

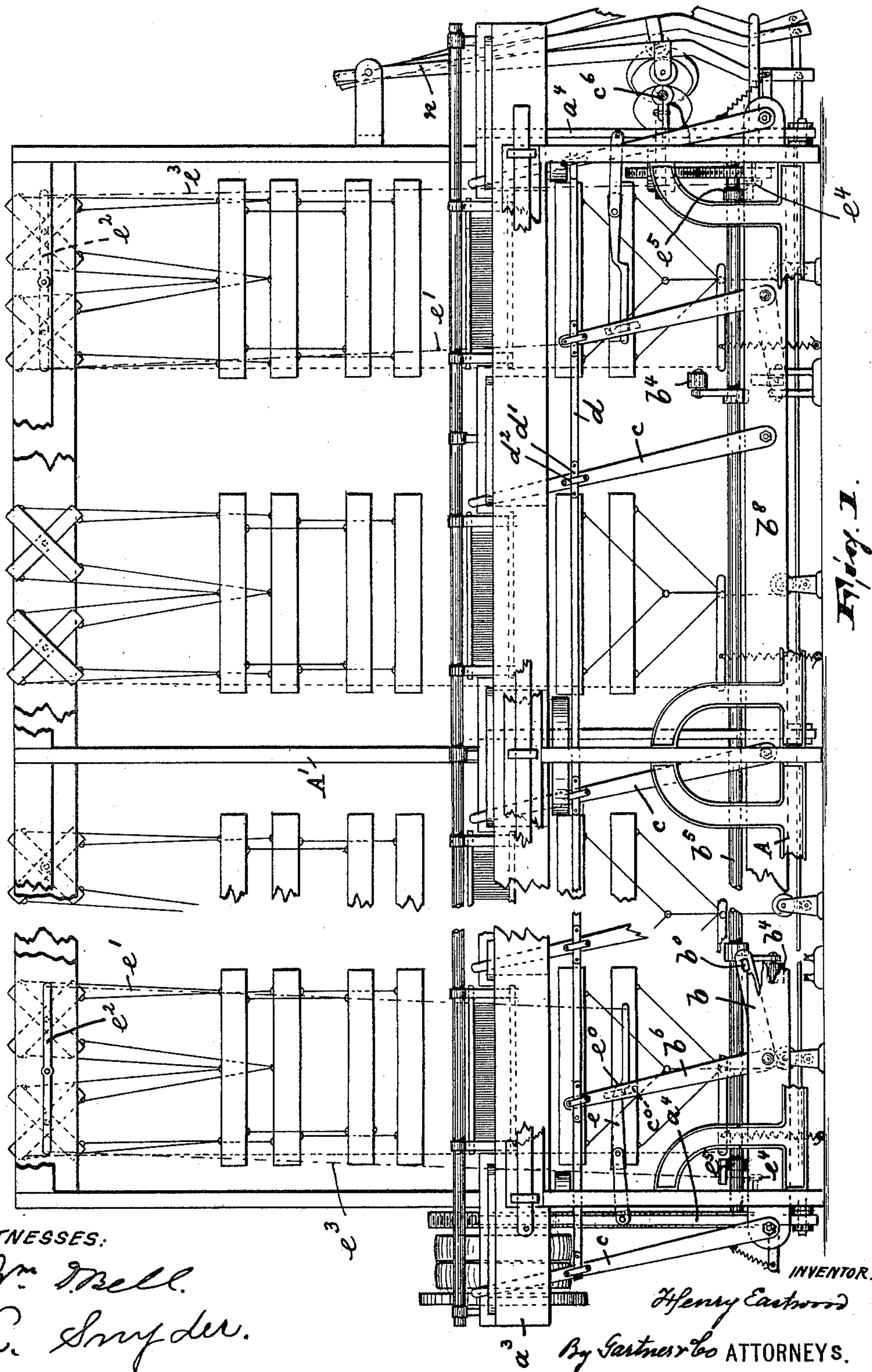
(No Model.)

2 Sheets—Sheet 1.

H. EASTWOOD.
LOOM.

No. 600,217.

Patented Mar. 8, 1898.



WITNESSES:

Wm. Bell.
L. Snyder.

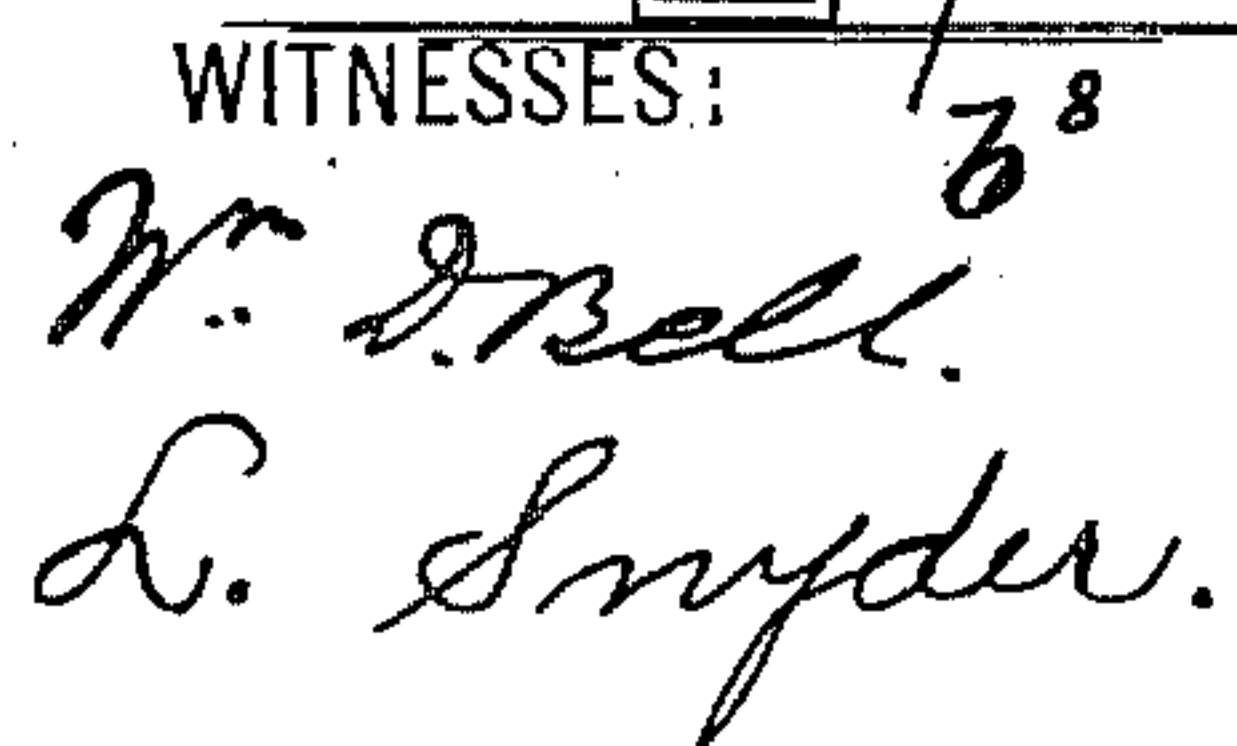
INVENTOR:

Henry Eastwood

By Gartner & Co ATTORNEYS.

2 Sheets—Sheet 2.

Patented Mar. 8, 1898.



July 2.

INVENTOR :

Henry Eastwood

BY

Y
Partners & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

HENRY EASTWOOD, OF LAKE VIEW, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE EASTWOOD & WHITE COMPANY, OF SAME PLACE.

LOOM.

SPECIFICATION forming part of Letters Patent No. 600,217, dated March 8, 1898.

Application filed September 27, 1897. Serial No. 653,098. (No model.)

To all whom it may concern:

Be it known that I, HENRY EASTWOOD, a citizen of the United States, residing in Lake View, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Looms; 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.

This invention is an improvement on United States Letters Patent No. 377,425, granted to me on February 7, 1888; and its object is to provide a loom of the character described in said Letters Patent with means for operating and controlling the series of picker-sticks, to thus render said loom perfect, effective, and reliable in operation.

The invention consists in the improved loom, in its picker-stick operating and controlling mechanism, and in the combination and arrangements of the various parts, substantially as will be hereinafter more fully described and finally embodied in the clauses of the claim.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the two views, Figure 1 is a front elevation of a loom provided with my improvements, certain portions being broken away and others removed to better illustrate the nature of my said invention; and Fig. 2, an end elevation of Fig. 1, certain parts illustrated in said Fig. 1 not being shown.

In said drawings, A represents a loom, and A' its supporting-frames; a , the driving-shaft, and a' the crank-arms, connected by pitmen a^2 with the lay a^3 , all of the usual and well-known construction. The said lay is supported by a series of lay-swords a^4 , fulcrumed on the shaft a^5 , arranged in suitable brackets in the frame A and parallel with the driving-shaft a .

At or near the lower portions of the lay-swords a^4 is secured in any desired manner a cross-bar b^8 , (parallel with the lay,) on which are pivotally secured the lower ends of the

series of picker-sticks c , the upper portions of which are connected by a series of links d and d' and leather straps d^2 . On said cross-bar b^8 and on each side of the loom is also fulcrumed an angle-lever b^6 , having its longer arm connected with the links d and d' and provided in its shorter arm b with an elongated slot b^0 , penetrated by a projection arranged on the shorter arm of the tappet-lever b' , which latter is at right angles to the cross-bar b^8 and is pivotally secured, as at b^2 , to a bracket, as clearly illustrated in Figs. 1 and 2. On the longer arm of said tappet-lever b' is secured the cam b^3 , adapted to be operated by its respective tappet b^4 , which latter is mounted on the cam-shaft b^5 , receiving its motion from the main driving-shaft through a train of gears, as in the usual manner.

Each angle-lever b^6 is provided with a bridge c^0 , penetrated by an arm e , pivotally secured with one end to the lay-swords a^4 and provided with a shoulder e^0 , adapted to engage said bridge and thus lock the said angle-lever and the picker-sticks in position after the latter have been operated. The free end of each arm e is connected by a cord e' to one end of a fulcrumed head-lever e^2 , the other end of which is connected by a cord or wire e^3 to a fulcrumed treadle-lever e^4 , adapted to be operated by a cam e^5 , mounted on the cam-shaft b^5 .

The upper portions of the picker-sticks c are adapted to operate in elongated slots arranged in the lay, while the various sets of harness are operated and controlled by a series of fulcrumed levers n , in turn operated through a series of cams mounted on the shaft c^6 , which latter is arranged at right angles to the cam-shaft b^5 .

On the shaft c^6 is mounted a beveled gear c^5 , meshing into beveled gear c^4 on the stub-shaft c^3 , which latter receives its motion from the cam-shaft b^5 by the gear-wheels c' and c^2 , as clearly illustrated in Fig. 2 of the drawings.

In operation when the tappet b^4 on one side of the loom in its downward movement depresses the tappet-lever b' the latter operates the angle-lever b^6 —that is to say, moves its shorter arm b upward. The angle-lever in turn, through the link connection $d' d^2$, throws

the picker-sticks *c* and thus forces the shuttles over the raceway. The picker-sticks remain in the position attained (the arm *e* with its shoulder *e'* engages one end of the bridge *c*⁰) until the tappet *b*⁴ on the other side of the loom depresses its corresponding tappet-lever *b'*, which in turn operates the angle-lever *b*⁶ (on the other side of the loom) and thus returns the picker-sticks to their former positions. At the required moment the cam *e*⁵ depresses the lever *e*⁴ and, through the cord *e*³, fulcrumed head-lever *e*², and cord *e'*, raises the arm *e* upward and thus its shoulder *e*⁰ out of engagement with the bridge *c*⁰.

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

1. In a loom of the character described, the combination with the frame, the main driving-shaft and the cam-shaft, of a shaft parallel with the driving-shaft and suitably supported in the lower portion of the frame, a series of lay-swords mounted on said shaft, a lay carried by the upper portions of said lay-swords, a cross-bar secured to the lower portions of said lay-swords and parallel with the lay, a series of picker-sticks pivotally secured on said cross-bar, an angle-lever at each side of the loom and also pivotally secured on said cross-bar, a series of links and straps connecting said picker-sticks and angle-levers, a bridge on each of said angle-levers, an arm provided with a shoulder and pivotally secured with one end to the lay-swords and adapted to engage with said shoulder the bridge on its respective angle-lever, a fulcrumed head-lever on the loom-frame and above each angle-lever and having one of its ends connected by a cord or wire with the free end of the arm, a cam mounted on the cam-shaft and on each side of the loom, a fulcrumed treadle-lever below each cam and adapted to be operated thereby, a cord connecting the free end of said fulcrumed treadle-lever with the other end of the fulcrumed head-lever, and means for transmitting motion from the cam-shaft to each of said angle-levers, substantially as and for the purposes described.

2. In a loom of the character described, the combination with the frame, the main driving-shaft and the cam-shaft, of a shaft parallel with the driving-shaft and suitably supported in the lower portion of the frame, a series of lay-swords mounted on said shaft, a lay carried by the upper portions of said lay-swords, a cross-bar secured to the lower portions of said lay-swords and parallel with the lay, a series of picker-sticks pivotally secured on said cross-bar, an angle-lever at each side of the loom and also pivotally secured on said cross-bar, a series of links and straps connecting said picker-sticks and angle-le-

vers, a bridge on each of said angle-levers, an arm provided with a shoulder and pivotally secured with one end to the lay-swords and adapted to engage with said shoulder the bridge on its respective angle-lever, a fulcrumed head-lever on the loom-frame and above each angle-lever and having one of its ends connected by a cord or wire with the free end of the arm, a cam mounted on the cam-shaft and on each side of the loom, a fulcrumed treadle-lever below each cam and adapted to be operated thereby, a cord connecting the free end of said fulcrumed treadle-lever with the other end of the fulcrumed head-lever, a fulcrumed tappet-lever on each side of the loom and having its shorter arm pivotally connected with the shorter arm of its respective angle-lever, a tappet for each of said tappet-levers—mounted on the cam-shaft, and means for transmitting motion from the driving-shaft to said cam-shaft, substantially as and for the purposes described.

3. In a picker mechanism, the combination with the lay and lay-swords, of a cross-bar secured to the lay-swords and parallel with the lay, a series of picker-sticks secured on the said cross-bar, angle-levers secured to the cross-bar at each side of the loom, means for actuating the angle-levers, connections between the picker-sticks and the angle-levers, pivoted latches secured to the lay-swords adapted to engage the angle-levers to lock them in position at their respective ends of the travel, fulcrumed head-levers on the loom-frame, cords attached to said latches and head-levers, and means to actuate said head-levers to release said latches, substantially as described.

4. In a picker mechanism, the combination with the lay and lay-swords, of a cross-bar secured on the lay-swords and parallel with the lay, a series of picker-sticks secured to the cross-bar, angle-levers secured to the cross-bar at each side of the loom, tappet-levers fulcrumed in the loom-frame for operating the angle-levers, means for actuating said tappet-levers, a series of links and leather straps connecting the picker-sticks and the angle-levers, pivoted latches secured to the lay-swords adapted to engage the angle-levers to lock them in position on their respective ends of the travel, fulcrumed head-levers on the loom-frame, cords attached to said latches and head-levers, and means to actuate said head-levers to release said latches, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of September, 1897.

HENRY EASTWOOD.

Witnesses:

ALFRED GARTNER,
WM. D. BELL.