

Michna & Fisher,

Take Up for Looms.

No. 112,478.

Patented Mar. 7. 1871.

Fig1.

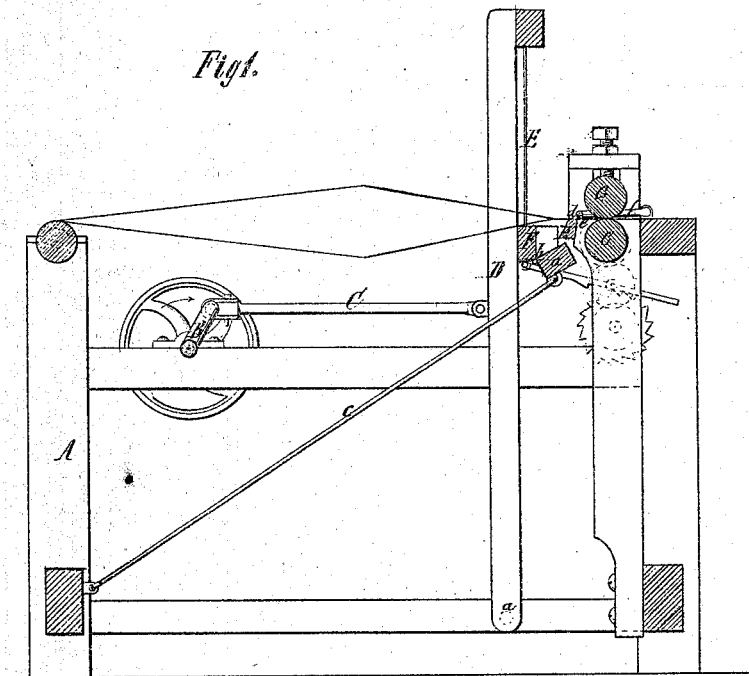
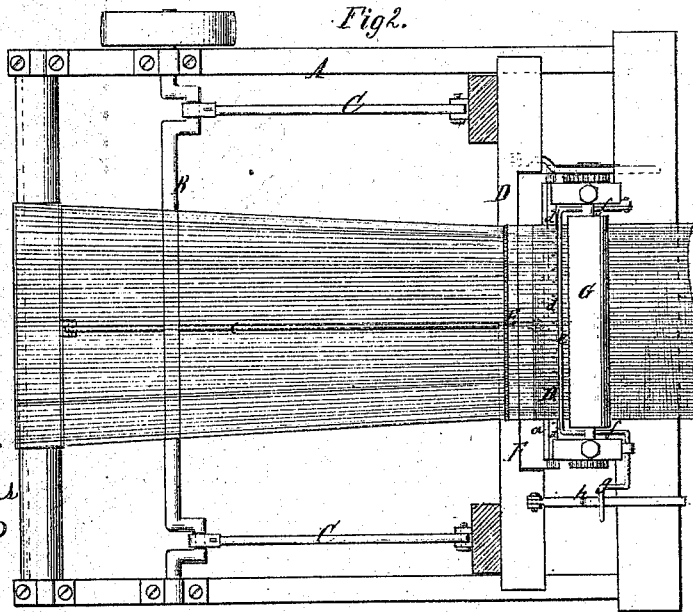


Fig2.



Witnesses
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UNITED STATES PATENT OFFICE

JOHN MICHNA AND GEORGE FISCHER, OF NEW YORK, N. Y.

IMPROVEMENT IN TAKE-UP MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. **112,478**, dated March 7, 1871.

To all whom it may concern:

Be it known that we, JOHN MICHNA and GEORGE FISCHER, both of the city, county, and State of New York, have invented a new and useful Improvement in Looms; and we 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 a longitudinal vertical section of our loom. Fig. 2 is a plan or top view of the same.

Similar letters indicate corresponding parts.

This invention relates to an improvement in that class of looms which is used for weaving irregular articles, such as corsets; and our improvement consists in the arrangement of a stationary bar, with fine inclined teeth, between the reed and the take-up rollers, the teeth of the bar being made to catch between the weft-threads in such a manner that if a weft-thread is thrown in which extends clear across the warp, and the reed beats up said thread, the fabric is released from the bar throughout its entire width by the combined action of the reed and of the strain of the take-up, and taken up uniformly; but if the weft is thrown in only partially across the warp, and the reed beats up said thread, that portion of the fabric only corresponding to the partial weft is released from the bar, and the fabric is taken up correspondingly, and by these means the regulator required for taking up irregular fabrics can be dispensed with.

With the pin-bar is combined a depressor, which extends across the entire width of the fabric close behind the teeth of the bar, and to which a rocking motion is imparted from the batten, or any other working part of the loom, in such a manner that when the batten recedes the depressor moves down and causes the fabric to catch in the teeth of the bar.

The middle portion of the shuttle-race in front of the reed is cut out and hinged to the batten, so as to form a flap, which turns down as the batten advances, and allows the reed to beat up close to the bar, thereby insuring its action, on releasing said bar, on that portion of the fabric which has received a fresh weft-thread.

In the drawing, the letter A designates a frame, which forms the bearings for the crank-shaft B, that connects by rods C with the batten D. This batten oscillates on pivots *a*, secured in the bottom rails of the frame A, and in it are secured the reed E and the shuttle-race F in the usual manner.

The middle portion of the shuttle-race in front of the reed is cut away, so as to form a flap, *a*, which is connected to the batten by hinge-joints *b*, and from which extends a rod, *c*, back to a fixed point in the frame A.

As the batten advances the flap *a* turns down, so as to allow the reed to beat up as close as possible to the take-up rollers G; and when the batten recedes the flap turns up, and the continuity of the shuttle-race is restored before the shuttle is propelled through the shed.

Between the take-up rollers G and the batten, and near to said take-up rollers, is a bar, H, which is provided with short, fine, sharp-pointed teeth *d*, inclined toward the take-up rollers, and so situated that they pierce the woven fabric between the take-up rollers and the place where the weft is beaten up by the advancing reed.

If a weft-thread is thrown in clear across the fabric, the reed in beating up acts uniformly over the entire width of the fabric, and the fabric is released from the teeth *d* and taken up by the roller G; but if a weft-thread is thrown in only partially across the warp, and the reed beats it up, that portion of the fabric which has received the partial weft-thread is released from the teeth *d* and taken up by the rollers G, while the remaining portion of the fabric is retained by the teeth.

The take-up rollers are covered with india-rubber or other suitable material, so that they will grasp the fabric with sufficient tenacity to take it up as far as it is released from the rack-teeth; but said rollers will slip on that portion of the fabric which is retained by the rack-teeth.

The effect of the reed in beating up and releasing the fabric partially or wholly from the rack-teeth is insured by the rocking flap *a*, which turns down and allows the reed to take effect quite close to the bar H. Over this bar is situated the depressor *e*, which consists of a wire secured in the ends of arms *f*, which swing up and down in a vertical plane. Said

depressor acts on the fabric close behind the teeth *d*, being held down by its own gravity, and, if desired, by an additional spring, (not shown in the drawing,) so that the teeth *d* will be sure to penetrate the fabric. Just before the reed beats up the fresh weft the depressor is raised, so as to enable the fabric to clear the teeth.

For the purpose of raising the depressor various devices may be used, such, for instance, as shown in Fig. 2, where one of the depressor-arms is bent to form a crank, *g*, on which acts a cam-slide, *h*, secured to the batten. As the batten advances the raised part of the cam-slide comes under the crank, and the depressor is raised just before the reed beats up, and as the batten recedes the depressor is allowed to drop down again to its former position.

The motion of the take-up rollers is produced from the batten in the usual manner.

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

1. The stationary pin-bar *H*, in combination with the take-up rollers and the depressor *e*, arranged and operating substantially as described, for the purpose specified.

2. The rocking flap *a* in the batten, to allow said batten to come close up to the pin-bar *H*, substantially as set forth.

3. The depressor *e*, in combination with the pin-bar *H* and with the batten of a loom, substantially as described.

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Witnesses:

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