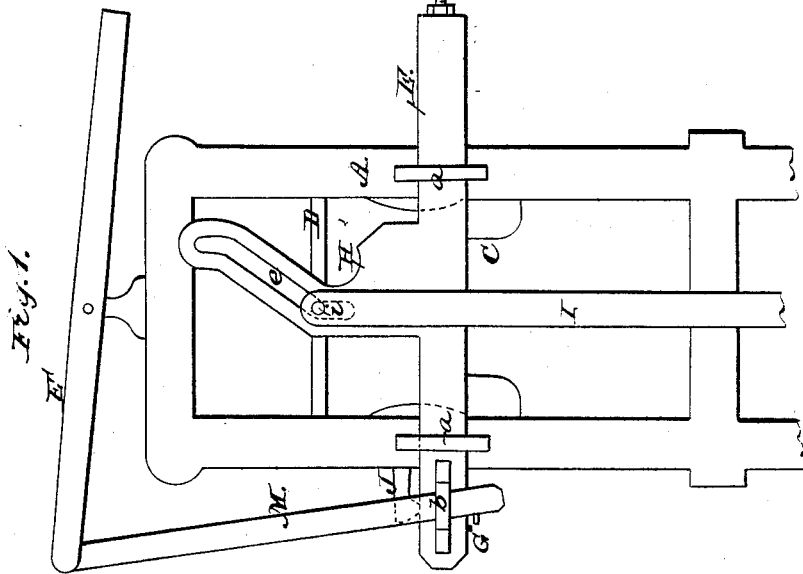
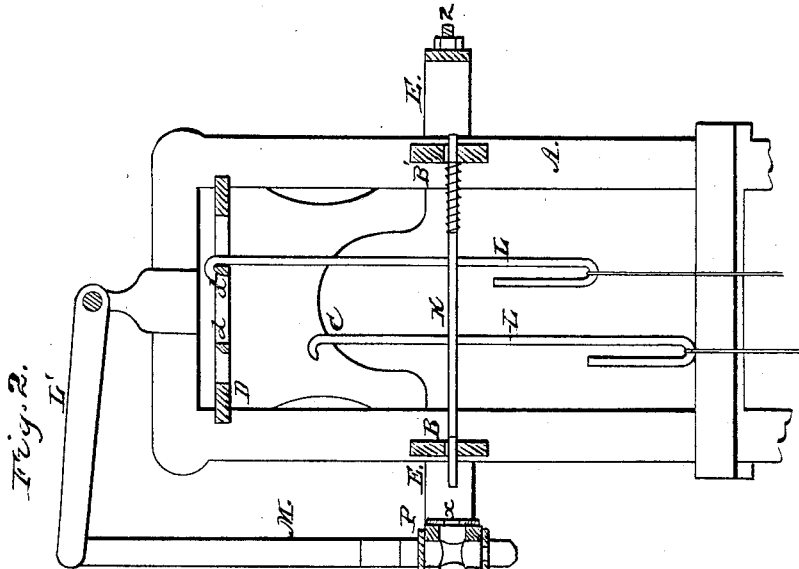


Sheet 1-2 Sheets.

L. D. Valetton.
Jacquard App's.

N^o 50,993.

Patented Nov. 14, 1865.



Witnesses.
Wm Albert Steel.
John Parker.

Inventor.
L. D. Valetton.
By his Atty
H. Howson.

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Fig. 3.

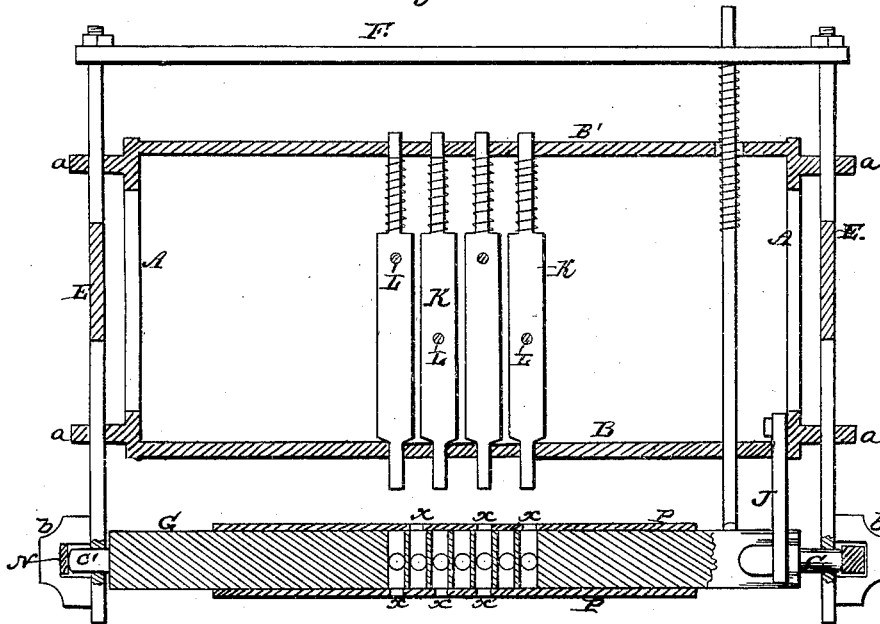
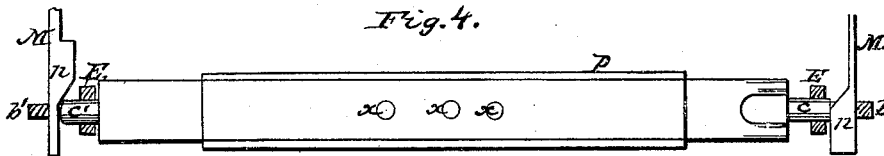


Fig. 4.



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UNITED STATES PATENT OFFICE.

L. D. VALETTON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND H. W. HENSEL, OF SAME PLACE.

IMPROVEMENT IN JACQUARD APPARATUS FOR LOOMS.

Specification forming part of Letters Patent No. 50,993, dated November 14, 1865.

To all whom it may concern:

Be it known that I, L. D. VALETTON, of Philadelphia, Pennsylvania, have invented an Improved Jacquard Apparatus for Looms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of certain adjustable arms having projections and combined with the card-shaft of a Jacquard apparatus, as fully described hereinafter, so that a lateral motion may be imparted to the shaft when it is desired to bring a second pattern in the cards opposite the needles of the apparatus.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe a mode of carrying it into effect.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of sufficient of a Jacquard apparatus to illustrate my improvement; Fig. 2, a sectional elevation; Fig. 3, a sectional plan on the line 1 2, Fig. 2; and Fig. 4, a detached view, partly in section.

Similar letters refer to similar parts throughout the several views.

A and A' are the side frames of a Jacquard apparatus, and are connected by the cross-pieces B and B', guides C, secured to the end of a frame, D, being arranged to slide in the said frames.

At the side of each of the frames A A' are projections *a a*, in which slides a bar, E, each bar being connected at the rear end to a cross-piece, F. In the front ends of the bars E E turns the card-shaft G, the journals *c c* of the latter projecting through the bars and into openings in brackets *b b*, at the sides of the same, so that the cylinder can have a slight lateral movement imparted to it in the manner and for a purpose described hereinafter.

On each sliding bar E is a plate, H, in which is a diagonal slot, *e*, and into the latter projects a pin, *i*, on the adjacent guide C, a connecting-rod, I, being also jointed to this pin, and the guides being raised and lowered through the medium of this rod, which is operated by any suitable appliances from the moving part

of the loom, the action of the pins *i* in the slots *e* imparting a reciprocating horizontal motion to the bars E E. As the bars are carried back and forth a catch, J, seizes a tooth of the ratchet-wheel on the end of the card-shaft G and causes the latter to turn one-fourth of a revolution at each outward movement of the said bars.

In the cross-pieces B B' slide the usual needles, K K, through which pass the hooks L, the harness of the loom being connected to the lower ends of the hooks and the upper bent ends of the latter catching onto the knives *d d* of the frame D in a manner too well known to those skilled in this class of machinery to need particular description.

To brackets at upper ends of the frame A A' are hung levers L L', to which are connected arms M and M', the former projecting through the bracket *b* and the latter through the bracket *b'*, there being a projection, *n'*, with an inclined upper edge, at the side of the arm M', and a projection, *n*, with an inclined lower edge, at the side of the arm M.

In the cards P are the usual holes, *x*, which, in the present instance, are situated at such a distance from each other that additional openings *x'* may be made between them for a purpose described hereinafter.

The parts are brought to the position shown in the drawings, and the apparatus is put in operation, the cards being brought against the needles K and operating the latter and the hooks in the usual manner, the pattern formed on the fabric being determined by the number and situation of the openings *x* in the cards, as in the ordinary Jacquard looms. In the latter, however, when it is desired to repeat a pattern at certain intervals in a fabric, it is necessary to introduce into the chain of cards additional cards having such openings as will insure the weaving of the pattern required, or it is necessary to replace the usual chain of cards with another by which the desired pattern can be obtained.

In the above-described apparatus the openings *x* are arranged to produce one pattern and the openings *x'* another, so that when the openings *x* are opposite the needles, and it is desired to change the pattern, the arms M M' are lowered and the projection *n'* is brought

against the end of the journal *c'*, thereby moving the card-shaft laterally and bringing the openings *x'* opposite the ends of the needles. When the pattern has been completed the arms *M M'* are raised, the card-shaft is moved to its first position by the action of the projection *n* on the journal *c*, and the first pattern is repeated.

It will be seen that by this arrangement the loss of time occasioned in replacing a chain of cards with others having a different pattern, or the necessity of employing a long chain of cards with the same pattern repeated at intervals, is avoided, and it will be apparent that a still greater saving may be effected and a greater variety of patterns be produced by so arranging the card-shaft that it can be moved laterally to a great extent, and by so perforating the cards as to produce three or more patterns.

It will be apparent that the card-shaft may

be made adjustable vertically instead of laterally without departing from the main feature of my invention, the additional openings *x'* in this case being made above or below the openings *x* instead of at the sides of the same.

Without confining myself to the precise construction and arrangement of the parts herein described,

I claim as my invention and desire to secure by Letters Patent—

The adjustable arms *M M'*, with their projections *n n'*, combined with the card-shaft *G*, substantially as and for the purpose specified.

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

L. D. VALETTON.

Witnesses:

CHARLES E. FOSTER,

W. W. DOUGHERTY.