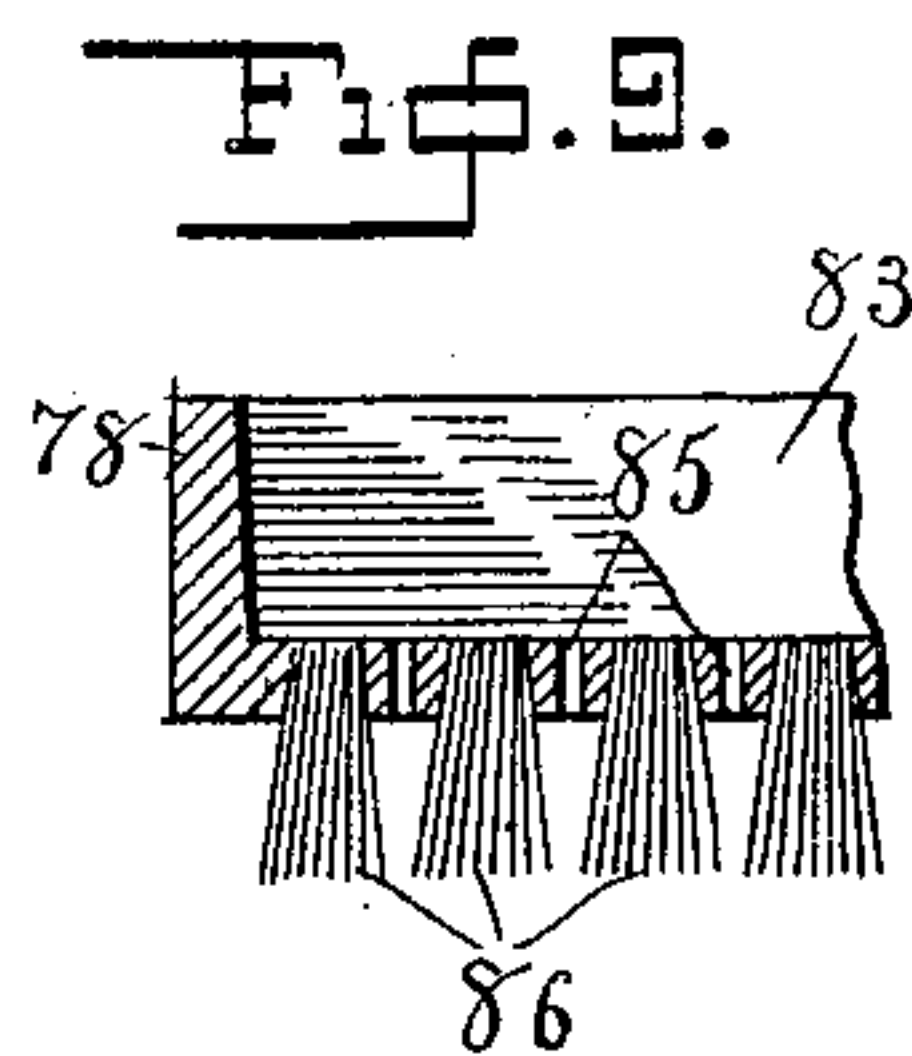
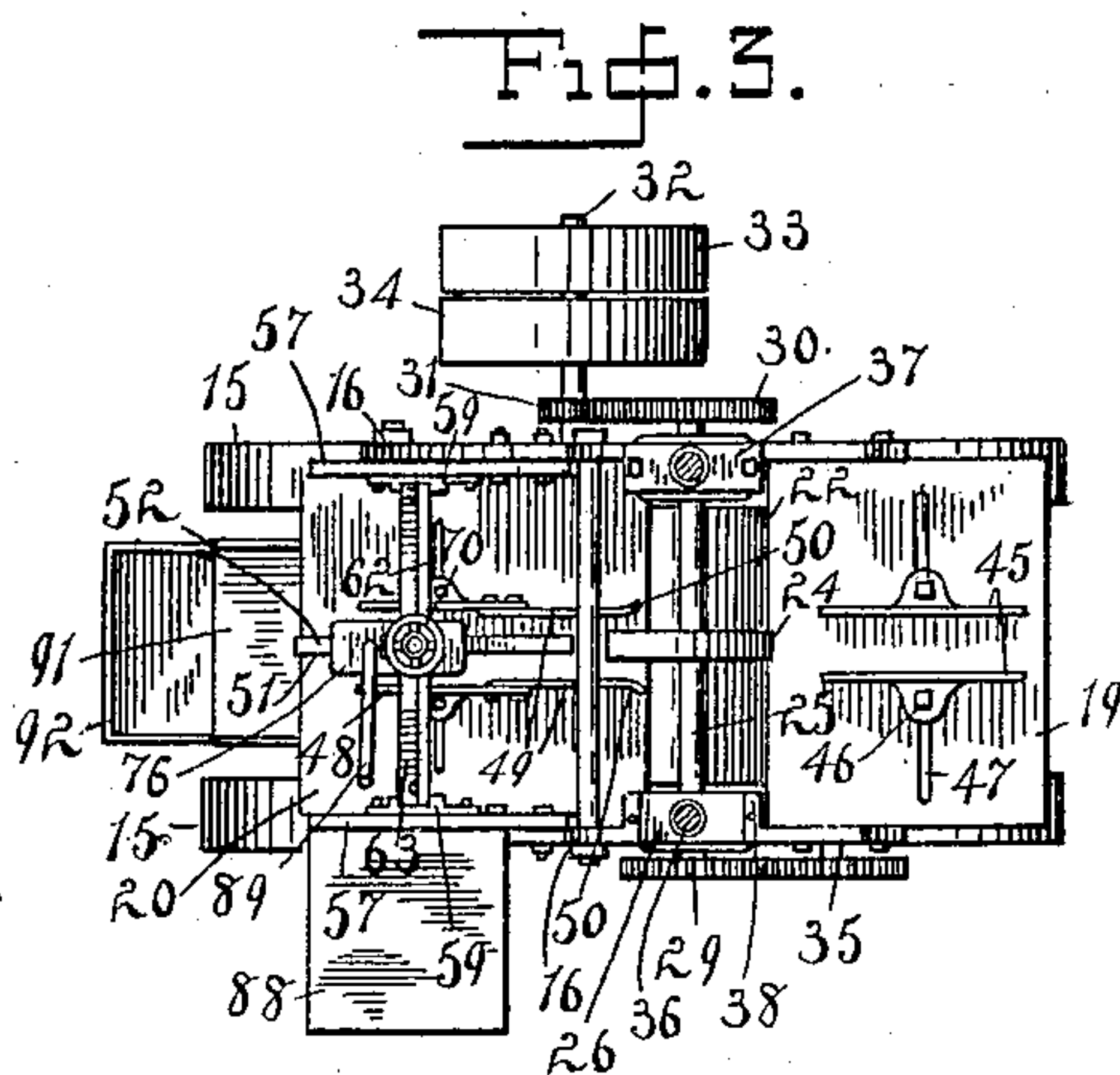
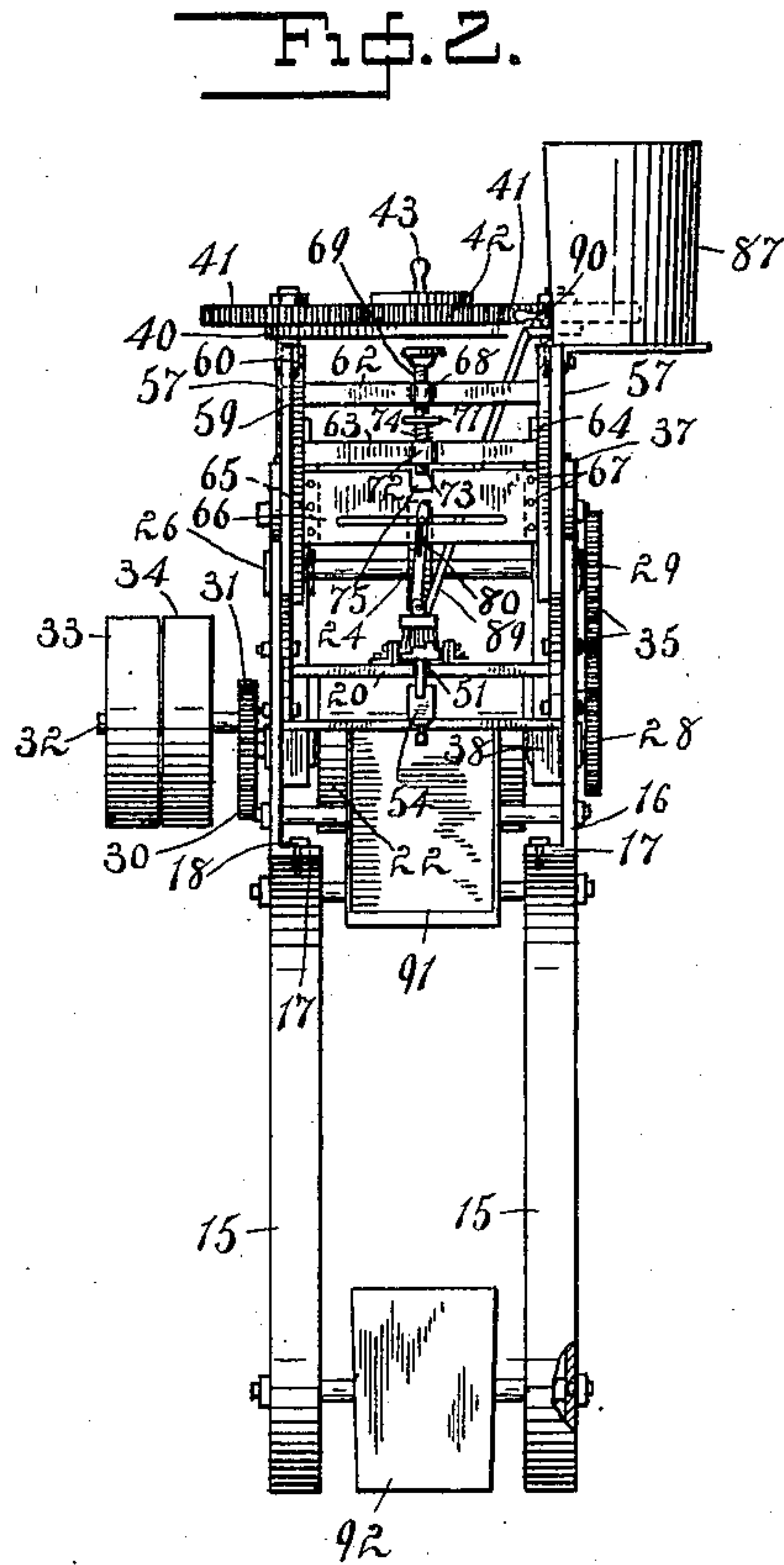
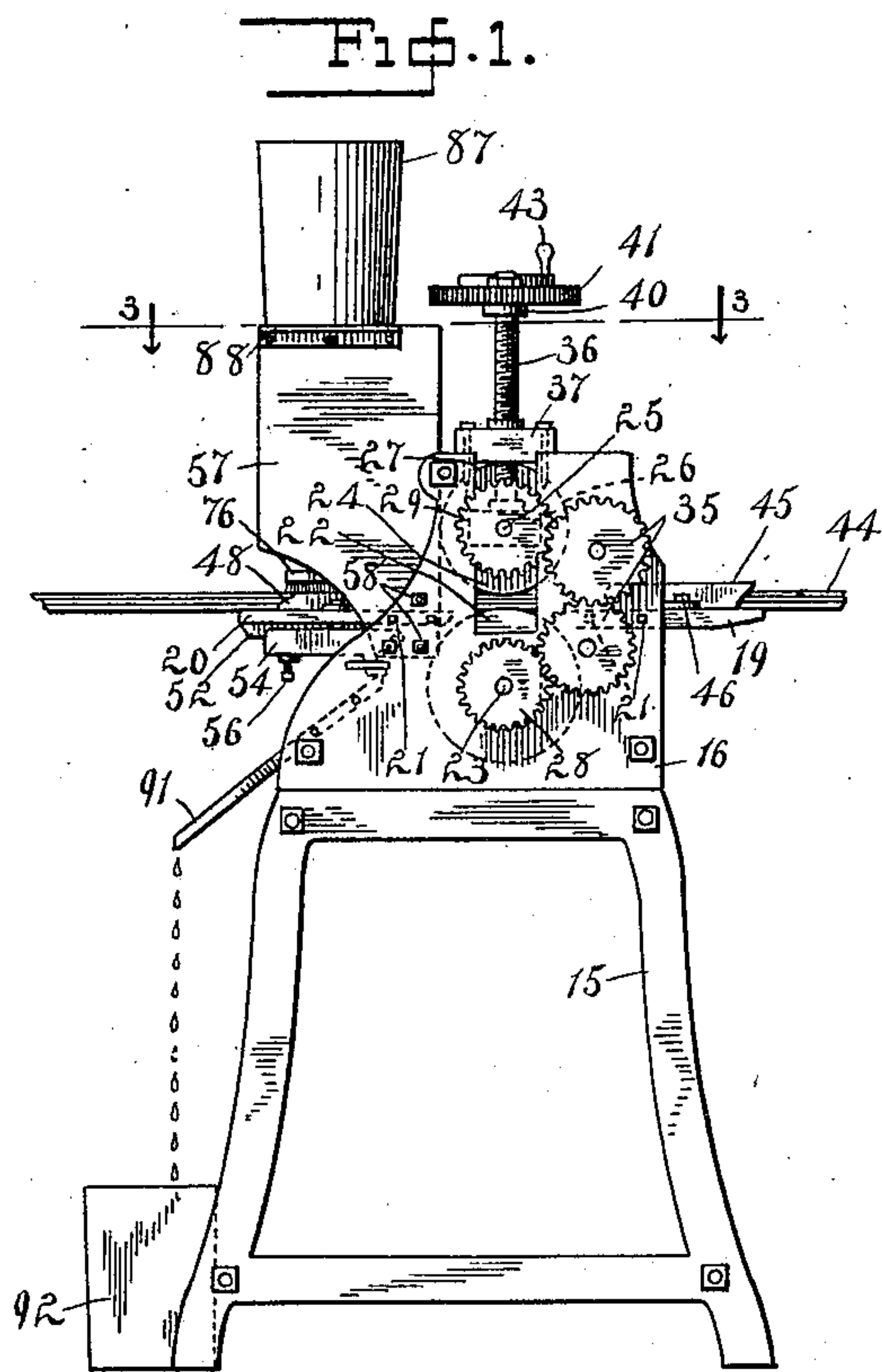


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MACHINE FOR APPLYING LIQUID TO MOLDINGS.
APPLICATION FILED FEB. 27, 1908.

903,313.

Patented Nov. 10, 1908.

2 SHEETS—SHEET 1.



WITNESSES:

Matthew J. Marty
C. F. Bassett

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BY

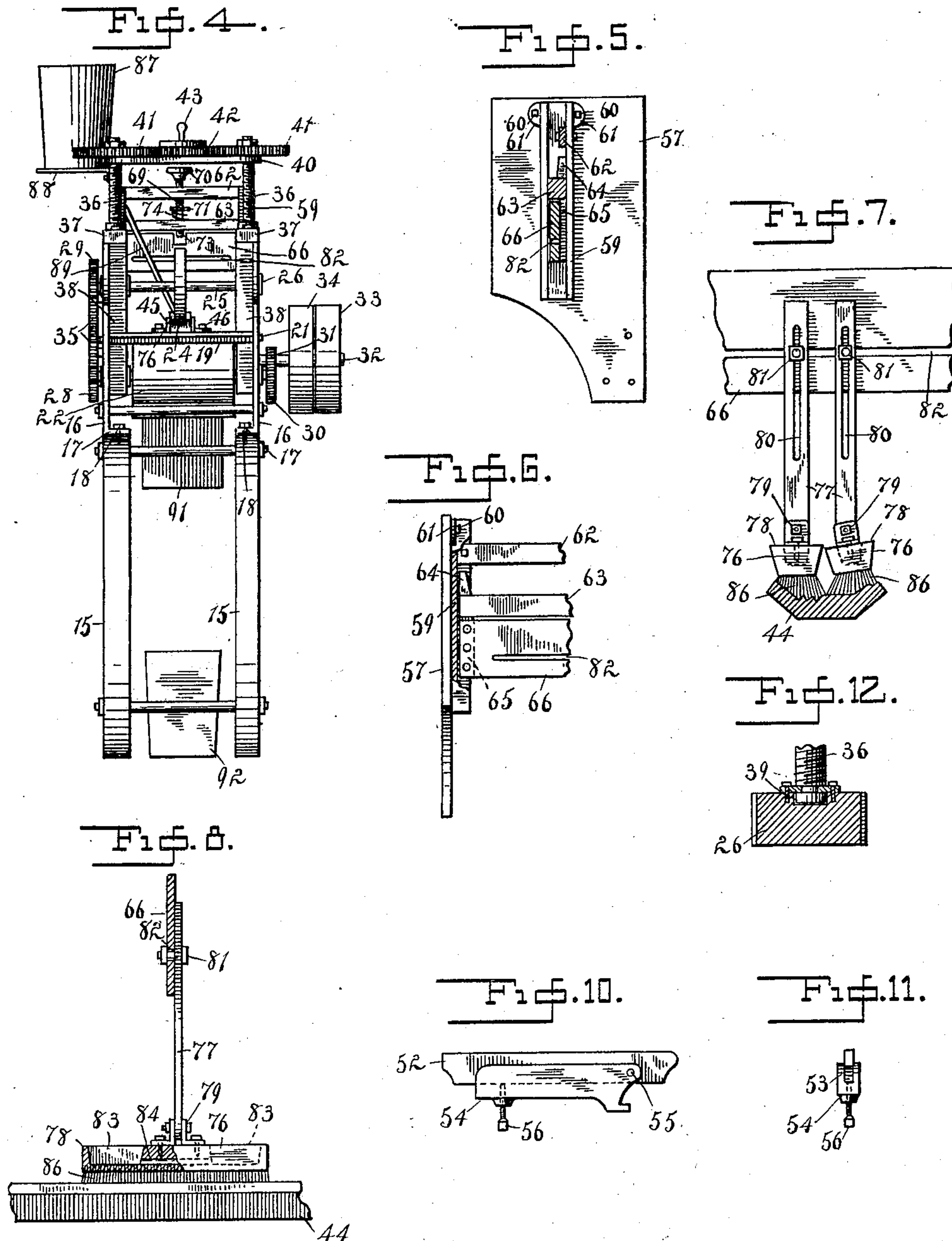
Fredrick S. Ryan
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WITNESSES:

Matthew J. Marty
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UNITED STATES PATENT OFFICE.

CHARLES F. PLANETT, OF LAPORTE, INDIANA, ASSIGNOR TO CHARLES H. TRUESDELL,
OF LAPORTE, INDIANA.

MACHINE FOR APPLYING LIQUID TO MOLDINGS.

No. 903,313.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed February 27, 1908. Serial No. 417,991.

To all whom it may concern:

Be it known that I, CHARLES F. PLANETT, citizen of the United States, residing at Laporte, in the county of Laporte and State of Indiana, have invented certain new and useful Improvements in Machines for Applying Liquid to Moldings, of which the following is a specification.

My invention relates to machines for applying varnish or other liquid substances to moldings, and its chief objects are to provide an apparatus for the purpose stated that will be rapid in its operation, and for that reason will lessen the cost of manufacture of moldings; that will be efficient in its action and that will improve the quality of the finished moldings by applying the finish with greater uniformity than when put on by hand.

Further and more specific objects are to provide suitable feeding mechanism for presenting the material to the applicators at the proper speed; to furnish an adjustment for the feeding devices, and to supply means for suitably adjusting the applicators.

In addition to the above features provision is made for substituting brushes of various patterns best suited to the style of moldings operated upon, and for regulating the supply of the liquid to the brushes used to distribute the varnish upon the molding.

These and other important objects are accomplished by the employment of the apparatus illustrated in the accompanying drawings, forming a part of this application, and in which:—

Figure 1 is a side view of my improved molding varnishing machine; Fig. 2 is a rear elevation; Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1; Fig. 4 is a front elevation; Fig. 5 is a vertical section through the brush adjusting devices; Fig. 6 is a fragmentary view showing the application of a plurality of brushes; Fig. 7 is a fragmentary elevational view of one end of the brush adjusting frame; Fig. 8 is a side view of a brush and holder, and Figs. 9 and 10 are side and end views, respectively, of the molding adjusting device.

Referring to the details of the drawings, the numeral 15 indicates the base of the machine upon which are mounted frame plates 16 provided along their lower margins with flanges 17 for attachment to the base 15 by bolts 18. The frame plates 16 are connected by horizontal bed plates 19, 20, rigidly se-

cured by bolts or screws 21, and separated by an interval below which is located solid feed roller 22 mounted upon a shaft 23 journaled in the frame plates 16. Immediately above the roller 22 is located a coöperating feed roller 24 mounted upon a shaft 25 journaled in boxes 26 which slide in vertical slots 27 in the frame plates 16. The roller 24 is narrower than the lower roller 22 and is covered with some soft material which will not mar or injure the face of the molding when fed between said rollers in a manner hereinafter described. I prefer to form this upper feed roller 24 of rubber as being best suited for the purpose. The ends of the roller shafts 23, 25 project upon one side beyond their bearings and are provided with gear wheels 28, 29. The opposite end of the shaft 23 of the lower roller carries a gear 30, which is driven by a pinion 31 mounted upon a drive shaft 32 having the usual fast and loose pulleys 33, 34. The upper roller 24 gets its motion from the lower roller 22 through a train of gears 35 carried on the frame plate 16. The sliding boxes 26 of the roller 24 are moved vertically by screws 36, having threaded connection with blocks 37 secured to flanges 38 formed integral with the frame plates 16. The ends of the screws 36 are connected with the said blocks by means of swivel joints 39 of a well known form, shown in section in Fig. 12. The upper ends of the screws 36 are connected by a bar 40 and carry gear wheels 41 which are driven by a gear 42 mounted upon the bar between said wheels 41 and provided with a crank handle 43. As the gear 42 will drive the intermeshing wheels 41 in opposite directions the screws 36 are provided with right and left threads to produce an identical movement in the blocks 37. The upper roller 24 is mounted in the median line and having a comparatively narrow face it is necessary to provide guides for keeping the molding 44 in alinement therewith. There are two sets of these guides one in either side of the rollers, since it is impracticable for a device for this purpose to extend between them. The front guides 45 are secured to the forward bed-plate 19 by bolts 46 engaging slots 47 in said plate to permit of lateral adjustability in the guides. The rear guides 48 are secured to the bed plate 20, in the same manner as the first guides and have extensions 49 which project toward the feed

rollers, their ends 50 being bent laterally to readily admit the end of the molding as it is fed between the rollers.

The bed plate is provided with a median slot 51, in which is located a molding adjusting lever 52, mounted in a longitudinal groove 53 in a fixed block 54. The said lever is pivoted at the forward end to the block 54 by a pin 55, and the rear end of the lever is engaged by an adjusting screw 56, by means of which the said rear end of the lever may be moved vertically.

Extending rearwardly from the frame plates 16 upon each side of the machine are bracket, or side plates 57, secured to the frame plates by bolts 58. Vertically disposed channel bars 59 are secured to the inner faces of the side plates by bolts 60, which engage ears 61 formed integral with the channel bars. A cross beam or rail 62 connects the channel bars near their upper ends, and said bars form vertical ways in which is slidably mounted a brush carrier consisting of a movable rail 63 furnished at the ends with arms or extensions 64, 65. The arms 64 project upward and serve as stops when they abut against the fixed rail 62. The extensions 65 project downward, and a plate or board 66 is secured thereto by bolts or screws 67. The upper or fixed rail 62 has a reinforcement or boss 68 in the median line of the machine and through this boss passes an adjusting screw 69, having threaded connection therewith. The upper end of said screw is provided with a milled head 70 to facilitate turning, and the body of the screw has a flange or collar 71. Below this collar the body of the screw is smooth and passes through a boss 72 in the movable rail, in which it has a turning fit, and is retained in this bearing by a pin 73. Between the collar 71 and the upper surface of the movable rail 63 the body of the screw is surrounded by a coiled spring 74, and the upper margin of the board 66 is furnished with a notch 75 to prevent interference with the end of said screw. The varnish, or other liquid, is applied to the upper surface of the molding 44 through the medium of a brush 76. A stem or handle 77 is secured to the back or body 78 of the brush and is supplied with a joint 79 which permits of lateral tilting of the brush relatively to the stem. The latter is formed of a flat bar and is provided with a longitudinal slot 80. The stem is removably attached to the board 66 by means of a bolt 81, which passes through a horizontal slot 82 in the said board. The body 78 of the brush is furnished with cavities, or receptacles 83, connected by ducts 84, and having their bottoms provided with perforations 85 located between the bristle tufts 86. A varnish tank or reservoir 87 is supported at a suitable height on a shelf 88, and from this reservoir

a tube 89 leads downward, its lower end extending above one of the receptacles 83 in the brush, so that the varnish will flow through said tube directly into the brush receptacles and be distributed to the parts below by percolation through the orifices 85. The supply of liquid to the tube 89 is regulated by a faucet 90, and a drip board or pan 91 is placed on an incline beneath the brush to convey the surplus varnish into a receptacle 92 placed below.

When unusually wide moldings are to be treated and especially when the contour of the surface is irregular I find it advisable to employ two or more brushes placed side by side, as shown in Fig. 7. In this case the joint 79 will enable one or both brushes to be suitably adjusted to correspond with unusual inclinations in the molding members.

The functions of the various mechanisms having been set forth in connection with the details of construction a brief description of the method of operating the machine will suffice to enable one, whether skilled in the art or otherwise, to understand its working. The first step will be to adjust the guides to suit the width of the molding to be coated, and to place the rollers at the proper distance apart to accommodate the thickness of said molding, such adjustment being accomplished by turning the crank 43. Connection having been made with any convenient source of power, and the feed rollers set in motion, a strip of molding is placed between the front guides 45, with the face of the molding uppermost, and pushed between the rollers until engaged thereby, when the feed will be automatic. The molding is run through just far enough to reach the brush, and if not previously adjusted the machine is stopped and the brush adjusted by moving the body on the joint 79, sliding the stem on the bolt 81 and the latter in the groove 82 in the board 66, and at the same time moving the board up or down as required by turning the milled head 70. The position of the molding may also be regulated by tilting the bar 52 by means of the screw 56. When once properly adjusted very slight changes, if any, will be required in the position of the brush so long as the same pattern of molding is being treated. The reservoir 87 having been supplied with a liquid suited to the work, the faucet 90 is opened and a sufficient quantity of varnish allowed to flow into the receptacles 83. The rollers are then again set in motion, after which the action of the machine will be continuous and automatic, except as to the supply of molding strips which are presented in sequence to the rollers by hand.

Having thus described my invention, what I claim is:—

1. In an apparatus for the purpose speci-

fied, the combination of feed rollers, means for adjusting one of said rollers, guides for the material to be treated, a brush, a slidable frame, means for attaching the brush to said frame, a reservoir, and means for conveying liquid from the reservoir to the brush.

2. In an apparatus for the purpose stated, the combination of feed rollers, means for adjusting one of said rollers, adjustable guides, a brush, a receptacle in the brush, a slidable frame, means for adjustably attaching said brush to the frame, a reservoir for liquid, and means for conveying liquid from the reservoir to the brush.

3. In an apparatus for the purpose stated, the combination of a solid roller, a cooperating roller composed of yielding material, means for adjusting said cooperating roller relatively to the solid roller, adjustable guides, a brush, receptacles in the brush, a slidable frame, means for adjustably attaching said brush to the frame, a reservoir for holding liquid, and means for conveying liquid from the reservoir to the receptacles in the brush.

4. In an apparatus for the purpose specified, the combination of a solid roller, a cooperating roller composed of yielding material, gearing connecting the rollers, means for adjusting said cooperating roller relatively to the solid roller, adjustable guides, a brush, receptacles in said brush, a stem for the brush, a joint in said stem, a slidable frame, means for adjustably attaching said brush to the frame, a reservoir for liquid,

and means for conveying liquid from the reservoir to the receptacles in the brush.

5. In an apparatus for the purpose specified, the combination of a solid feed roller, a yielding roller cooperating with said feed roller, means for adjusting said yielding roller relatively to the solid roller, gearing connecting said rollers, adjustable guides, a brush, receptacles in said brush having perforated bottoms, a jointed stem for the brush, a spring-held frame, means for adjusting the frame vertically, means for adjustably attaching the brush to the frame, a reservoir, and a tube connecting the reservoir with said brush.

6. In an apparatus for the purpose specified, the combination with feed rollers, one of said rollers having a yielding surface, means for adjusting one of said rollers relatively to the other, gearing connecting the roller, and adjustable guides for the material to be operated upon, of a brush having receptacles provided with perforated bottoms, a jointed stem for the brush, a yielding frame, means for adjusting the frame vertically, means for adjustably attaching the brush to the frame, a reservoir, a pipe for conveying liquid from the reservoir to said brush, a drip pan, and a receptacle for the surplus liquid.

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

CHARLES F. PLANETT.

Witnesses:

H. W. WORDEN,
BESSIE FOLANT.