(No Model.) 2 Sheets—Sheet 1.

H. C. LAZELLE.

COMPRESSION ROLL FOR SLASHER DRESSERS FOR COTTON WARPS.

No. 342,613. Patented May 25, 1886.

Fig. 1.

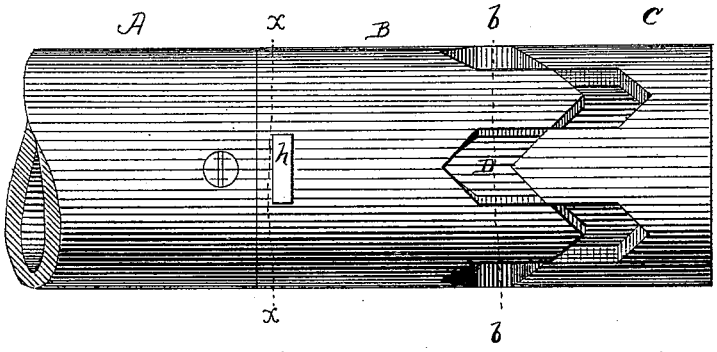


Fig. 2.

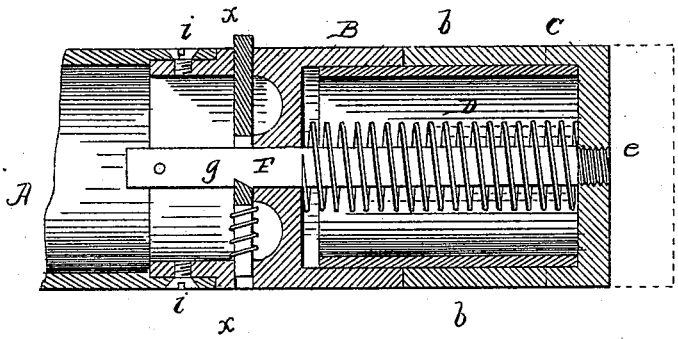


Fig. 5.

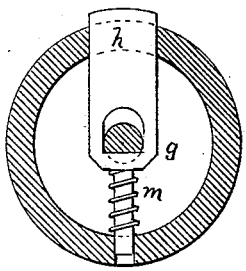


Fig. 4.

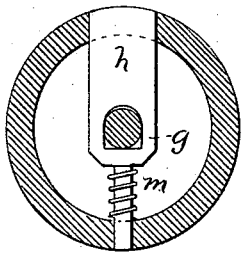
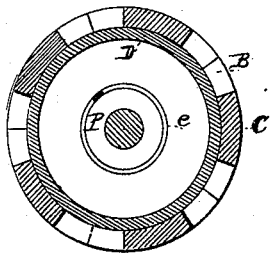


Fig. 3.



—WITNESSES.—

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his Attorneys

(No Model.) 2 Sheets—Sheet 2.

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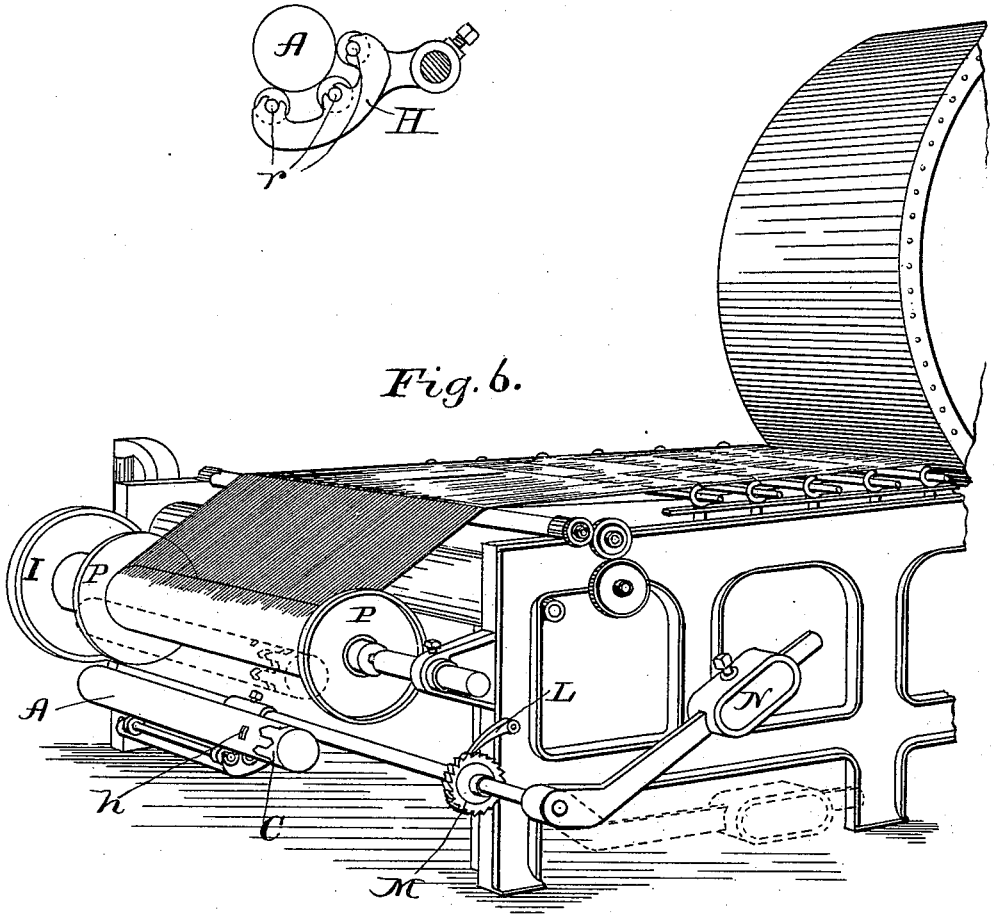
Fig. 7.

Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY C. LAZELLE, OF WOONSOCKET, RHODE ISLAND.

COMPRESSION-ROLL FOR SLASHER-DRESSERS FOR COTTON WARPS.

SPECIFICATION forming part of Letters Patent No. 342,613, dated May 25, 1886.

Application filed April 18, 1885. Serial No. 162,681. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. LAZELLE, a citizen of the United States, residing at Woonsocket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Compression-Rolls for Slasher-Dressers for Cotton Warps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to compression-rolls for slasher-dressers for cotton warps; and it consists in the novel construction and combination of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a partial detail perspective view of a compression-roll embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of Fig. 1. Fig. 3 is a vertical section on line *b b* in Fig. 1. Fig. 4 is a vertical sectional view on line *x x* in Fig. 1 with the key *h* retracted. Fig. 5 is a similar view with the key *h* projected. Fig. 6 is a rear end perspective view of part of a machine, showing my invention applied; and Fig. 7 is an end view of the compression-roll and its means of support removed from the machine.

The ordinary compression-roll as now used is simply a hollow cylinder, of either wrought or cast iron, made smooth on the outside and of such a length as to nearly fill between the heads of the loom-beam. When the yarn upon the slasher is wound upon the beams, the roll, by other mechanism, is pressed firmly against it, causing it to revolve, and thereby press the yarn solid and uniform. Heretofore considerable trouble has been experienced with these rolls, because of the variations in the lengths of the loom-beams between the heads requiring a number of rolls of various lengths, and in most cases when no roll is at hand of the required length shorter ones are used, causing the warp on the ends of the beams not pressed by the roll to build up much faster, making it to take most of the strain when in the loom, causing the selvage ends to break, and thus make poor selvages on cloth. I obviate this difficulty by making one roll answer for all variations and at all times to fill between the beam-heads. To accomplish this I attach to the common roll an expansion-joint of such a length that when the joint is closed it will be shorter and when expanded longer than any beam used.

Referring by letter to the accompanying drawings, A designates the common roll, and B C are the jaws or the clutch-sections, one of which, B, is secured to the roll A by screws *i i*.

F designates the guide-bar, and *e* the spring for projecting the extension C, and also for permitting the retraction of the extension C when desired, to lengthen or shorten the roll, as may be desired.

gh designate a spring-actuated key for locking the parts together. The spring *m* is designed to hold the key in engagement with the guide-bar F, as shown.

D designates a dust-sleeve within the jaws or clutch-sections B C, and is designed to close the openings between the engaging and interlocking branches *a a* of the clutch-sections when the latter are drawn apart.

In operation the roll is placed upon weighted supports at the rear of the machine and nearly under the loom-beam. The expansion joint or clutch B C is pressed in and locked, as shown in Figs. 2 and 5, the key *h* extending beyond the periphery of the roll. The weights of the support are then released, which convey the roll between the heads of the beam until it meets the yarn and immediately commences to revolve. The key *h*, coming in contact with the beam or yarn, is pressed in, which releases it from the catch or the bar F, causing the spring *e* to act, expanding the joint until the roll comes in contact with both heads of the beam and conforms to the distance between them at all times, thereby pressing upon the yarn the entire length of the roll.

By referring to Figs. 6 and 7 of the drawings it will be seen that the compression-roll A is placed upon the rollers *r*, which are journaled in the frame H. When the machine is put in motion, the warp-beam is rotated by means of the friction-gear I, and after it has been turned sufficiently to hold the yarn the pawl L is then released from the ratchet-wheel

M, which allows the weight N to drop, thus causing the roll to rise up against the yarn on the beam and between the disks P, thereby causing the compression-roll to rotate on the rollers *r*. By this operation the catch-pin *h* comes in contact with the yarn. It is pressed in, unlocking the jaws, and causing the roll to engage the inner sides of the heads or disks P.

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

1. The combination of the sections B C, the dust-sleeve D, guide-bar F, spring *e* on guide-bar F, and the spring-actuated key *gh*, substantially as specified.

2. The combination, with the roll-body A of a compressor-roll, of the sections B C, the dust-sleeve D, guide-bar F, spring *e* on guide-bar F, and the spring-actuated key *gh*, substantially as specified.

3. A compressor-roll having two separate sections, a spring for expanding or separating the same, a guide-bar, and a spring-actuated key for locking the sections in contracted position, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY C. LAZELLE.

Witnesses:
SAML. P. COOK,
THEO. M. COOK.