(No Model.) 2 Sheets—Sheet 1.

T. S. PARKER.

SEWING MACHINE TRIMMER.

No. 270,466. Patented Jan. 9, 1883.

Fig. 1.

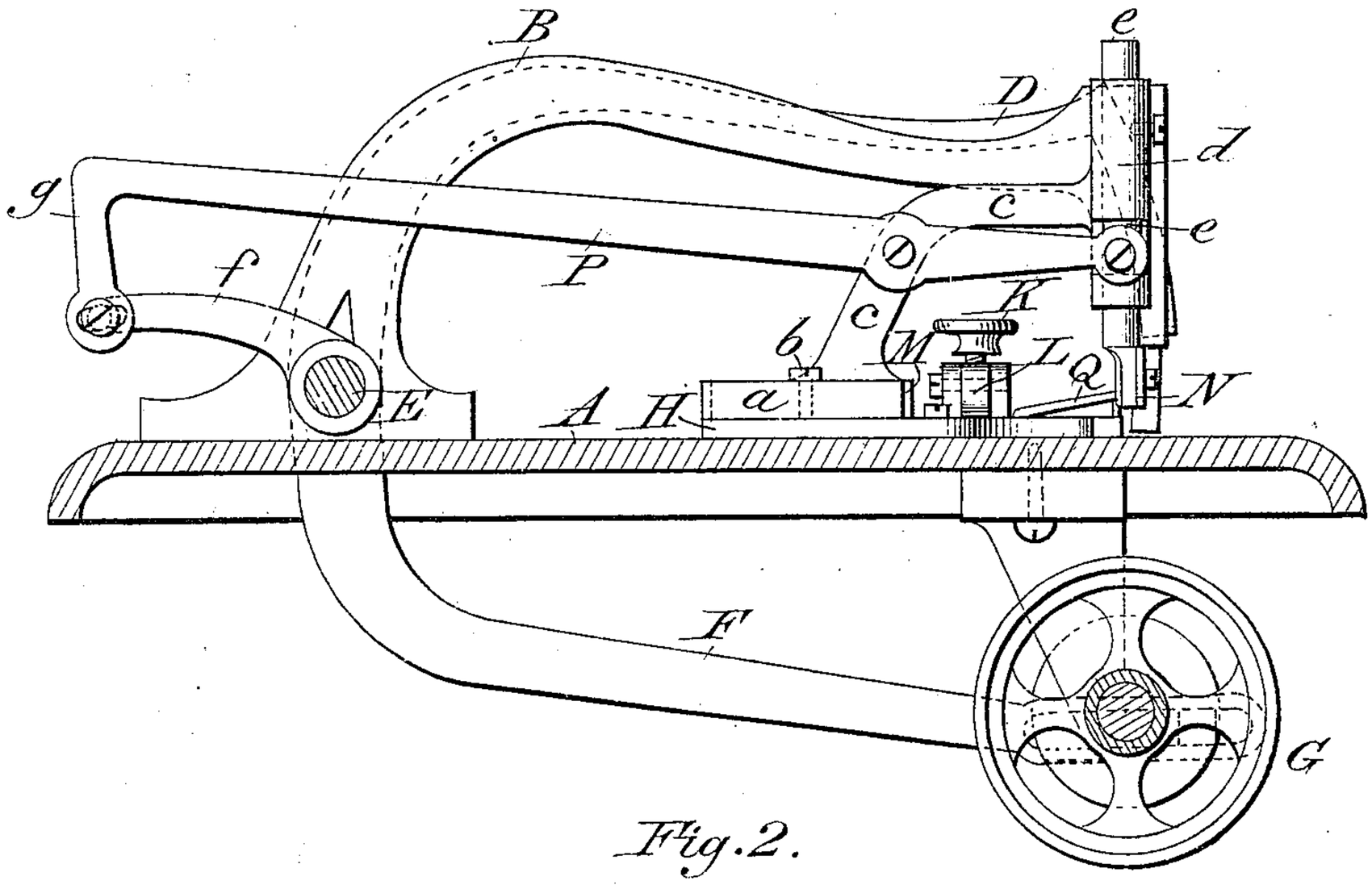
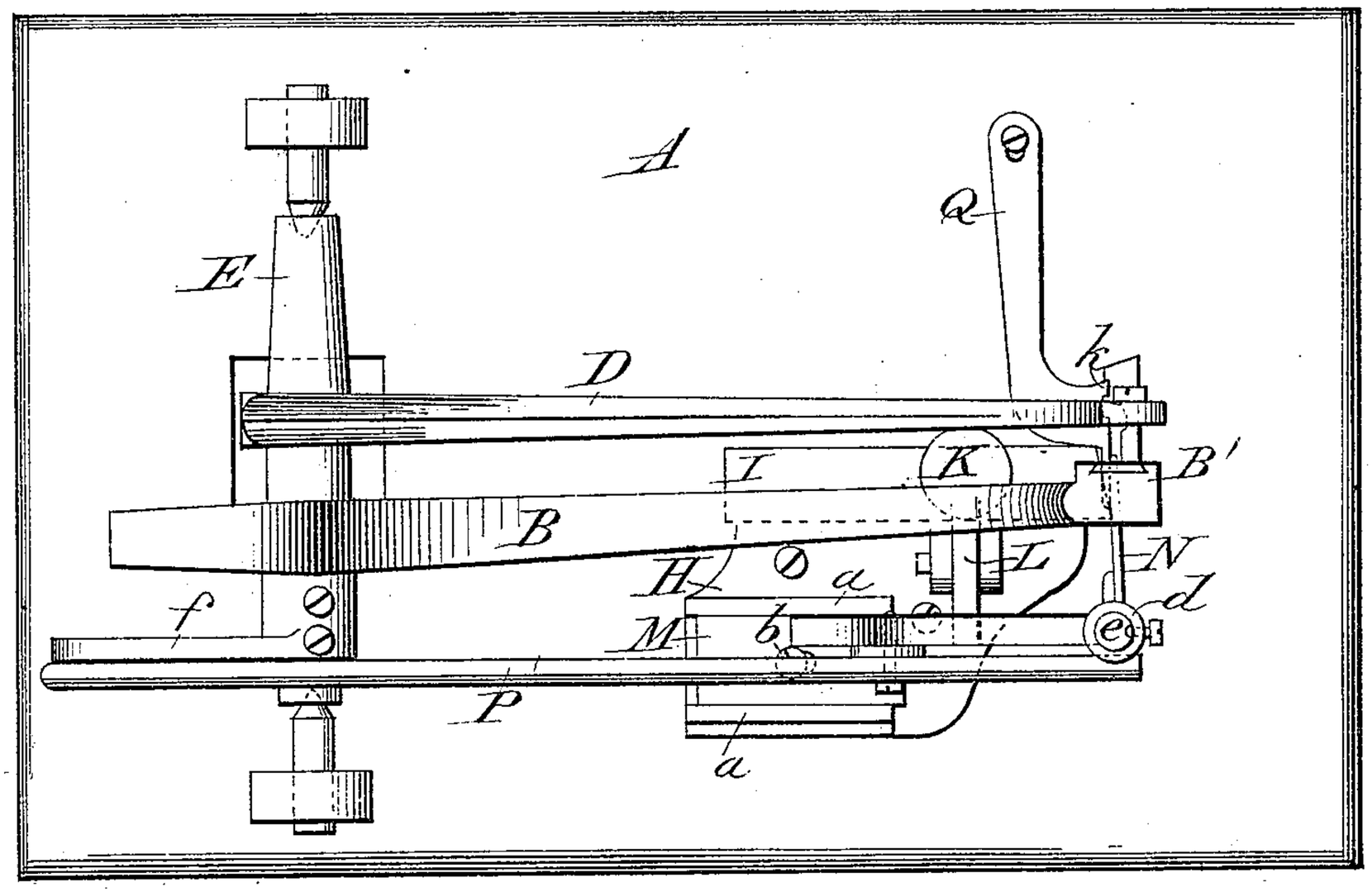


Fig. 2.



Attest:
F. H. Schott
A. P. Brown.

Inventor:
Thomas S. Parker
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

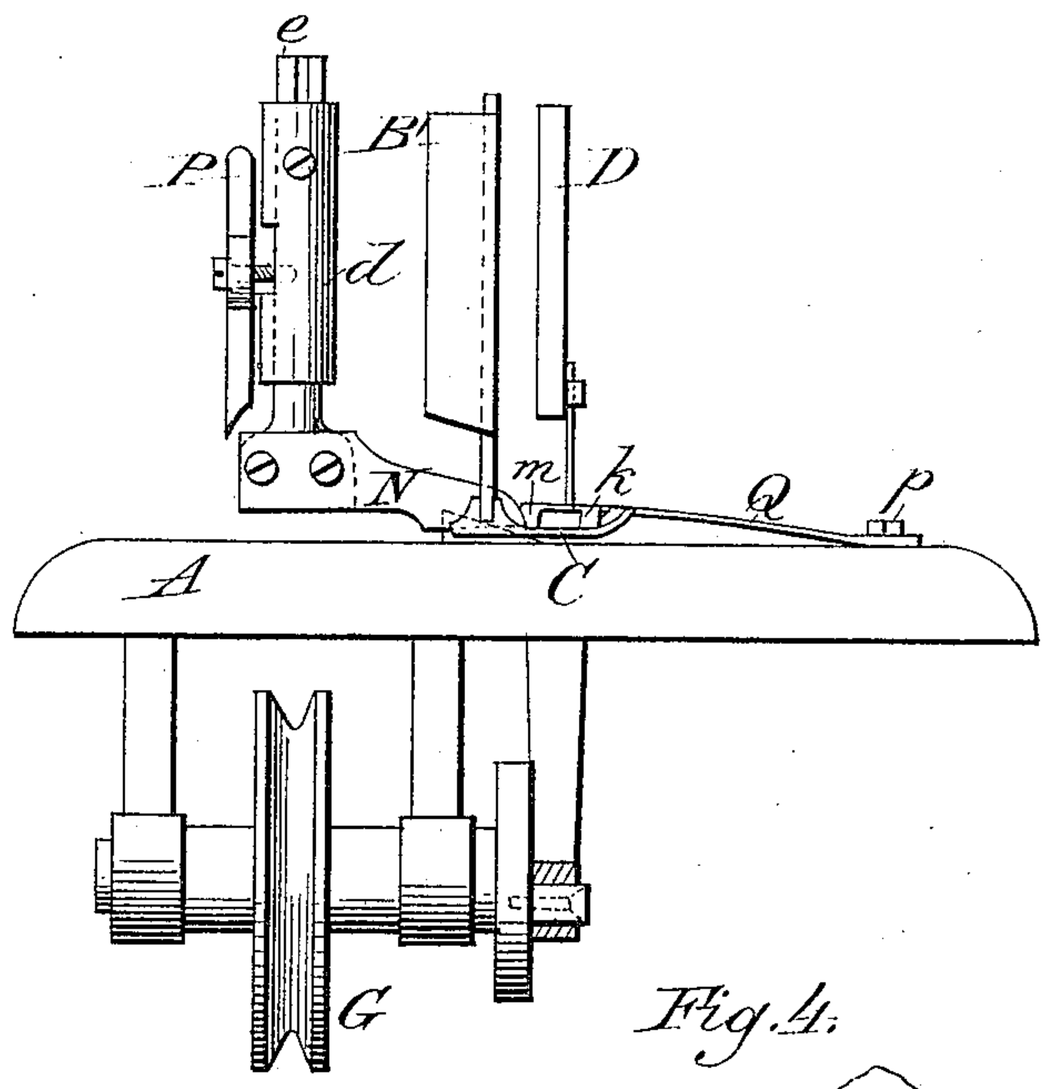


Fig. 4.

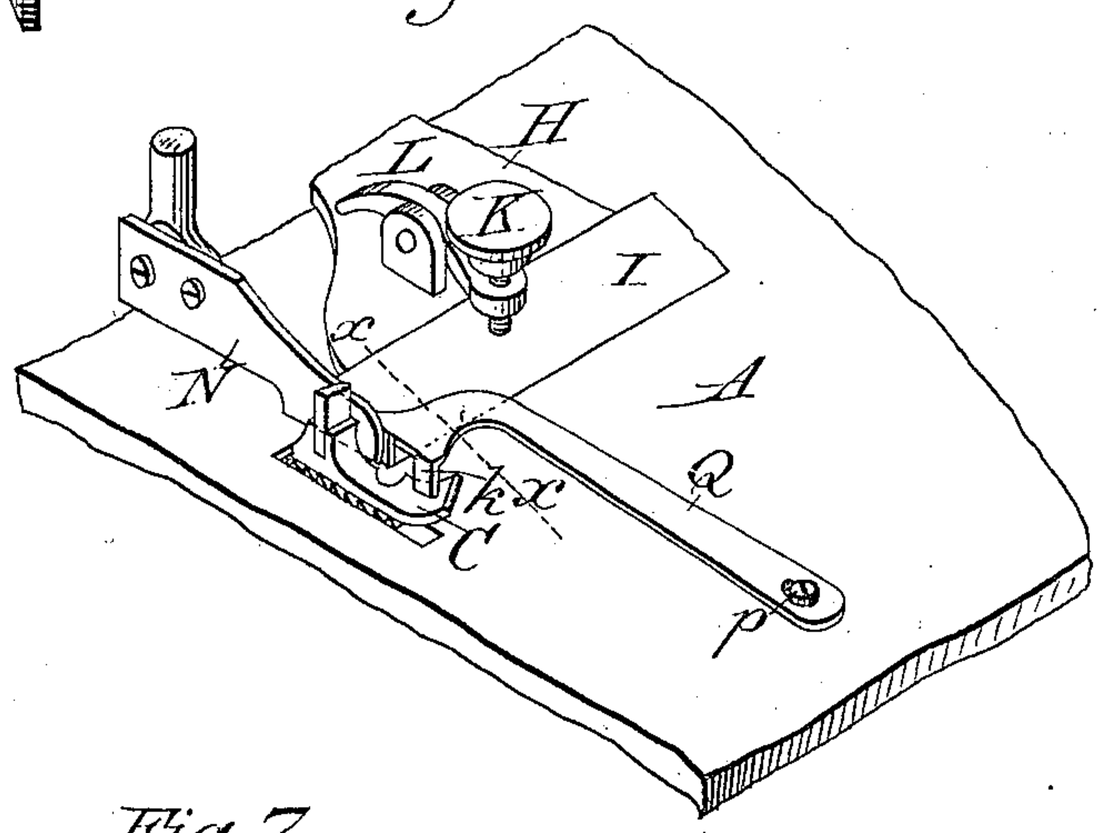


Fig. 5.

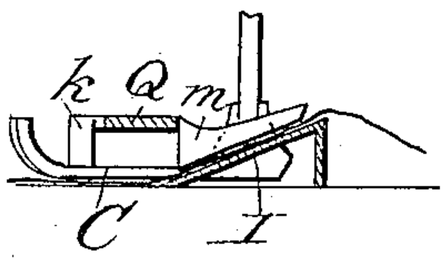


Fig. 6.

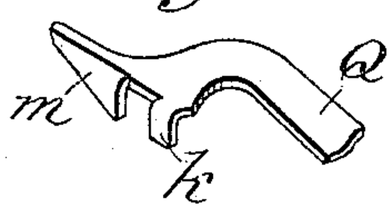
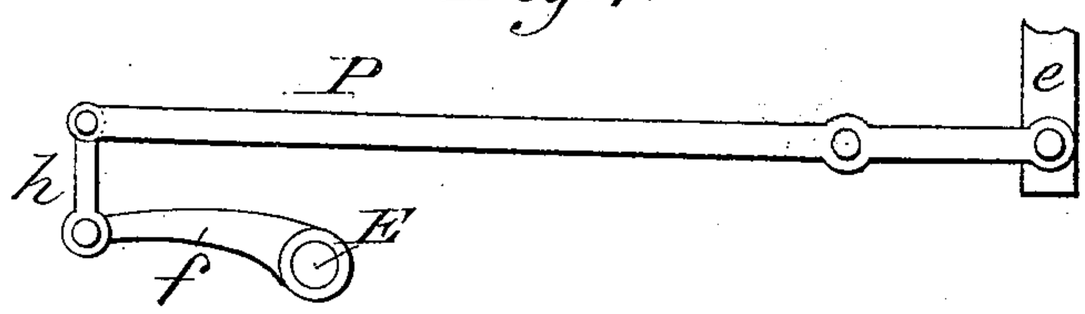


Fig. 7.



Attest:
H. H. Schott
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Inventor:
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UNITED STATES PATENT OFFICE.

THOMAS S. PARKER, OF SCHENECTADY, NEW YORK.

SEWING-MACHINE TRIMMER.

SPECIFICATION forming part of Letters Patent No. 270,466, dated January 9, 1883.

Application filed August 12, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. PARKER, a citizen of the United States, residing at Schenectady, in the county of Schenectady and State of New York, have invented certain new and useful Improvements in Sewing-Machine Trimmers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to certain novel and useful improvements in devices for actuating the movable knife or cutter of a sewing-machine trimmer, and in the means for depressing the presser-foot after it has been raised by the feed, as well as for holding the fabric on both sides of the line of stitch during the operation of trimming.

The invention consists, first, in providing a sewing-machine with an adjustable head or support that carries a guide sleeve or bearing for a vertically-reciprocating rod to which the movable knife is attached, said rod being actuated by a vibratory lever that is pivoted thereto as well as to the adjustable support, and receives its motion from any suitable moving part of the machine.

It also consists in the combination, with the feed mechanism, presser-foot, and cutting devices, of a spring-clamp having an adjustable connection with the bed-plate, and adapted to depress the presser-foot and hold the fabric to the action of the knives; and, further, in certain peculiarities in the construction and arrangement of parts, as hereinafter more fully set forth.

In the annexed drawings, illustrating my invention, Figure 1 is a rear elevation, partly in section, of a sewing-machine provided with my improved trimming attachments. Fig. 2 is a plan. Fig. 3 is an end elevation. Fig. 4 is a perspective of a portion of the bed-plate, showing the relative position of the knives and devices for holding the fabric on both sides of the line of stitch during the operation of trimming. Fig. 5 is a section on the line *x x* of Fig. 4. Fig. 6 is a detail end view of the spring-clamp. Fig. 7 represents a modification in the construction of the vibratory arm or lever for actuating the movable knife.

Like letters of reference indicate like parts in the several views.

The letter A designates the bed-plate. B is an ordinary goose-neck, having a head, B′, for the attachment of the presser-foot C; and D is a needle-carrying arm, which is connected with a rock-shaft, E, and lever F, that is operated by eccentric mechanism connected with the driving-wheel G in the usual manner. The machine is also provided with appropriate feed devices and other customary attachments.

Near the rear of the bed A, toward one end, is detachably secured a grooved or recessed bracket, H, against the front edge of which is placed the lower or stationary knife, I, which is detachably secured by means of the thumb-screw K, so as to be readily adjusted to any desired position with relation to the upper or movable knife that operates therewith for the purpose of trimming the fabric while it is being stitched. The thumb-screw K, that secures the knife I, is supported in a pivoted bearing, L, that is journaled in lugs formed on the detachable bracket. The knife I consists of a metallic plate bent into the form of an inclined plane, as shown in cross section in Fig. 5. Its cutting-edge is beveled slightly forward, as shown in Fig. 2. Its rear edge or heel rests against the bracket H, and its front end is beveled so as to rest firmly on the bed of the machine when held by the thumb-screw. The bracket H is provided with longitudinal ribs *a a*, thus forming a groove or recess for the reception of an adjustable head, M, which is slotted for the passage of a set-screw, *b*, that may be manipulated so as to permit the head to be adjusted longitudinally to any desired position. This head or plate M is provided with an upwardly-curved arm, *c*, carrying at its rear end a vertical guide-sleeve, *d*, for the reception of a rod or stud, *e*, the lower end of which is expanded to form a bearing for the attachment of the upper or movable knife, N, which is detachably secured thereto in a slightly inclined position, as shown in Fig. 2, to correspond with the cutting-edge of the lower knife. The vertical supporting-rod *e*, as represented in the drawings, is cylindrical and grooved longitudi-

nally for engagement with a feather or other device—such as a set-screw—that is passed through the sleeve *d*, and thus prevents the rod from turning within its inclosing-sleeve. If desired, however, the sleeve and rod may be made square and the set-screw and groove dispensed with. A vibratory arm or lever, P, is pivoted to the curved arm *c* or adjustable support, and also has a pivoted connection at one end with the vertical rod *e* through a slotted opening made in the sleeve, while its opposite end is connected with an arm, *f*, which has an adjustable sleeve-connection with the rock-shaft E; or the lever may be connected with some other moving part of the machine. It will be seen that when the lever P is actuated so as to reciprocate the rod *e* the movable knife N will be caused to reciprocate vertically in contact with the cutting-edge of the lower or stationary knife, I, this operation being also simultaneous with the movement of the devices for stitching the fabric. It will be observed that the head or plate M is capable of a longitudinal adjustment for varying the position of the vertically-reciprocating knife N and its actuating mechanism with relation to the presser-foot and lower knife.

The lever P may be formed at its rear end with a bend, *g*, which has a pivotal connection with the arm *f*, as shown in Fig. 1, the pivot-hole being oblong to permit an endwise adjustment; or the bend *g* may be dispensed with and a link, *h*, be substituted therefor, as shown in Fig. 7, the operation of the vibratory lever being the same in either case.

Attached to the bed-plate A, near its front end, is a spring-clamp, Q, that consists of a shank, which is curved or bent at one end and provided with a nearly rectangular lug, *k*, that bears on the presser-foot C, and a tapering lug, *m*, that is nearly parallel with the movable knife and rests on the stationary knife. This spring arm or clamp, in connection with the presser-foot C, serves to hold the fabric on both sides of the line of stitch during the operation of trimming. It will be seen that as the presser-foot rises with the feed it raises the spring-clamp Q, and is thereby pressed in close contact with the fabric and returned to its former position with the pressure exerted upon it by the lug *k*. I am thus enabled to dispense with the usual spring attachment, which has heretofore been arranged in the head of the goose-neck, in connection with the presser-foot, for a similar purpose. This spring-clamp Q may be composed of brass, steel, or other suitable material, and preferably has an adjustable connection with the bed-plate by means of an elongated slot for the passage of a screw, *p*, by which the clamp is attached. After the movable knife has been adjusted to its proper position with relation to the stationary knife, the spring-clamp is secured close to the upper knife, and with the lug *m* resting upon the cutting end of the lower knife and the lug *k* on the presser-foot, for the purposes before explained. The presser-foot is cut away close to the needle-hole, so as to permit the upper knife to be adjusted in proximity to the line of stitch. It will be observed that as the feeding mechanism rises and falls the spring-clamp, which rises with the presser-foot, reacts thereon, so as to hold it firmly on the goods while they are being stitched. At the same time the lug or projection *m* holds the goods against the lower knife while the upper knife is cutting. The spring-clamp also answers as a guide for the goods, and obviates their usual tendency to curl over on the edges while being stitched and trimmed.

It is obvious that the vibratory lever for operating the vertically-reciprocating bar that carries the upper knife may be actuated in various ways from any moving part of the machine, and that the construction of the adjustable support to which this lever is attached, as well as the guide-sleeve or casing for the knife-carrying bar, may be varied without affecting the principle of my invention. A sewing and trimming machine embodying these parts in a modified form is shown in my application filed September 28, 1882, Serial No. 72,932.

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

1. In a sewing-machine trimmer, the combination, with a knife attached to a vertically-reciprocating rod, of a vibratory lever pivoted to an adjustable support and adapted to actuate said knife-carrying rod, substantially as described.

2. In a sewing-machine trimmer, the combination of a vibratory lever pivoted to an adjustable support and actuated from some moving part of the machine, a vertically-reciprocating rod connected to said lever and provided with a suitable support, and a knife attached to said rod and adapted to operate in contact with a stationary knife, substantially as described.

3. In a sewing-machine trimmer, the combination, with the bed-plate, of a detachable recessed plate or bracket provided with a pivoted arm adapted to form a bearing for a thumb-screw, a stationary knife detachably secured by means of said thumb-screw, an adjustable head secured within the recessed plate, and provided with an arm carrying a vertical sleeve, a reciprocating rod supported in the sleeve and carrying a knife, a vibratory lever having a pivotal connection with the knife-carrying rod, and means for actuating said lever, substantially as described.

4. In a sewing-machine trimmer, the combination, with the feed mechanism, presser-foot, and cutting devices, of a spring-clamp having an adjustable connection with the bed-plate, and adapted to bear upon the presser-foot and hold the fabric to the action of the knives, substantially as described.

5. In a sewing-machine, the combination,

with the presser-foot, of a spring-clamp attached directly to the bed-plate, and adapted to depress the presser-foot after it has been raised by the feed, substantially as described.

6. In a sewing-machine trimmer, the combination, with the presser-foot C, stationary knife I, and movable knife N, of the spring-clamp Q, having an adjustable connection with the bed-plate, and provided with lugs *k m*, substantially as and for the purpose described.

7. In a sewing-machine trimmer, the combination, with the stationary knife I, of the knife N, attached to the vertically-reciprocating rod *e*, supported in a guide-sleeve, *d*, attached to an adjustable part of the machine, and the vibratory lever P, adapted to actuate said knife-carrying rod, substantially as described.

8. In a sewing-machine trimmer, the combination, with the bed A, of the detachable plate H, having ribs *a a*, and pivoted bearing L, carrying thumb-screw K, the adjustable head M, having arm *c*, provided with the vertical slotted sleeve *d*, the vibratory lever P, having a pivotal connection at one end with the arm *c* and rod *e*, carrying knife N, and at its other end with an operative part of the machine, the stationary knife I, adjustably secured by means of the thumb-screw K, and the presser-foot C and adjustable spring-clamp Q, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS S. PARKER.

Witnesses:

GEO. E. DURYEE,

GEORGE HARDIN.