

Beebe & Bestor.

Friction Device for Yarn Beams.

No. 43,895.

Patented Aug. 23, 1864.

Fig. 1.

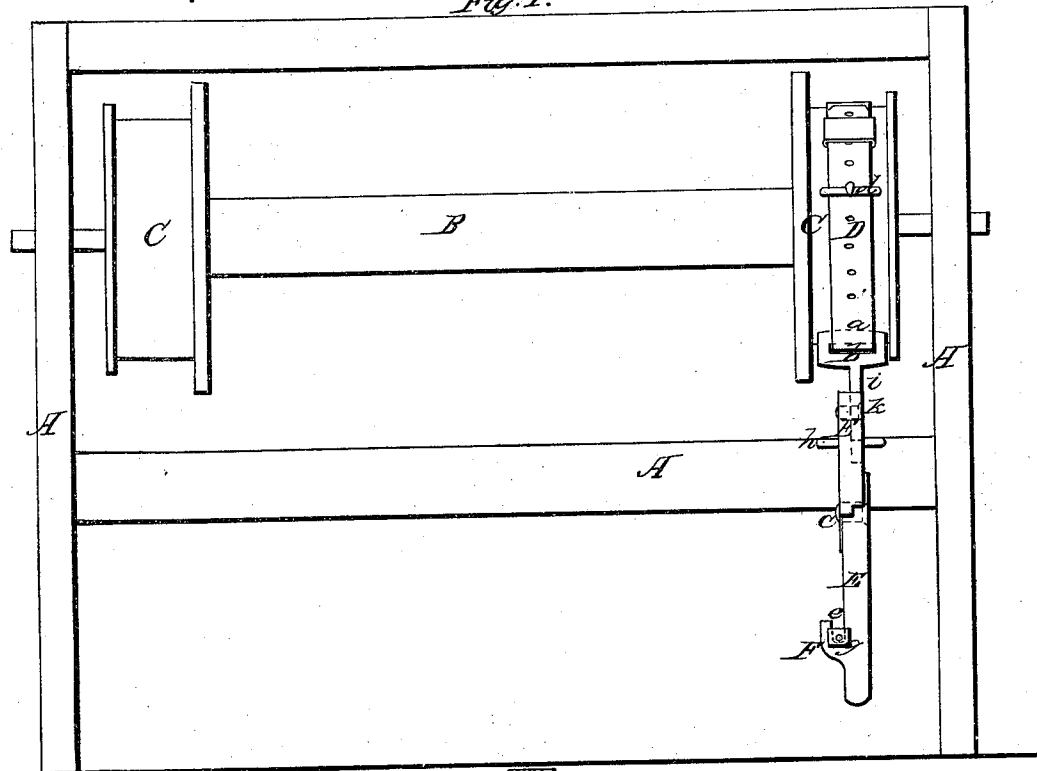
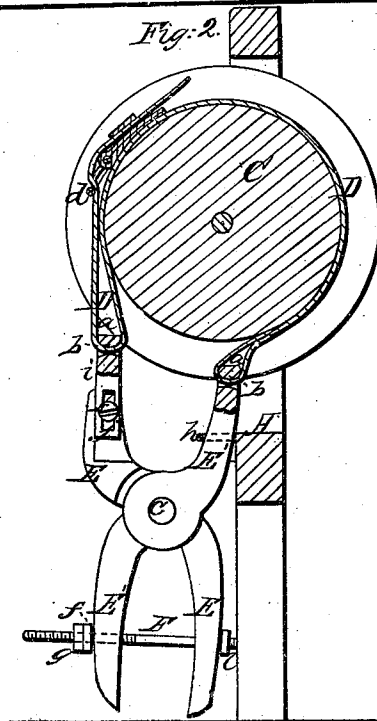


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALONZO BEEBE AND FRANCIS L. BESTER, OF ENFIELD, MASSACHUSETTS.

IMPROVEMENT IN FRICTION DEVICE FOR THE YARN-BEAMS OF LOOMS.

Specification forming part of Letters Patent No. 43,895, dated August 23, 1864.

To all whom it may concern:

Be it known that we, ALONZO BEEBE and FRANCIS L. BESTER, both of Enfield, in the county of Hampshire and State of Massachusetts, have invented a new and Improved Friction Device for the Yarn-Beams of Looms; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an elevation of the back of a loom having our invention applied. Fig. 2 is a vertical section at right angles to Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

The object of this invention is to supply a means of producing and regulating the friction on the yarn-beam of a loom, whereby such friction will be rendered uniform, and the cockling of the cloth will be effectually prevented; and to this end it consists in the employment of a flexible friction-strap, D, of leather or other similar material, upon the drum C, the tension of the strap being regulated by two crossed levers pivoted together like the legs of a pair of tongs or pinchers and adjusted by a screw.

To enable those skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A is the frame of the loom, and B is the yarn-beam, having its journals arranged in the usual bearings. C C are the friction-drums fast on the yarn-beam. Our invention is represented as applied to one of these drums only, as that will be sufficient.

D is the flexible friction-strap, of leather or other similar material, encircling about three-fourths of the circumference of the drum, and made with a loop, *a*, at each end, one of the said loops being adjusted by a buckle, *d*, to adjust the length of the strap according to the circumference of the drum. E E' are the crossed levers pivoted together by a pin, *c*, like a pair of pinchers or tongs, and each having an eye, *b*, at its upper end for the reception of one of the loops *a a* of the flexible friction-strap, one of the said loops being connected with one and the other with the other of such levers. F is the adjusting-screw, secured to the lower part of the lever E or passing through it and fur-

nished with a head, *l*, at the back thereof, and passing through a slotted lug, *e*, on one side of the lower part of the lever E', in front of which it is furnished with a nut, *f*, which screws up against the said lever to tighten the band, and with a second nut, *g*, which is screwed up against the first one to secure it in the position to which it is adjusted. The upper end of the slot in the lug *e* is open to permit the screw to be slipped in or out to apply or remove the friction of the strap without removing the nuts from the screw. The upper part of the lever E' is connected with the frame of the loom by a metal strap, *h*, by which the levers and straps are prevented from turning with the beam.

By screwing up the nut *f* against the lever E' the lower parts of the levers E E' are drawn toward each other, and by that means the upper parts are caused to approach each other and tighten the flexible friction-strap upon the drum; and by moving the nuts in the opposite direction the opposite effect is produced, and in this way the flexible friction-strap is tightened or slackened to increase or diminish the friction as required. When the friction of the strap is adjusted, it will be perfectly uniform and cannot be altered by the weaver without the use of a wrench to turn the nuts.

The upper end of the lever E is fitted with a movable piece, *i*, in which its eye *b* is formed, the said piece being connected with the principal portion of the lever by a slot, *j*, and set-screw *k* to enable it to be adjusted and secured in a higher or lower position to adapt the strap to beams of different sizes.

One advantage of this friction device is that its weight is less than one-fifteenth part of that of the devices commonly used.

What we claim as our invention, and desire to secure by Letters Patent, is—

The employment of a flexible friction-band, D, of leather or other similar material, upon the drum C, regulated as to tension by the two crossed levers E E' and their tightening-screw F.

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Witnesses:

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