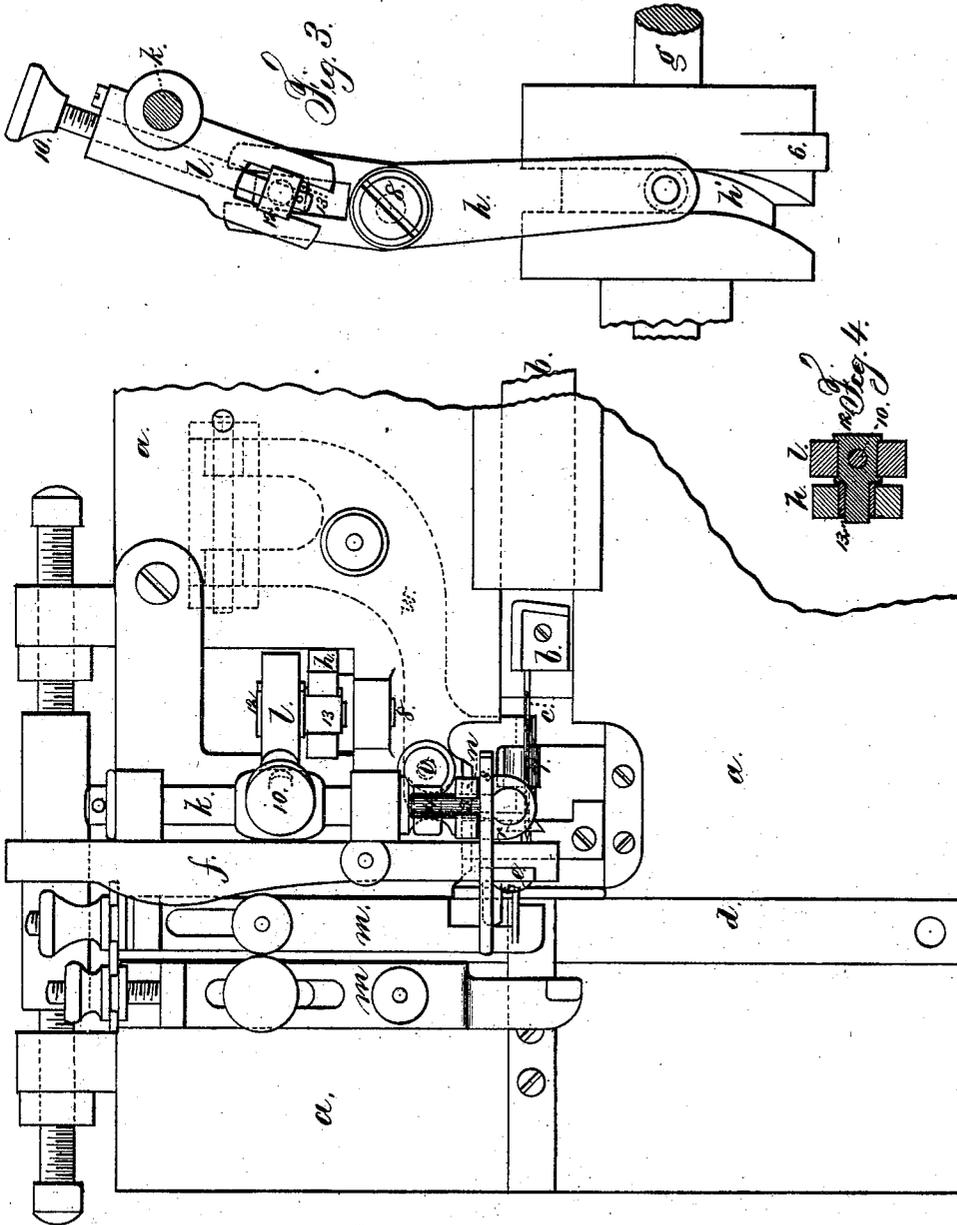


R. LAMONT.

MACHINES FOR SEWING STRAW-BRAID.

No. 176.794.

Patented May 2, 1876.



Witnesses
Char. H. Smith
Harold Small

Inventor
Robert Lamont.
 per *L. W. Serrell* atty

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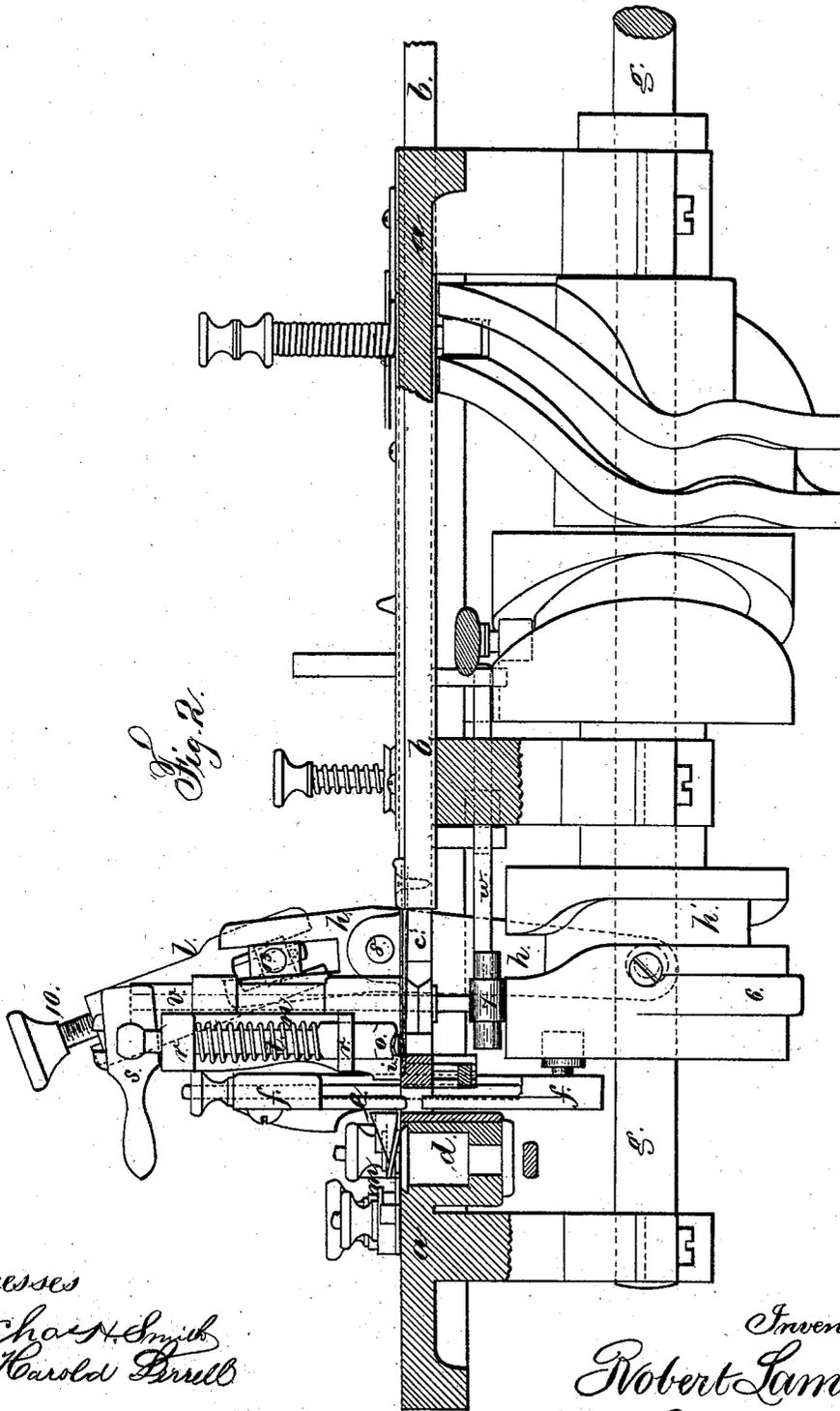


Fig. 2.

Witnesses
Chas. H. Smith
Harold Perrell

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UNITED STATES PATENT OFFICE.

ROBERT LAMONT, OF BROOKLYN, NEW YORK, ASSIGNOR TO WILLIAM E. DOUBLEDAY, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR SEWING STRAW BRAID.

Specification forming part of Letters Patent No. 176,794, dated May 2, 1876; application filed February 21, 1876.

To all whom it may concern:

Be it known that I, ROBERT LAMONT, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Sewing-Machines for Braid, &c., of which the following is a specification:

In Letters Patent granted to Hiram Plummer, July 14, 1868, and August 10, 1869, a machine for sewing straw and other braid is set forth. In those machines the braid was pushed endwise as the feed took place, and there was difficulty in regulating the length of the stitch.

My invention is an improvement upon the aforesaid Letters Patent, and relates to the means for feeding the braid and sewed material, and in the manner of regulating the length of the stitch.

I make use of a swinging clamp, that grasps the sewed material and carries it along the required distance, liberates the same, and returns, and the length of the stitch is varied by a movable connection in a compound lever, whereby the relative lengths of the parts of the lever are varied without changing the fulcrum of such compound lever.

In the drawing, Figure 1 is a partial plan. Fig. 2 is an elevation of the feeding mechanism, with the bed in section. Fig. 3 is an elevation of the compound lever, and Fig. 4 is a section of the connection of the compound lever.

The sewing-machine bed *a* is provided with a channel, in which slides the needle-bar *b*, carrying the eye-pointed needle *c*, and there is a shuttle in the raceway *d*, actuated by a lever and shuttle-driver, and the crimper, composed of the blade *e* in the forked lever *f*, carries the material down into an opening in the bed, the needle passes through the respective thicknesses, and the shuttle goes through the loop of the needle-thread, substantially as in aforesaid patents. The crimp of the fabric is raised, the feed takes place, and the crimper again descends. These motions are derived from cams upon the shaft *g*, and, with the exception of the feed-motion, it is unnecessary to describe the details, as the same are set forth in said patents.

The feeding mechanism consists of an actuating-lever, *h*, moved at one end by a cam, *h'*, a rock-shaft, *k*, with an arm, *l*, that, with

the upper portion of the lever *h*, forms the compound lever, and upon the end of the rock-shaft there is a crank-arm, *n*, having a foot-piece, *i*, that is, preferably, a separate L-piece screwed to the arm, and above this foot *i* there is a clamp, *o*, formed with a rod or stem passing through guides *r* upon the arm *n*, and having a spring, *t*, and a lifting cam-lever, *s*, pivoted to the upper end, by means of which the clamp *o* can be raised to liberate the material between *i* and *o*. The pivot 4 of the lever *s* extends through between a guide-fork, 5, and beneath it is the arm upon the upper end of the vertical slide *v*, that rests at its lower end upon a frame, *w*, that is hinged at one end, and provided with a roller, 7, at the other end, and there is a cam, 6, that acts upon this roller. The cams are shaped and timed so that before the rock-shaft *k* is moved to swing the arm *n* toward the guides *m*, through which the braid passes, the cam 6 has acted upon the roller 7, frame *w*, slide-rod *v*, and pivot-arm 4, to raise the clamp *o* and liberate the fabric; and before the rock-shaft *k* and arm *n* move the other way the cam 6 has passed from below the roller 7, and the clamp *o* comes upon the fabric to grasp it with the pressure due to the spring *t* against the foot *i*, and hold such material firmly, while the rock-shaft and arm swing, carrying the material with them, drawing the crimp or fold that has been sewed so that the same becomes nearly flat, and placing the braid and sewed material in the position for the crimper to descend and present the material to the action of the needle for the next stitch.

The feeding mechanism described might be employed with any suitable device for giving a rocking motion to the shaft *k*. I prefer and use the compound lever made of the slotted arm *h* and slotted arm *l*. These are contiguous, and extend past each other, so that the connection between them can be moved along in the slots of the lever nearer to or farther from the rock-shaft, and thereby vary the relative lengths of the levers, and regulate the length of stitch without varying the action of the cam *k'* upon the lever *h*. The lever *h* preferably has its fulcrum at 8, and the arm *l* of the rock-shaft extends to one side of such shaft,

so that the adjusting-screw 10 can run through the same lengthwise of the slot in the arm, and the end of this screw passes through a block, 12, within such slot, so as to move the same lengthwise of the slot. From the arm 12 there is a pin projecting at one side, entering a block, 13, in the slot of the lever *h*.

It will now be apparent that the parts 12 and 13 will be moved together by the adjusting-screw 10, and, when drawn toward the rock-shaft, the leverage will be regulated so as to increase the movement of the feed-arm *n*, and when 12 and 13 are moved farther away from the rock-shaft the feed movement will be lessened.

I claim as my invention—

1. The combination, with the crimping and

sewing mechanism for braid, of a clamping feeding mechanism that acts upon the material after it has been sewed to draw the same through the guides, substantially as set forth.

2. The feeding mechanism and its rock-shaft *k*, in combination with the lever-arm *l*, adjustable connecting-block 12, and lever *h*, that receives its motion from the cam *h'*, substantially as specified, for varying the length of stitch by changing the relative lengths of the levers, substantially as set forth.

Signed by me this 3d day of January, 1876.

ROBERT LAMONT.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.