

A. BARTH & N. BARTH.
Improvement in Sewing Machines.

No. 120,614.

Patented Nov. 7, 1871.

Fig. 1.

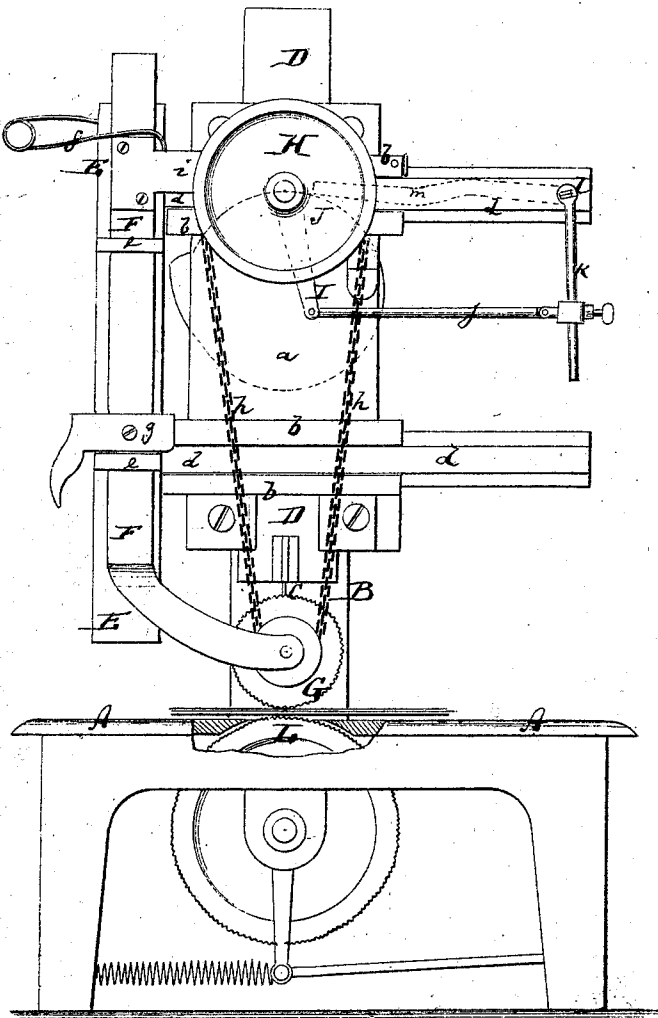
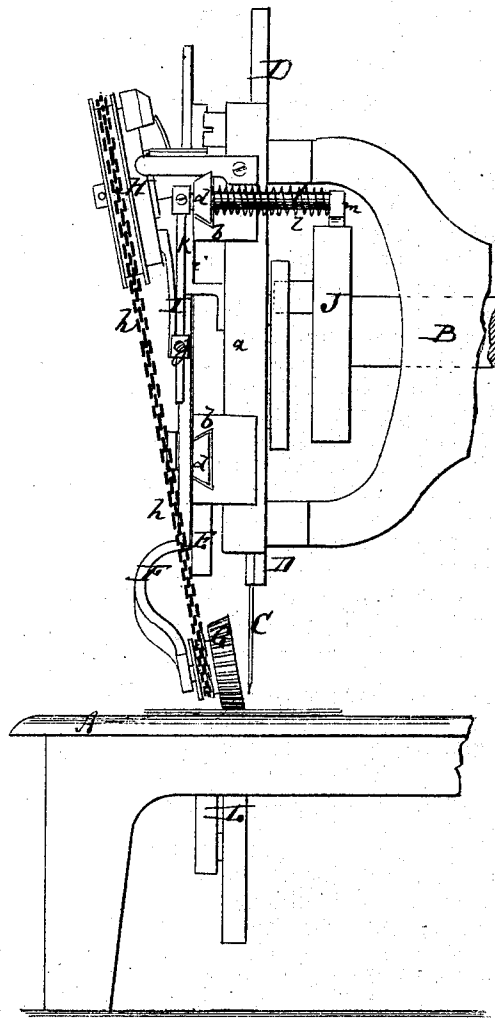


Fig. 2.



Witnesses:

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PER

UNITED STATES PATENT OFFICE.

ADAM BARTH AND NICHOLAS BARTH, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 120,614, dated November 7, 1871.

To all whom it may concern:

Be it known that we, ADAM BARTH and NICHOLAS BARTH, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and Improved Feed Mechanism for Sewing-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a front view, partly in section, of our improved feed mechanism. Fig. 2 is a side view of the same.

Similar letters of reference indicate corresponding parts.

Our invention consists in the improvement of sewing-machine feed mechanism, as hereinafter fully described, and subsequently pointed out in the claims.

The advantages to be gained by this invention are that it shall dispense with a presser-foot and with the friction consequent to the use of the same, and that it can be used, together with the lower feed, for crimping and ruffling on either side.

A in the drawing represents a sewing-machine table. B is the upper arm of the machine; C, the needle; and D, the needle-bar, operated by suitable mechanism. To the face of the arm B is secured a plate, *a*, which has transverse grooves or guides *b b* for receiving the horizontal lateral projections *d d* of a vertical bar, E. F is a vertical slide, fitted through loops *e e* of the bar E so as to be vertically adjustable therein. The lower end of the slide F carries a wheel, G, whose periphery is roughened or milled, so as to serve as an effective feed. By means of a spring, *f*, the slide is depressed, so that the wheel G is held down on the fabric which is being sewed. By a cam or lever, *g*, pivoted to the slide and bearing against one of the loops *e*, the slide can be elevated with the wheel to clear the fabric.

Intermittent rotary motion is imparted to the wheel G by means of a chain or band, *h*, which passes around it and around another wheel, H, that hangs in a horizontal projecting arm, *i*, of the slide F. Motion is imparted to the wheel H by means of a vibrating pawl or friction-lever, I, which is, by a rod, *j*, connected with a crank, *k*, of an arbor, *l*. This arbor has its bearings in the end of one of the arms *d* of the bar E, and is provided with another crank, *m*, which rests upon or is connected with a cam, J, of the driving-shaft. As rotary motion is, by suitable means, imparted to the cam J the arbor *l* is vibrated, whereby the wheels H and G are intermittently revolved. The rod *j* is adjustable on the crank *k* so that the strokes of the lever I and the degree of feed motion can be varied. The wheel G when bearing upon the fabric serves at once as a feed-wheel and presser-foot. It is conveniently raised when not to be used, and can, by moving the bar E in the guides *b*, be carried aside to facilitate the handling of the needle. A lower feed, L, of ordinary or suitable kind, may also be used below the table A. If the same is moved faster or slower than the upper feed G the lower or upper of two fabrics to be joined will be ruffled, while if both feeds move with equal speed they will insure the equal motion of the fabrics. If the lower feed is not to be used it may be covered with a strip of thin sheet metal.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The vertical slide F carrying the upper feed-wheel, and attached to the laterally-adjustable bar E, substantially as set forth.

2. The upper wheel H, connected by chain *h* with the wheel G and combined with the lever I, adjustable rod *j*, and crank arbor *l*, as described.

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Witnesses:

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