S. SANFORD.

Loom for Weaving Pile-Fabrics.

No. 159,282. Patented Feb. 2, 1875.

Fig. 1

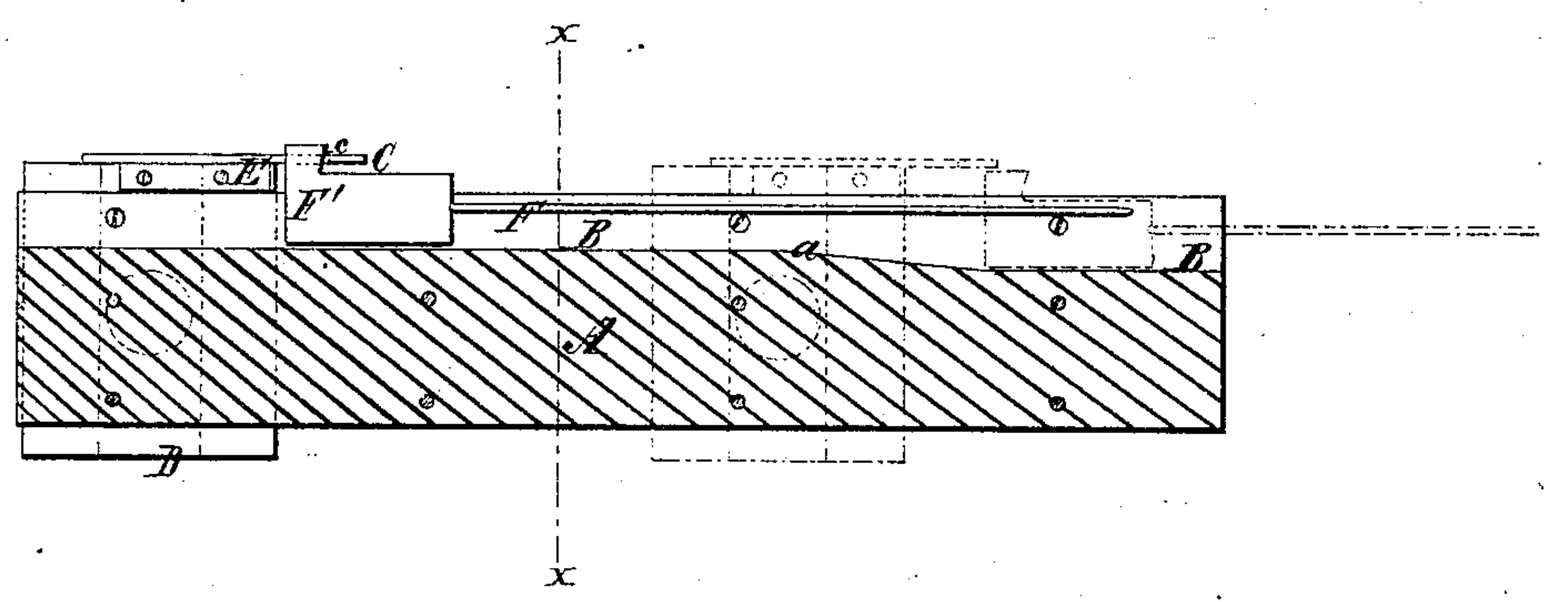


Fig. 2

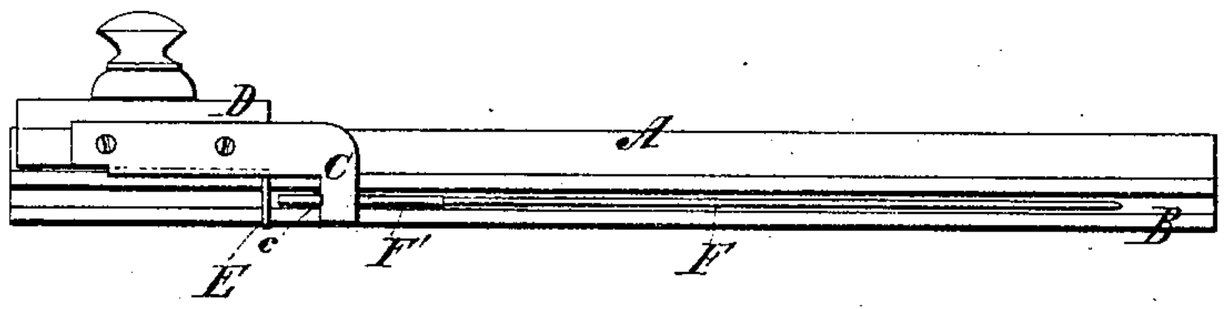
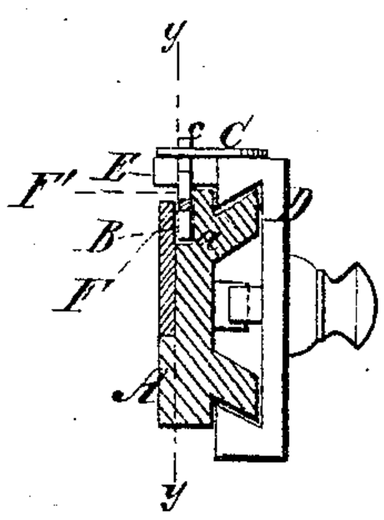


Fig. 3



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UNITED STATES PATENT OFFICE.

STEPHEN SANFORD, OF AMSTERDAM, NEW YORK.

IMPROVEMENT IN LOOMS FOR WEAVING PILE FABRICS.

Specification forming part of Letters Patent No. **159,282**, dated February 2, 1875; application filed January 12, 1875.

To all whom it may concern:

Be it known that I, STEPHEN SANFORD, of Amsterdam, county of Montgomery and State of New York, have invented a new and useful Improvement in Looms for Weaving Pile Fabrics; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a horizontal section, Fig. 2 a top view, and Fig. 3 a vertical cross-section, of the vibrating wire-withdrawing and wire-inserting bar of a loom for weaving pile fabrics, as improved by me.

The object of my invention is to avoid the use of machinery for removing the withdrawing latch, hook, or nipper of looms for weaving piled fabrics, at the time when the said latch, hook, or nipper has partly or nearly completed the insertion of the wire into the open shed.

The nature of my invention consists in providing for moving the wire on a gradually-descending plane, or on two planes of different altitudes, during its passage into the shed, in such a manner that the wire-head is held between the withdrawing-latch and pusher during a portion of the movement required for its insertion, and during the remainder of the said movement is freed entirely from the latch, and allowed to complete the insertion of the wire.

My invention renders unnecessary the use of a cam or any other apparatus for operating the hook in order to relieve the wire-head therefrom; and while this is the case the latch, hook, or nipper may be hinged or pivoted for the purpose of lifting it with the hand out of connection with the wire-head, in the event of accident requiring such adjustment.

A represents the laterally-movable vibrating or reciprocating bar, used on pile-fabric looms for the purpose of removing the wires from the point of withdrawal to the point of insertion. This bar may be operated in any known practical manner. B is the groove cut down in the top of the bar, into which the wire passes when it is being withdrawn from the fabric. The form of the bottom *a* of this groove is peculiar, and the effect of this form constitutes the essence of my invention. Said bottom is formed partly horizontal, and partly inclined, as shown in the drawings. C is an angular latch or other suitable device for withdrawing the wires F from the fabric. This latch is attached to a longitudinally-reciprocating slide, D, which is dovetailed upon the bar A, as shown, or in any suitable manner. E is an angular pusher or other suitable device for forcing the wires F into the open shed. This pusher is also attached to the slide, far enough in rear of the latch to admit the highest portion of the wire-head F between it and the latch, as shown in the drawings.

The pusher is on a little lower plane than the latch, and while it bears against the end of the wire-head F′ the latch stands in front of the shoulder *c* thereof.

Any other suitable form of latch may be adopted, and any other mode of applying and moving the same may be used, without changing the character of my invention.

In operating with my invention a wire-box or holder is used for supporting the wires, as usual, and the respective wires are withdrawn therefrom by the latch and carried laterally from the point of insertion in about the ordinary manner, but as the wire is pushed along into the shed it descends by its gravity and the action of the pusher on the inclined portion in the groove B of the bar A until the highest point of the wire-head clears the latch C, in which condition it is pushed or inserted free of the latch entirely into the shed.

It might be practical to cause the wire to descend by a pin and groove, or by a force other than its own gravity, or the action of the pusher, but I prefer to depend upon its gravity and the action of the pusher for this purpose.

What I claim as my invention is—

The grooved bar, into which the wires are withdrawn from the fabric, having a form substantially as described, which allows the respective wires to adjust themselves to a position which clears them from the withdrawing device on their movement into the open shed, as specified.

STEPHEN SANFORD.

Witnesses:

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