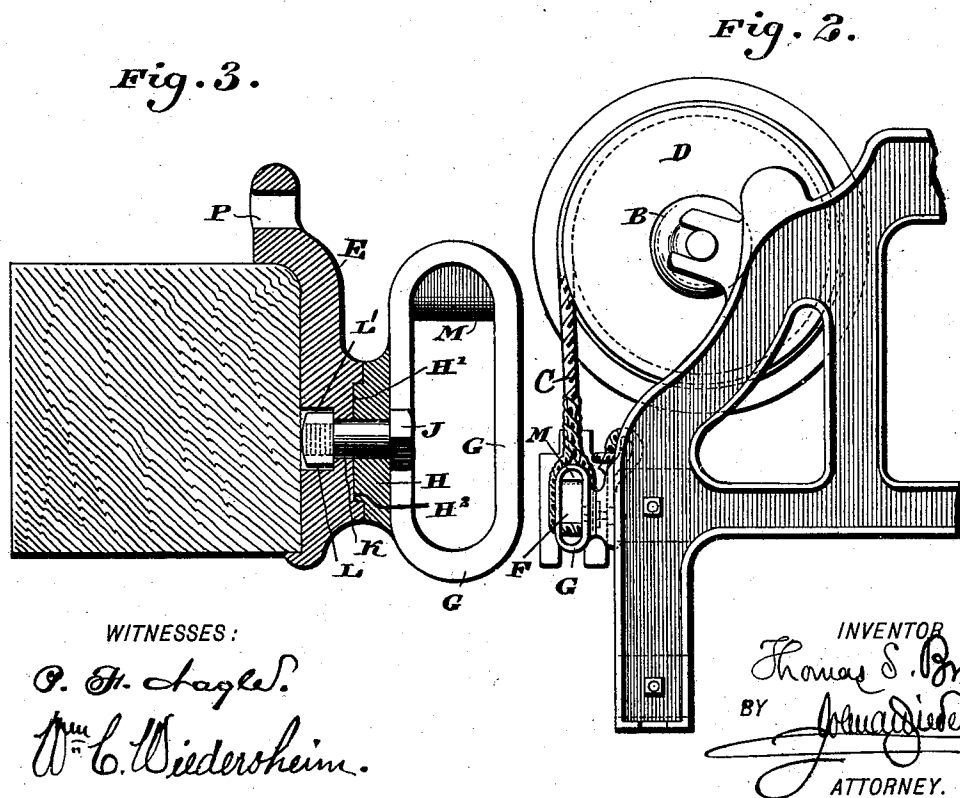
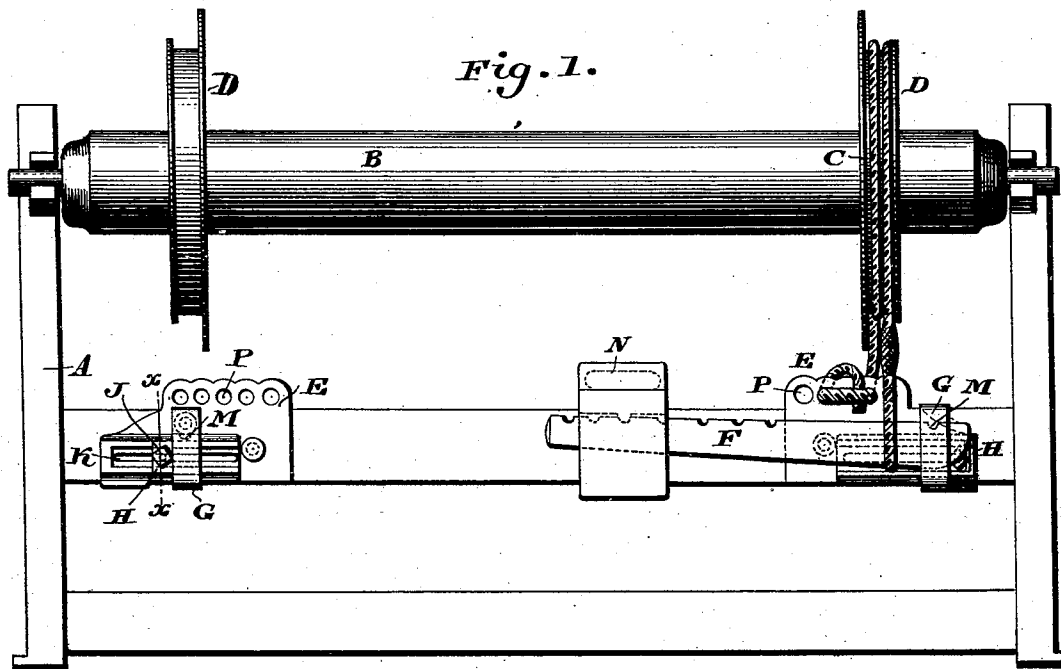


(No Model.)

T. S. BROWN.
FRICTION LET-OFF MOTION FOR LOOMS.

No. 478,045.

Patented June 28, 1892.



WITNESSES:

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THOMAS S. BROWN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE FAIRMOUNT MACHINE COMPANY, OF PENNSYLVANIA.

FRICTION LET-OFF MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 478,045, dated June 28, 1892.

Application filed November 21, 1891. Serial No. 412,665. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. BROWN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Friction Let-Off Motions for Looms, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of an adjustable rope-bracket and an adjustable fulcrum for the lever of a warp-tension of a loom, the same being hereinafter fully set forth.

Figure 1 represents a rear view of a portion of a loom having a warp-tension embodying my invention applied thereto, one end thereof being only partly rigged. Fig. 2 represents a side elevation thereof. Fig. 3 represents a section on line $x x$, Fig. 1, on an enlarged scale.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a portion of the frame of a loom, and B designates the warp-beam which is mounted thereon.

C designates the tension ropes or cords, the same passing over the beam-flanges D and each having one end connected with a bracket E and the other end with a lever F.

G designates pockets, which are provided with ears H, the latter being tongued, as at H', and fitted in grooves H² in the brackets, and through the ears are passed bolts J, which are also passed through the slots K in the brackets E and secured by nuts L in the recesses L' therein, said brackets being firmly attached to the back rail of the frame. Depending from the inner face of each pocket is a tooth M, the same forming the fulcrum of one of the levers F, the latter carrying a weight N, whereby tension may be transmitted to the rope or cord C, it being noticed that the latter is connected with the lever between the fulcrum and weight. In the upper ends

of each bracket is a series of eyes or openings P, in either of which the end of the rope or cord D may be laced, and thus connected with said bracket.

To accommodate cloth or fabric of different widths, the pockets G are shifted on the brackets E to the right or left, as required, and then secured by the bolts J. The connections of the cords with the brackets are also adjusted, owing to the openings P. By these means the leverage on either width of the fabric may be preserved, and there is great saving of weights over the old system.

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

1. A warp-tension for a loom, consisting of a warp-beam having flanges, brackets adapted to be secured to the loom-frame and having grooves, a slot and eyes, pockets with ears fitting in said grooves and with depending teeth, securing-bolts for said pockets and brackets, levers fulcrumed in said pockets, and cords passing around said flanges and secured to the eyes of said brackets and to levers, said parts being combined substantially as described.

2. The bracket E, provided with the groove H², the slot K, and a series of openings P, the pocket G, with the depending tooth M within the same at the upper end thereof and the tongued ear H at the rear, said ear entering said groove H², the bolt J, passing through the ear E and slot K, the lever F, fulcrumed in said pocket on the tooth M thereof, the beam B, the flange D on said beam, and the rope C on said flange connected with the fulcrum end of the lever and with the bracket E in one of the openings P thereof, said parts being combined substantially as described.

THOMAS S. BROWN.

Witnesses:

CHAS. E. PANCOAST,
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