

No. 656,386.

Patented Aug. 21, 1900.

J. BETSCH.

WARP BEAM FOR LOOMS.

(Application filed May 4, 1900.)

(No Model.)

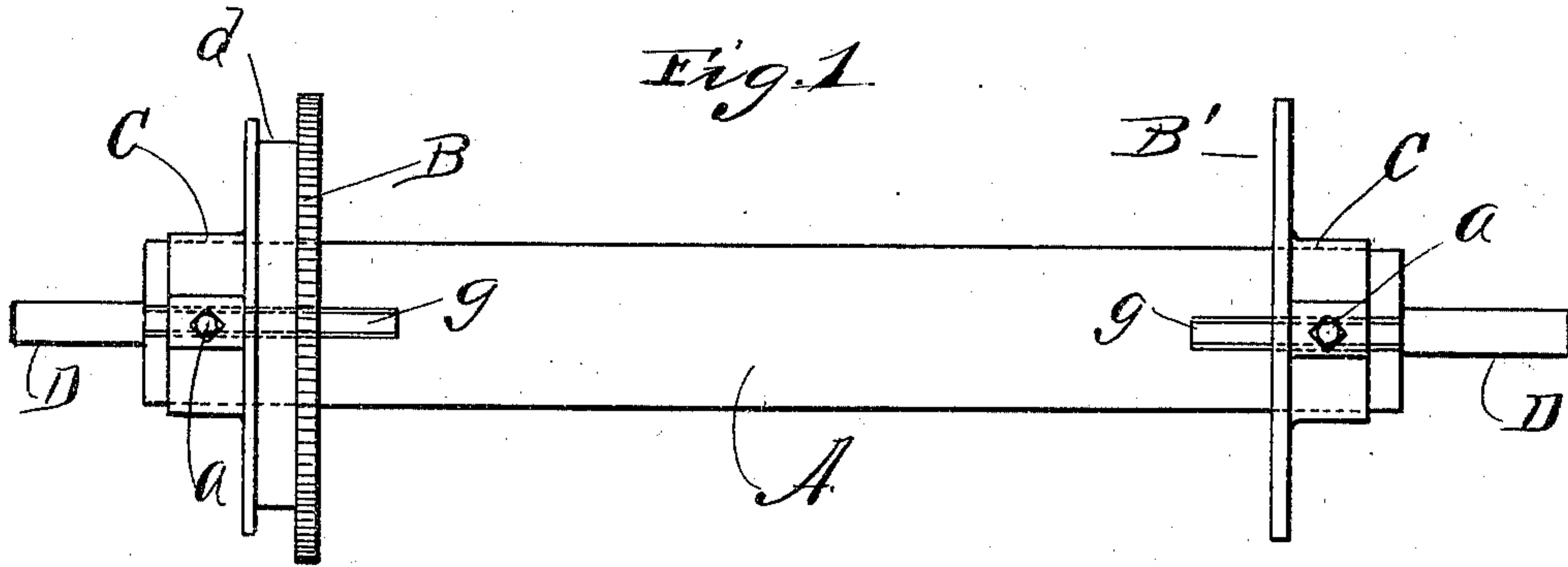


Fig. 2.

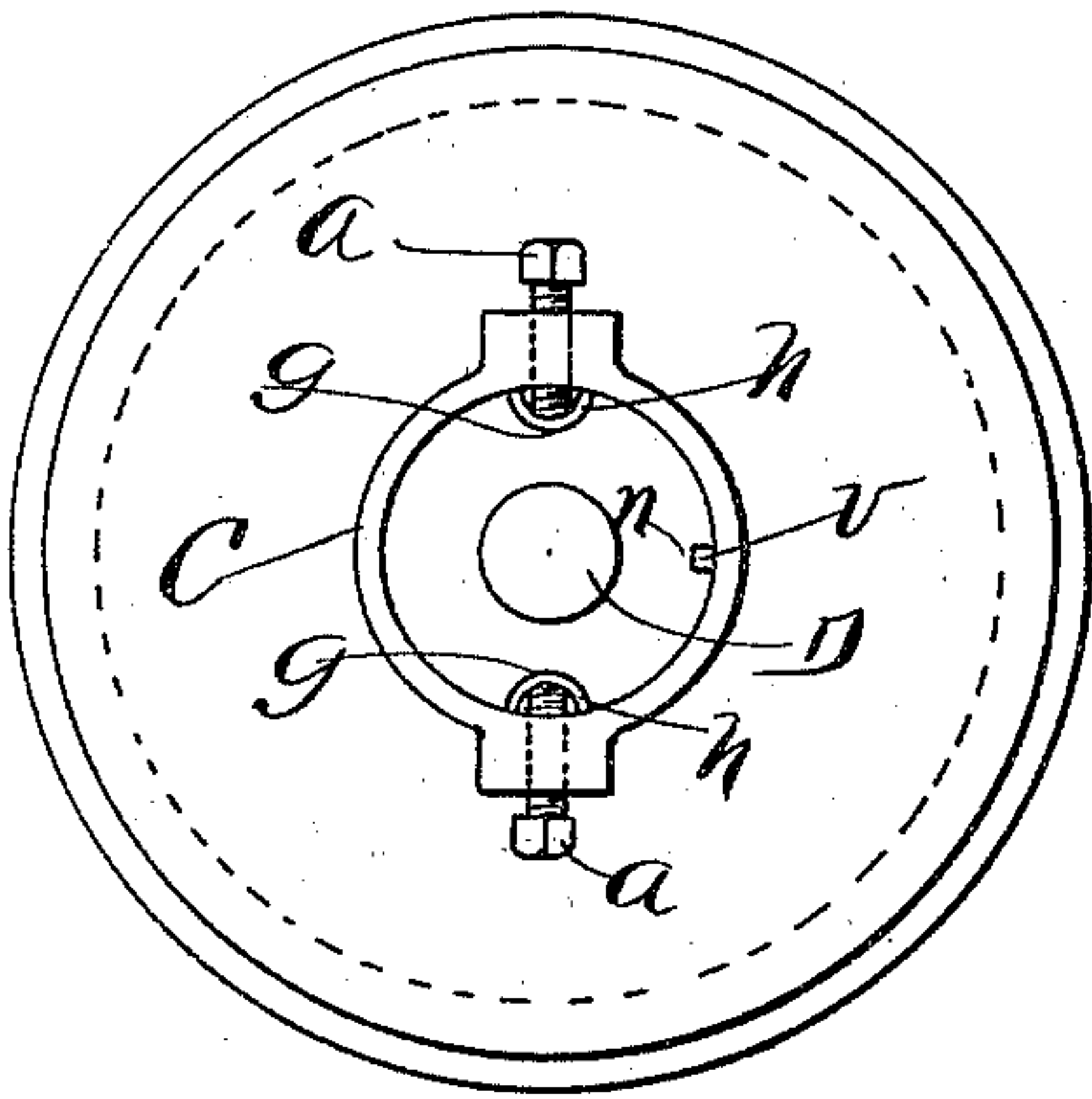
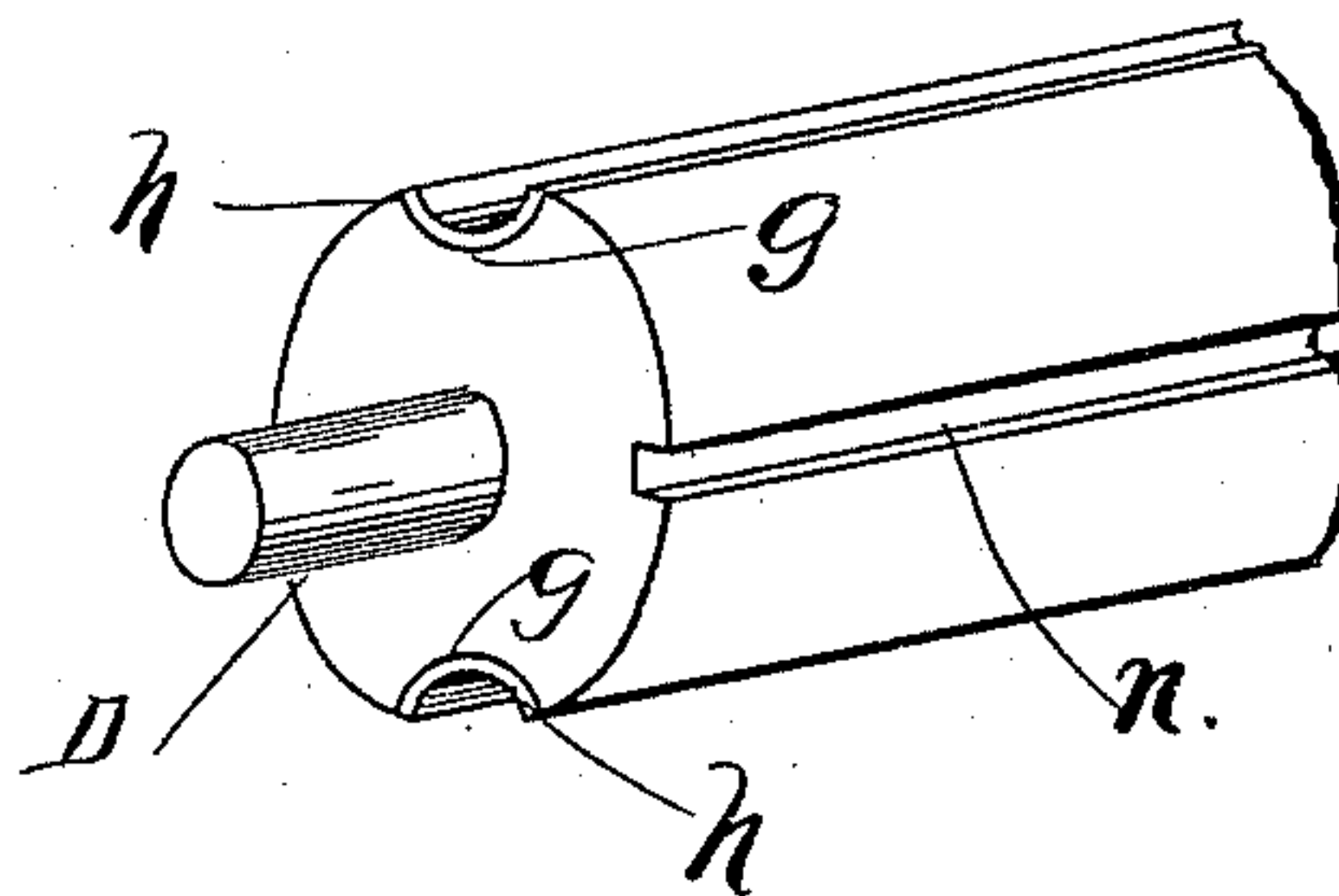


Fig. 3.



Witnesses.

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JOSEPH BETSCH, OF WOONSOCKET, RHODE ISLAND.

WARP-BEAM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 656,386, dated August 21, 1900.

Application filed May 4, 1900. Serial No. 15,451. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BETSCH, a resident of Woonsocket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Warp-Beams for Looms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to the class of improvements in looms for weaving, and has for its object to make the warp or yarn beam of a loom adjustable as to its length between its heads so as to accommodate a wide or narrow warp on the same loom, as it is sometimes necessary to do. It is fully explained and illustrated in this specification and the annexed drawings.

Figure 1 shows a front elevation of a warp-beam with the adjustable heads. Fig. 2 is an enlarged end view of the warp-beam. Fig. 3 is a view in perspective, also enlarged, of one end of the roll of the beam without its head.

The construction of my invention is as follows: The center roll of a warp-beam is made quite large because the strain of drawing the yarn off of the roll when it is nearly unwound would, if the roll were small, be too great for the weaving, and being necessarily large it is made usually of soft pine wood for lightness, as the close-wound yarn on the roll makes it very heavy to handle in putting it in the loom and a hard-wood or metal center roll would largely increase its weight. This wood roll A has an iron shaft D passing through its center, the ends of which are turned to form journals outside the roll A, on which the beam turns when in the loom.

B B' are two cast-iron heads having flanged collars C at their centers fitted to slide snugly on the center roll A. One of the heads B has a flanged groove *d* on its outer sides to receive a friction-strap, which puts the proper amount of tension on the warp when weaving by putting more or less weight on the strap. The metal on the two opposite sides of the collars C is made thicker to receive the set-screws *a a*, that are fitted to screw through the collars

and enter the grooves *g g*, made in the wooden roll A.

As before stated, the roll A is made for good reasons of light soft wood, in which the ends of the set-screws *a a* would soon work loose. To prevent this, I put stiff metal bushings *h h* in the grooves *g* for the ends of the set-screws to bear on and hold the heads fast as they may be set. To still further help to hold the heads and assist the set-screws, I make grooves *n* in the roll A and cast keys *v* on the inside of the collars of each head that will fit in the grooves *n* when the heads are put on the roll. To adjust the heads for wider or narrower warps, it is only necessary to unscrew the set-screws *a a*, slide the heads from or toward each other, as the case may be, and then screw the set-screws tight again. This makes the heads hold firmly to the roll, and as the beam is driven by one of the heads in winding the yarn on it and all of the strain of the friction-strap in holding the warp at its proper tension against the beating up of the lay comes on the hold of the set-screws on the roll it will readily be seen that the metal bushing of the grooves accomplish an important object, for if a head becomes loose and slips away from the yarn the whole warp is liable to be spoiled by the end layers breaking down, so that they cannot be replaced.

Having thus described my improvements, I claim as my invention and desire to secure by Letters Patent—

A warp-beam for looms consisting of a pair of metal heads having broad collars around their center openings, set-screws fitted to screw through said collars, a center roll of wood to hold said heads, longitudinal grooves made in said wooden roll and metallic bushings fitted in said grooves to receive the ends of the set-screws, a key cast on the inside of collars, and grooves made in said wooden roll to receive them, all in combination substantially as described.

In testimony whereof I have hereunto set my hand this 30th day of April, A. D. 1900.

JOSEPH BETSCH.

In presence of—

HOWARD E. BARLOW,
BENJ. ARNOLD.