

(No Model.)

T. HALTON.
JACQUARD MACHINE FOR LOOMS.

No. 544,532.

Patented Aug. 13, 1895.

FIG. 2.

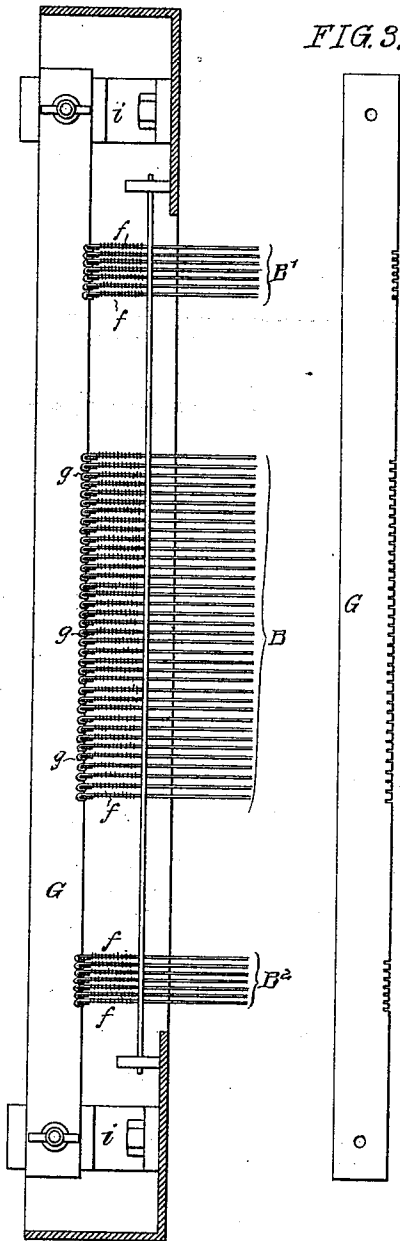
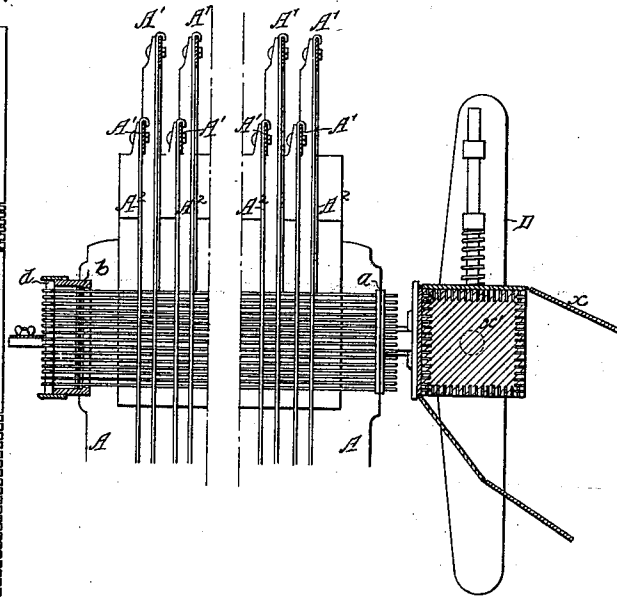


FIG. 3.



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UNITED STATES PATENT OFFICE.

THOMAS HALTON, OF PHILADELPHIA, PENNSYLVANIA.

JACQUARD MACHINE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 544,532, dated August 13, 1895.

Application filed May 9, 1895. Serial No. 548,688. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HALTON, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Jacquard Machines for Looms, of which the following is a specification.

The object of my invention is to insure the proper guidance of the rear ends of the needles of a Jacquard machine, and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of sufficient of a Jacquard machine to illustrate my invention. Fig. 2 is a sectional plan view of part of the same on a somewhat larger scale, and Fig. 3 is a detached view of a retainer-bar to which my invention particularly relates.

In Fig. 1 A represents part of the frame of a Jacquard machine, A' some of the griff-bars, and A² some of the lifters, B, B', and B² representing three sets of needles controlling these lifters. My invention, however, is applicable to any ordinary form of Jacquard machine. The needles are guided at the front ends by a perforated guide-board *a*, as usual, and the projecting ends of the needles are acted upon by cards *x*, which are carried by the card-cylinder *x'* on the ordinary vibrating or reciprocating frame D, so that on each stroke of said frame certain of the needles B, B', and B², corresponding to the blank portions of the card, will be pressed rearward so as to release the hooks of the lifters controlled thereby from engagement with the griff-bars, the remaining needles, corresponding to the perforated portions of the card, being unacted upon, so as to permit the hooks of the lifters controlled thereby to engage with the griff-bars. The rear ends of the needles pass between horizontal guide-rods *b*, whereby they are held in proper vertical position, and also between vertical guide and retainer bars *d*,

whereby they are held in proper lateral position, and whereby, also, their forward movement is limited, such forward movement being due to coiled springs *f* acting upon the rods, and this movement being restricted by the engagement of the hooked rear ends *g* of the rods with the vertical guide-bars *d*. In machines in which a large number of needles are used said needles are very closely bunched. Hence the guide-bars *d* are very thin, but are of considerable length, owing to the large number of needles in each vertical row, and the central portions of these guide-bars are therefore liable to be deflected laterally to such an extent that adjoining needles sometimes engage with each other, and thus cause improper operation of the lifters. In order to overcome this defect I provide the rear portion of the Jacquard machine with projecting brackets *i*, upon which is mounted a transverse retainer-bar G, notched in its front edge, as shown in Fig. 3, for the reception of the rear edges of the vertical guide-bars *d* for the needles, the vertical position of said retainer-bar G being about midway of the length of said bars *d*, so as to firmly brace the same at the point where deflection is otherwise most likely to occur.

Having thus described my invention, I claim and desire to secure by Letters Patent—

The combination of the needles of a Jacquard machine, the vertical guide bars at the rear ends of said needles, and a transverse retainer bar having its forward edge notched for the reception of said vertical guide bars whereby lateral deflection of the latter is prevented, substantially as specified.

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

THOMAS HALTON.

Witnesses:

WILL. A. BARR,
FRED C. BENNER.