

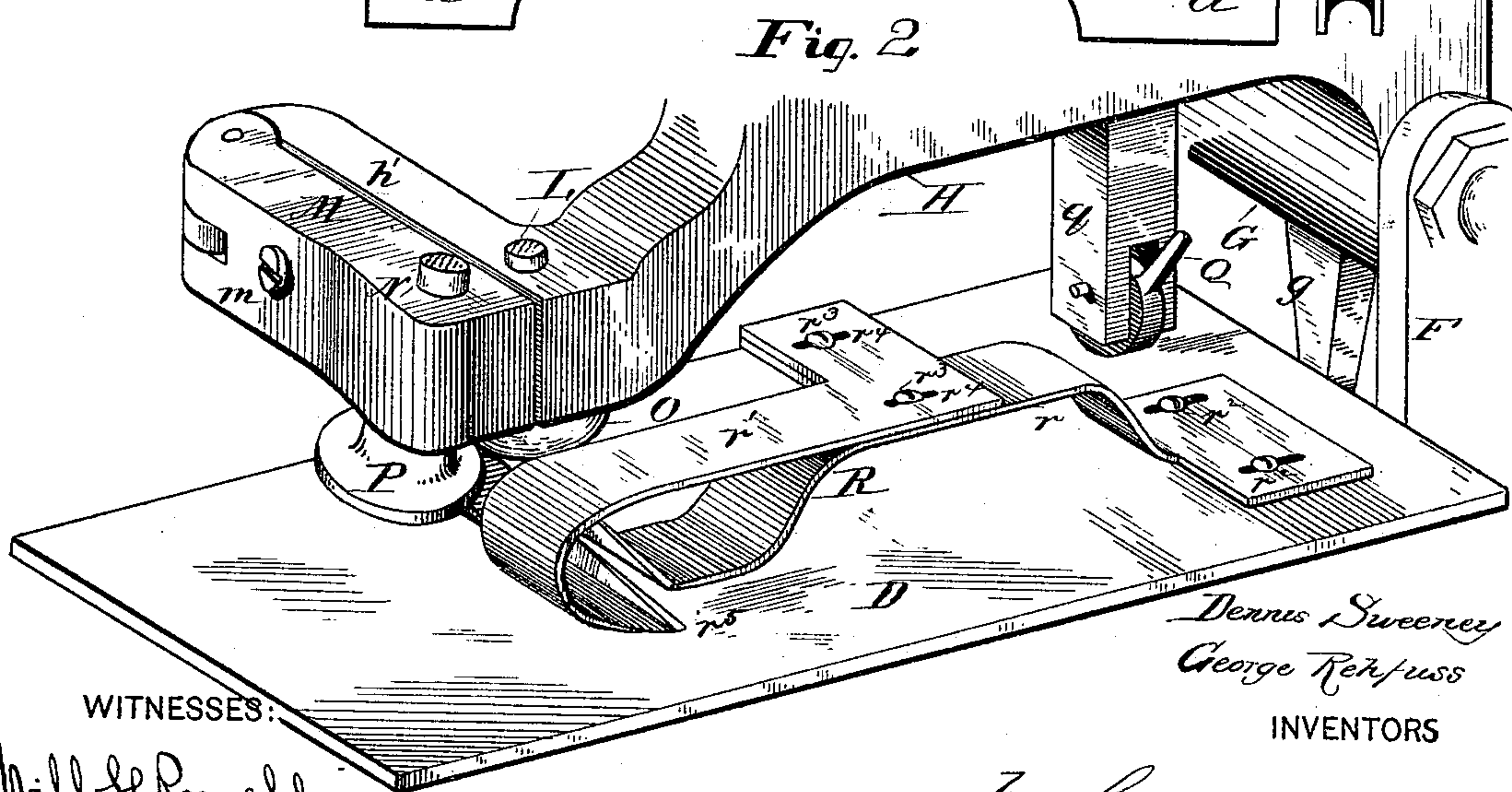
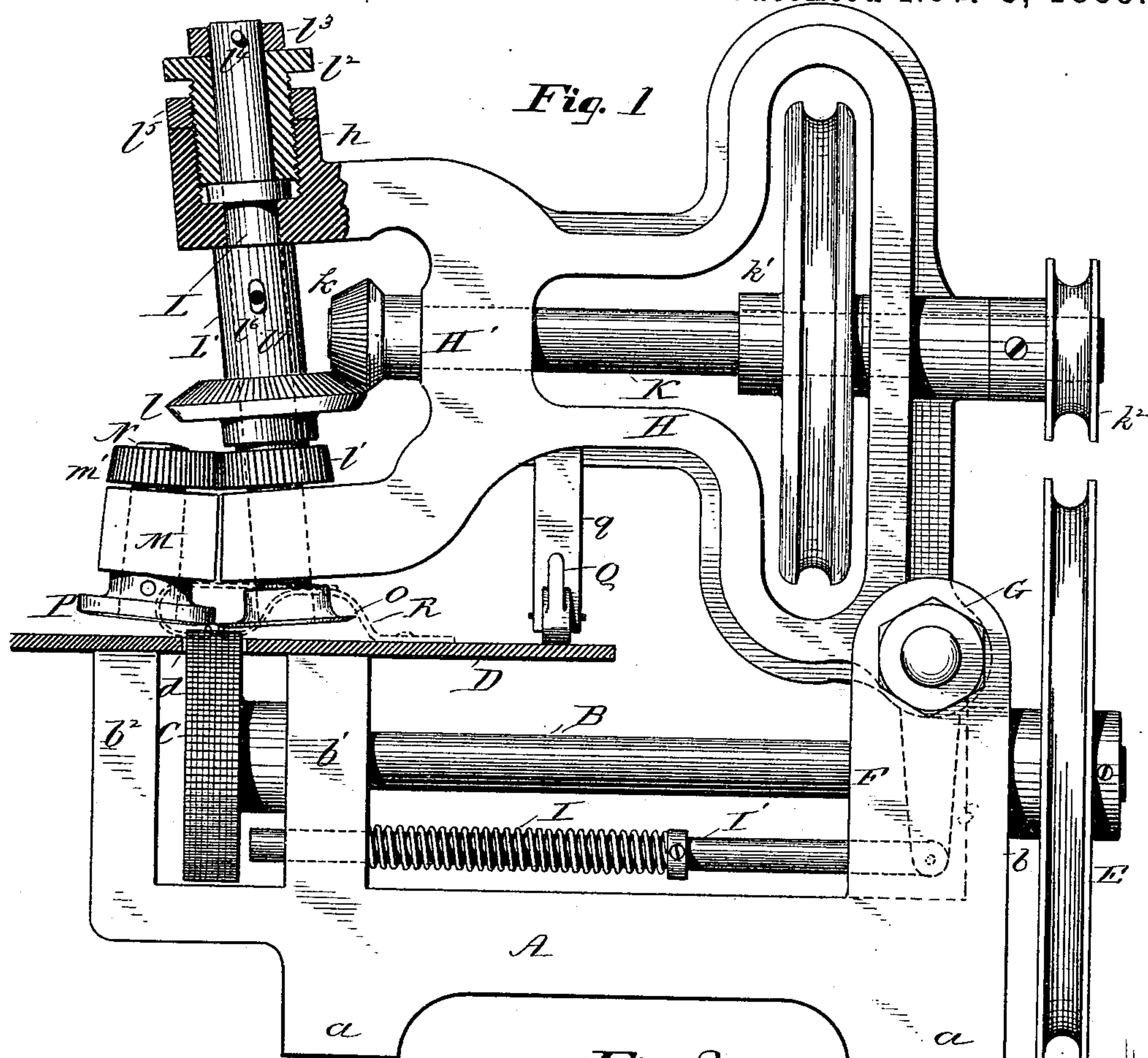
(No Model.)

D. SWEENEY & G. REHFUSS.

MACHINE FOR TRIMMING FABRICS.

No. 329,865.

Patented Nov. 3, 1885.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DENNIS SWEENEY, OF AMSTERDAM, NEW YORK, AND GEORGE REHFUSS, OF PHILADELPHIA, ASSIGNORS TO THE DEWEES FABRIC TRIMMER COMPANY, (LIMITED,) OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR TRIMMING FABRICS.

SPECIFICATION forming part of Letters Patent No. 329,865, dated November 3, 1885.

Application filed August 8, 1884. Serial No. 140,919. (No model.)

To all whom it may concern:

Be it known that we, DENNIS SWEENEY, a citizen of the United States, residing at Amsterdam, Montgomery county, New York, and
5 GEORGE REHFUSS, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Machines for Trimming Fabrics; and we do hereby declare
10 the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a vertical longitudinal section,
15 and Fig. 2 a perspective, partly broken away, of our invention.

Our invention has for its object to provide a machine for trimming fabrics, and particularly for trimming hems or welts of under-
20 shirts and similar knitted articles or hosiery.

Our invention consists of a machine the component parts of which comprise a bed-piece or base, a main shaft and feed-wheel, a cutting-disk and bearing-roll, and a guide; and
25 our improvements consist in the peculiar construction and combination of parts hereinafter fully described and claimed.

Referring to the accompanying drawings, A designates the base of the machine, consisting
30 of a casting having feet *a a*, designed to rest upon and be fastened to a suitable work-table. Said casting has standards *b b'*, which afford bearings for a shaft, B, which carries at one end a feed-wheel, C, formed with a roughened
35 periphery, similar to that used in some sewing-machines, and which projects slightly above the plane of a cloth-plate, D, through a slot, *d*, in the latter. Said shaft B has on its opposite or rear end a pulley, E. The
40 cloth-plate D rests upon and is secured by screws to the standard *b'* and on another standard, *b''*, on the feed end of the bed-piece A. The bed-piece A has at its rear end two parallel uprights, F F, which afford bearings for
45 a cross-shaft, G, which is cast integral with and in effect forms trunnions for an arm, H, permitting said arm to have some play or allowing it to be moved in a vertical plane, as

hereinafter set forth. The tendency of said arm is to drop, by reason of the weight of 50 itself and what it carries, on the cloth-plate D. This tendency is assisted or re-enforced by a spiral spring, I, on a rod, I', one end of which passes through the standard *b'*, the other being connected to an arm, *g*, depending 55 from the rock-shaft G.

The arm H affords bearings for the main shaft K, and is bifurcated at its forward extremity or head H', affording bearings in its forks to a shaft, L, which is slightly inclined 60 from a vertical line, and carries a bevel-wheel, *l*, in mesh with a pinion, *k*, on the main shaft K. Said shaft K has two pulleys, *k'* and *k''*, the former receiving the driving-belt and the latter a belt by which the feed-shaft is driven. 65 The lower fork of the arm-head H' is extended laterally, as shown, forming a lug, *h'*, which has hinged to it a block, M, that carries an inclined shaft, N. To hold this block M steady and to adjust it with relation to the lug *h'*, 70 there is provided an adjusting screw or bolt, *m*. On the shafts L and N are gear-wheels *l'* *m'*, both of the same size and in mesh, so that they travel coincidently and at the same rate of speed. 75

The shaft L has secured to its lower end a cutting or pressure disk, O, and the shaft N carries a bearing-roll, P. The edge of the disk O impinges against the periphery of the roll P, so that fabric fed between them will be 80 trimmed or severed by pressure. To permit the disk O to be adjusted higher or lower with respect to the periphery of the roll P so as to cut off or trim more or less of a hem or welt, the shaft L, which carries said disk, 85 is made vertically adjustable, and to this end is provided with an adjusting-nut, *l''*, that enters, as shown, a threaded socket in the boss *h*, which terminates one of the forks of the head H'. Above this adjusting-nut *l''* is a collar, *l'''*, fastened to the shaft L by means of a pin, *l''''*, and encircling the nut *l''* is a jam-nut, *l''''*. To elevate the disk O, the nut *l''* is first loosened and the adjusting-nut *l''* turned, so as to move in an upward direction. The required 95 elevation having been attained, the jam-nut *l''''*

is then turned down on said nut l^2 until it meets and binds against the boss h .

The bevel-wheel l is not secured directly to the shaft L , but upon a sleeve, L' , which is fitted on said shaft, and caused to turn therewith by means of a pin, l^6 , which passes through said shaft, its end fitting in a slot, l^7 , in said sleeve. By means of this arrangement the vertical adjustment of the shaft L does not disturb the gear-wheel l , nor vary its engagement with the pinion k .

Q is an eccentric lever, pivoted in a hanger, q , depending from the arm H and bearing against the cloth-plate, said lever serving to lift the arm H and keep it sustained in an elevated position when desired to introduce or withdraw fabric.

R represents a guide secured to the cloth-plate D . It consists of two plates, r and r' , the former being adjustably secured, by means of screws $r^2 r^2$, to the cloth-plate, and the plate r' being adjustably fastened on plate r by means of screws $r^3 r^3$, which pass through slots $r^4 r^4$. This construction permits a double adjustment—i. e., of the whole guide on the cloth-plate, and of one section of the guide relatively to the other. The plate r' is substantially a J-shaped piece, its bend trending toward the outer edge of the plate r , and its edge being prolonged to form a point, r^5 .

In operation the fabric to be trimmed is laid upon the cloth-plate, the part to be cut off passing into the guide and between the edges of the plates $r r'$. Motion being communicated to the shafts, the feed-wheel carries the fabric along, the edge to be trimmed coming between the disk O and roll P and being severed or trimmed off thereby. The weight of the arm H and of the parts it carries, along with the action of the spring, produces a pressure of the disk and roll upon the fabric, so that no separate presser-foot is required.

To vary the extent of the cut or the distance of the line of severance or rupture from the line of stitching or other defined mark, the disk O may be raised or lowered by adjusting the shaft L , as already explained. To vary the distance between the edges of the disk O and roll P , so as to adjust the machine for operation on different thicknesses of fabric, the block M may be moved laterally by means of the adjusting-screw m , and the space between the edges of the guide may be adjusted by sliding the plate r' on plate r . The shafts L and N are inclined, so as to throw the disk O and roll P out of the horizontal, in order that their points of contact or contiguous edges may be in a lower plane than their outer edges, so that the latter will not press upon the fabric beneath or interfere with its feeding.

This machine is primarily intended for use in trimming the welts or hems of fabrics which have been already stitched on a machine, and its paramount excellence resides in the fact that it will trim much closer than any

trimmer attached to a sewing-machine and operating to stitch and trim coincidently. It can also be run at a much higher rate of speed than a sewing-machine, and, unlike trimmers attached to sewing-machines, its use is not suspended by a defect in the stitching operation.

In practice the fabric to be trimmed should be fed in such a manner that the welt will pass beneath the roll P , the part to be trimmed or cut off standing vertically and passing between the edges of the guide and the edges of the disk and roll, the line of stitching being kept in contact with the point r^5 of the plate r' . It will be noted that the pulleys are so proportioned that the disk O and roll P rotate more rapidly than the feed-wheel, as it is found that thereby a better result is secured than would be if the rotation of said disk and roll were at the same rate as the feed-wheel.

What we claim as our invention is as follows:

1. In a machine for trimming fabrics, the combination, with a supporting-arm, of two vertical shafts sustained thereby, said shafts being inclined with respect to each other and receding apart as they descend, one of said shafts having a disk and the other a roller, against the periphery of which latter the edge of said disk impinges, whereby the superfluous edge of material fed beneath said disk and roller will be removed while standing vertically, substantially as shown and described.

2. In a machine for trimming fabrics, the combination of the following parts, viz: an arm carrying a horizontal shaft and supporting two vertical shafts geared therewith, and carrying, respectively, a disk and roll, said disk having an edge which bears against the periphery of said roll, with a cloth-plate, and a feed-wheel located below said cloth-plate and projecting upwardly through a slot in the latter, substantially as shown and described.

3. In a machine for trimming fabrics, the combination of a disk and a roller, against the periphery of which said disk bears, two vertical-inclined shafts upon which said disk and roller respectively are mounted, said shafts being geared together, a pivoted arm in which said shafts are supported, and a cloth-plate below said shafts and arm, substantially as shown and described.

4. The combination, with the head H' , carrying the shaft L , of the hinged adjustable block M , supporting the shaft N , substantially as shown and described.

5. In a machine for trimming fabrics, the combination of the following elements: two vertical-inclined shafts carrying, respectively, at their lower ends a disk and a roller, against the periphery of which latter the edge of said disk bears, an overhanging arm in which said shafts are supported and have their bearings, a cloth-plate below said shafts and arm, a feed-wheel beneath said cloth-plate, the latter hav-

ing a slot through which the roughened surface of said wheel projects, and a guide secured on the upper surface of said cloth-plate, one of the sections of said guide being prolonged into a point, substantially as shown and described.

6. In a machine for trimming fabrics, the combination, with the trimming-disk and roller and their supporting hinged or pivoted arm H, of the eccentric lever Q and cloth-plate D, substantially as shown and described.

In testimony that we claim the foregoing we have hereunto set our hands.

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