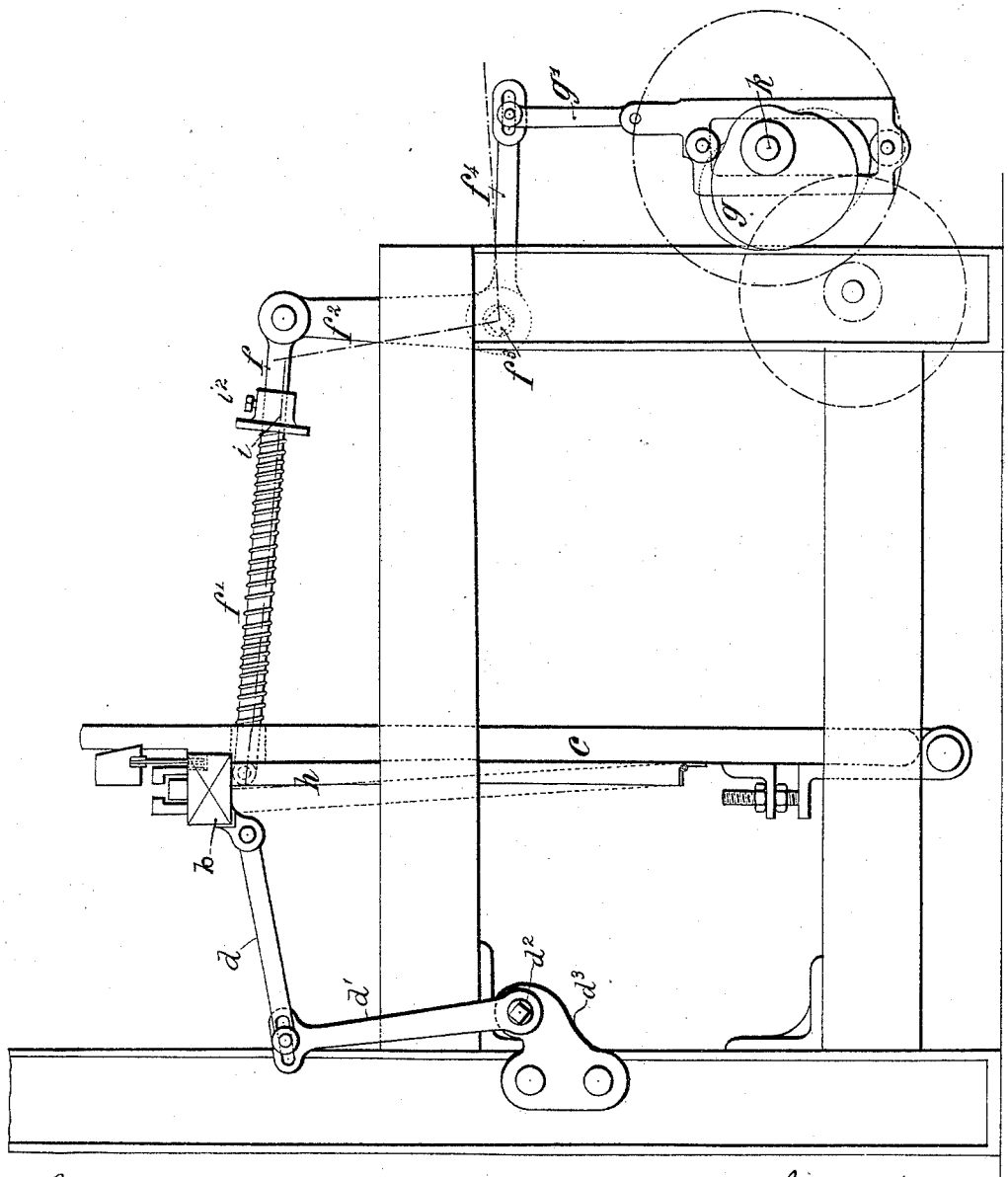
(No Model.)

A. F. DÉVIGNE & J. P. DURAND.

BATTEN OPERATING MECHANISM FOR POWER LOOMS.

No. 443,161. Patented Dec. 23, 1890.



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANTOINE FRANÇOIS DÉVIGNE AND JEAN PIERRE DURAND, OF LA COUR-DU-PIN, FRANCE.

BATTEN-OPERATING MECHANISM FOR POWER-LOOMS.

SPECIFICATION forming part of Letters Patent No. 443,161, dated December 23, 1890.

Application filed June 20, 1890. Serial No. 356,170. (No model.) Patented in France October 27, 1886, No. 179,169; in Belgium November 13, 1886, No. 75,223; in England December 30, 1886, No. 17,094; in Italy December 31, 1886, XLI, 227; in Spain January 3, 1887, No. 10,314, and in Germany November 19, 1887, No. 46,978.

To all whom it may concern:

Be it known that we, ANTOINE FRANÇOIS DÉVIGNE and JEAN PIERRE DURAND, of the city of La Cour-du-Pin, France, have invented Batten-Operating Mechanisms for Power-Looms, (for which we have obtained Letters Patent in France for fifteen years, dated October 27, 1886, No. 179,169; in Belgium for fifteen years, dated November 13, 1886, No. 75,223; in England for fourteen years, dated December 30, 1886, No. 17,094; in Italy for fifteen years, dated December 31, 1886, No. 227, Vol. 41; in Spain for twenty years, dated January 3, 1887, No. 10,314, and in Germany for fifteen years, dated November 19, 1887, No. 46,978,) of which the following is a full, clear, and exact description.

This invention relates to the mechanism for operating the batten or lathe of a power-loom, whereby to beat up the weft with an elastic blow and a variable degree of strength.

Reference is to be had to the accompanying drawing, forming part of this specification, which represents the batten and its operating mechanism at one side of the loom.

The connecting-rods *f*, through which the batten is actuated, are not coupled to the swords *c* of the batten, but pass through vertically-elongated holes therein to allow the vibrating movement of the connecting-rods and are coupled to radius-arms *h*, hinged at their lower ends to the front side of the swords *c*. Upon each connecting-rod *f* there is a spiral spring *f'*, confined between the sword *c* and a collar *i*, adjustable on the rod *f* by a clamping-screw i^2, so that the spring always tends to draw the radius-arm *h* close up to the sword *c*. Each connecting-rod is coupled to an arm f^2, fixed to a rock-shaft f^3, actuated by the double cam *g* on the shaft *k* acting on the friction-rollers of the slotted plate *g'*, connected by a pin and slot to the other arm f^4, fixed to the said rock-shaft f^3. When the batten is moved forward to beat up the weft, it will be stopped before the other parts have completed their stroke. Through the intervention of the springs the connecting-rods, together with the radius-arms *h*, will be free to move farther forward, as shown by dotted lines in the figure, whereby the springs *f'* are compressed and an increasing elastic pressure is exerted by the reed. The strength of this pressure may be regulated by adjusting the collars *i*, so as to regulate the initial tension of the springs *f'*.

In order to insure equality of motion of the two ends of the batten, which is very important in the beating up of the weft, the cross-bar *b* of the batten has connected to it near each end the rods *d*, which are connected to the lever-arms *d'*, which project from a cross-shaft d^2, hung in bearings d^3 on the side frames of the loom.

I claim—

In a power-loom, the combination of the batten with the connecting-rods *f*, springs *f'*, adjustable collars *i* on the rods *f*, the radius-arms *h*, hinged to the swords *c* of the batten, and means, substantially as described, for actuating the rods *f*, all arranged to render the action of the batten elastic and enable the strength of the blow to be varied, as described.

The foregoing specification of our batten for power-looms signed by us this 23d day of May, 1890.

ANTOINE FRANÇOIS DÉVIGNE.
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