

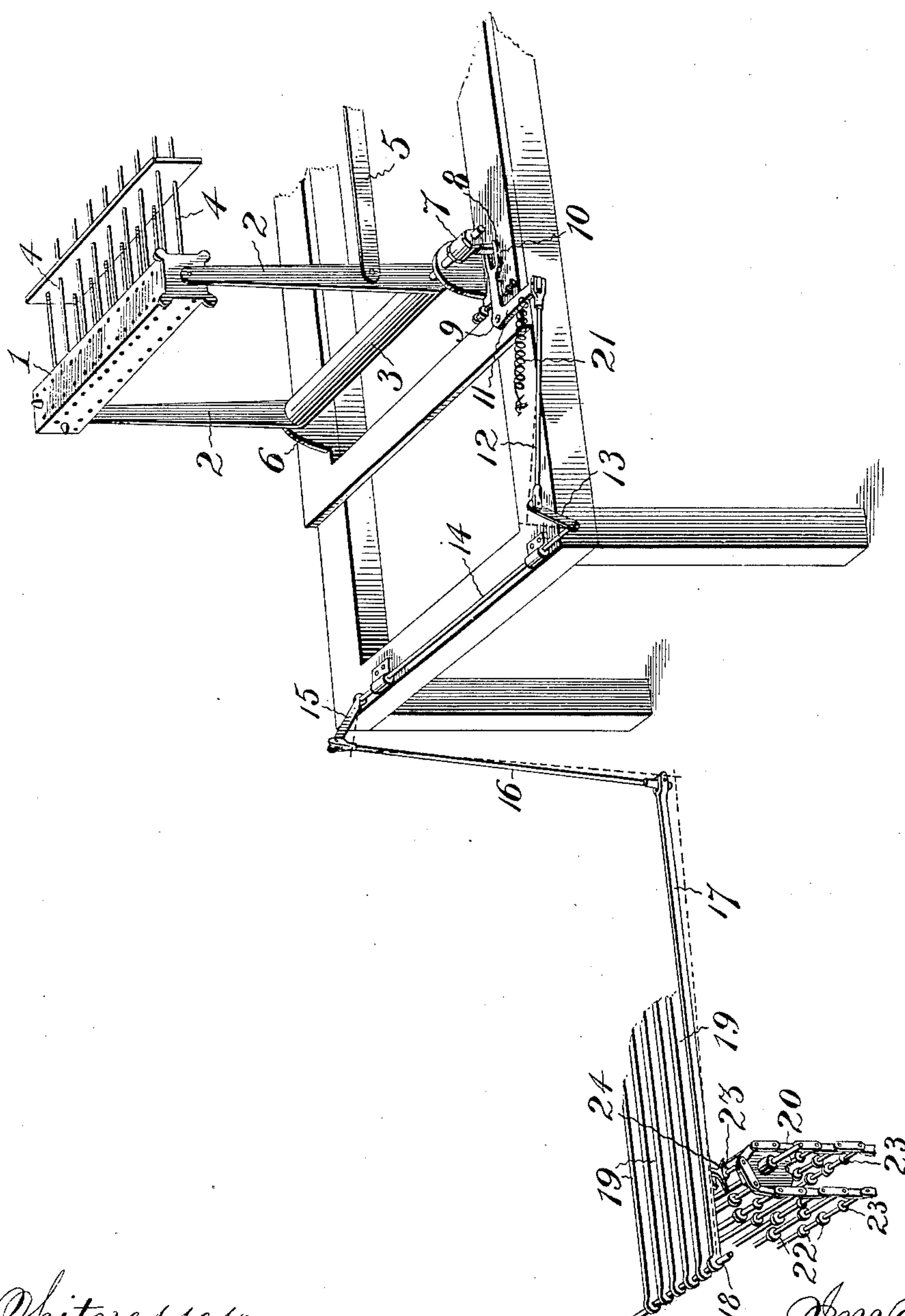
No. 657,283.

Patented Sept. 4, 1900.

J. W. DAWSON.  
ATTACHMENT FOR LOOMS.

(Application filed Nov. 1, 1899.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN W. DAWSON, OF SCRANTON, PENNSYLVANIA.

## ATTACHMENT FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 657,283, dated September 4, 1900.

Application filed November 1, 1899. Serial No. 735,521. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. DAWSON, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Attachments for Looms, of which the following is a specification.

My invention relates to improvements in looms; and it consists in an attachment by means of which the pattern-cylinder of a dobby may be shifted laterally with respect to the needles in an automatic manner through the medium of the box-chain, so that when a series of pattern-cards having perforations corresponding to two patterns are arranged upon the cylinder the latter will be shifted at the proper time to change the pattern.

The invention is applicable to box-loom which any of the well-known forms of dobbies having a laterally-adjustable cylinder adapted to pattern-cards having two patterns is employed. In the accompanying drawing, therefore, I have shown only so much of a dobby as is required to illustrate the invention.

Referring to the drawing, 1 indicates the pattern-cylinder of a dobby, which is supported upon a suitable cylinder-frame 2, the latter being mounted upon a rock-shaft 3 and being movable toward and from the needles 4 by means of a suitably-connected rocking lever 5. The rock-shaft 3 is journaled in the opposite sides of the supporting-frame 6, as shown, and has secured at one of its ends a collar 7, having a depending finger 8. A bell-crank lever 9, having a forked arm 10, is pivotally secured to the supporting-frame, and the finger 8 extends between the arms of the fork. The other arm 11 of the bell-crank lever is connected by a series of intermediate rods and levers 12, 13, 14, 15, and 16 to a lever 17, hinged at its rearend 18 and arranged parallel with the shuttle-box levers 19 over the shuttle-box chain 20. The arrangement of the levers is such that when the lever 17 swings upward upon its pivotal point, as shown in full lines in the drawing, the pattern-cylinder will be moved to the left, and when said lever 17 returns to its normal position (indicated in dotted lines) the pattern-cylinder will be drawn to the right. A spring 21, connected

to the bell-crank lever 9, returns the cylinder to the right-hand position. The cylinder has twice as many holes as there are needles, and its lateral movement is equal to the distance between two holes, so that when the cylinder is held in its normal or right-hand position by the spring one series of holes will be opposite the needles and when shifted to the left the other series will be opposite the needles.

The pattern-cards are provided with two sets of patterns, as is customary with this class of dobbies, so that when the perforations of one of the patterns are in line with the needles the perforations of the other pattern will be out of line therewith. In order to shift the pattern-cylinder at the proper moment to change the pattern, I arrange upon the shuttle-box chain in addition to the usual rollers or indicators 22 for moving the shuttle-box levers 19 of the loom a series of indicators 23, so located upon the bars of the chain that they will engage the shoe 24 upon the lever 17, moving the latter upward and forcing the pattern-cylinder to the left at the proper time to bring about the required change in the pattern. The cylinder will remain in this position while the indicators upon the chain are passing beneath the shoe 24, and when the bars having no indicators thereon pass beneath the shoe the lever 17 will be lowered and the cylinder will be returned to the right-hand position by the spring 21, thereby bringing the other pattern into operation. The shoe, as shown in the drawing, is long enough to bridge the distance between successive indicator-bars, so that before one indicator leaves the shoe the latter will be engaged by the indicator upon the succeeding bar, if there be one, thus preventing the return movement of the lever, as would occur if the shoe were not of sufficient length to bridge the distance between the successive indicators. The shoe may be any suitably-formed wearing-piece arranged to be engaged by the indicators.

My improvements can be applied to any of the forms of dobby now in common use having a laterally-adjustable pattern-card cylinder without necessitating any radical or expensive changes in the loom or dobby.

Any convenient cam or lever arrangement



may be used for moving the cylinder laterally, and the indicators 23 may be applied to any ordinary shuttle-box chain.

Having described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a loom attachment, the combination with the pattern-cylinder movable transversely and longitudinally of the needles and adapted to receive pattern-cards provided with perforations corresponding to two patterns, of the shuttle-box chain having indicators thereon arranged to represent the desired changes in the patterns, and a lever connected to the pattern-card cylinder and adapted to be moved by said indicators, whereby when the lever is moved, the cylinder will be shifted to change the pattern.

2. In a loom, the combination with the pat-

tern-cylinder movable transversely and longitudinally of the needles and adapted to receive pattern-cards provided with perforations corresponding to two patterns, of the box-chain having indicators arranged to represent the desired changes in the patterns, a shoe adapted to be moved by said indicators, said shoe being arranged to bridge the distance between two successive indicators, and connections between said shoe and pattern-card cylinder whereby when the shoe is moved by the indicators, the cylinder will be shifted to change the pattern.

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

JOHN W. DAWSON.

Witnesses:

ROBERT WATSON,  
FLORA LEVI.