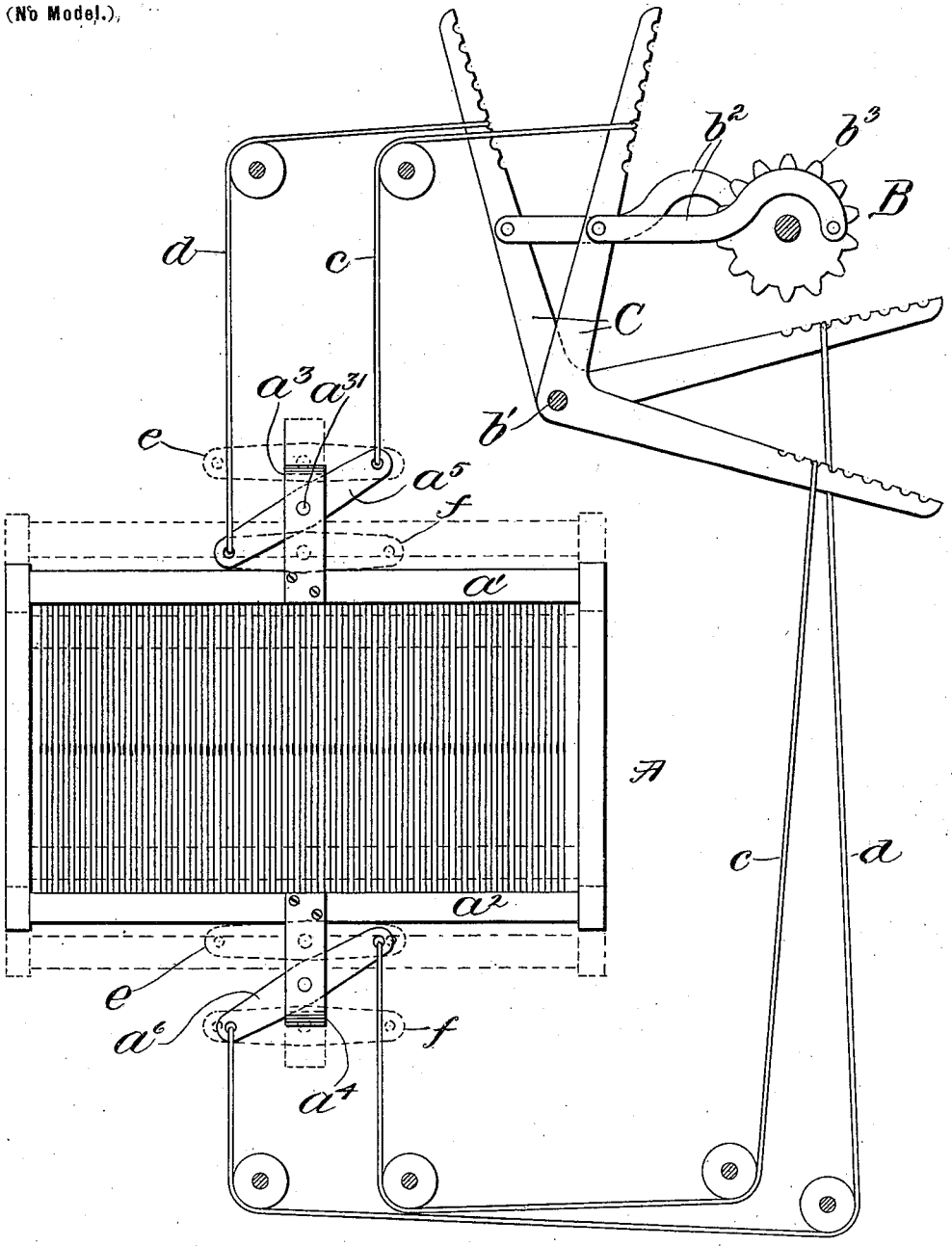
No. 645,636. Patented Mar. 20, 1900.

C. ALVORD.

SHEDDING MECHANISM FOR LOOMS.

(Application filed June 23, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

CLINTON ALVORD, OF WORCESTER, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE PRESTON HOSE AND TIRE COMPANY, OF MAINE.

SHEDDING MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 645,636, dated March 20, 1900.

Application filed June 23, 1899. Serial No. 721,530. (No model.)

To all whom it may concern:

Be it known that I, CLINTON ALVORD, of Worcester, in the county of Worcester, in the State of Massachusetts, have invented certain new and useful Improvements in Looms, of which the following is a specification.

This invention has for its object to improve the construction of harness-frame-operating mechanism for looms for weaving by providing for dividing the movement of the frame or making the same intermittent by alternate action of jacks with which said frame is connected or effecting full movement without subdivision by simultaneous action of such jacks.

Referring to the drawing, A represents a loom harness-frame, and B pattern-controlled jack-operating mechanism, the latter being of usual construction. Jack-levers C are pivotally mounted upon a bar b', and said levers are connected by links b^2 with pinions b^3, which are operated by devices controlled by a pattern-chain and which it is not thought necessary to illustrate in the drawing.

To the top cross-bar a' of the harness A is secured a bracket a^3, to which is pivoted at $a^{3'}$ a lever a^5, and to the lower cross-bar a^2 of the harness-frame A is secured a similar bracket a^4 and lever a^6. Levers a^5 and a^6 can be each connected by a cord or other method to the harness-frame.

Two levers C are utilized to operate the frame A, and one of said levers is connected with the corresponding ends of both of the levers a^5 and a^6 by means of cords or other connection c, while the other lever C is connected with the opposite ends of said levers a^5 and a^6 by means of the cord or other connection d. Levers a^5 and a^6 are operatively connected to the harness-frame. The dotted outlines of the levers a^5 and a^6 shown at e indicate the position occupied by said levers when the frame A is in its elevated position, and the dotted outlines shown at f indicate the position occupied by said levers when the frame A is in its lowermost position, while the full-line position shown in the drawing indicates its intermediate position. By causing the levers C to be alternately operated the frame may be raised or lowered from one extreme position to the other extreme step by step, or when the levers C are simultaneously operated in the same direction the frame A will be moved directly from one extreme position to the other extreme.

In further explanation of the operation it may be said that the levers work on fulcra afforded in their connections with the jacks, and when the latter are working alternately one end of each lever is held through its connections with the inactive jack, so as to work on a fulcrum at that end when the other jack operates, and so the lever works first on a fulcrum at one end and then on a fulcrum at the opposite end to accomplish what is above referred to as a "step-by-step" movement of the frame.

What I claim, and desire to secure by Letters Patent, is—

1. In a loom, the combination with a harness-frame, of a lever pivotally connected intermediate its ends with said frame, and jacks connected independently with said lever on opposite sides of its pivotal connection with the frame, fulcra for the levers being provided in its jack connections whereby the movement of the frame in one direction may be divided by alternate action of the jacks whereas simultaneous action of the jacks effects the full movement without division, substantially as described.

2. In a loom, the combination with a harness-frame, of levers pivotally connected intermediate their ends with said frame above and below the same, and jacks connected independently with said levers on opposite sides of their pivotal connections with the heddle, fulcra for the levers being provided in their jack connections whereby movement of the frame in either direction may be divided by alternate action of the jacks whereas simultaneous action of the jacks effects the full movement without division, substantially as described.

CLINTON ALVORD.

Witnesses:
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