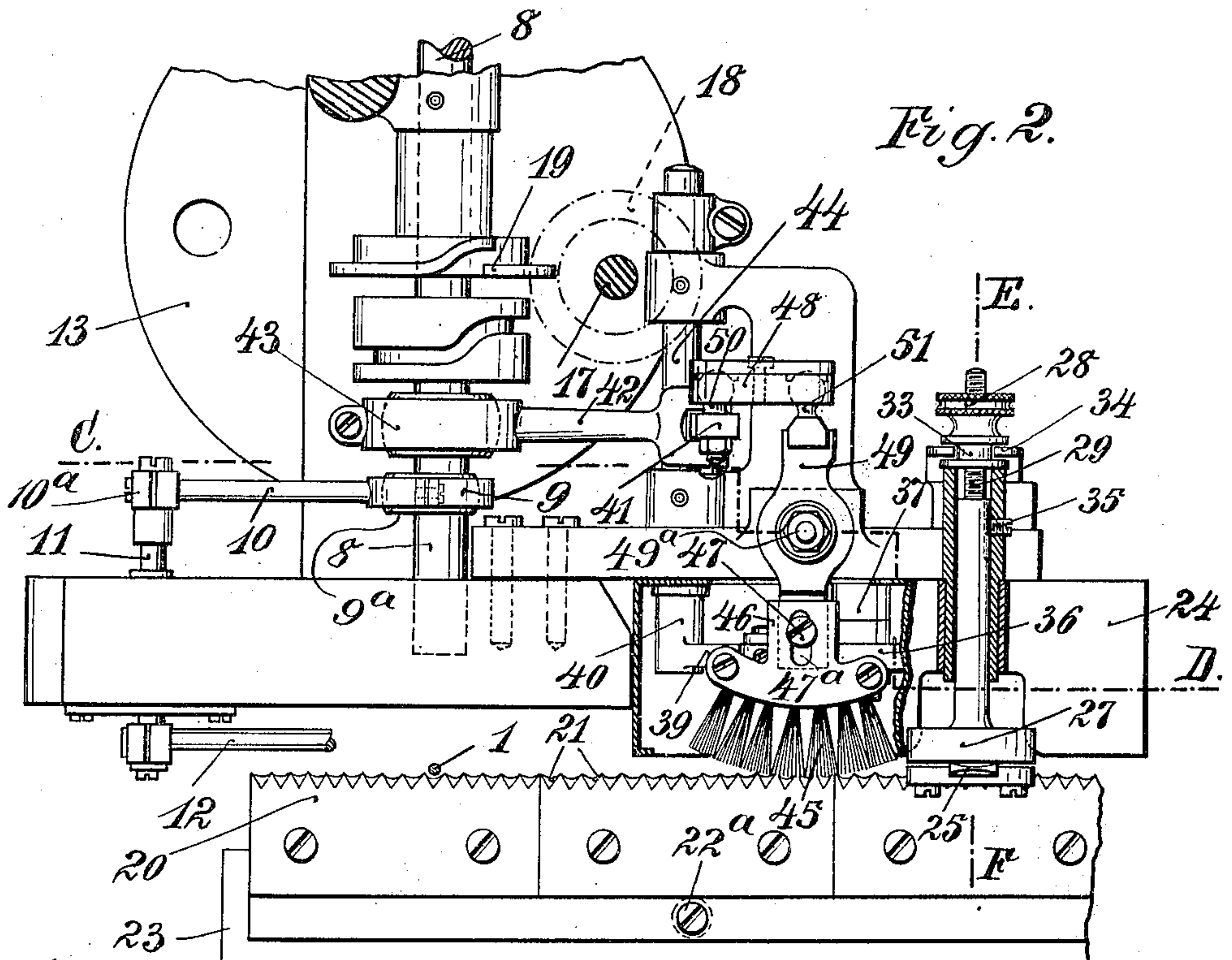
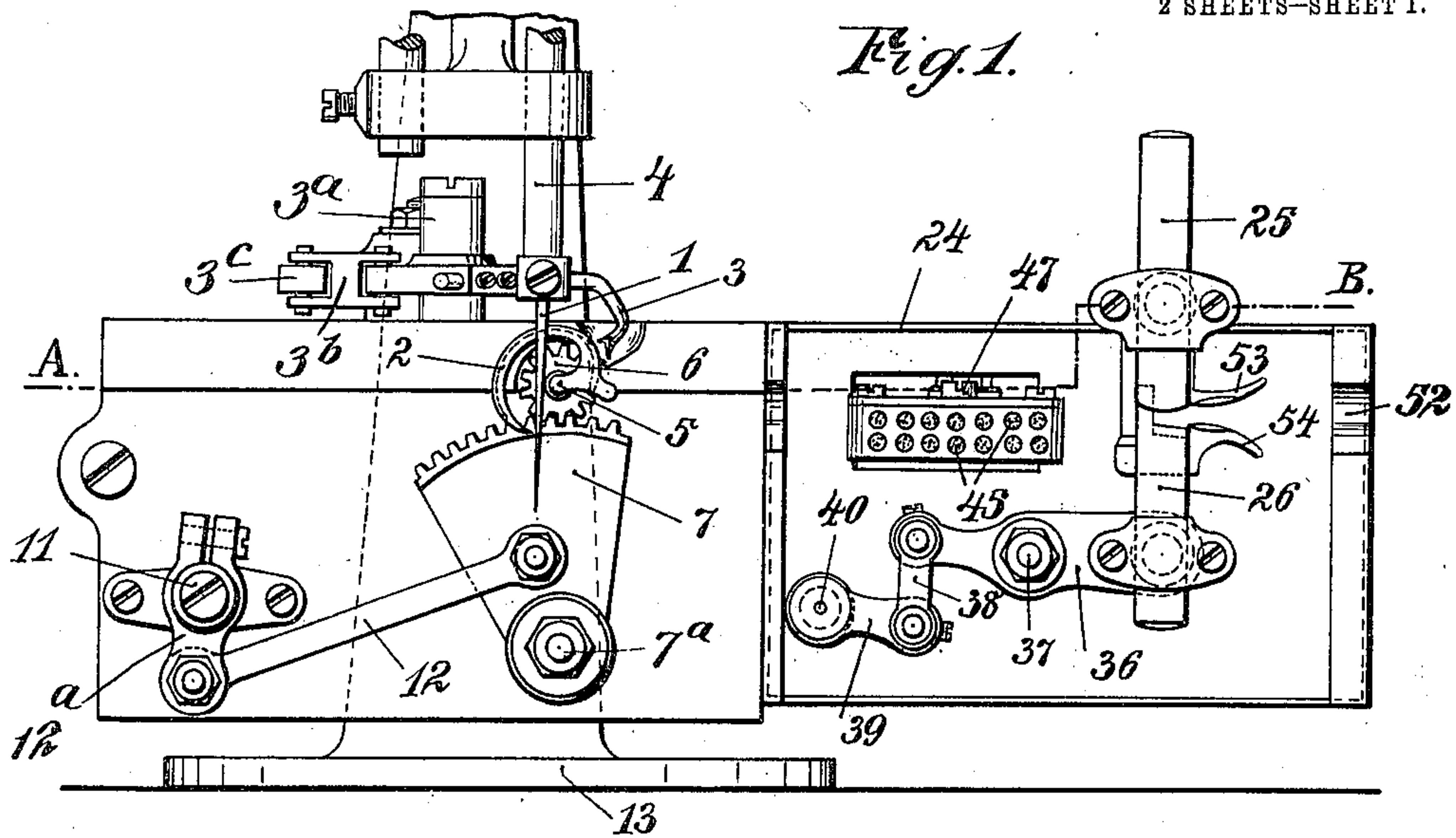


G. NIEDERMAYR.
FABRIC PREPARING DEVICE FOR SEWING MACHINES.
APPLICATION FILED MAR. 20, 1906.

999,463.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.



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Fig. 3.

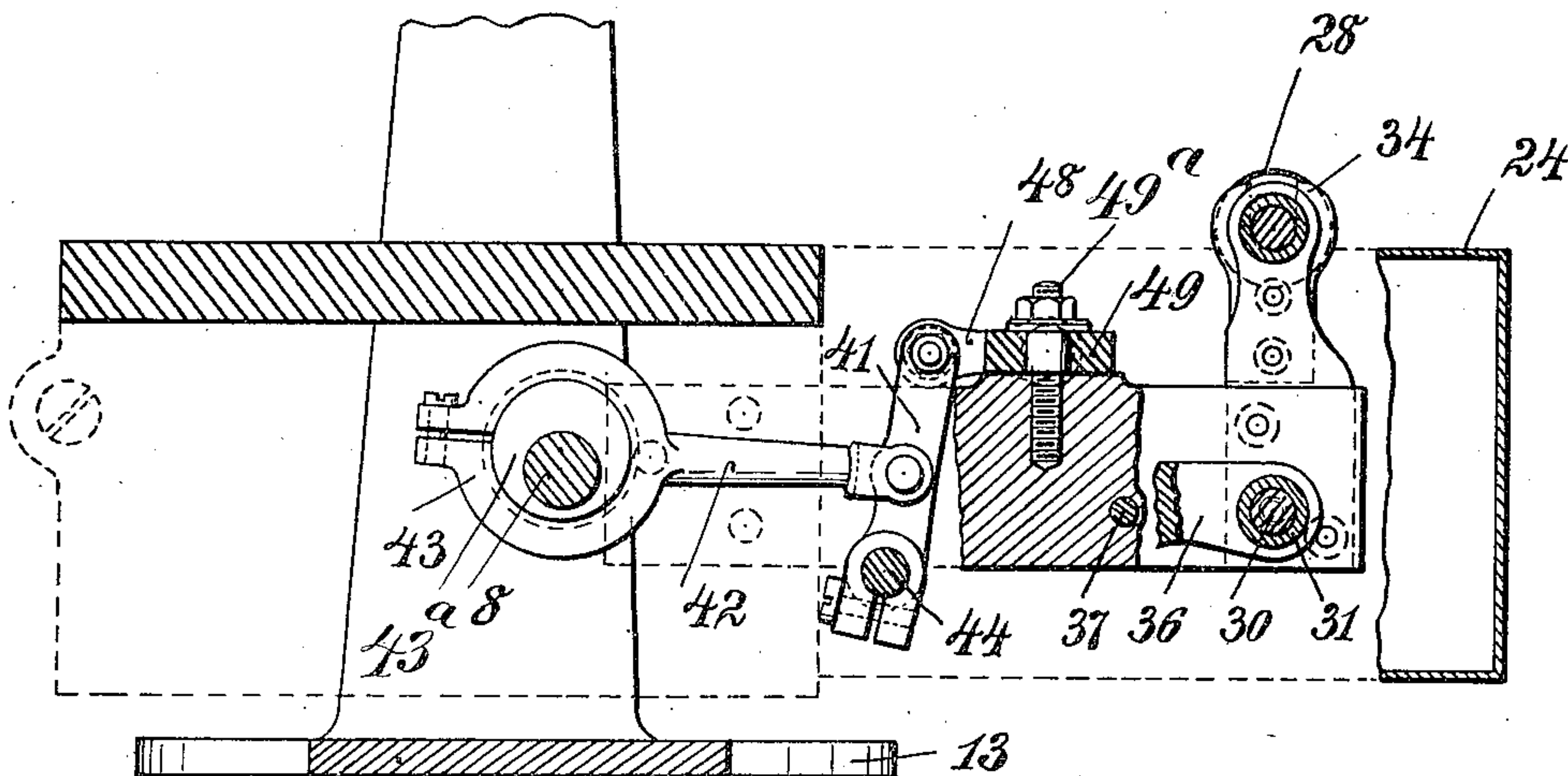
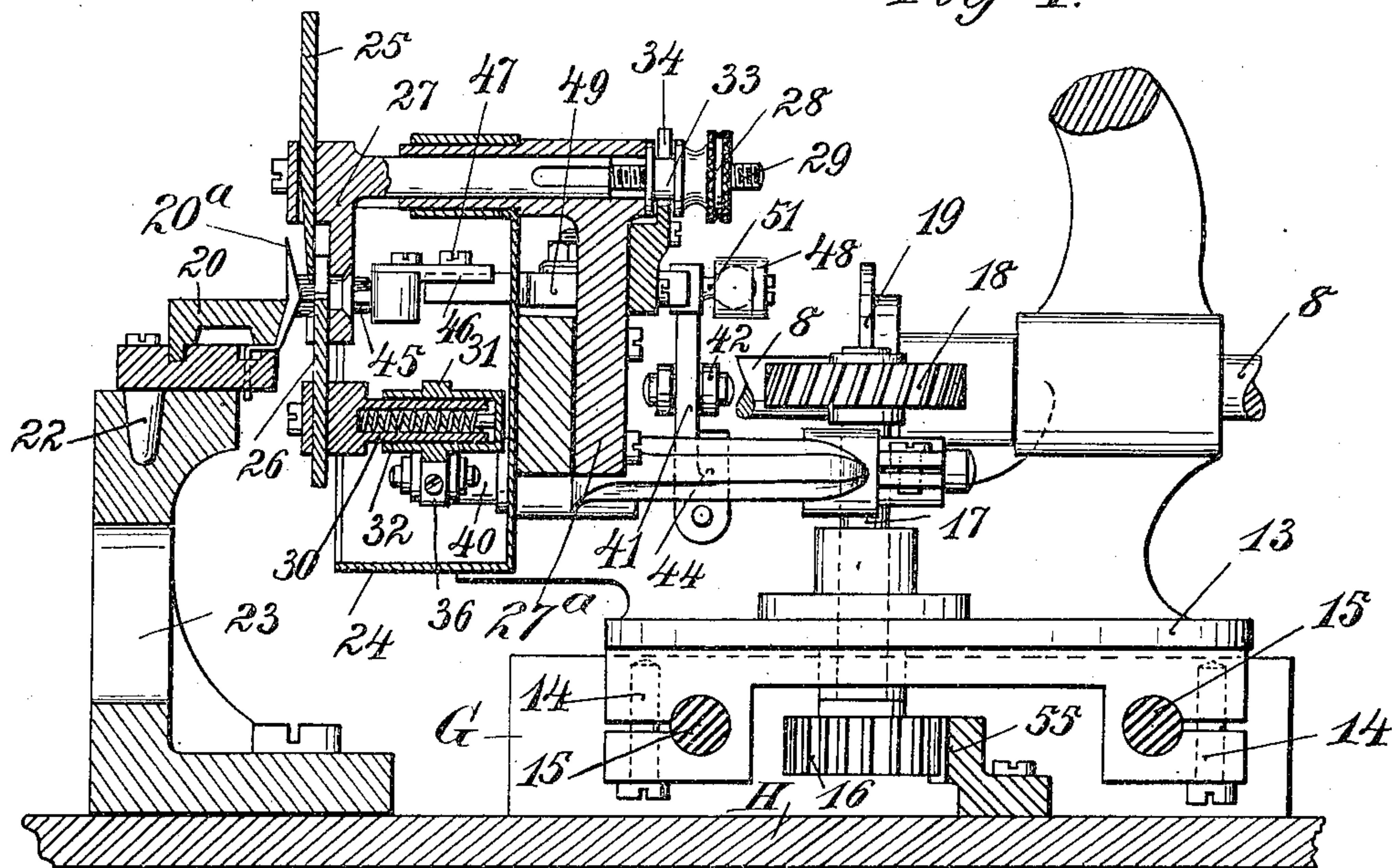


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORG NIEDERMAYR, OF HATTERSHEIM, GERMANY, ASSIGNOR TO AARON VAIL ROWLEY, OF FRANKFORT-ON-THE-MAIN, GERMANY.

FABRIC-PREPARING DEVICE FOR SEWING-MACHINES.

999,463.

Specification of Letters Patent.

Patented Aug. 1, 1911.

Application filed March 20, 1906. Serial No. 306,974.

To all whom it may concern:

Be it known that I, GEORG NIEDERMAYR, a subject of the German Emperor, and resident of Hattersheim, in the Taunus, German Empire, have invented certain new and useful Improvements in Fabric-Preparing Devices for Sewing-Machines, of which the following is a specification.

My invention relates to fabric preparing devices for sewing machines, and has for its object to provide such machines with a simple and efficient device for preparing the fabric previous to sewing it.

My invention will be fully described hereinafter, and the features of novelty will be pointed out in the appended claims.

In the drawings in which I have shown my device applied to an over-edge sewing machine, Figure 1 is an elevation of as much of such a machine as is necessary to illustrate my invention; Fig. 2 is a plan view thereof with parts in section on line A—B of Fig. 1; Fig. 3 is a sectional view on the line C—D of Fig. 2, and Fig. 4 is a sectional view on the line E—F of Fig. 2.

1 is the needle, carried in the usual way by the reciprocating needle bar 4, which may be operated in the customary manner. The looper 2 is carried by a shaft 5 to which is attached a pinion 6. This pinion 6 is in gear with a toothed sector 7, pivoted to a portion of the machine at 7^a. This sector 7 is connected by means of a link 12 with an arm 12^a on a short rock-shaft 11, which shaft carries at its opposite end a similar arm 10^a to which is attached the arm 10, the ring 9 of which surrounds the eccentric 9^a. This eccentric 9^a is mounted on the driving shaft 8, through the medium of which and the connection just described the looper 2 is operated. The spreader 3 may be made as usual in machines of this kind, and is pivoted to the machine at 3^a and connected by means of a link 3^b with a lever 3^c. This lever 3^c is connected in the usual way with mechanism of the customary description for operating spreaders of the above character.

The support 13 which carries the mechanism just described is provided with downwardly projecting portions 14, which are mounted on rods 15 running parallel with the direction of the sewing. These rods are carried by supports G which are attached to or form part of the stationary bed plate H of the machine. On the support 13 is ro-

tatably mounted a shaft 17, carrying at its lower end a pinion 16 which meshes with a rack 55 secured to the stationary bed plate H. At its upper end the shaft 17 carries a worm gear 18, which engages the driving worm 19 on the driving shaft 8. To this shaft power may be applied in any customary manner to rotate the driving worm 19 and the worm gear 18, which results in rotating the pinion 16 and feeds the machine along the rods 15 and along the edge of the cloth which is to be sewn.

20 is a cloth plate provided with upwardly projecting teeth 20^a, upon which teeth the fabric to be sewn is adapted to be placed. This cloth plate 20 is further provided with positioning studs 22 which project into corresponding openings in a bracket 23 which is secured to the bed plate H. The cloth plate is fastened in position by a set screw 22^a.

As so far described the mechanism is well known, and forms no part of my present invention.

In order to prepare the two edges of the fabric which are to be sewn together preparatory to such sewing, the following mechanism is provided: A trimming knife is secured on an adjustable member 27 mounted in a support 27^a which is secured to a suitable portion of the machine. The member 27 is provided with a screw-threaded portion 29 adapted to receive an adjusting nut 28. This nut is provided with a reduced portion 33 which is rotatable in a fork 34, said fork being secured to the support 27^a. A reciprocating knife 26 is also mounted on the member 27, and is movable up and down through the medium of the following mechanism: This knife 26 is secured to a cup-shaped member 30 which fits into a second cup-shaped member 31 forming part of or secured to a lever 36. A spring 32 serves to keep the knife 26 in engagement with the knife 25, as clearly shown in Fig. 4. It is to be remembered that by turning the nut 28, the distance between the knives 25 and 26 and the cloth plate 20 may be regulated, the fork 34 securing the nut 28 in position, yet permitting it to be rotated. Thus the cloth may be trimmed at different distances from the cloth plate 20 as desired.

The lever 36 is pivoted to the machine at 37, and is connected by means of a link 38

with an arm 39 connected as indicated at 40 with a shaft 44. On the shaft 44 is further secured an arm 41, which arm 41 is connected to the stem 42 of the eccentric 5 ring 43 which surrounds the eccentric 43^a mounted on the driving shaft 8. Thus as the driving shaft 8 is rotated the eccentric 43^a and the various connections just described will move the knife 26 up and down 10 and properly trim the fabric to be sewn. In order to brush away the trimmings after the cutting has taken place the upper end of the arm 41 is connected by means of a ball and socket joint 50 with a link 48, which 15 is in turn connected by means of a similar joint 51 with an arm 49 pivoted on a stud 49^a which extends perpendicular to the plane of the cloth plate 20. At the other end this arm 49 carries a brush 45, the projection 46 20 of which is secured to said arm. This brush is curved and the bristles thereof are arranged in a direction so as to substantially radiate from the pivot stud 49^a. Thus as the eccentric 43^a moves the knife 26 up and 25 down, it at the same time swings the brush 45 in a horizontal plane to brush away the cuttings or trimmings. The projection 46 of the brush 45 is provided with a slot 47^a through which projects the screw 47 so that 30 the distance of the brush from the fabric can be adjusted to correspond with the adjustment of the knives 25 and 26. A casing 24 is secured to a suitable portion of the machine and serves as a cover for the pre- 35 paring mechanism just described. Guide fingers 53 and 54 are carried by the frame adjacent to the knives 25 and 26 respectively. In operation the fabric is passed through the opening 52 in the wall of the 40 casing 24 and between the guide fingers 53 and 54. Power is then applied, and the knife moved up and down and the fabric cut and trimmed, the brush 43 meanwhile traveling in a horizontal path and brushing 45 away or removing all the trimmings or cuttings. With my device the fabric is thus trimmed and cut and properly prepared for

sewing before the sewing takes place, resulting in a neat finish, and at the same time doing away with the necessity of trim- 50 ming the fabric after it has been removed from the machine.

While I have described and shown my machine as applied to an over-edge sewing machine, I wish it distinctly understood 55 that I do not wish to limit myself to this style of machine, as my invention is applicable to all kinds of sewing machines.

Various modifications may be made without departing from the nature of my in- 60 vention as defined in the claims.

I claim

1. In a sewing machine, a trimming device comprising a reciprocating knife, a stationary knife provided with a screw- 65 threaded shank extending at an angle to the blade, a nut held against longitudinal movement and engaging said shank to adjust the stationary knife, and means for carrying the reciprocating knife laterally 70 against the stationary knife.

2. In a sewing machine, a trimming device comprising a reciprocating knife and a brush adapted to oscillate in a plane at an angle to the plane in which the knife is re- 75 ciprocated and arranged adjacent to said reciprocating knife, a main shaft provided with an eccentric, a rock shaft operatively connected with said knife, an arm on said rock shaft, mechanism for operating said 80 brush, and an eccentric rod extending from said eccentric to said arm and connected to said arm at a point intermediate between the rock shaft and the connection with the 85 brush operating mechanism.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

Frankfort-on-the-Main, Germany, this 7th day of March, 1906.

GEORG NIEDERMAYR.

Witnesses:

CARL SIEGLE,
EVA SATTLER.