

H. WYMAN & A. A. GORDON.

JACQUARDS FOR LOOMS.

No. 179,882.

Patented July 18, 1876.

Fig. 1.

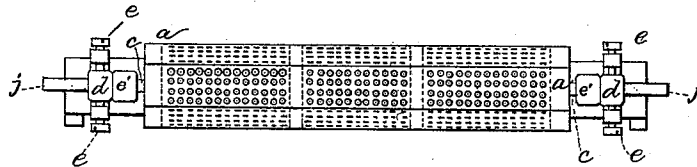
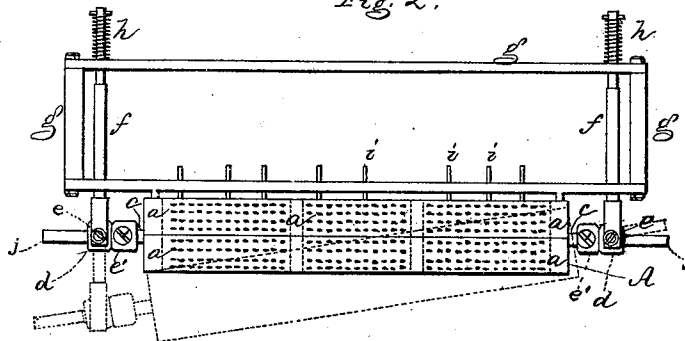


Fig. 2.



Witnesses.

L. H. Cratimer,
W. J. Pratt.

Inventor.

Horace Wyman and Albert A. Gordon
per Crosby Griegory Atty.

UNITED STATES PATENT OFFICE.

HORACE WYMAN AND ALBERT A. GORDON, OF WORCESTER, MASS.,
ASSIGNORS TO GEORGE CROMPTON, OF SAME PLACE.

IMPROVEMENT IN JACQUARDS FOR LOOMS.

Specification forming part of Letters Patent No. **179,882**, dated July 18, 1876; application filed May 5, 1876.

To all whom it may concern:

Be it known that we, HORACE WYMAN and ALBERT A. GORDON, of Worcester, in the county of Worcester and State of Massachusetts, have invented an Improved Jacquard for Looms, of which the following is a specification:

This invention relates to Jacquard barrels or cylinders for looms; and consists in a Jacquard barrel and shaft connected through the universal joints with sliding arms, to permit the barrel to yield when necessary, as hereafter described.

Figure 1 is a back view of a Jacquard barrel and its support, the Jacquard cards being removed; and Fig. 2 is a top view thereof.

The barrel *A* is composed of a number of perforated plates, *a*, properly secured, in this instance, to hexagonal disks, (shown in dotted lines,) one at each end of the barrel and two between the end disks, or on the shaft *c*, directly under those portions of the plates *a* where they are shown as not provided with holes to properly sustain the plates *a*, and through these hexagonal blocks or disks is passed a shaft, *c*, its ends being sustained in bearings *d d*, supported by and free to turn on screws *e e* in arms *f*, adapted to be moved horizontally in frame *g* in any usual or well-known way. In practice we prefer to use links connected with each end *j* of the shaft *c*, the said links extending backward parallel with arms *f*, where they are connected each with an elbow-lever, operated by a link connected with a horizontal lever, moved from a cam for that purpose.

The frame *g* carries the Jacquard needles *i*, of usual construction, which, in practice, extend through holes in each side of the frame, and are provided with springs to hold them pressed toward the barrel, and, when moved in the opposite direction by a card, the threads controlled by such needles are not lifted. The drawing shows the needles as broken off.

In preparing a pattern and placing the cards on ordinary solid wooden barrels, it often happens that the holes in the card and barrel and the ends of the needles in the

frame do not exactly correspond, and then it is difficult to get at the front side of the barrel next the frame to see where the holes in cards and barrel are not in line with the ends of the needles, so as to correct this evil.

Such difficulty in this our invention is easily remedied, for, as the barrel is hollow, we can look through it from its rear side, and can see in which direction the holes in the cards and barrel do not coincide with the ends of the needles, and the holes in the cards, and also the cylinder, can be readily adjusted or made to assume their proper position, thereby saving much time in adjusting the cards and cylinder with the needles. This adjustment of the cylinder may be accomplished by means of the screws *e e*, by which the boxes may be raised or lowered to move the shaft and barrel, so as to place the row of holes in the plates *a* in proper horizontal position with relation to the ends of the needles, and by means of the little collars *e'* on the shaft, near the bearings *d*, the barrel may be adjusted longitudinally to bring the holes in proper position for the needles.

The Jacquard barrel is moved out and in by a suitable arrangement of levers and links, as described, or in any usual manner, and in case the levers, arms, or links adapted to move one end of the Jacquard barrel stop or get broken, or if the movement of the devices at one end is impeded, then the shaft *c*, owing to its pivoted bearings *d*, can move with relation to the arms *f*, moving through unequal distances, and the barrel may assume a position, as shown in dotted lines, Fig. 2, without breaking the shaft or injuring the bearings, as is usually the case when the shaft of the barrel is mounted in ordinary boxes on the arms *f*.

The springs *h* assist in drawing the barrel toward the frame *g*, but they may be dispensed with.

The barrel is turned each time it is moved out away from the frame by any suitable or common device for the purpose, and a new card is brought into position.

We claim—

1. A Jacquard barrel and its shaft, in com-

bination with the arms *f* and pivoted or turning bearings, substantially as and for the purpose described.

2. The Jacquard barrel-shaft and its bearings, in combination with a collar and screws, to adjust the shaft laterally and bearings and shaft vertically, substantially as described.

In testimony whereof we have signed our

names to this specification in the presence of two subscribing witnesses.

HORACE WYMAN.
ALBERT A. GORDON.

Witnesses:

J. B. SYME,
J. A. WARE.