L. C. Briggs.

Let Off.

No. 81,133. Patented Aug. 18, 1868.

Fig 1.

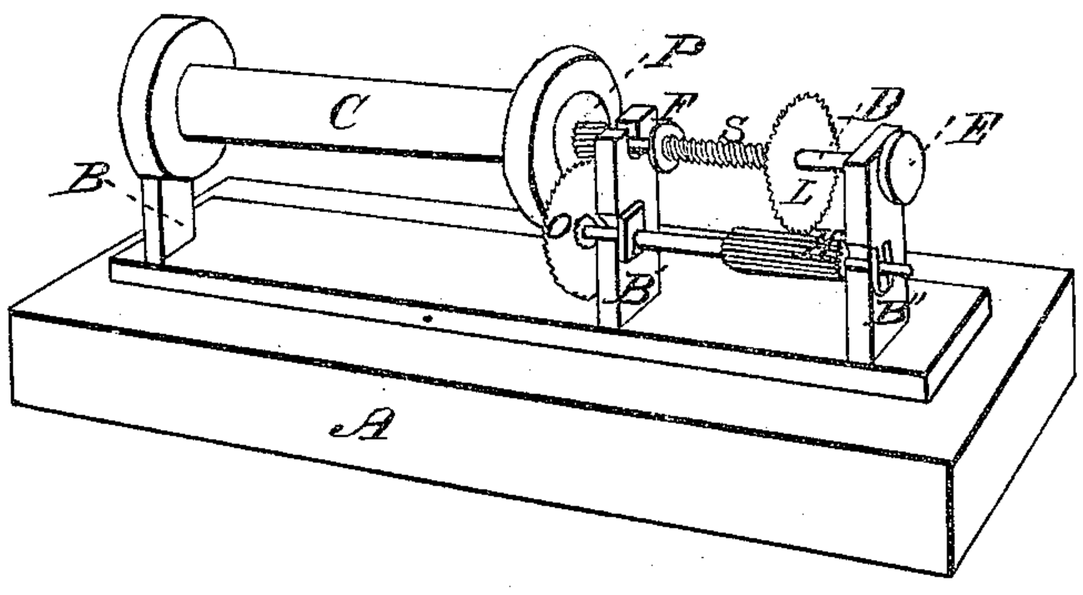
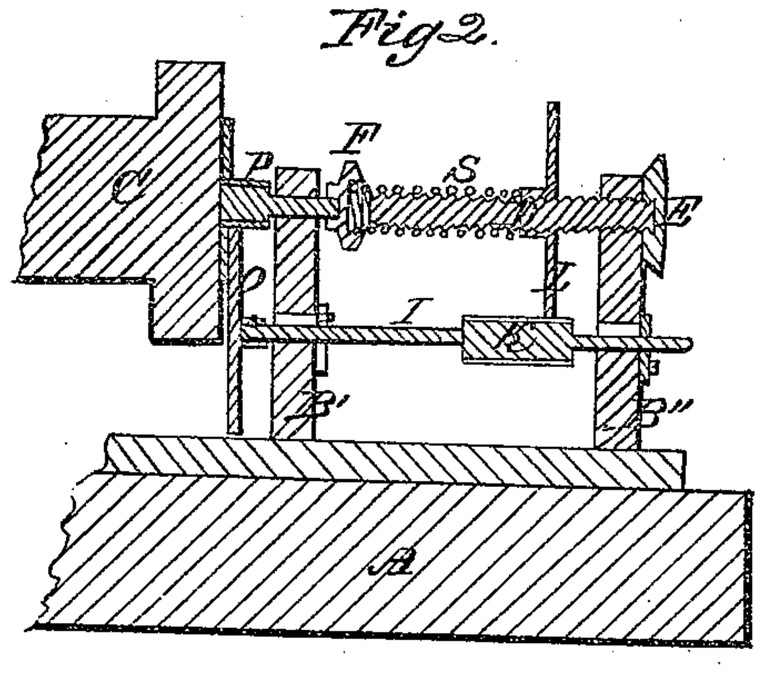


Fig 2.



Witnesses

Frank G. Parker.

A. Lyon Berry.

Inventor.

Leonard C. Briggs.

United States Patent Office.

LEONARD C. BRIGGS, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 81,133, *dated August* 18, 1868.

IMPROVEMENT IN LET-OFF FOR LOOM.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, LEONARD C. BRIGGS, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Let-Offs for Looms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in combining, with the beam of a loom, a train of gear-wheels, which connect with and operate a disk, said disk revolving and traversing upon a fixed screw, in such a manner as to cause a spring, which it acts against, to react upon the spindle of the beam, and thus to produce friction, and to check, as much as desired, the free revolution of the beam.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and use. In the drawings—

Figure 1 is a perspective view of my machine.

Figure 2 is a longitudinal section of a part.

In the drawings, C is the beam, made and hung in the ordinary manner, but has attached to one end the small pinion P, and to the extreme end of its shaft or axle, a small friction-disk, F.

The pinion P meshes into and actuates the spur-gear O, attached to the shaft I. K is a barrel-pinion on the shaft I. D is a stationary arm, attached permanently to the standard B″, by means of the set-nut E. A screw-thread is cut upon D, upon which screws, as a nut, the gear-wheel L. S is a spiral spring, one end of which rests against the wheel L, while the other end rests against the friction-disk F, so that if from any cause the wheel L be screwed towards F, pressure will be brought to bear upon the spring S, and by the spring transmitted to the friction-disk F, the friction upon F being more or less, as the wheel L is nearer or more remote from F.

From inspection of the drawings, it will be seen that if the beam C be revolved, a very slow motion will be given through the pinion P, spur-wheel O, and pinion K to the wheel L, thus causing it to advance or recede on the screw-arm D, and thus to exert more or less pressure upon the spring S; in other words, it will increase or lessen the friction on the disk F, and thus regulate the motion of the beam C.

The object of my invention is to so vary the amount of friction upon the beam C, that the tension of the warp shall be always the same, whether the beam be full or nearly empty. Instead of the spiral spring S, an elliptical or any suitable spring may be substituted.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination and arrangement of the wheel L, the screw-arm D, the spring S, and friction-disk F, working substantially as described, and for the purpose set forth.

2. The combination and arrangement of its pinion P, spur-wheel O, shaft I, barrel-pinion K, wheel L, the screw-arm D, spring S, and friction-disk F, working substantially as described, and for the purpose set forth.

LEONARD C. BRIGGS.

Witnesses:

FRANK G. PARKER,

A. HUN BERRY.