(No Model.)

N. T. FOLSOM.

LET-OFF MECHANISM FOR LOOMS.

No. 558,274. Patented Apr. 14, 1896.

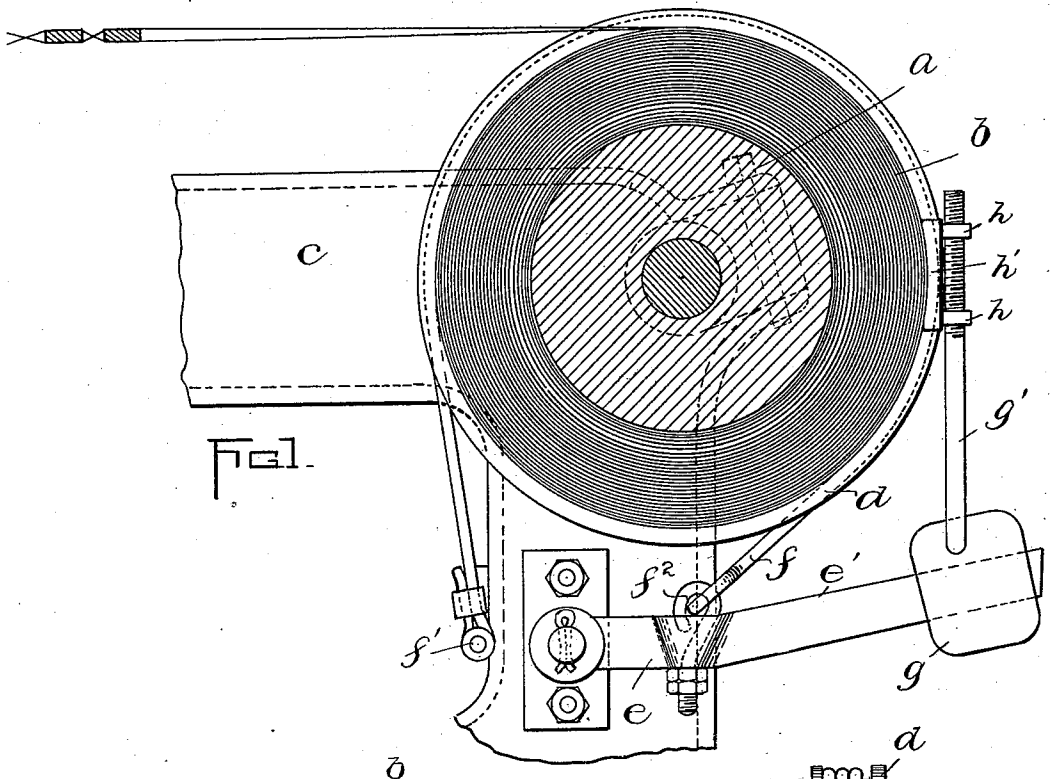

Fig. 1.

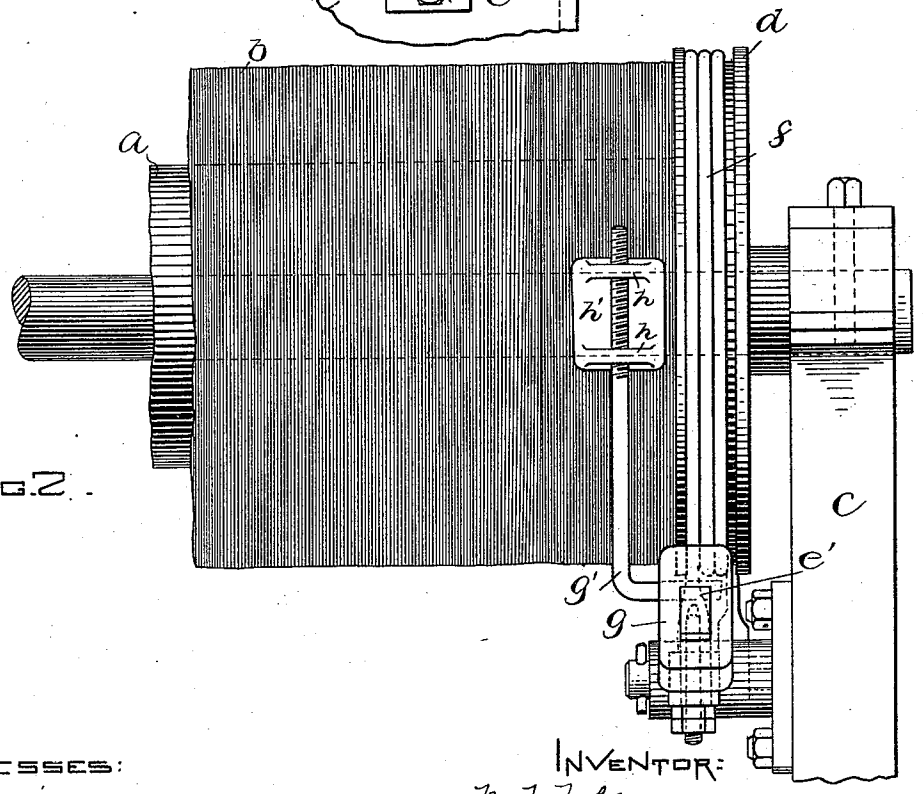

Fig. 2.

WITNESSES:
A. D. Harrison
C. E. Davis

INVENTOR:
N. T. Folsom
by Wright Brown & Quinby attys.

UNITED STATES PATENT OFFICE.

NEHEMIAH T. FOLSOM, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF TO JOHN S. FOLSOM, OF MILLIS, MASSACHUSETTS.

LET-OFF MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 558,274, dated April 14, 1896.

Application filed October 14, 1895. Serial No. 565,568. (No model.)

To all whom it may concern:

Be it known that I, NEHEMIAH T. FOLSOM, of Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Let-Off Mechanism for Looms, of which the following is a specification.

This invention relates to what are known as "let-off" mechanisms for looms, arrangements designed to vary resistance to unwinding of the warp from its beam, according to the decrease in diameter, as the warp unwinds. My invention aims to provide a mechanism of this character wherein the parts are so constructed and arranged that advantages of compactness and simplicity result. Economy of space is a great desideratum in mills, and my invention provides for confining the let-off mechanism to the minimum compass. The number of parts is reduced to the minimum, making the mechanism extremely simple, and at the same time it is thoroughly practical.

With the above-stated objects in view the invention consists in the novel construction and combination of parts recited in the appended claim.

The drawings which accompany and form part of this specification illustrate an embodiment of the invention.

Figure 1 shows the mechanism in side elevation with the warp-beam in section. Fig. 2 shows a front elevation of the same.

The letter *a* designates the beam from which the warp *b* is unwound, and which is journaled in the frame *c* of the loom and carries near one end a disk or pulley *d*. A lever *e* is pivoted at one end to the frame of the machine under the warp-beam and has a part *e'* inclined to the vertical axial plane of the beam. A brake-strap *f* winds about the pulley *d* a number of times and is fastened at one end to the frame of the machine, as shown at *f'*, and at the other to the lever near its inner end, as shown at f^2. It is here to be noted that by having the friction-band or brake-strap pass a number of times around the pulley sufficient friction is provided for to permit the employment of a comparatively short lever and consequent reduction in space occupied by the let-off mechanism. In fact the lever need not project to an appreciable extent beyond the plane of the warp-beam.

A weight *g* embraces and is adapted to slide on the inclined part *e'* of the lever *e* and has a rigid arm *g'*, which is angular, projecting laterally to clear the pulley and thence upwardly into the horizontal plane of the warp-beam. At its upper end this arm *g'* is screw-threaded to engage ears *h* on a shoe *h'*, adapted to bear against the roll of warp. The bearing of this shoe against the said roll controls the position of the weight *g* on the inclined arm, for the said weight constantly tends to slide down the incline and is only restrained from so doing by the bearing of the shoe against the roll. The jarring of machine in operation is sufficient to insure the downward movement of the weight on the arm.

The operation will be apparent. As the diameter of the roll lessens the weight moves inward on the lever and the tension on the brake-band is lessened.

The simplicity and practicability of the device will be immediately recognized.

The number of parts is considerably reduced as compared with other devices of this character. The arrangement of the weight is to be particularly noted, it being simply formed to embrace the lever and thus be guided and kept in place while still free to slide.

What I claim as my invention is as follows:

A let-off mechanism for looms, comprising a lever pivoted at one end to the frame of the machine under the warp-beam and having an upward inclination; a brake-strap connected to the said lever near its pivot, said brake-strap winding on a pulley on the warp-beam; a weight arranged upon the inclined part of the lever and adapted to slide on the same and having a rigid upstanding arm; and a shoe on said arm adapted to be pressed against the roll of warp by the downward tendency of the weight on the lever.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 28th day of August, A. D. 1895.

NEHEMIAH T. FOLSOM.

Witnesses:
JOHN C. BICKFORD,
JOHN A. RIDDLE.