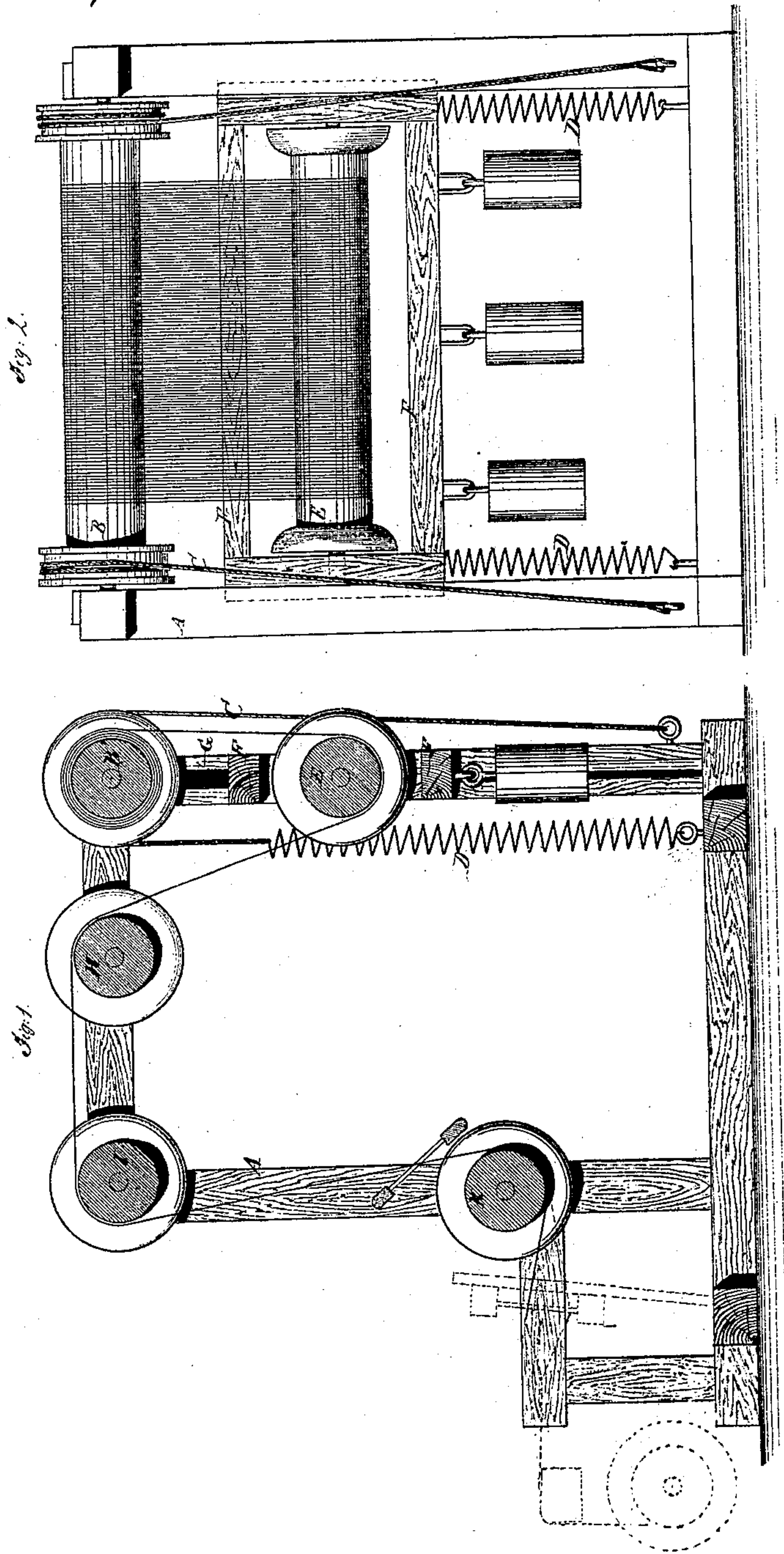


J. Day,

Let-Off for Loom.

No. 102,506.

Patented May 3, 1870.



Witnesses:
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JOHN DAY, OF PATERSON, NEW JERSEY.

Letters Patent No. 102,506, dated May 3, 1870.

IMPROVEMENT IN LET-OFF MECHANISM FOR LOOMS.

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, JOHN DAY, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and improved Compensating Let-off for Looms; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

This invention relates to improvements in let-off motions for looms, and consists in the application, in addition to the ordinary warp-roll, of an auxiliary roll, mounted on a vertically-sliding and weighted frame, under which the warp is carried from the warp-roll, and to another guiding-roll, which, together with the warp-roll, are elevated in a vertical extension of the loom-frame, so that the weight of the auxiliary roll, frame, and weights is suspended in the bight of the warp, which passes over another guide-roll in the plane of the first, and down under a third guide-roll, and thence through the sley to the work-beam. Previous to passing under the final guide-roll, the warp passes through a sley or reed, for guiding it evenly on the said roll.

This improved attachment is designed to provide a better means for producing uniform tension in the warp, and relieving the shocks thereon due to the beating up of the lay, which vary materially with the atmospheric changes, especially silk and cotton warp, the working of which this apparatus is especially designed for.

Figure 1 represents a longitudinal sectional elevation of my improved let-off attachment, and

Figure 2 is a rear elevation of the same.

Similar letters of reference indicate corresponding parts.

A is a vertical and rear extension of the loom-frame, at the rear upper corner of which the warp-roll B is mounted. It is provided with any preferred arrangement of friction devices. In this instance I have represented a friction-cord, C, wound once or more around the grooved pulley, and connected to the spring D.

E is the auxiliary roll, mounted in a sliding and

weighted frame, F, below the roll B, working in the vertical guiding-grooves, G, in the rear posts of the extension frame.

H and I are guide-rolls, mounted on the top of the frame, and

K is another guide-roll, mounted in the front posts of the extension frame A, in the horizontal plane of the work-beam.

The warp is carried from the roll B, under E, over H and I, and under K, and thence through the harness and sley to the work-beam and cloth-roll, in the usual way.

By this arrangement, the warp is placed under tension throughout a much greater distance after leaving the warp-roll, and before winding on the cloth-roll, whereby it will stretch more under the sudden strains of the reed in beating up, and, being carried under the auxiliary roll, which is capable of rising and falling as the tension increases or diminishes, the variations in the strain on the warp, due to beating up, or to atmospheric or other causes, will be compensated for in an efficient and reliable manner, so that the tension on the warp-threads will be equalized more nearly than is the case with the present arrangements, no matter how wide the warp may be.

This vertical extension of the frame and elevation of the guide-rollers over which the warp is carried afford convenient access to the warp, for the attendant to clean the same, as it is working through the loom.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The combination, with the warp-roll of a loom, of the auxiliary roll, mounted in a vertically-sliding weighted frame, and guide-rolls H, I, and K, when the said warp-roll and guide-rolls H I are arranged, as shown, in a vertical extension of the loom-frame, substantially as specified.

JOHN DAY.

Witnesses:

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