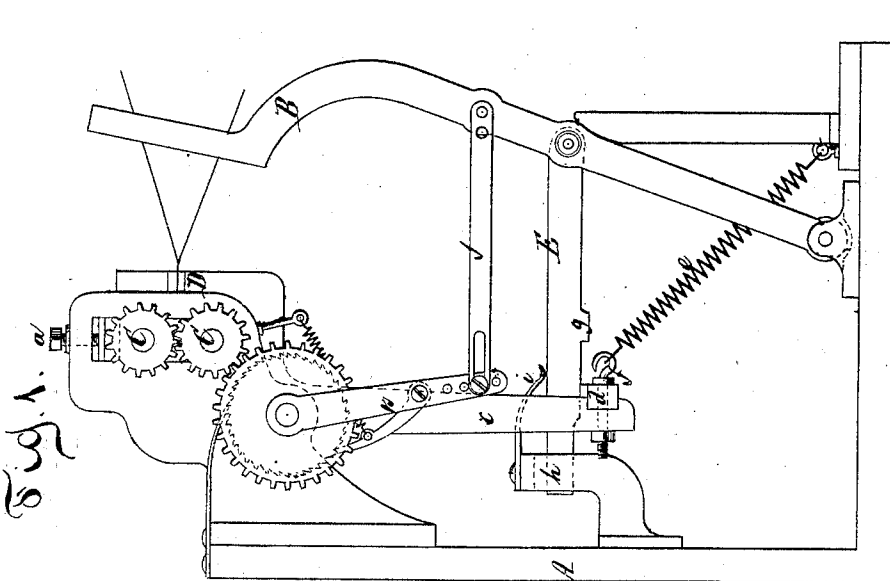
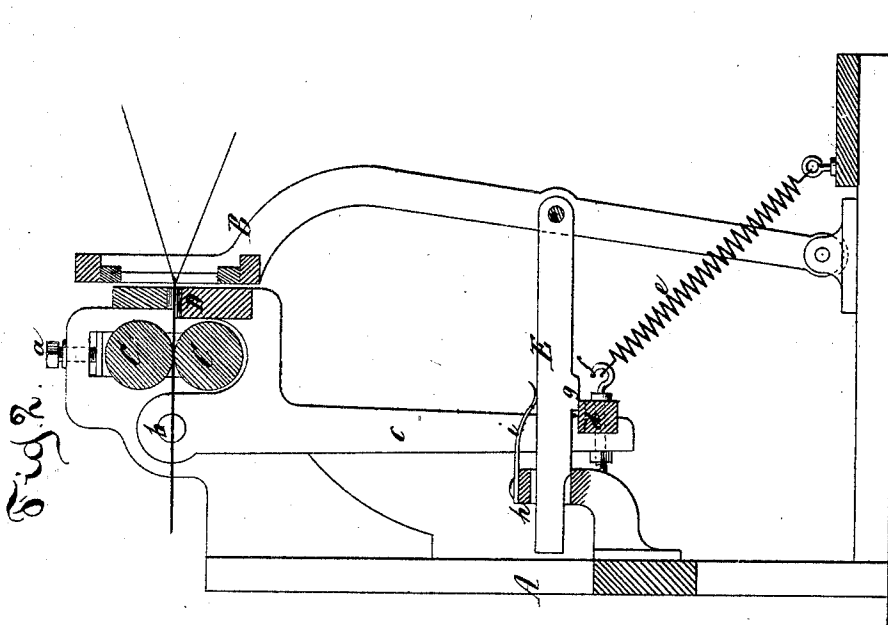


C. GAHREN.

Take-up for Looms.

No. 133,845.

Patented Dec. 10, 1872.



Witnesses:
Ernst Bilhuber.
Chas. Wahlers.

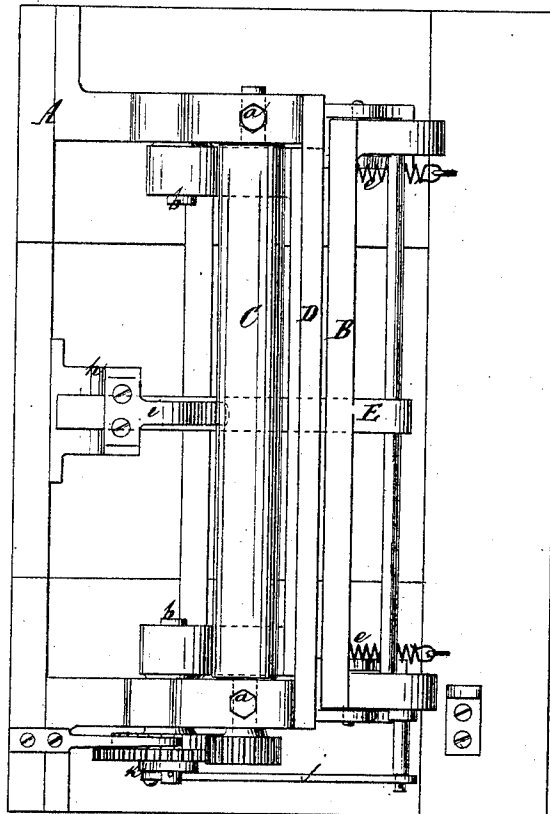
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Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES GAHREN, OF NEW YORK, N. Y.

IMPROVEMENT IN TAKE-UPS FOR LOOMS.

Specification forming part of Letters Patent No. 133,845, dated December 10, 1872.

To all whom it may concern:

Be it known that I, CHARLES GAHREN, of the city, county, and State of New York, have invented a new and useful Improvement in Take-Up for Looms; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents an end view of my invention; Fig. 2 is a longitudinal vertical section of the same in the plane *xx*, Fig. 3; and Fig. 3 is a plan or top view of the same.

Similar letters indicate corresponding parts.

This invention relates to a take-up mechanism of that class in which a retaining-clamp acts in connection with the take-up rollers of a loom, said clamp being opened at the moment the batten strikes up, and the take-up rollers are moved in such a manner that if a weft-thread is thrown in partially across the warp such portion of the fabric only which has received said partial weft-thread, and which is rendered slack by the blow of the batten, is taken up, while the take-up rollers slip on the remaining portion of the fabric, and that immediately after the slack portion of the fabric has been taken up the clamp closes and prevents the fabric or any portion thereof from moving back.

The motion of the spring-clamp is produced by means of a tappet-arm secured to the batten.

In the drawing, the letter A designates a portion of the frame of a loom in which is mounted the batten B in the usual manner. The woven fabric passes through between the take-up rollers C C, which extend the whole width of the frame A, and which are geared together so that they revolve in opposite directions. Set-screws *a* serve to compress said rollers, so that they take hold of the fabric with the required tenacity. Between the take-up rollers and the batten is situated the clamp D, the movable jaw of which is attached to the frame A by pivots *b*, and from said movable jaw extend arms *c*, which are connected

together by a cross-bar, *d*, and to which are hitched springs *e*, which have a tendency to keep the clamp firmly closed. These springs catch in hooks *f*, which are adjustable in the arms *c* of the movable jaw, so that the tension of the springs can be regulated. The jaws of the clamp are lined with flannel or any other suitable substance, so that the same take a firm hold of the fabric. To the support of the batten B is hinged an arm, E, which is provided with a tappet, *g*, while its front end is cam-shaped and moves in a slotted standard, *h*, secured to the frame A. A spring, *i*, which bears on the tappet-arm has a tendency to depress the same in the slot of said standard.

When the batten moves forward, and just at the moment when it strikes up the weft, the tappet *g* comes in contact with the cross-bar *d* of the clamp, and the clamp is opened so as to release the fabric, but immediately thereafter the cam-shaped part of the tappet-arm enters the slot in the standard E, and thereby the tappet *g* is raised clear of the cross-bar *d* and the clamp closes again.

From one of the supports of the batten also extends a rod, *j*, which connects with a lever-pawl, *k*, that serves to impart the requisite motion to the take-up rollers, (see Fig. 1,) the lever-pawl and the connecting-rod being so arranged that the amount of motion imparted to the take-up rollers can be adjusted.

By this arrangement I obtain the following great advantage: If a weft-thread is thrown in partially across the warp the batten in striking up renders that portion of the fabric slack across which the partial weft-thread extends, and as the take-up rollers revolve at the moment when the batten strikes and when the fabric has been released by the clamp D, that portion of the fabric which has been rendered slack by the blow of the batten is taken up, while the take-up rollers slip on the remaining portion of the fabric; and since the clamp closes immediately after the blow of the batten the fabric, after having been taken up, is prevented from moving back, and it is held firmly in position for the subsequent motion of the shuttle.

By these means I am enabled to weave successfully irregular pieces of work, such, for instance, as corsets, where a number of partial weft-threads have to be thrown into the warp.

In carrying out my invention I do not restrict myself to any particular construction of take-up rollers.

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

1. The tappet-arm E and slotted standard *h*, constructed and operating together as de-

scribed, in combination with the batten B, clamp D, and take-up rollers C C, as and for the purpose set forth.

2. The batten B, provided with the tappet-arm E for actuating the clamp D and with the rod *j* to impart motion through a pawl to the take-up rollers, substantially as set forth.

CHARLES GAHREN.

Witnesses:

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