(Model.)

2 Sheets—Sheet 1.

J. STIELY.

PLAITING MACHINE.

No. 362,551. Patented May 10, 1887.

Fig. 1.

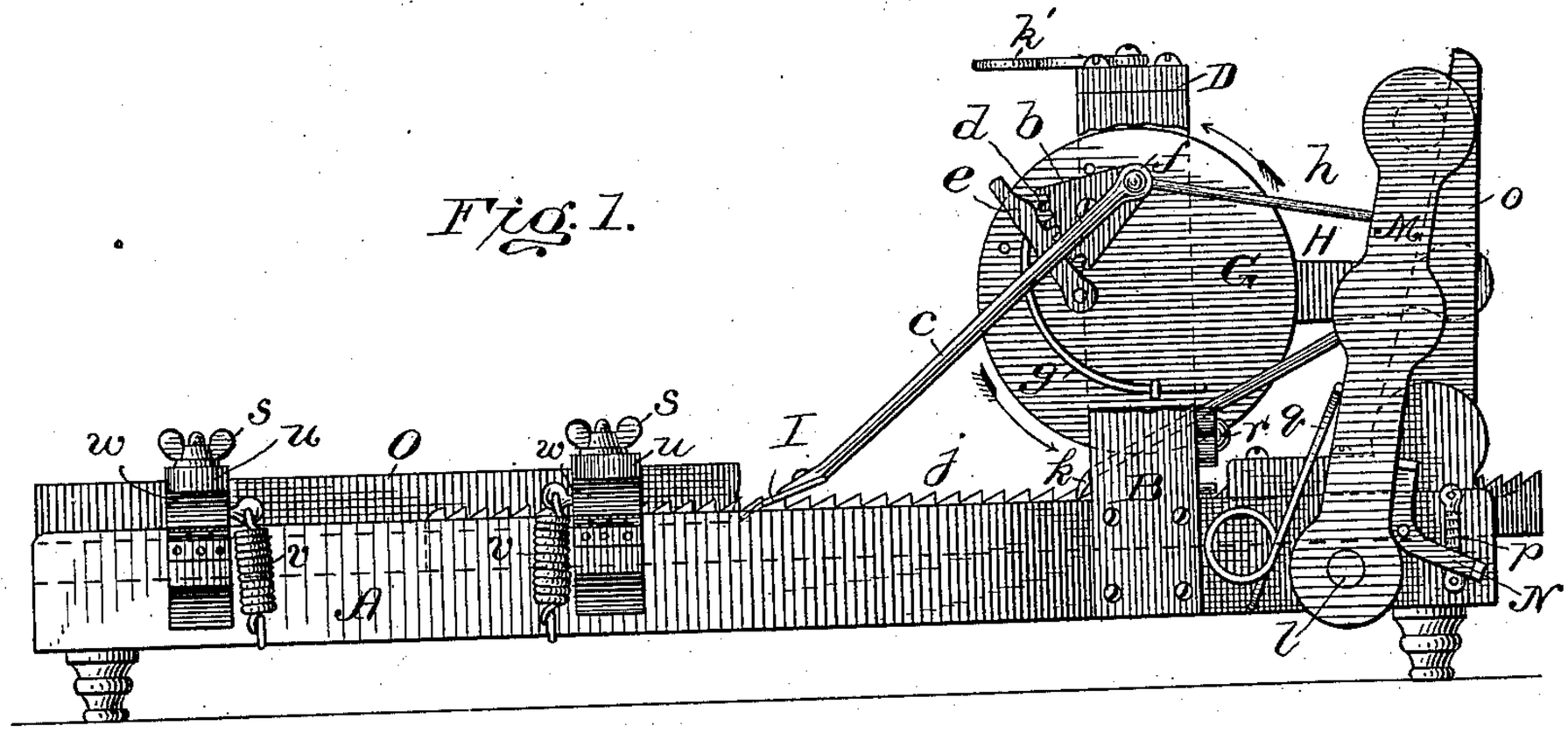
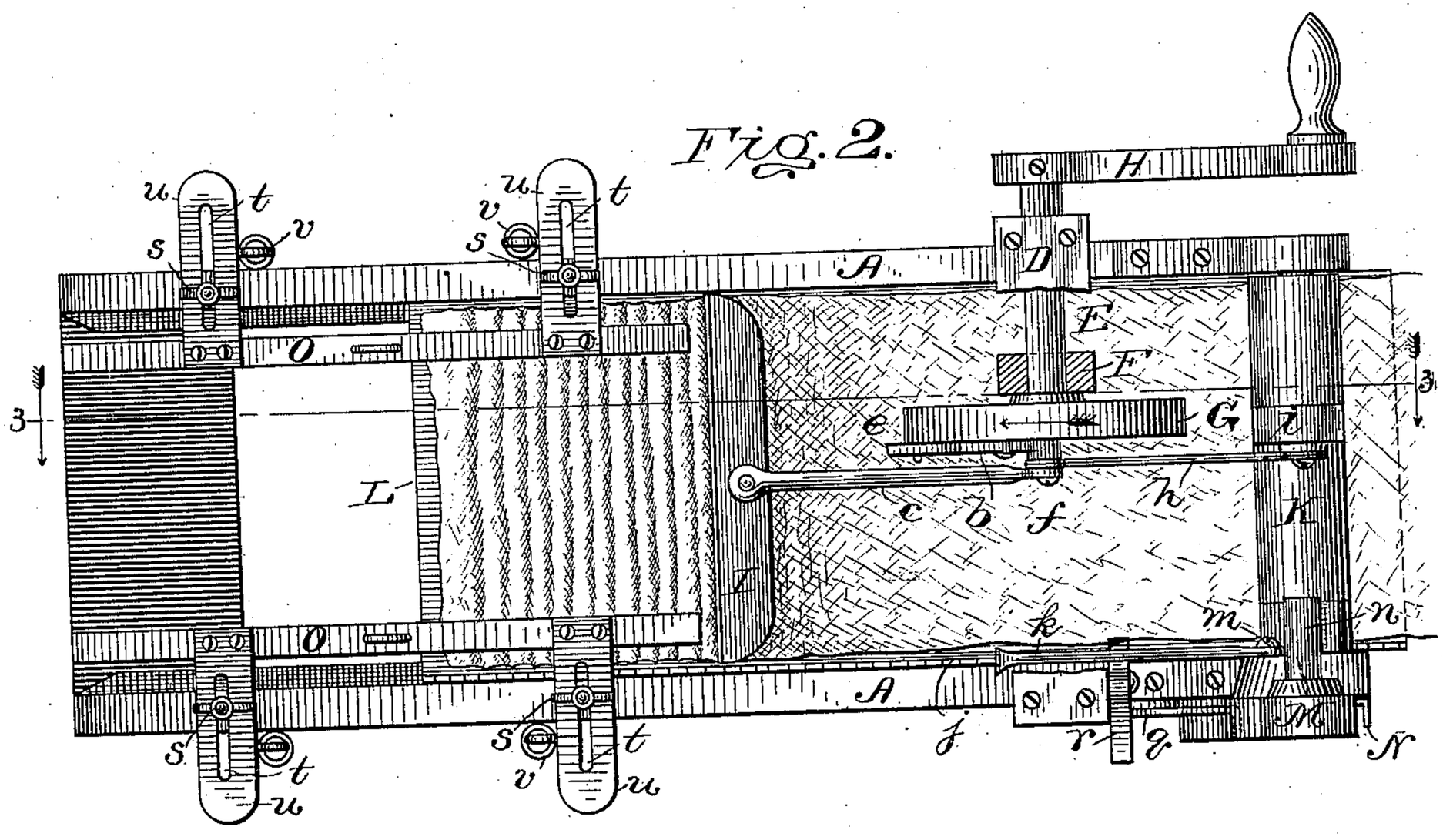


Fig. 2.



Witnesses.

Wm. E. Dyre.

Inventor

Jared Stiely

By his Attorneys

Johnston, Reinehl & Dyre

(Model.) 2 Sheets—Sheet 2.

J. STIELY.

PLAITING MACHINE.

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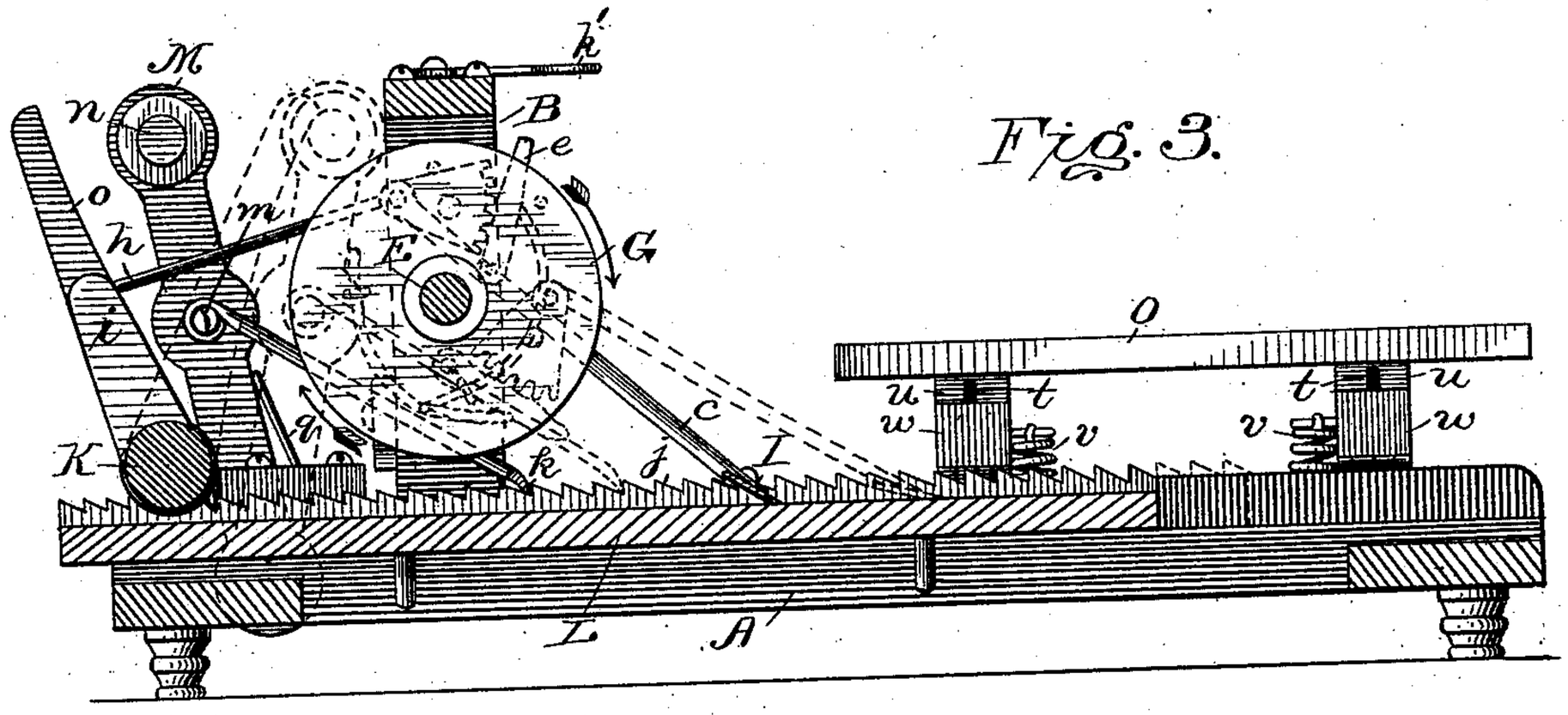

Fig. 3.

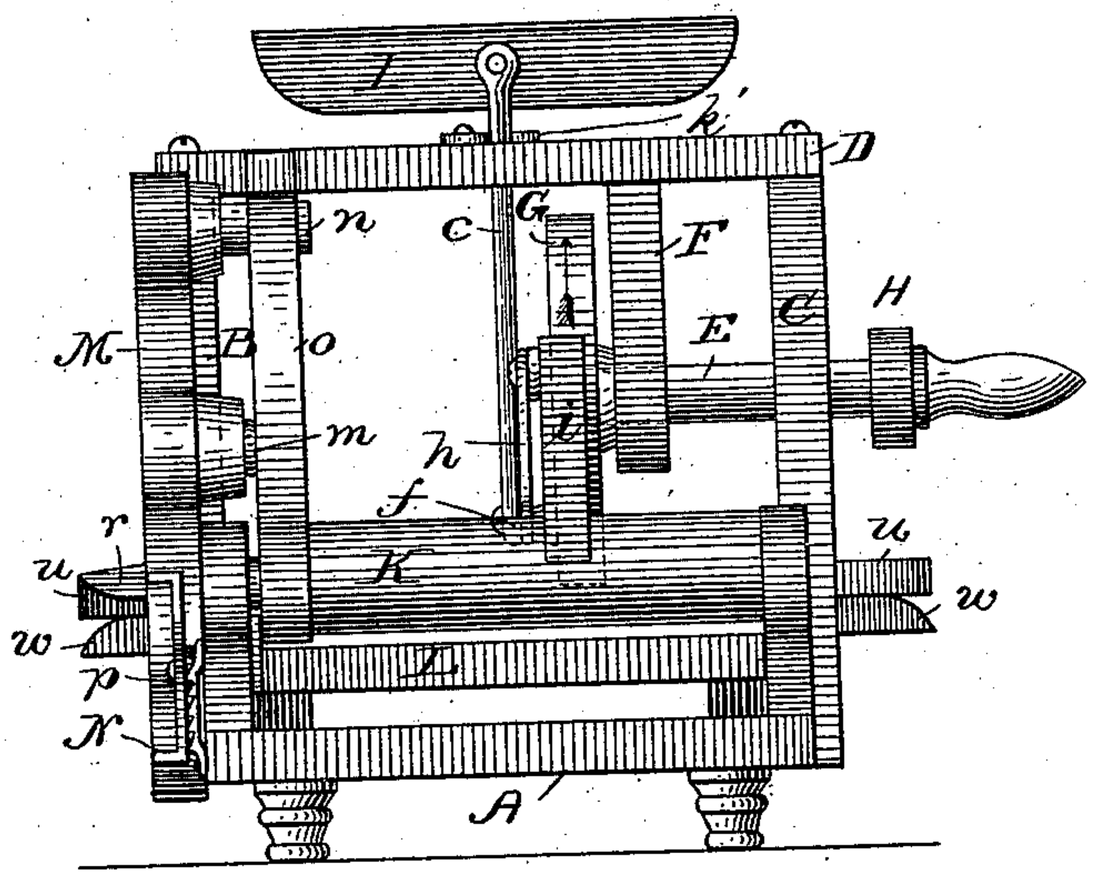

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

JARED STIELY, OF LEBANON, PENNSYLVANIA.

PLAITING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 362,551, dated May 10, 1887.

Application filed December 29, 1886. Serial No. 222,928, (Model.)

To all whom it may concern:

Be it known that I, JARED STIELY, a citizen of the United States, and residing in the city of Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Improvement in Plait-Making, of which the following is a specification.

My invention relates to plaiting-machines, and has for its object the construction of a machine especially adapted for household use, which shall be simple, easily manipulated, and capable of ready adjustment for forming plaits of different sizes.

The invention will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 represents a side elevation, partly in section; Fig. 2, a plan view; Fig. 3, a longitudinal section on the line 3 3 of Fig. 2, looking in the direction of the arrows; and Fig. 4 is an end view.

Reference being had to the drawings and the letters marked thereon, A represents the frame of the machine, to the opposite sides of which are secured uprights B C, which support a cross-piece, D.

E is a shaft supported in the upright C and in a pendent arm, F, attached to the cross-piece D, and is provided at one end with a disk, G, and at the opposite end with a crank-lever, H. On the inner surface of the disk G is attached a segment, *b*, on one end of which is a wrist-pin, *c*, and on the opposite end is formed a rack, *d*, with which a pawl, *e*, engages. The segment *b* is adjustable upon the screw or stud *f*, and the pawl is held in engagement with the rack *d* by means of a spring, *g*, also secured to the disk G.

I is the plaiting-knife, which is attached to the wrist-pin *c* and is operated by the crank-lever H. To the wrist-pin *c* is also attached a link, *h*, which connects with an arm, *i*, on the rock-shaft K, which is supported in suitable bearings on one end of the frame A.

L is a movable bed supported by the frame A, and on one side of the bed is a toothed rack, *j*, with which a pawl, *k*, engages. On one side of the frame A is an arm, M, pivotally secured at *l* and provided with a pin, *m*, to which the pawl *k* is secured, and with a stud, *n*, with which the arm *o* on the rock-shaft K engages to move the bed L.

The throw of the arm M, and consequently the degree of movement of the bed L, is regulated by a bell-crank lever, N, adjustably secured to the frame A. One arm of the lever N engages with one side of the arm M, and the opposite arm engages with a rack, *p*, for adjusting the throw of the arm M. The forward movement of the arm M is effected through the medium of the disk G and the rock-shaft K, and the arm is returned by a spring, *q*, which bears against one side of the arm.

To the upright B is secured a lever, *r*, for raising the pawl *k* out of engagement with the rack *j* on the bed L when the bed is moved back to the rear end of the frame A. By adjusting the segment *b* on the disk G the throw of the wrist-pin *c* is varied, and plaits of different widths are formed by the knife I, and by adjusting the bell-crank lever N the throw of the arm M is regulated to correspond with the throw of the wrist-pin, and the movable bed L is fed along at a rate of speed corresponding with the movement of the knife I. When the material to be plaited is being placed in position on the bed L, the knife is elevated and supported by a hook, *k'*, as shown in Fig. 4.

On each side of the frame A are secured hinged clamping-bars O, which are adjusted laterally, to accommodate different widths of material to be plaited, by means of set-screws *s s*, which work in slots *t* in arms *u*, connected to said bars O, and the bars are held in engagement with the cloth being plaited by springs *v*, connected to the hinged pieces *w* and to the frame A. The front ends of the bars O are slightly rounded to facilitate the passage of the knife I and the cloth as the plaits are formed by the stroke of the knife.

By the application of the spring-actuated clamping-bars the plaits as they are formed are securely held without the application of the hand of the operator. After the plaited cloth leaves the bed of the machine, the plaits are secured in the usual manner.

By hinging the clamping-bars on the sides of the frame they may be thrown up out of the way, as shown in Fig. 3, thus affording ready access to the bed L, on which the cloth is plaited, for placing the cloth in position or for removing it after it has been plaited.

The cloth may be kept taut while being operated upon by the plaiting-knife by one hand of the operator, or a pair of friction-rolls may be attached to the rear end of the frame, through which the cloth may be fed.

Having thus fully described my invention, what I claim is—

1. In a plaiting-machine, a reciprocating knife and a movable bed, in combination with a crank-shaft having a wrist-pin, a rock-shaft connected to said pin, and an arm carrying a pawl and operated by said rock-shaft for moving the bed, substantially as described.

2. In a plaiting-machine, a reciprocating knife and a movable bed, in combination with a shaft having a disk and supporting an adjustable wrist-pin, a rock-shaft connected to said pin, a vibrating arm supporting a pawl engaging with a rack on the bed, and mechanism for adjusting the movement of said arm, substantially as described.

3. In a plaiting-machine, a knife, in combination with a crank-disk, an adjustable toothed segment secured to said disk and supporting a wrist-pin, a pawl for engaging with said segment, and a rod connecting the knife with the wrist-pin, substantially as described.

4. In a plaiting-machine, a knife, in combination with a crank-disk, an adjustable segment supporting a wrist-pin secured to said disk, a rock-shaft provided with arms, one of which is connected to the wrist-pin and the other adapted to move an adjustable vibrating arm carrying a pawl engaging with the movable bed, and a spring for returning said vibrating arm to its normal position, substantially as described.

5. In a plaiting-machine, clamping-bars hinged to the side of the frame of the machine and laterally adjustable across the bed, in combination with a plaiting-knife, suitable means for operating the same, and a bed for supporting a fabric, substantially as described.

JARED STIELY.

Witnesses:
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