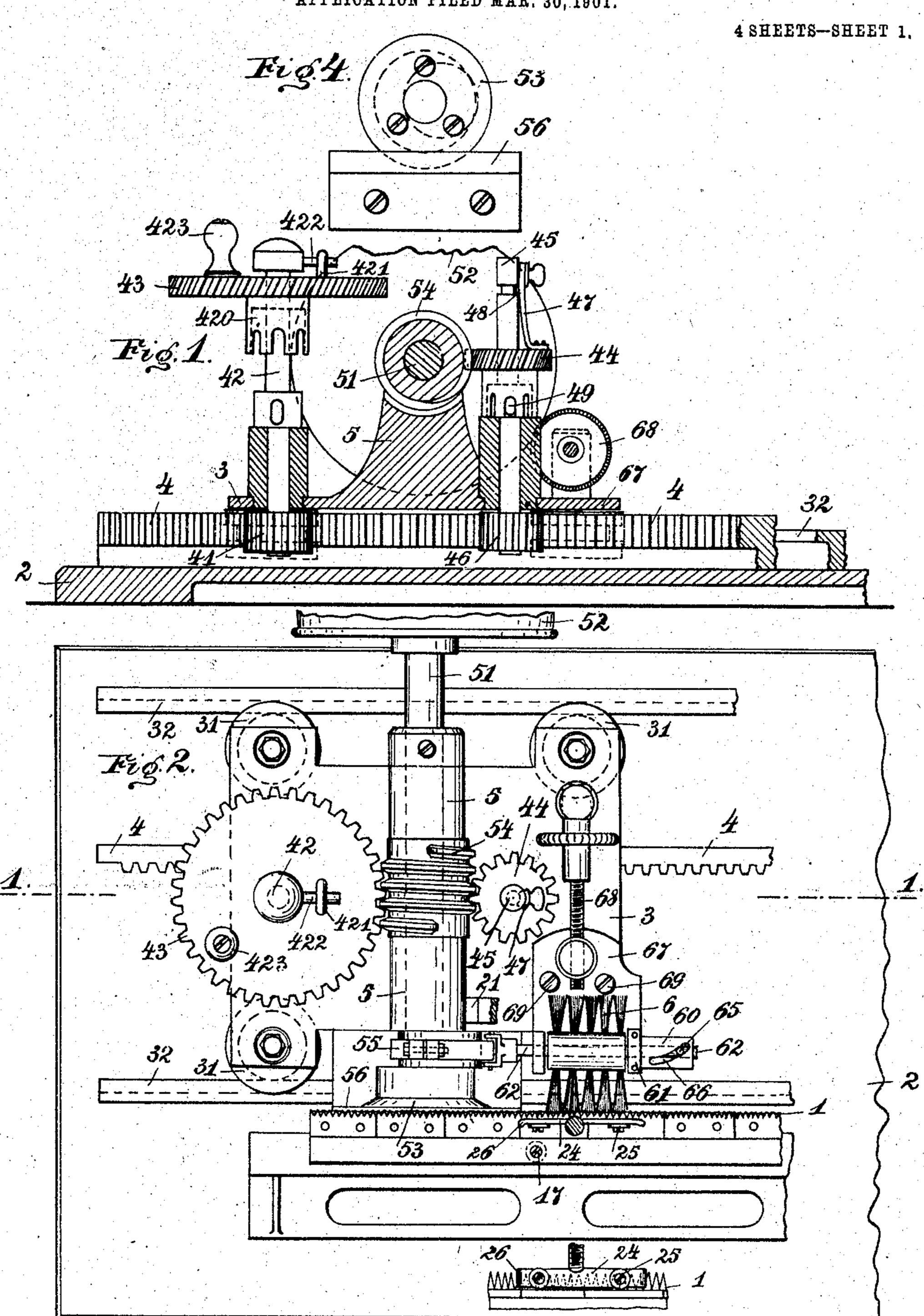
MACHINE FOR TRIMMING AND SEWING FABRICS.

APPLICATION FILED MAR. 30, 1901.



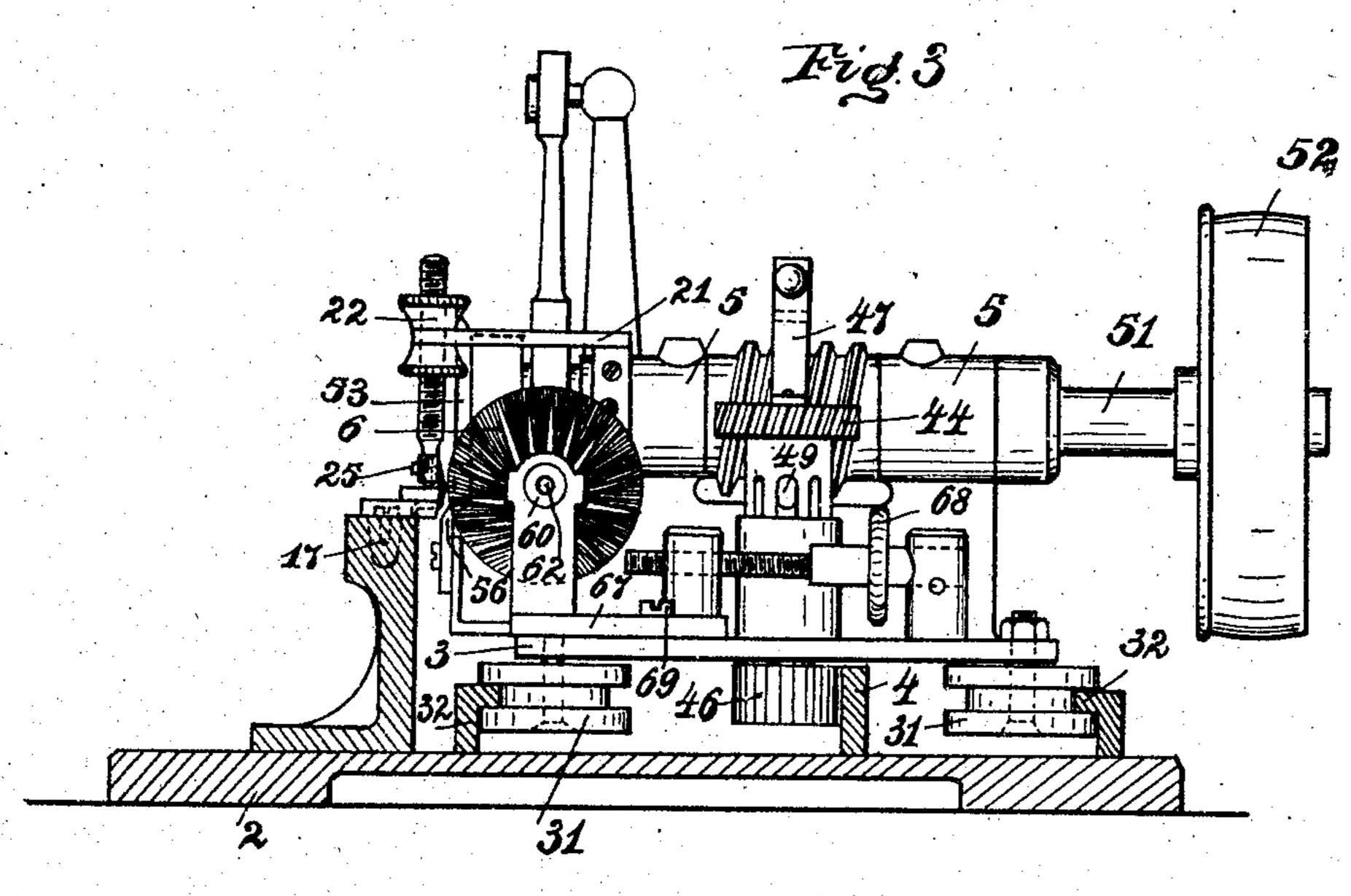
Witnesses: Edward S. Lang My V. Bruesen

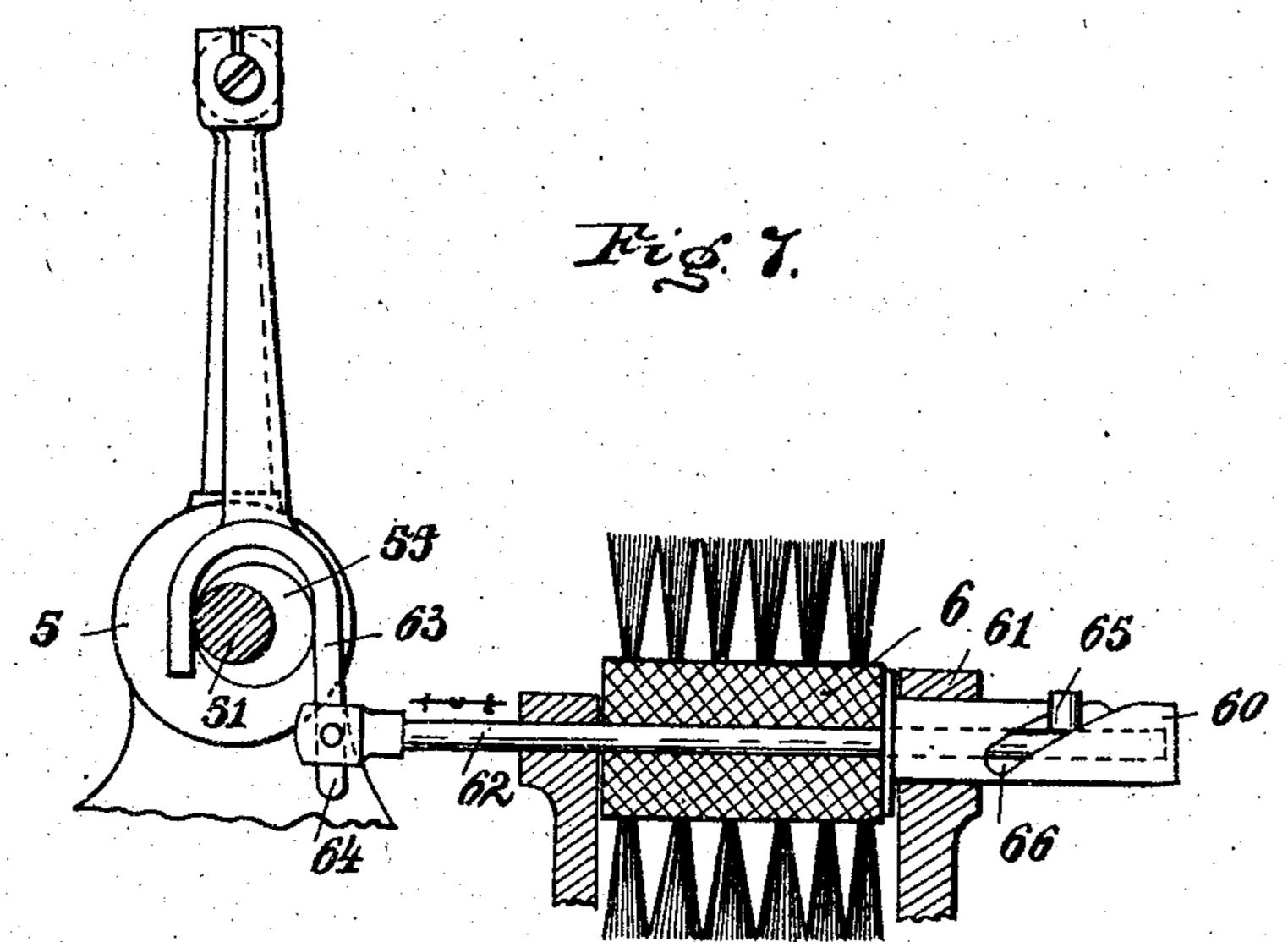
Trevertor:
Fortune Universe Huants
Ling attorneys

MACHINE FOR TRIMMING AND SEWING FABRICS.

APPLICATION FILED MAR. 30, 1901.

4 SHEETS-SHEET 2.

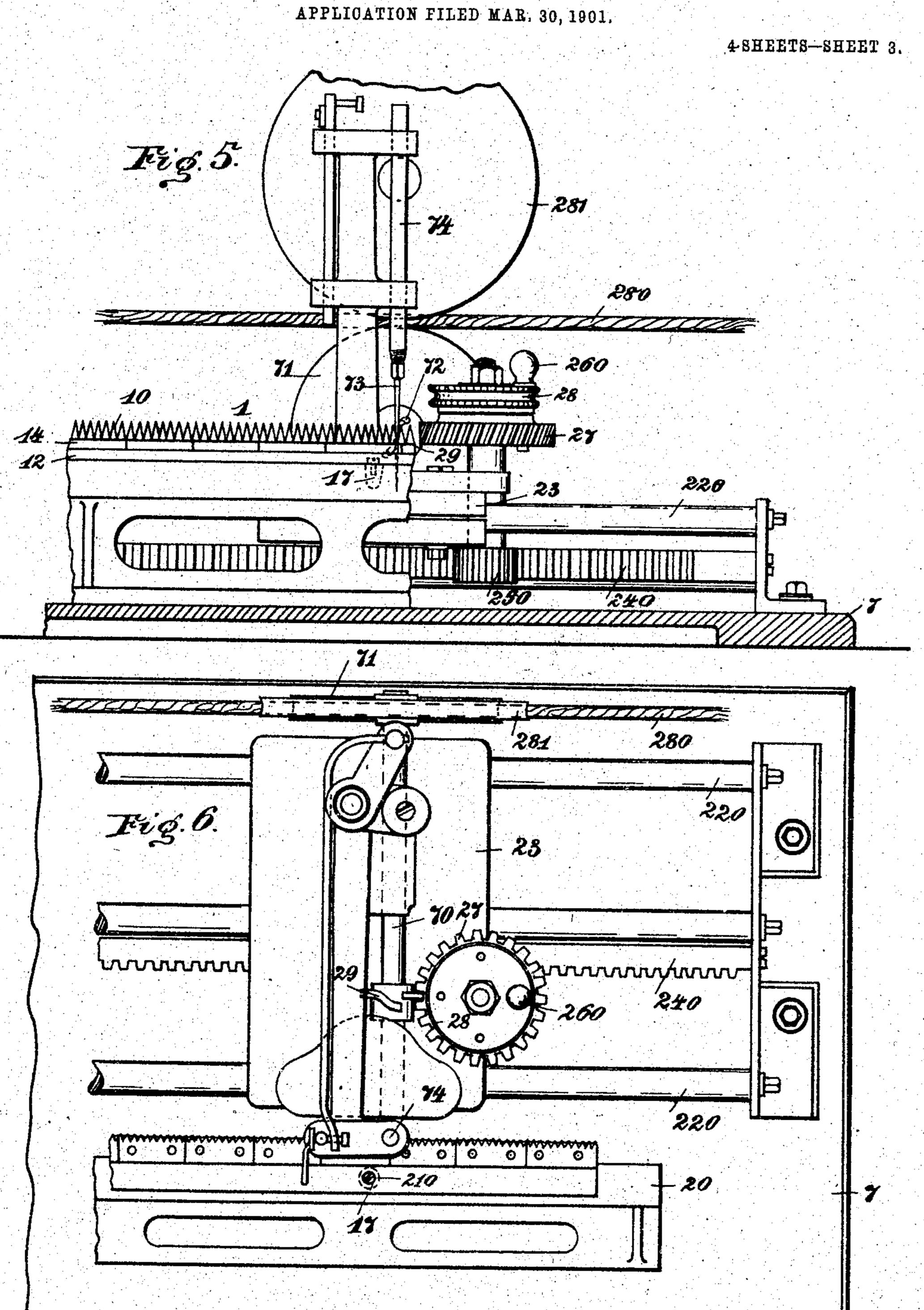




Witnesses: Edward L. Long. Fryv. Mriesen

Fortune Nevens
by
Briesen Henauth
his attornsys.

MACHINE FOR TRIMMING AND SEWING FABRICS.



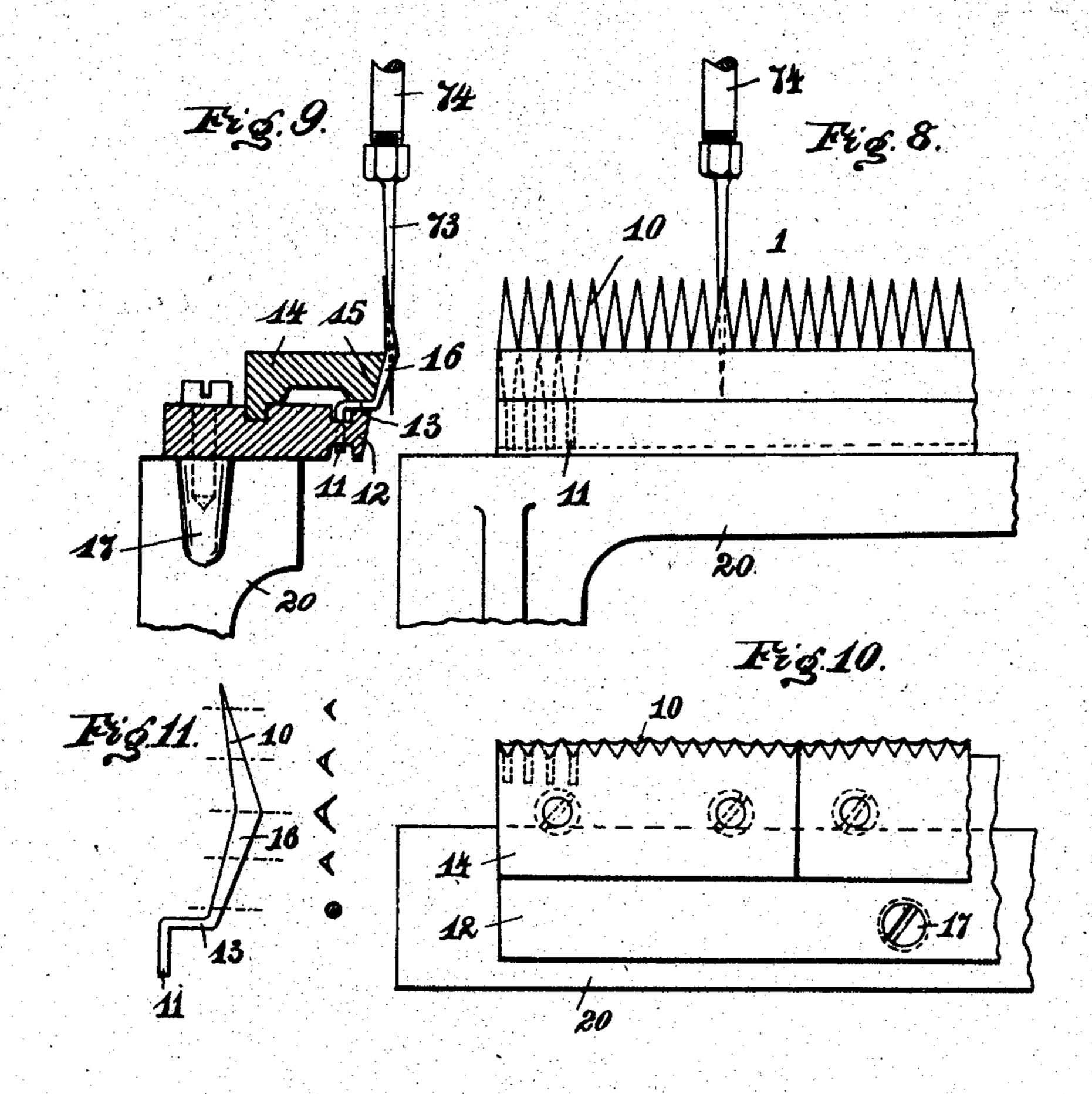
Witnesses:

Edward S. Long. Fritz v. Brissin. Tovertor: Fortuni Ulevrux Brien Hluauth his attorneys.

MACHINE FOR TRIMMING AND SEWING FABRICS.

APPLICATION FILED MAR. 30, 1901.

4 SHEETS-SHEET 4.



Witnesses: Edward L. Long Fryr. Bruen.

Treentor: Fortund herrux Briesen Huanth Lui attorneys.

United States Patent Office.

FORTUNÉ NEVEUX, OF SAN AMBROGIO, NEAR TURIN, ITALY, ASSIGNOR TO AARON VAIL ROWLEY, OF FRANKFORT-ON-THE-MAIN, GERMANY.

MACHINE FOR TRIMMING AND SEWING FABRICS.

SPECIFICATION forming part of Letters Patent No. 786,833, dated April 11, 1905.

Application filed March 30, 1901. Serial No. 53,612.

To all whom it may concern:

Be it known that I, Fortuné Neveux, manufacturer, residing at San Ambrogio, near Turin, in the Kingdom of Italy, have invented 5 new and useful Improvements in Machines for Trimming and Sewing Fabrics, of which the following is a specification.

My invention relates to machines for trimming and sewing fabrics, and has for its obo ject to provide an efficient device of the aboveindicated character, as will appear from the detailed description following hereinafter.

The features of novelty will be pointed out

in the appended claims.

In the accompanying drawings, Figure 1 is a vertical section on line 1 1 of Fig. 2, which is a plan of the preparatory machine. Fig. 3 is an end elevation. In each of these three figures sundry portions are removed or broken 20 away. Fig. 4 is a detail view of the cuttingknives. Fig. 5 is a front elevation of the sewing-machine with sundry portions broken away, and Fig. 6 is a plan of the same. Figs. 7 to 11 are detail views. Figs. 1 to 4 and 7 to 25 11 are similarly lettered, and the same lettering applies to the comb in all figures.

The mechanism for preparing the sewing consists of the comb 1, fixed to the bed-plate 2 of the machine, and the device for cutting 3° the edges and brushing away the cuttings, which is supported on a movable plate 3. This plate is guided by four grooved rollers 31, which run on rails 32, fixed to the bed-plate, and is moved by the engagement of a pinion 35 41 on a vertical spindle 42 with a rack 4, also

fixed to the bed-plate.

The needle-comb 1 consists of recessed needle-points 10 of somewhat wide angle, the stems 11 of which are set in holes in a bar 12 4° and are bent first to a horizontal portion 13, which rests in a slot in bar 12 and is pressed down by a second bar 14, and then to an oblique portion 16, which rests in a slot in the correspondingly-inclined front face 15 of the bar 45 14, Figs. 8 to 11. The points of the needles are bent backward over the edge of the bar 14. The needle-bar 12 has two pins 17, which fit in corresponding holes of the framework of the machine.

The plate 3 carries a bearing 5, in which is 50 journaled the driving-shaft 51, carrying the pulley 52, the worm 54, the cam 55, and the circular knife 53. This latter coöperates with a straight horizontal knife-blade 56, which is fixed to the plate 3.

When shaft 51 is rotated, the worm 54, engaging with the worm-wheel 43, rotates the spindle 42 and through the latter the pinion 41, which thus causes plate 3, with the whole apparatus thereon, to travel slowly, inasmuch 60 as this pinion engages with the fixed rack 4. During this movement the knives 53 56 cut off the edge of the fabric which is placed on the comb 1. When the edge has been cut off, the fabric must be pressed down onto the 65 needle-comb to fix it securely on the needlebar. For this purpose the bearing 5 has an arm 21, which carries a horizontal bar 24, which is adjustable vertically by means of a nut 22. This bar 24 carries two rollers 25 70 and has curved and rounded ends 26. It holds the fabric closely behind the needle-comb and to some extent presses it down thereon. The rollers 25 then lie closely on the needle-bar.

In this position the edge of the fabric is 75 brought against the brush 6, which is fixed to the hollow shaft 60. This shaft can rotate in bearing 61, but is axially immovable. It is mounted on the non-rotating slide-rod 62, which receives a reciprocating movement 80 from cam 55, being for this purpose pivoted at 63 to a bar 64, oscillated by the cam, Fig. 7. A pin 65 on slide-rod 62 engages in a screw-shaped slot 66 in the hollow shaft 60, so that the longitudinal reciprocation of slide-85 rod 62 is transformed into an oscillating motion of the brush 6. This motion of the brush removes all the ends of thread from the edge of the fabric, so that the pieces are made ready for sewing. The bearings of the brush 90 6 are uprights on a plate 67, which can be adjusted in position on plate 3 by means of a nut-and-screw spindle 68, as shown in Figs. 2 and 3, so that the brush can be brought nearer to or farther from the edge of the fabric. 95 The screws 69 serve to clamp the plate 67. The return movement of the plate 3 is effected by the pinion 46 engaging with rack 4. This

pinion is on the spindle 45, which also carries the worm-wheel 44, engaging with worm 54. When the forward movement is again required, the worm-wheel 44 is raised out of 5 engagement with the worm. For this purpose the wheel carries a spring 47, a projection 48 on which engages with a peripheral groove in the upper end of the spindle 45. The boss of the worm-wheel has slots which 10 engage with pin 49 on spindle 45 to couple the wheel with the latter. When the material to be sewed has been thus put into position on the needle-comb, the latter is transferred to the sewing-machine, where the pins 15 17 on the needle-bar fit into corresponding holes 210 in a bar 20, fixed in front of the sewing mechanism. To form the stitches, the plate 23, carrying the sewing mechanism is moved parallel to the bar 20 along two guid-20 ing-rails 220, fixed to the bed-plate 7. For this purpose a pinion 250 engages with a rack 240 and is driven by coupling a disk 28 on the upper end of its axis with a loosely-mounted worm-wheel 27 by means of a pin 260. The ²⁵ wheel 27 is driven by the worm 29.

The sewing mechanism may be of any approved type, provided it is of suitable dimensions. A simple chain-stitch machine may be used with advantage. The driving-shaft 3° 70 is journaled in uprights on the plate 23. and is driven by the pulley 71. On its front end are the loop-hooks 72 for forming the chain-stitch. The needle 73 in its holder 74 moves up and down correspondingly with the 35 forward movement of the whole mechanism, so that it descends each time into the recess or groove of a needle 10 and makes a stitch which lies against the front angle of the bend of the needle 10. The movement of the plate 4° 23 is so timed that the advance or feed for each complete reciprocation of the needle 73 is equal to the distance between two adjacent needles 10. The pulley 71 is driven by a horizontal rope 280 whenever the roller 281 45 presses the said rope upon it.

In order that the mechanism for preparing the material may be reciprocated by hand, the worm-wheel 43 is mounted loosely on spindle 42. By raising the wheel the coupling 420, which previously connected it with the spindle 42, is disengaged, and if the hook 421 be turned over the pin 422 in the head of the spindle the latter may be turned in either direction by means of the handle 423, the wheel 43 being then out of engagement with worm 54.

Now what I claim, and desire to secure by Letters Patent, is the following:

1. The combination of a stationary rack and stationary guides parallel therewith, a frame arranged to travel along said guides, a stationary comb or work-holder, pinions engaging said rack and mounted to travel with the frame, a drive-shaft journaled on the frame, connections from said shaft to the pinions to drive them in opposite directions, means for throw-

ing one pinion or the other into operative connection with the drive-shaft, and fabric-working mechanism carried by the frame.

2. The combination of a stationary rack and stationary guides parallel therewith, a frame 70 arranged to travel along said guides, a stationary comb or work-holder, pinions engaging said rack and mounted to travel with the frame, a drive-shaft journaled on the frame, a worm on said shaft, worm-wheels arranged 75 to engage said worm on opposite sides and each connected with one of the pinions, means for throwing one pinion or the other into operative connection with the drive-shaft, and fabric-working mechanism carried by the 80 frame.

3. The combination of a frame and a comb or work-holder, one movable relatively to the other, means for effecting a relative movement of said two parts, a knife stationary with ref- 85 erence to the frame, and a rotary knife carried by the frame adjacent to the stationary knife.

4. The combination of a frame and a comb or work-holder, one movable relatively to the 90 other, means for effecting a relative movement of said two parts, bearings carried by said frame, a brush mounted to turn in said bearings, and mechanism for imparting an oscillating motion to the brush.

5. The combination of a frame and a comb or work-holder, one movable relatively to the other, means for effecting a relative movement of said two parts, bearings carried by said frame, a brush having a sleeve-core mounted to turn in said bearings, a bar or shaft mounted to slide within the sleeve-core, said core and bar being provided, one with an oblique guide, and the other with a pin engaging such guide, and means for imparting a reciprocating motion to the said bar, to oscillate the brush.

6. The combination of a movable frame, a stationary comb having teeth forming a workholder, means for feeding the frame, fabricworking mechanism carried by the frame on 110 one side of the comb-teeth, and a presser-bar carried by the frame on the other side of the comb-teeth.

7. The combination of a movable frame, a stationary frame having teeth forming a workholder, means for feeding the frame, fabricworking mechanism carried by the frame on
one side of the comb-teeth, and a presser-bar
carried by the frame on the other side of the
comb-teeth, said presser-bar being adjustable
toward and from the comb, and comprising a
plate the ends of which are bent away from
the comb, and rollers arranged to bear on the
fabric.

8. The combination of a stationary comb or 125 work - holder, guides parallel therewith, a frame arranged to travel along said guides, fabric-working mechanism on the frame, a drive-shaft journaled in said frame and connected with said mechanism, a pulley on said 130

shaft, a driving cord or belt having a rectilinear run which extends in engagement with the pulley and parallel with the direction in which the frame travels, mechanism for feeding the frame, and a pressure-roller engaging said cord or belt at the same portion which is in engagement with the pulley.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. s. FORTUNÉ NEVEUX.

Witnesses:

Mario Copania, Mauro Cirone.