

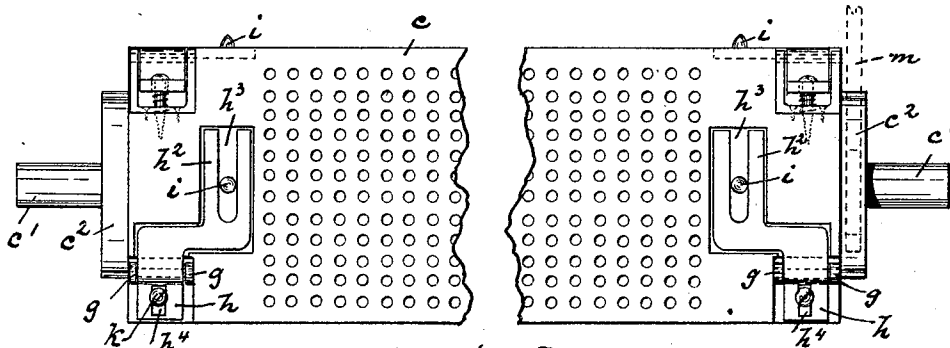
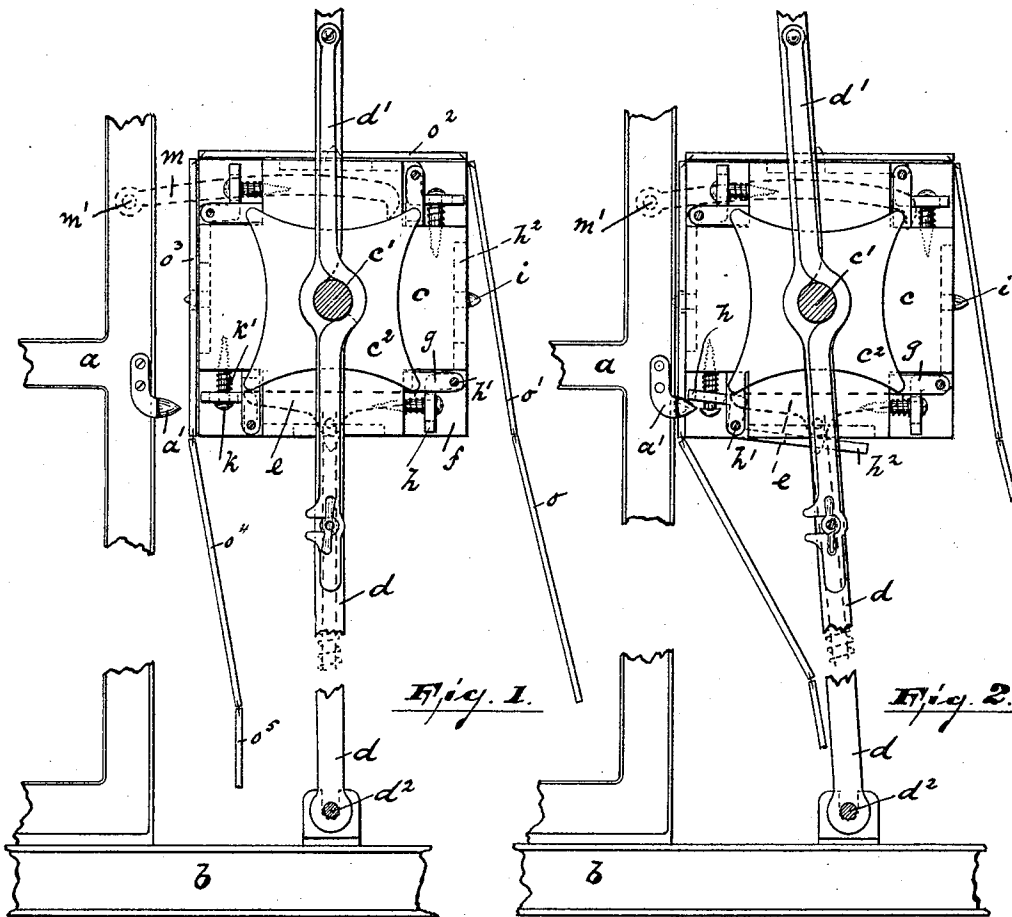
(No Model.)

S. MORGAN.

CARD AND JACQUARD MACHINE PROTECTOR.

No. 479,895.

Patented Aug. 2, 1892.



WITNESSES:

Fig. 3.

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SIMON MORGAN, OF PATERSON, NEW JERSEY.

CARD AND JACQUARD MACHINE PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 479,895, dated August 2, 1892.

Application filed March 23, 1892. Serial No. 426,052. (No model.)

To all whom it may concern:

Be it known that I, SIMON MORGAN, a citizen of the United States, residing in Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Card and Jacquard Machine Protectors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide means for removing the pattern-cards from the cylinder of the Jacquard machine after said cards have been pressed against the needles, whereby said cards are prevented from sticking to and from being carried around with said cylinder, which is simple, durable, and cheap in construction, and reliable and automatic in operation.

The invention consists in the improved attachment for the cylinder of a Jacquard machine and the combination and arrangements of the various parts thereof, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claims.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a front elevation of the cylinder with the attachment secured thereto, only those parts of the Jacquard machine being shown which are necessary to fully illustrate the invention. Fig. 2 is a similar view showing the cylinder rocked over and the attachment in operation, and Fig. 3 is a detail front elevation of Fig. 1.

In said drawings, *a* represents a portion of a Jacquard frame secured to the loom-frame *b* in the ordinary manner. The square cylinder *c* is pivotally secured at *c'* to its oscillating support *d* with locking-bar *d'*. The support *d* is pivoted at *d²* to the loom-frame *b*. At each end of the cylinder is secured in the usual manner the drum-head or turning-block *c²*, operated by pawl-lever or upper knogger *m*, pivoted at *m'* to the frame *a*, and kept in the same plane when in operation by the ordinary lever attachment or lower knogger *e*.

The square cylinder *c* is provided at each corner with a rectangular groove and adjoining recess *f*, provided with bearings *g* for the pivot *h'* of lever *h h²*. The shorter arm *h* of said lever is again provided with a slot *h⁴*, through which passes a pin *k*, surrounded by spiral spring *k'*, adapted to hold the said lever in its normal position. In the longer arm *h²* is also arranged an elongated slot *h³*, surrounding the card-pin *i*. The said lever *h h²* is so arranged in the groove and recess *f* that its surface will not at any point project beyond the surface of the cylinder *c*. Opposite each lower left-hand corner of the said cylinder, Figs. 1 and 2, and secured to the Jacquard frame is arranged a pin *a'*, adapted to strike against the under side of lever *h* when the cylinder *c* is moved toward the frame *a*, causing the lever *h h²* to swing on its pivot *h'*, as clearly shown in Fig. 2.

In the drawings, *o*, *o'*, *o²*, *o³*, *o⁴*, and *o⁵* represent the pattern-cards.

In operation the cylinder *c* is oscillated at every pick in the usual manner, and is turned one-quarter of a revolution by the knogger *m*, acting alternately upon the corners of the drum-head *c²*, as will be manifest. Whenever the cylinder *c* is moved toward the frame and the hooked end of the upper knogger *m* is engaging the corner of the drum-head, the pin *a'* will simultaneously strike against the under side of the shorter arm *h* of lever *h h²* and cause said lever to turn on its fulcrum *h'*, whereby the pattern-card occupying the lower surface of the cylinder *c* is disengaged from the pin *i* and forced by the longer arm *h²* to drop down. This operation continues to be repeated at every quarter-revolution of the cylinder—that is, at every pick of the weaving mechanism. This removing of the pattern-card from the cylinder will be found of great value and importance in a moist atmosphere and also if the pattern-cards have become dirty or coated with any oily or sticky substance.

This device will save the pattern-cards from being torn, broken, or carried around with the cylinder, which very often causes an interruption in weaving.

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

1. In a Jacquard machine, the combination, with the frame, the oscillating cylinder, and its supporting-bar, of a lever pivoted to the said cylinder and a pin secured to the frame
5 opposite said lever and adapted to operate said lever, whereby the pattern-card is removed from said cylinder, substantially as described and set forth.

2. In a Jacquard machine, the combination,
10 with the frame, of a cylinder adapted to be oscillated in said frame and provided in or near its corners with grooves or recesses, levers pivotally arranged in said grooves, and a pin secured to the frame and adapted to
15 operate said levers alternately, substantially as described and set forth.

3. In a Jacquard machine, the combination, with the frame, of a cylinder adapted to be oscillated in said frame and provided in or near
20 each corner with a groove or recess, bearings arranged in said groove, a lever pivotally se-

cured in said bearings, a pin secured to the frame and adapted to operate said lever, and a spiral spring controlling the return motion of said lever, all said parts substantially as
25 described, and for the purposes set forth.

4. In a Jacquard machine, the combination, with the frame, of a cylinder adapted to be oscillated in said frame and provided in or near
30 each corner with a groove or recess, a lever pivotally secured in said groove, a spiral spring holding said lever in its normal position, and means for operating said lever, substantially as described and set forth.

In testimony that I claim the foregoing I
35 have hereunto set my hand this 29th day of February, 1892.

SIMON MORGAN.

Witnesses:

ALFRED GARTNER,
WM. VAN VOORHEES, Jr.