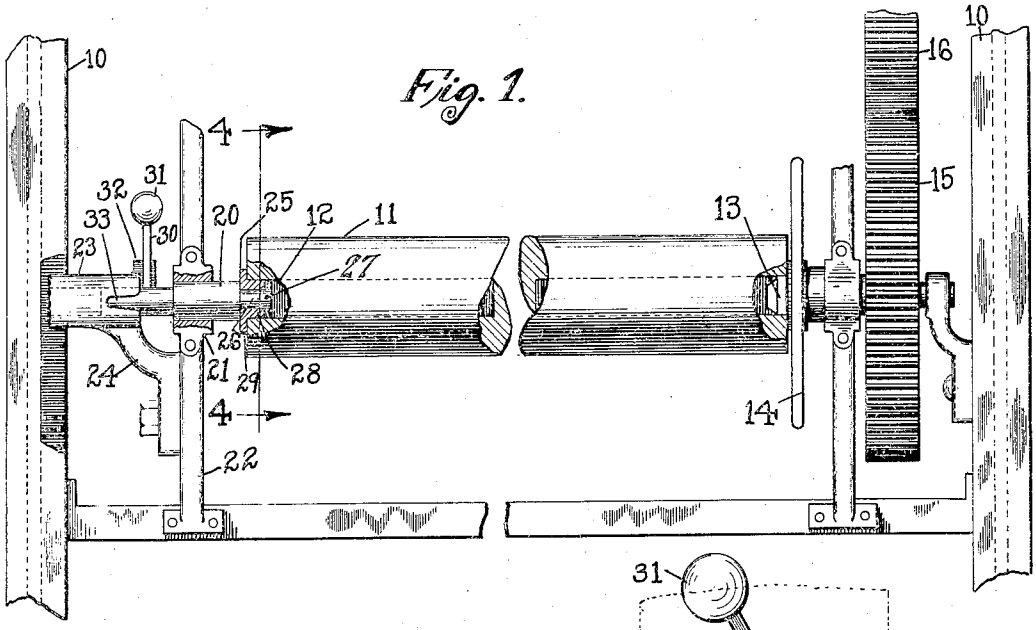


Fig. 1.

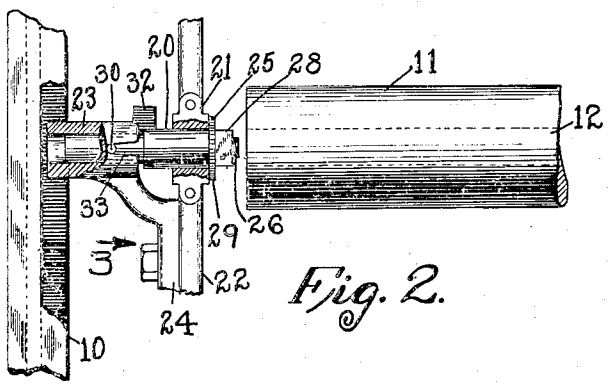


Fig. 2.

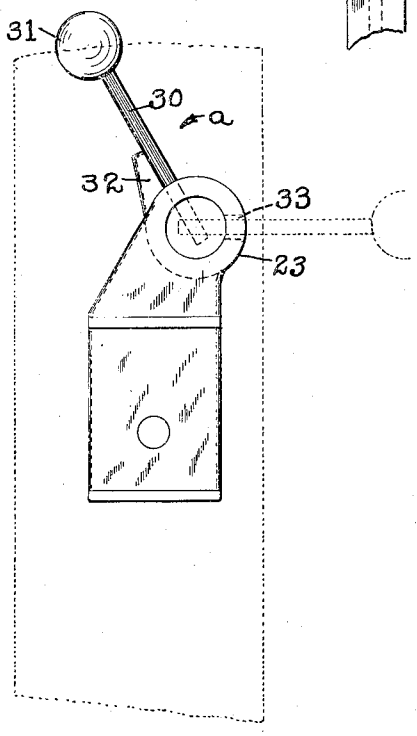


Fig. 3.

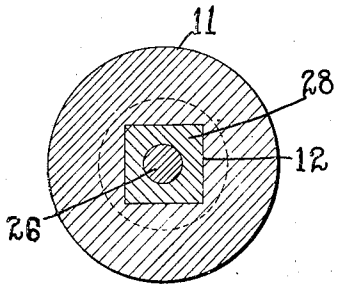


Fig. 4.

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UNITED STATES PATENT OFFICE.

PERCY F. CHOATE AND HARRY M. LATHAM, OF WORCESTER, MASSACHUSETTS, ASSIGNORS TO CROMPTON & KNOWLES LOOM WORKS, OF WORCESTER, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

CLOTH-ROLL BEARING.

Application filed March 26, 1924. Serial No. 702,140.

To all whom it may concern:

Be it known that we, PERCY F. CHOATE and HARRY M. LATHAM, both citizens of the United States, both residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Cloth-Roll Bearing, of which the following is a specification.

This invention relates to a loom and more particularly to means for rotatably supporting a cloth roll therein.

It is the object of our invention to provide an improved construction by which the roll is securely supported during the winding of the cloth thereon and from which a full roll of cloth may be easily and conveniently removed.

With this general object in view, our invention relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claims.

A preferred form of the invention is shown in the drawings in which—

Fig. 1 is a front elevation of parts of a loom embodying our improvements;

Fig. 2 is a similar view showing certain parts in a different relation;

Fig. 3 is an end view of our improved bearing, looking in the direction of the arrow 3 in Fig. 2, and

Fig. 4 is a detail sectional view, taken along the line 4—4 in Fig. 1.

Referring to the drawings, we have shown parts of a loom frame 10 in which is rotatably mounted a cloth roll 11. The roll 11 is preferably provided with a square or other non-circular opening 12 extending therethrough and one end of the roll is supported upon a non-circular driving member 13 which may be provided with a hand wheel 14 for manual rotation and with driving gears 15 and 16 for mechanical operation. The parts thus far described are of the usual construction.

Our invention relates to the provision of an improved bearing support for the opposite or free end of the roll 11. Our improved support comprises a plunger 20 having a bearing 21 in a brace or frame member 22 and having a second bearing 23 in a bracket 24 firmly secured to the frame member 22. A cap 25 is rotatably mounted upon a reduced extension 26 of the plunger 20 and may be held from displacement thereon by a cross pin 27.

The cap 25 has a square or non-circular portion 28, adapted to enter the opening 12 in the roll 11, and also has a flange 29 adapted to engage the end of the roll. A handle rod 30 is fixed in the plunger 20 and is provided with a handle 31 at its outer end.

A lug or projection 32 on the bearing 23 forms a support for the rod 30, normally maintaining the same in the position indicated in Fig. 3. The bearing 23 is also provided with a notch or recess 33 adapted to receive the rod 30 and to permit the plunger 20 to be withdrawn axially when the rod and handle are swung toward the front of the loom to the dotted line position indicated in Fig. 3.

The direction of rotation of the cloth roll is indicated by the arrow *a* in Fig. 3, so that both the force of gravity and also the friction of the roll tends to hold the handle rod 30 in its normal position against the lug 32. In such position, the rod engages the end of the bearing 23 and thus holds the cap 25 in position in the end of the roll 11. The cap rotates with the roll upon the portion 26 of the plunger and there is no relative movement or wear between the cap and the roll.

When it is desired to remove a full cloth roll, the handle 31 and rod 30 are swung to the front and then to the left into the recess 33, thus withdrawing the cap 25 from the roll 11 and permitting the roll to be swung forward out of the loom. The withdrawn position of the bearing support is clearly indicated in Fig. 2.

Having thus described our invention and the advantages thereof, we do not wish to be limited to the details herein disclosed otherwise than as set forth in the claims, but what we claim is:—

1. In a loom, a cloth roll, a bearing for one end of said roll mounted in fixed axial position, a bearing member for the other end of said roll, and means to lock said bearing member in operative position, said member having a freely rotatable roll-engaging end portion and having a plunger supporting said end portion, said plunger being movable angularly to unlock said member and being removable axially to release the roll.

2. In a loom, a cloth roll, a rotatable support for one end of said roll, a plunger having supporting engagement with the other end of said roll, a journal box in which said plunger is slidable, said box having a longitudinal slot therein, a handle for said plunger movable in said slot, and means to normally support said handle out of alignment with said slot.

3. In a loom, a cloth roll having a non-circular opening therein, means to support and drive said roll at one end thereof, a plunger having a cap rotatably mounted thereon fitting said non-circular opening, and a journal box for said plunger, in which said plunger is mounted for limited angular and axial movement to release said roll.

In testimony whereof we have hereunto affixed our signatures.

PERCY F. CHOATE.
HARRY M. LATHAM.