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PATENTED AUG. 6, 1907.

E. F. HATHAWAY.
LOOM REED SUPPORT FOR WARP DRAWING MACHINES.

APPLICATION FILED MAR. 30, 1906.

2 SHEETS—SHEET 1.

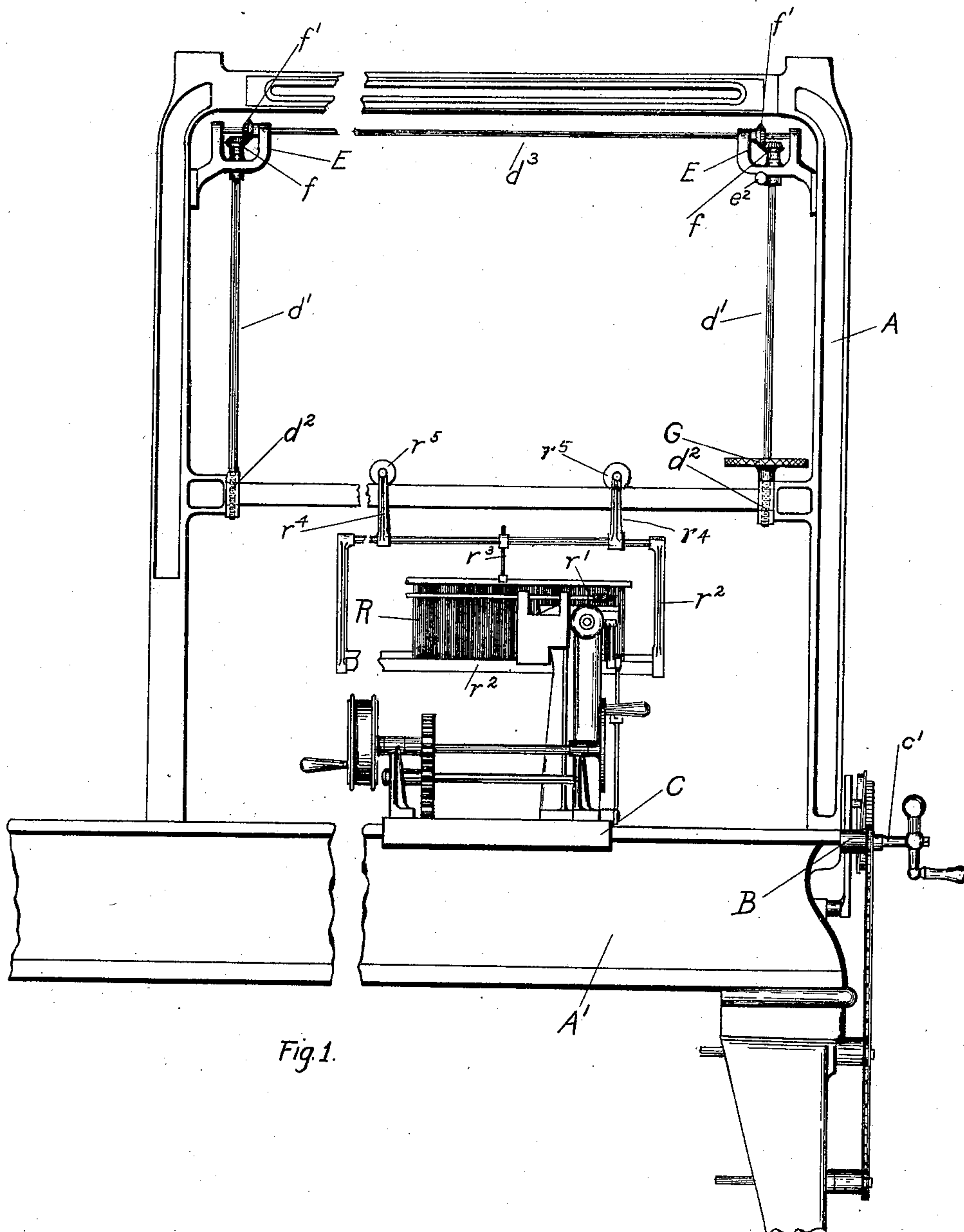


Fig. 1.

Witnesses

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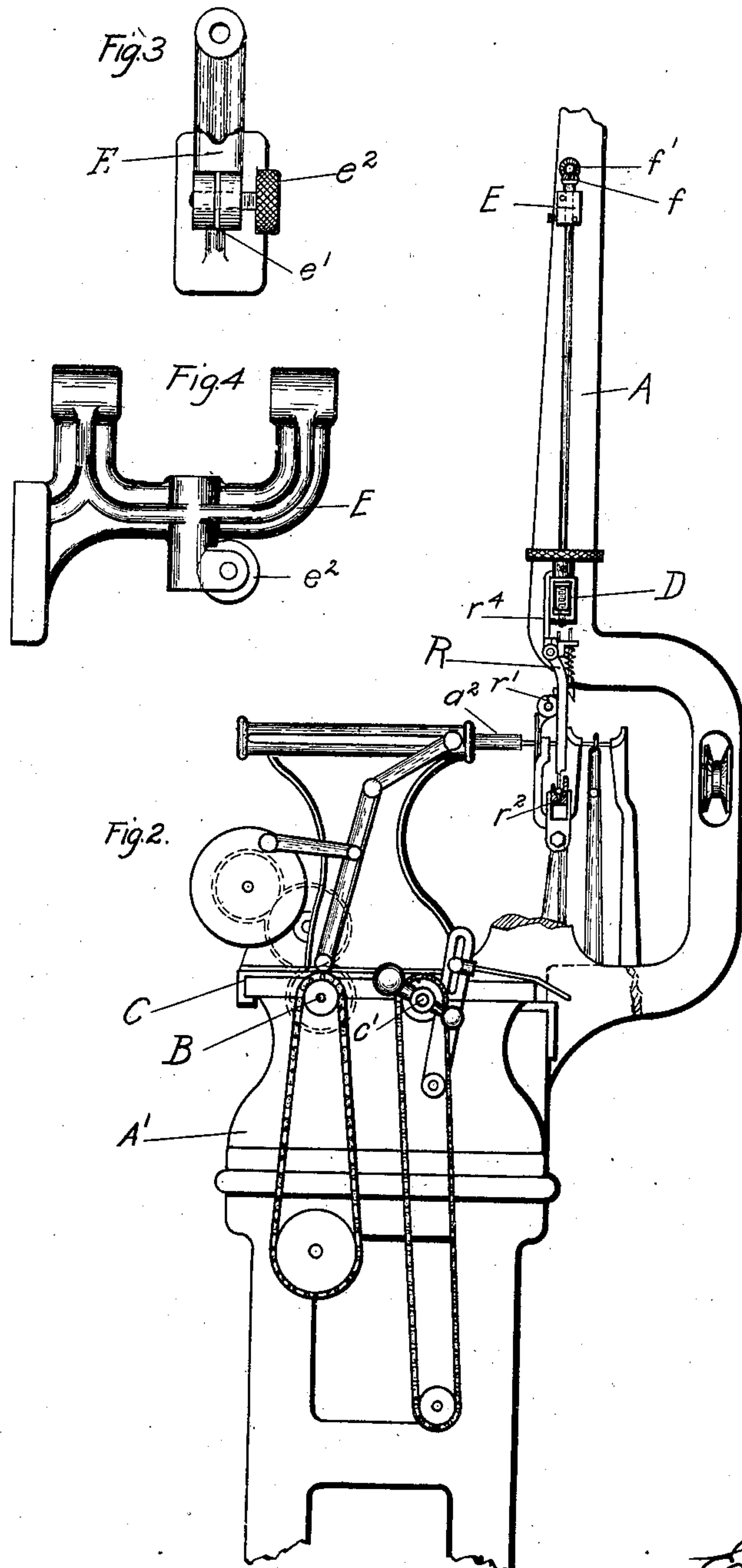
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EDGAR F. HATHAWAY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO AMERICAN WARP-DRAWING MACHINE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

LOOM-REED SUPPORT FOR WARP-DRAWING MACHINES.

No. 862,474.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed March 30, 1906. Serial No. 308,904.

To all whom it may concern:

Be it known that I, EDGAR F. HATHAWAY, a citizen of the United States of America, residing at Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Loom-Reed Supports for Warp-Drawing Machines, of which the following is a specification.

The invention relates to means for supporting the loom-reed in a warp-drawing machine, by which in addition to an automatic longitudinal adjustment upon anti-friction rollers which is imparted to it by the action of the reed-dent opener, it may have an accurate and even adjustment in a vertical plane; and the invention consists in a plurality of supports attached at different points throughout the length of the bar or other part of the machine upon which the reed may be adjusted longitudinally, and interconnecting the several supports so that they may be controlled and simultaneously operated to move the reed in a vertical plane without disturbing its horizontal alinement, and further, in means by which the adjusting mechanism may be locked when the reed has been adjusted to the desired position.

In warp-drawing machines for use at the present time it has become necessary to have the greatest accuracy and nicety of adjustment of the reed in relation to the reed-opener, the drawing-in device and other mechanism upon the traversing carriage, which coöperate with the reed or act thereon, and therefore, besides the automatic longitudinal adjustment of the reed, a vertical adjustment is needed in order that the location of the action of the reed-opener and drawing-in device thereon, may be at the most advantageous position, which should be nearer to the reed bar as the number of splits per inch increases, and consequently the size of the wire decreases; the splits being held more firmly at their ends near to the reed bars than at the middle of their length.

In the specific form of the improvements illustrated in the accompanying drawings, Figure 1 is a front elevation of the parts of a warp-drawing machine which involve the present invention, and which coöperate directly therewith; the harnesses, warp-frame, etc. being omitted; Fig. 2 is a side elevation of the parts shown in Fig. 1; Figs. 3 and 4 are details showing an end and side elevation respectively, of the bracket in which the adjusting supports for the reed are hung, and the clamp for locking these supports after adjustment.

Referring to the drawings, A is the frame of the machine, A' the bed on which the carriage C is traversed; C' is the screw-shaft by which the carriage C is caused to traverse the bed A', B is the driving shaft for the mechanism supported upon the carriage C.

a^2 is the drawing-in device, r' the reed-opener, R the reed attached to a frame or holder r^2 by rods r^3 . The reed holder r^2 is hung upon an adjustable support or bar D by arms r^4 carrying antifriction rolls r^5 which run upon the bar D. The ends of the bar D engage guideways in the frame A and thus any horizontal movement thereof is prevented. The bar D is supported by rods d' , the lower ends of which are screw-threaded and engage screw-threaded holes in the bar D at d^2 . The rods d' extend up through holes in brackets E on the machine frame, and are supported therein by collars fastened to the rods above the brackets. Across the top of the machine a rod d^3 extends and is supported in the same brackets E. Beveled gears f are attached to the upper ends of each of the rods d' which mesh with corresponding gears f' upon each end of the rod d^3 .

A handwheel G is attached to one of the rods d' at a point convenient for the hand of the operator, and by means of this single wheel the system of rods d' d^3 may be simultaneously rotated and through the screws d^2 raise or lower the bar D and with it the reed holder r^2 and reed R, thus adjusting the reed accurately and evenly throughout its length in a vertical direction, thereby determining the location upon the reed-split at which the reed-opener shall act and the drawing-in device enter the reed-dents. The relative position of the reed will by this adjustment be changed in relation to all of the coöperating parts upon the traversing carriage. The bearing in one of the brackets E for one of the rods d' is split, as at e' , Fig. 3, and by means of a thumb-screw e^2 the bearing may be closed upon the rod d' and thus lock the whole system of adjusting supports d' , d^3 , after the bar D has been adjusted to the desired position.

I claim:

1. In a warp-drawing machine, provided with a loom-reed, a reed-opener and a drawing-in device, means to hold the reed for the action of the opener and drawing-in device, a plurality of supports for said reed holding means, and mechanism to give said supports uniform and simultaneous vertical adjustment.

2. In a warp-drawing machine embodying a loom-reed and a reed-dent-opener and drawing-in device which coöperate therewith, supports for the reed on which it may be longitudinally adjusted, and a single adjusting device to give the reed and its supports, simultaneous, uniform vertical adjustment to regulate the location of action of the dent-opener and drawing-in device upon the reed.

3. In a warp-drawing machine embodying a loom-reed, a reed-dent-opener and drawing-in device, a reed holder support which is prevented from horizontal movements by engagement with the machine frame, a pair of screw-rods which engage the reed holder support and are adapted to give it vertical adjustment, and rotative interconnection between the two screw-rods to cause simultaneous movement thereof, and equal adjustment of the reed throughout its length.

4. In a warp-drawing machine, a vertically movable reed support, screw-rods which engage the support and by their rotation give it uniform vertical adjustment, rotative interconnection between the rods to produce simultaneous movement thereof, means upon one of the rods to facilitate its rotation by the operator, and a device to lock the adjusting means after the support has been adjusted.
5. In a warp-drawing machine provided with a reed, a reed-opening device and a drawing-in needle, with means to cause a relative feeding movement lengthwise of the reed, between the reed and the reed-opener and needle, a reed holder, supporting means for the said holder adapted to permit its longitudinal movement, a plurality of adjusting devices coöperatively related to said supporting means and adapted to effect their vertical adjustment, and a single controlling device to operate said adjusting devices.
6. A warp drawing machine having a drawing needle and a loom reed, and separate but interconnected supports for the reed which are capable of simultaneous, uniform and vertical adjustment from the same point.
7. A warp drawing machine having a drawing needle and a loom reed, separate but interconnected supports for the reed which are capable of simultaneous, uniform and vertical adjustment from the same point, and locking means to retain the reed in its adjusted position.
8. A warp drawing machine having a drawing needle and a loom reed, separate but interconnected supports for the reed which are capable of simultaneous, uniform and vertical adjustment from the same point, and means permitting the longitudinal adjustment of the reed.
9. A warp drawing machine having a reed provided with means, such as the anti-friction support r^5 , for longitudinal adjustment, and separate supports, such as threaded rods d' , connected for simultaneous and uniform adjustment by means, such as the rod d^3 .
10. A warp drawing machine having a reed automatically adjustable in a longitudinal direction, a plurality of supports for said reed, and means for simultaneously adjusting said supports in a vertical direction.
- EDGAR F. HATHAWAY.
- Witnesses:
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