(No Model.)

L. WILMOTT.

LET-OFF MECHANISM FOR LOOMS.

No. 345,468. Patented July 13, 1886.

Fig. 1.

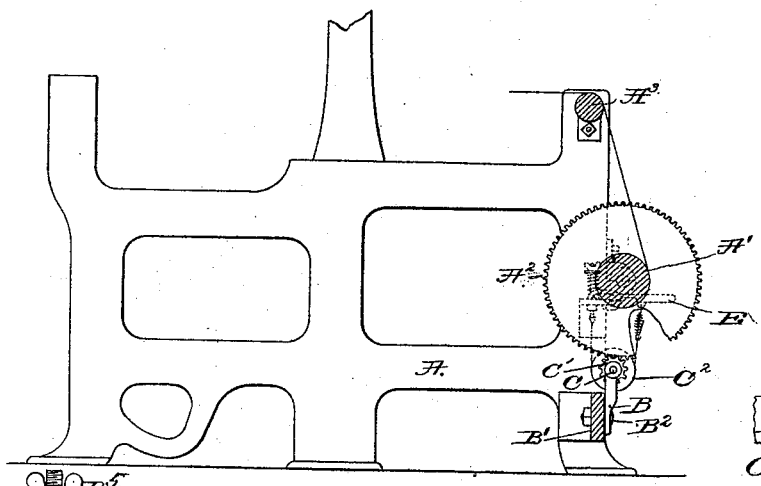


Fig. 2.

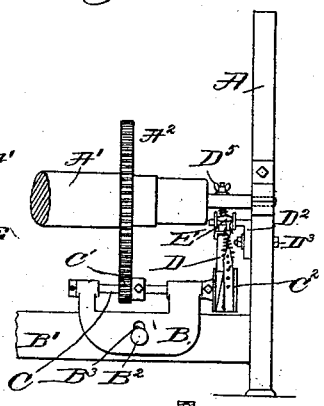


Fig. 4.

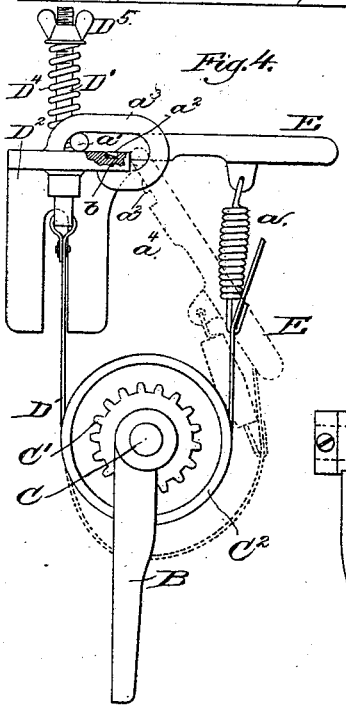
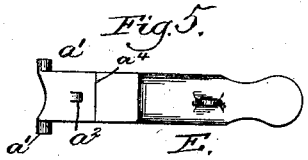


Fig. 5.



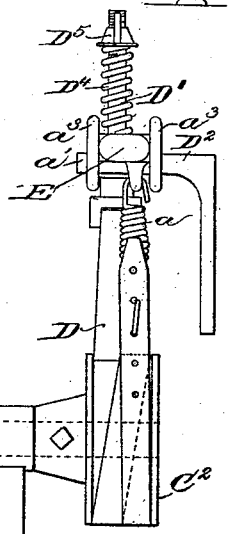
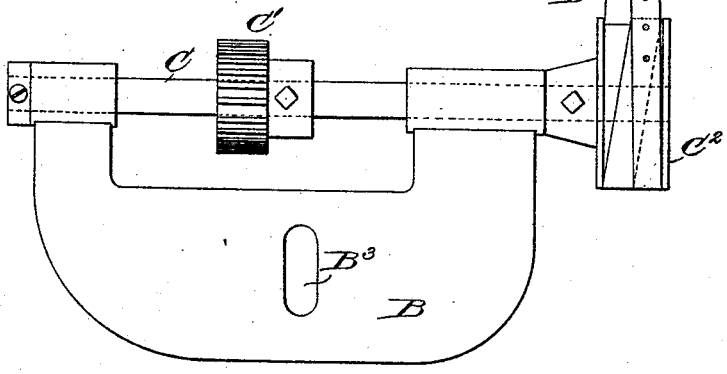


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

LOUIS WILMOTT, OF NEW BEDFORD, ASSIGNOR OF ONE-HALF TO GEORGE DRAPER & SONS, OF HOPEDALE, MASSACHUSETTS.

LET-OFF MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 345,468, dated July 13, 1886.

Application filed July 11, 1885. Serial No. 171,348. (No model.)

To all whom it may concern:

Be it known that I, LOUIS WILMOTT, of New Bedford, county of Bristol, State of Massachusetts, have invented an Improvement in Let-Off Mechanisms for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention consists, essentially, in the combination, with the loom-frame, the let-off beam, and the toothed gear thereon, of a bracket, a shaft in the said bracket carrying a pinion and a friction-drum, and a second bracket, a strap-attaching device, a friction-strap, and a strap-holding lever, the strap being extended about the drum, and acting as a friction device to retard the rotation of the said shaft and of the let-off beam.

Figure 1 represents in section a sufficient portion of a loom-frame to illustrate the invention to be herein claimed, the toothed gear of the let-off beam being partially broken out to show parts behind it. Fig. 2 is a right-hand end view of Fig. 1. Fig. 3, on a large scale, shows separately or detached from the loom-frame the devices comprising my friction apparatus, and which are to be applied to looms of kinds already made, or looms having a toothed gear on the let-off beam. Fig. 4 is a left-hand end view of Fig. 3, the dotted lines showing the lever drawn forward and dropped to slacken the friction-strap; and Fig. 5 shows the lever detached.

The loom-frame A, let-off beam A′, toothed gear A^2, fast thereon, and the roll A^3, are and may be of any usual construction.

It is a great desideratum in looms to hold the let-off beam by a friction device which shall permit its rotation only so far as it is positively pulled by the warp from the take-up end of the loom. To effect this I have provided a bracket, B, which is attached to the usual cross beam or tie, B′, by a bolt, B^2, the slot B^3 permitting it to be adjusted vertically into proper position. The bracket B receives a shaft, C, provided with a pinion, C′, and a friction-drum, C^2, and about the latter is wrapped one or more times the friction-strap D. One end of strap D is connected with the looped end or head of a strap-attaching device (shown as a bolt, D′) extended through a hole in a second bracket, D^2, secured, as herein shown, to the inner part of the loom side by a bolt, D^3, the bolt D′ being thereafter surrounded by a spiral spring, D^4, and above the spring the bolt is provided with a nut, D^5, by which to govern the effective strength of said spring. The opposite end of the friction-strap D is operatively joined, as herein shown, by hook or loop *a*, made as a spring-hook, with the strap-holding lever E, (shown separately in Fig. 5,) it having two lugs, *a′ a′*, and a dog, a^2, the two lugs entering the loops or eyes a^3, so as to permit the lugs to be slid and to turn in the said loops as the lever is moved from its full into its dotted line position, Fig. 4, it being drawn forward and dropped, as shown in dotted lines, whenever it is desired to relieve the drum from friction—as, for instance, when it is desired to rotate the let-off beam by hand for any considerable distance. When the lever E is in its full-line position, the strap is operative to produce friction, and at such time the dog a^2 enters the notch *b* and the shoulder a^4 meets the front end of the bracket, as shown best in Fig. 4; but to relieve the strap it is only necessary to turn the lever E far enough to remove the dog from the notch *b*, and then pull the lever forward until the lugs *a′* pass along in the loops to the edge of the bracket, when the lever will drop, as in dotted lines, Fig. 4. The said lever when pulled out relieves the friction of the strap on the drum.

I claim—

1. The loom-frame, the let-off beam and toothed wheel thereon, the bracket B, shaft borne in said bracket, and the pinion and friction-drum on said shaft, combined with a bracket, D^2, a strap-attaching device, a lever, E, loosely connected to said bracket D^2 by a slip-joint constructed, substantially as shown, so as to be aligned with said bracket and rigidly engaged therewith, and also adapted by a longitudinal movement to be disengaged and swung loosely therefrom, and a friction-

strap extending from the strap-attaching device, thence about the friction-drum, and to the lever, substantially as described.

2. The bracket D^2, provided with the loops or eyes, and the lever having the lugs and dog, the bolt, and the spring to support it, combined with the friction-strap, drum, shaft, and bracket, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS WILMOTT.

Witnesses:
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