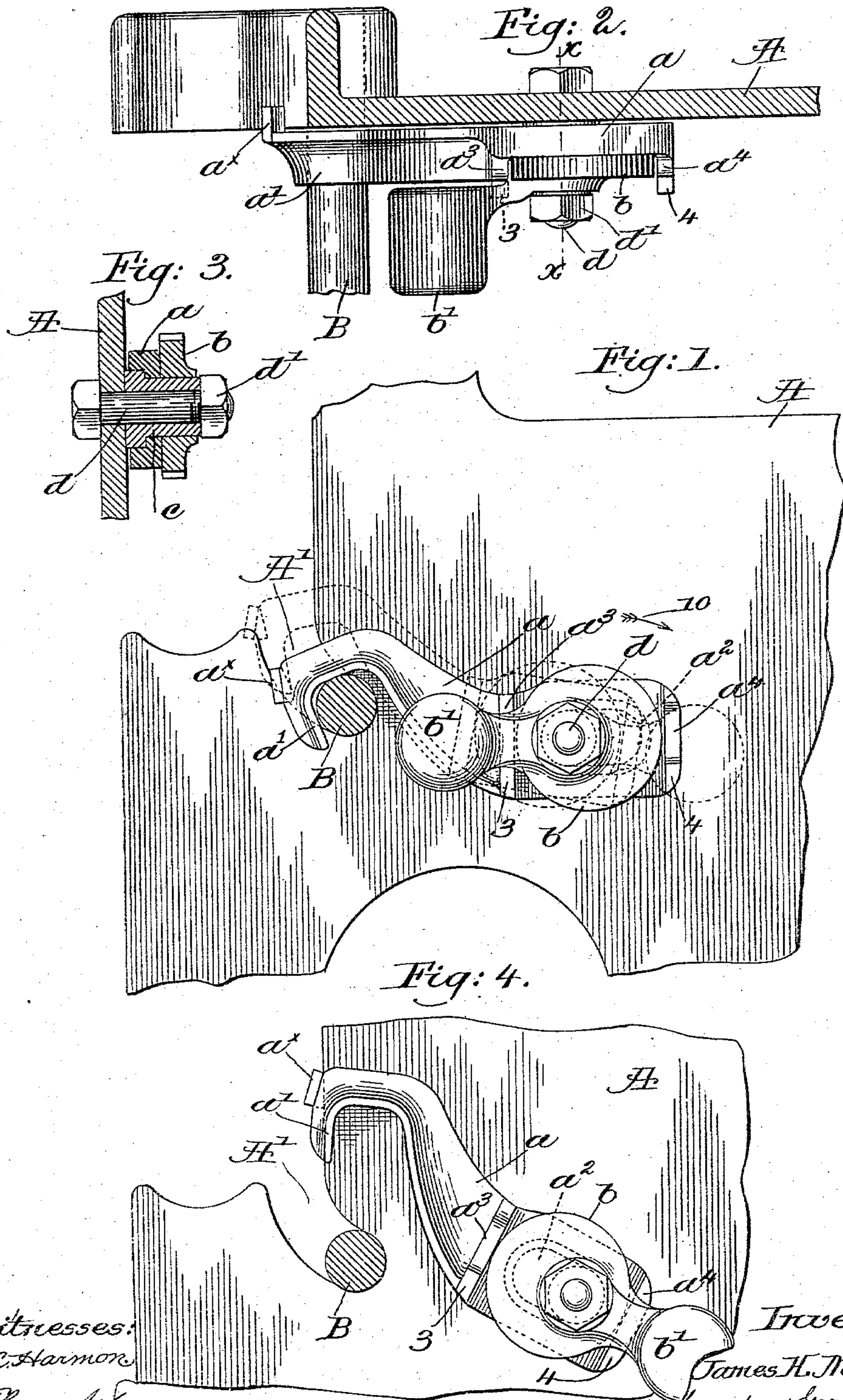


(No Model.)

J. H. NORTHROP.
BEAM CLAMP OR LOCK FOR LOOMS.

No. 563,610.

Patented July 7, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES H. NORTHROP, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO
GEORGE DRAPER & SONS, OF SAME PLACE.

BEAM CLAMP OR LOCK FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 563,610, dated July 7, 1896.

Application filed November 18, 1895. Serial No. 569,284. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. NORTHROP, of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Beam Clamps or Locks for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters and numerals on the drawings representing like parts.

In all looms wherein a beam of warp is used it is necessary that the beam can be readily removed from and applied to the loom, and it is now usual to provide open upwardly-inclined slots in the rear portion of the loom-frame to receive the beam-journals, and in which they rotate.

The tension of the yarn exerts a great strain upon the beam, and unless the journals are locked in the slots the beam is apt to jump or vibrate in the bearing-slots in such a way as to seriously affect the appearance of the cloth being woven, and, furthermore, produces a harmful action on the warp-threads. I have obviated these objections by means of a simple and effective lock or clamp which closes the open side of the beam-journal slot, the clamp being so constructed as to be easily released to remove the beam, while securely holding the latter in place when in operative position.

Means are provided for holding the lock or clamp in either operative or inoperative position.

Figure 1 is a side elevation of a portion of the loom-frame with my invention applied thereto, the beam-journal being shown in section. Fig. 2 is a top view of the device shown in Fig. 1. Fig. 3 is a cross-sectional view on the line $x x$, Fig. 2; and Fig. 4, in side elevation, represents the lock or clamp in inoperative or releasing position.

The loom-frame A is provided at the rear and at each side of the loom-frame with an open journal-slot A', of usual construction, said slots receiving the journals B of the warp-beam. (Not shown.)

The lock or clamp comprises two parts or members a and b , the former having a downturned hooked end a' to fit over the beam-journal B, as shown in Figs. 1 and 2, the

other end of said member being longitudinally slotted at a^2 , (shown only in dotted lines, Figs. 1 and 4,) preferably undercut to embrace the shouldered end of a sleeve c , Fig. 3, extended through the slot. A bolt d is extended through the loom-frame and sleeve, and provided with a retaining-nut d' to secure the bolt and sleeve rigidly to the loom-frame A. The hooked member a is thus free to swing and move longitudinally upon the sleeve c as a fulcrum.

Between the member a and nut d' I have mounted upon the sleeve a controlling and locking member b , shown as a substantially circular disk eccentric to the sleeve, and provided with a weighted handle b' , extended radially therefrom and offset slightly, as shown best in Fig. 2.

The outer face of the retaining member a is provided with two transverse ribs $a^3 a^4$, between which the disk b is rotatable, the lower ends of said ribs having extensions 3 and 4, respectively, to form stops for the cooperating member b in operative and inoperative positions.

Supposing the warp-beam to be in position with its journals B in the slots A', the actuating and locking member b will be turned to bring the handle b' to the front and against the stop 3, the disk acting as a cam against the ribs $a^3 a^4$ to draw the retaining member a into full-line position, Fig. 1, the hooked end a' embracing and preventing jumping or vibrating of the beam, the disk b holding the member a in locked position.

To unlock the beam, the handle b' is turned in the direction of arrow 10, Fig. 1, into dotted-line position, thereby causing the member a to slide forward upon the sleeve c toward dotted-line position, further rotation of the handle b' into the position shown in Fig. 4 lifting the hooked end a' of the member a above and to the rear of the slot A'.

A lug a^x on the member a rests against some portion of the loom-frame and prevents undue movement, the weight of the handle b' retaining the clamp in inoperative position, and the stop a^x also prevents the clamp from turning down too far by engaging the lower side of the journal-slot.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

5 A beam clamp or lock for looms, comprising a retaining member having a downturned hooked end to fit over the journal of the beam, transverse ribs on the outer face of the other end of said member, a longitudinal slot therein between the ribs, and a fixed
10 bolt extended through the slot and upon which said member is movable, combined with a locking member comprising a circular disk eccentrically mounted to rotate on the bolt between the ribs of the retaining mem-

ber, and provided with a radially-extended, 15 weighted handle, a stop on the retaining member to limit its movement, and independent stops on said ribs to limit the relative movement of the locking member relatively thereto, substantially as described. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES H. NORTHROP.

Witnesses:

GEO. OTIS DRAPER,
WALTER HASTINGS.