

T. S. HUNTINGTON.

FEED DEVICE FOR SEWING-MACHINES.

No. 179,022.

Patented June 20, 1876.

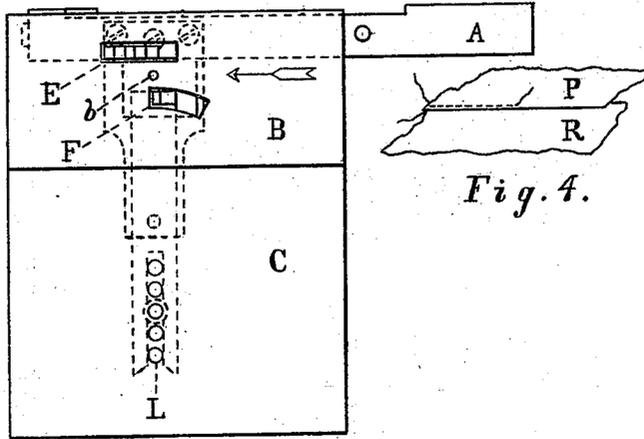


Fig. 4.

Fig. 1.

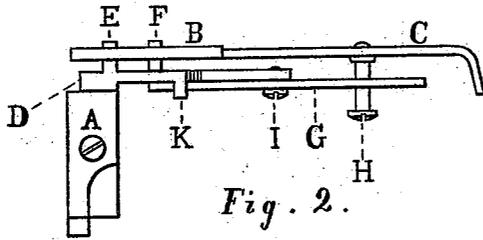


Fig. 2.

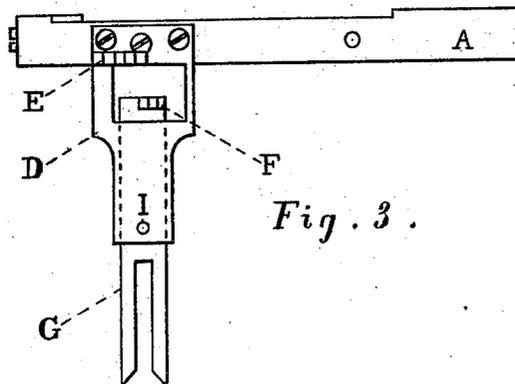


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

THOMAS S. HUNTINGTON, OF NEW YORK, N. Y., ASSIGNOR TO WHEELER AND WILSON MANUFACTURING COMPANY, OF BRIDGEPORT, CONN.

IMPROVEMENT IN FEED DEVICES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **179,022**, dated June 20, 1876; application filed February 24, 1876.

To all whom it may concern:

Be it known that I, THOMAS S. HUNTINGTON, of the city, county, and State of New York, have invented a new and useful Improvement in Sewing-Machines, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, and the letters of reference marked thereon.

My invention relates to the feeding mechanism of sewing-machines, and particularly to certain modifications thereof, whereby one of the two pieces of fabric or material being stitched or sewed together may be fed faster than the other, in the manner and for the purposes hereinafter more fully described.

My invention is shown in the accompanying drawings, together with the parts of a sewing-machine to which it is connected, the particular machine to which it is in this case applied being one now known to the trade as the Wheeler & Wilson No. 7.

Figure 1 is a top, and Fig. 2 an end, view of the parts complete, while Fig. 3 represents the feed disconnected, the various parts being lettered as follows:

A, feed-bar; B, throat-plate; *b*, needle-hole in same; C, plate-slide; D, feed-point frame; E, feed-points; F, auxiliary feed; G, operating-lever; H, regulating-pin; I, pivot; K, support for end of operating-lever; L, holes for regulating-pin; P and R, pieces of fabric.

The construction and operation of my improvement are as follows: In connection with the feed-points E, I attach to the feed-bar A a frame, as shown at D, of which Fig. 3 shows a top, and Fig. 2 an edge view, the feed-bar A being the same as ordinarily used, and the feed-points E the same as are used for such classes of work as require a feed only on one side of the needle. To this feed-point frame D, I pivot at I, the operating-lever G, to the end of which is likewise attached a set of feed-points, as shown at F, which I term an auxiliary feed. The operating-lever G may be pivoted either above or below the feed-point frame D, as found most convenient in the particular machine to which it is applied, but if below, as shown in the drawings, it must be supported by a bearing connected with the

feed point frame D, as shown at K, in Fig. 2. The auxiliary feed, being thus connected with feed-bar A, becomes a part and partakes of the movement of the feeding mechanism of the machine. For the purpose, however, of governing the relative movement of the two sets of feed-points, I insert the regulating-pin H, Fig. 2, in one of the row of holes shown at L, Fig. 1, thereby attaching the regulating-pin to the plate-slide C, which is a stationary yet detachable portion of the cloth-plate of the sewing-machine. As the plate-slide C is placed in the machine, the regulating-pin H slides into the slot in the end of the operating-lever G, as shown in Fig. 1. It will now be seen that the movement given to the feed-bar A by the mechanism which operates it will be simultaneously imparted, through the feed-point frame D and operating-lever G, to the auxiliary feed F, but the outer end of the operating-lever G being prevented from moving forward by the regulating-pin H, it is evident that the inner end, carrying the feed-points F, will move farther than the feed-points E. The relative distance traversed by the two sets of feed-points E and F is controlled by the regulating-pin H, by changing its position in the holes at L. The nearer the pin is placed to the pivot or fulcrum of the operating-lever, the greater will be the movement of F in comparison to that of E, and vice versa. As constructed, the regulating pin is screwed into the holes at L, but for greater convenience the pin will be secured to the plate-slide in such a manner as to be automatically adjustable.

As shown in the drawings, the feed, while carrying the fabric, moves in the direction indicated by the arrow in Fig. 1, and the auxiliary feed F is so connected that it will move forward only as far as the rear portion of E, and as far as the needle-hole *b*, and hence will act only upon that portion of the fabric approaching the needle, or before the fabric is joined together by the seam. The presser-foot used in connection with this improvement is the same as in ordinary use, but is made of sufficient width to cover both sets of feed points.

From the foregoing description, it will be seen that if two pieces of fabric be placed with

edges overlapping, as shown in Fig. 4, and stitched together by stitching close to the edge of the piece marked P, both pieces, after being stitched, will, by the action of the feed-points E, necessarily be carried away from the needle together, yet the piece marked R will be, by the action of the auxiliary feed, carried forward to the needle faster than the piece marked P, and be thereby gathered or fulled in by the operation of the machine, and by changing the relative movements of the feed-points E and F in the manner described, any degree of fullness in R may be produced which is desirable.

My improvement is especially useful in sewing together elastic and inelastic material, as the knitted and woven fabrics used in the manufacture of hosiery, as, by placing the garment so that the knitted fabric will be acted upon by the auxiliary feed, the movement of which can be so varied that it will be

just sufficiently greater than that of the feed-points E to compensate for the elasticity of the knitted fabric, both fabrics will be carried forward at the same rate of speed, or by giving still greater movement to the auxiliary feed any given length of the knitted fabric may be fulled into any lesser given length of the woven fabric, as is frequently necessary in practical work.

What I claim as my invention, and desire to secure by Letters Patent, is—

In combination with the feed-bar A and feed-points E of a sewing-machine, the feed-point frame D, operating-lever G, auxiliary feed-points F, and regulating-pin H, all constructed and operating substantially as and for the purposes specified.

THOS. S. HUNTINGTON.

Witnesses:

J. C. HORTON,
THOS. H. HORTON.