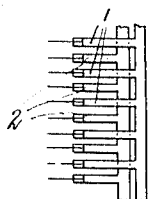
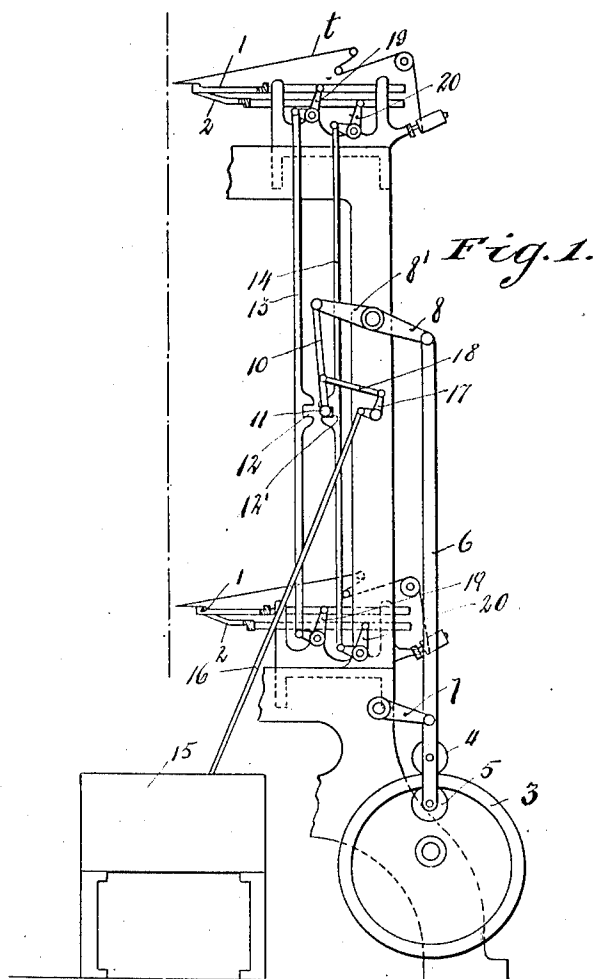


R. ZAHN.
JACQUARD EMBROIDERY MACHINE.
APPLICATION FILED OCT. 2, 1911.

1,040,834.

Patented Oct. 8, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

ROBERT ZAHN, OF PLAUEH, GERMANY.

JACQUARD EMBROIDERY-MACHINE.

1,040,834.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed October 2, 1911. Serial No. 652,312.

To all whom it may concern:

Be it known that I, ROBERT ZAHN, a subject of the King of Bavaria, residing at Plauen, Vogtland, in the Kingdom of Saxony, Germany, have invented certain new and useful Improvements in Jacquard Embroidery-Machines, of which the following is a specification.

The present invention pertains to jacquard embroidering machines, in which a plurality of rows of needles having differently colored threads are automatically and alternately operated to produce a variegated-design.

My invention is illustrated in the accompanying drawing, in which similar reference letters denote corresponding parts and in which—

Figure 1 is a diagrammatic elevation of the machine and Fig. 2 is a plan view of the needle rows.

In the drawing, which forms a part of my invention, 1, and 2 denote the needles of two different rows. There may be, however, any number of needle rows. The needles of the various rows are threaded with differently colored threads *t* and are operated from a cam 3 or other suitable means in well known manner.

The following means is used for the transmission of motion from the cam 3 to the needle rows. A vertical bar 6 carries superposed rolls 4 and 5 which are adapted to travel on an outer and an inner edge formed on the cam 3. This bar has a parallel guide consisting of pivoted arms 7 and 8, 8'. The arm 8, 8' is a part of a double armed lever, the arm 8' of which carries a coupling rod 10. The lower end 11 of the latter is adapted to alternately engage notches 12 and 12' formed in the rods 13 and 14 respectively which by angular levers 19 and 20 are positively connected to the needles 1 and 2 respectively. The alternate coupling of the rod 10 to the rods 13 and 14 is effected automatically by the jacquard card of the jacquard mechanism, which is of well known

construction and in the drawing is denoted by the box 15. The jacquard mechanism operates the rod 16 which by an angular lever 17 and rod 18 is connected to the rod 10, so that by the movement of the rod 16 the rod 10 is caused to alternately engage the notches 12, 12'. Thus, when the bar 6 by the rod 10 is coupled to rod 13, the needles 1 of one row will be operated and when the bar 6 is coupled to rod 14 the needles 2 of another row will be operated. In this manner, it is possible to obtain a variegated embroidery design.

What I claim and desire to secure by Letters Patent is:

1. In jacquard embroidering machines, a jacquard mechanism, a plurality of rows of needles adapted to carry thread of different color, and means whereby the needles of the different rows are alternately controlled by said jacquard mechanism.

2. In jacquard embroidering machines, a jacquard mechanism, a plurality of rows of needles adapted to carry thread of different color, motion transmitting means, and means controlled by said jacquard mechanism and adapted to alternately couple the needles of the different rows to the said motion transmitting means.

3. In jacquard embroidering machines, a jacquard mechanism, a plurality of rows of needles adapted to carry thread of different color, driven means, motion transmitting means for the needles of each row, a coupling means between said first named means and the latter means, and means controlled by said jacquard mechanism and operatively connected to said coupling means to effect an alternate coupling of the driven means with the motion transmitting means of the different needle rows.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT ZAHN.

Witnesses:

LOUIS HILLER,
ROBERT HEINRICH NUR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."