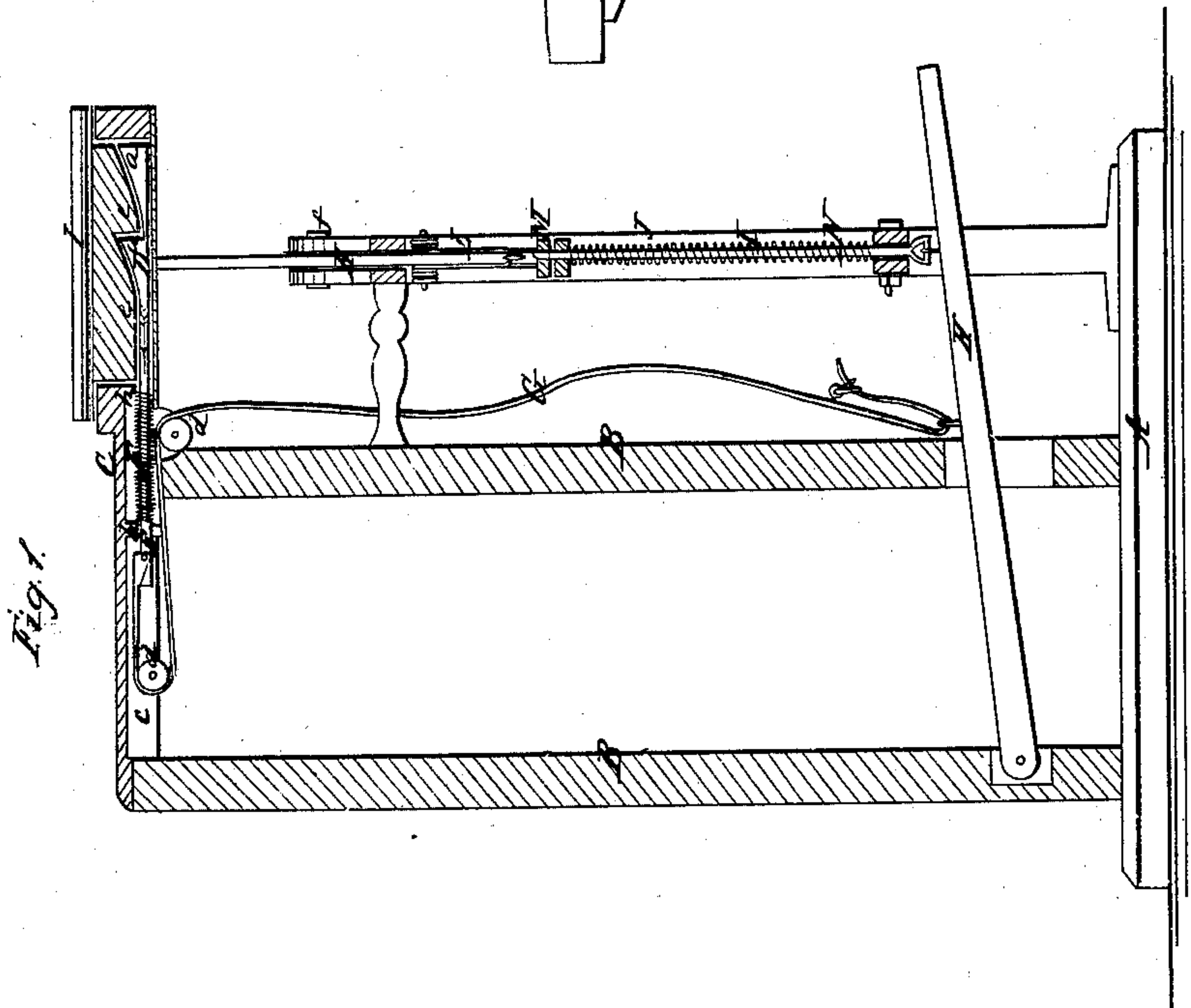
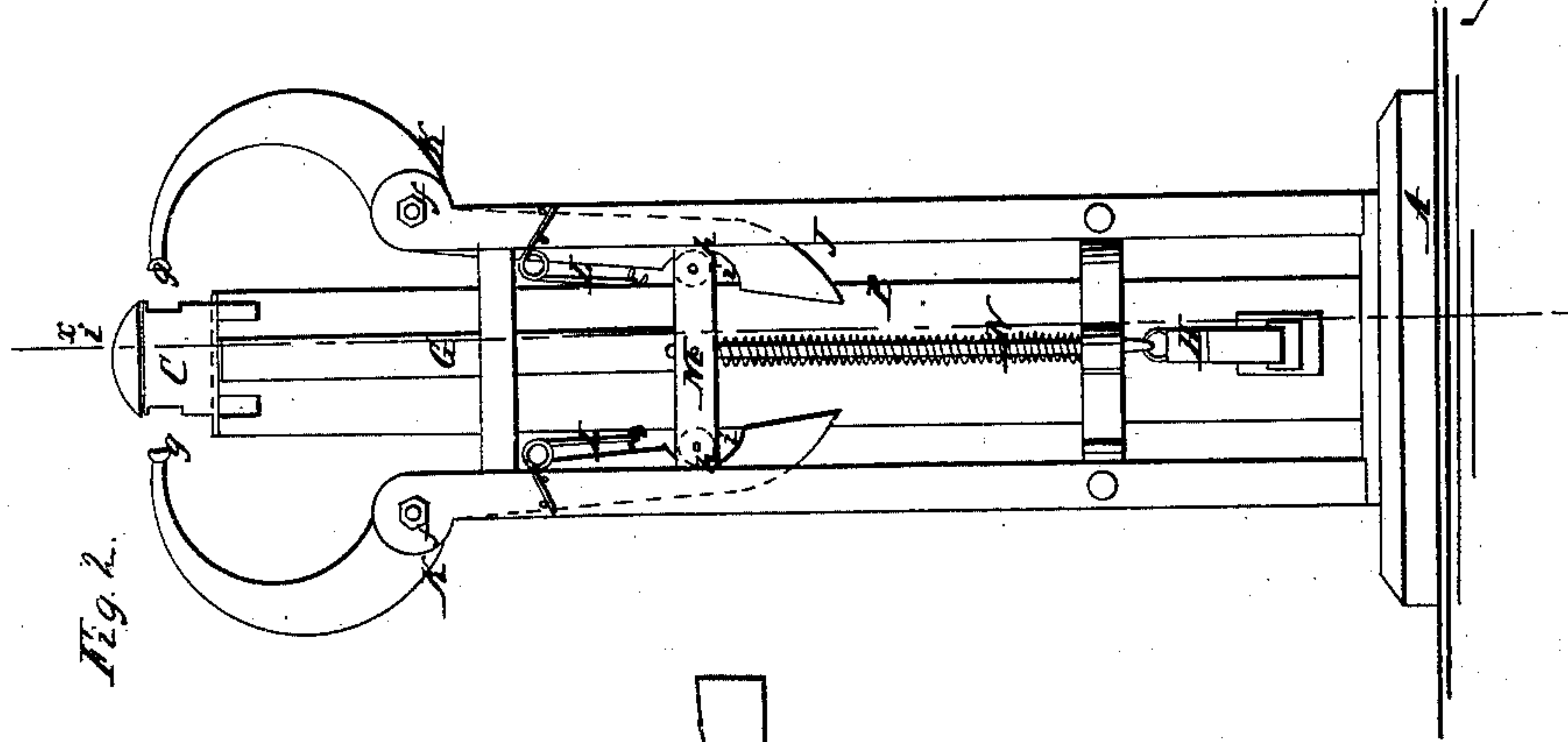


E. Shaw,

Uyner Machine,

N^o 57,392.

Patented Aug. 21, 1866.



Witnesses:

J. M. B. Livingston
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UNITED STATES PATENT OFFICE.

ELIJAH SHAW, OF MILWAUKEE, WISCONSIN.

IMPROVED MACHINE FOR CLAMPING AND STRETCHING LEATHER.

Specification forming part of Letters Patent No. 57,392, dated August 21, 1866.

To all whom it may concern:

Be it known that I, ELIJAH SHAW, of Milwaukee, Milwaukee county, State of Wisconsin, have invented a new and useful Machine for Clamping and Stretching Seams; and I 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 drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *xx*, Fig. 2; Fig. 2, a front view of the same; Fig. 3, a detached side view of the bed, over which the article to be operated upon is placed in order to be clamped and stretched.

Similar letters of reference indicate like parts.

This invention relates to a new and useful device for clamping and stretching fabrics or any substance connected by sewed or stitched seams, for the purpose of enabling the edges of the fabric adjoining the seam to be burnished or rubbed down and also trimmed with great facility. This work has hitherto been performed exclusively by hand, involving a considerable expenditure of time and materially augmenting the cost of manufacture, especially the manufacture of shoes, the operating upon the seams of the uppers of which my improvement is more especially designed for.

A represents a base or platform, on which are secured two uprights, B B, the upper ends of which have a metal bar, C, secured to them, the front part of which is hollow, forming an oblong rectangular box, in which a slide, D, is fitted, the upper surface of the slide having two inclined surfaces, *a a*, as shown clearly in Fig. 1. The rear end of the slide D has a rod, E, attached to it, which works in guides *b b* in a groove, *c*, at the under side of the bar C, and upon said rod, between the guides *b b*, there is placed a spiral spring, F, said spring having a tendency to keep the slide D pressed forward to its fullest extent within the box at the front part of C, as will be fully understood by referring to Fig. 1.

G is a strap, the lower end of which is attached to a treadle, H, at the lower parts of the uprights B B. This strap G extends up-

ward and passes over pulleys *d d*, and is connected at its upper end to the rear end of rod E, as shown clearly in Fig. 1, the strap and pulleys being so arranged that, by depressing the treadle H, the strap will draw the slide D backward or in the direction indicated by arrow 1.

I represents a bed, the upper surface of which is of segment form transversely, the lower surface having two pendent projections, *e e*, with inclined lower edges corresponding to the inclined surfaces *a a* of the slide D, as shown in Fig. 1, the projections *e e* fitting in the box at the front part of the bar C, so that the lower edges of *e e* and the upper surfaces of *a a* will be in contact.

J represents an upright metal frame, which is secured to the base or platform A, and has two bars or arms, K K, secured in its upper part by pivots *f f*. The lower parts of these arms are straight, the upper parts, above the pivots *f*, being curved in semicircular form and having jaws *g* at their upper ends, which are parallel with and one at each side of the box at the front part of the bar C, the jaws being about equal in length to said box and the bed I.

The arms K K have springs L bearing against them, which springs have a tendency to keep the jaws *g* forced outward from the bar C to the extent of their movement, or as far as they are designed to go.

M represents a cross-bar or slide, which is fitted in the upright frame J and is connected to the treadle H by a rod, I, which has a spiral spring, N, the latter having a tendency to keep the cross-bar or slide M elevated. The cross-bar or slide has a friction-roller *h* in each end of it, and the inner edges of the lower straight parts of the arms K have curved notches *i* made in them (see Fig. 2) to admit of the springs L drawing inward the lower parts of the arms sufficiently to cause the jaws *g g* to be out from the sides of the front part of bar C, as will be fully understood by referring to Fig. 2. When the treadle H is depressed the cross-bar or slide M will force outward the lower parts of the arms K K and the jaws *g g* will be moved toward the bar C and in contact therewith.

The operation is as follows: The article (shown in red) to be operated upon is placed

upon the bed I, the seam *i* having a longitudinal central position thereon and the sides of the article extending down at each side of bar C between it and the jaws *g g*. The operator then depresses the treadle H, and thereby causes the cross-bar or slide M to force outward the lower parts of the arms K K, and to press the jaws *g g* in contact with the article, so that the sides of the same will be firmly clamped between the jaws and bar C. This is effected before the strap G is actuated, the latter being sufficiently long to admit of such result, and when the article is clamped the strap G will be pulled in a downward direction under the continued descent of the treader, and will draw the slide D backward, and the bed I will be raised, a result due to the inclined surfaces *a a e e*, and the article will be stretched taut over the bed. The seam may then be burnished or rubbed down and trimmed, when necessary, with the greatest facility.

It will be understood, of course, that in applying the article to the bed I the wrong side of the article is placed uppermost.

This invention has been practically tested, and has been found to answer an excellent purpose, one boy, by its use, being enabled to perform the work of five men, and effecting a saving of \$40 per week.

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

1. The clamping and stretching of fabrics and other articles connected by sewed or

stitched seams, for the purpose of burnishing and trimming the seams, by means of a bed, I, and jaws *g g*, arranged in such a manner that by the action of a treadle or its equivalent the jaws *g g* will first clamp and hold the article firmly, and the bed then rise in order to stretch the article on the same, substantially as set forth.

2. The arrangement of the pivoted arms K K, with jaws *g* attached, cross-bar or slide M, treadle H, and springs L L N, substantially as and for the purpose specified.

3. The slide D, provided with the inclined surfaces *a a*, and connected to the treadle H by the strap G, in combination with the inclined surfaces *e e* at the under side of the bed I, substantially as and for the purpose set forth.

4. The combination of the bed I, provided with the inclined surfaces *e e*, slide D, provided with the inclined surfaces *a a*, and connected to the treadle H by the strap G, the pivoted arms K K, provided with the jaws *g*, and the cross-bar or slide M, connected with the treadle, and arranged to operate in connection with the arms K, all substantially as and for the purpose herein shown and described.

The above specification of my invention signed by me this 1st day of March, 1866.

ELIJAH SHAW.

Witnesses:

M. M. LIVINGSTON,
ALEX. F. ROBERTS.