April 28, 1931. M. GLAZER 1,802,597

GLAZING MACHINE

Filed July 5, 1929 4 Sheets-Sheet 1

Fig. 1.

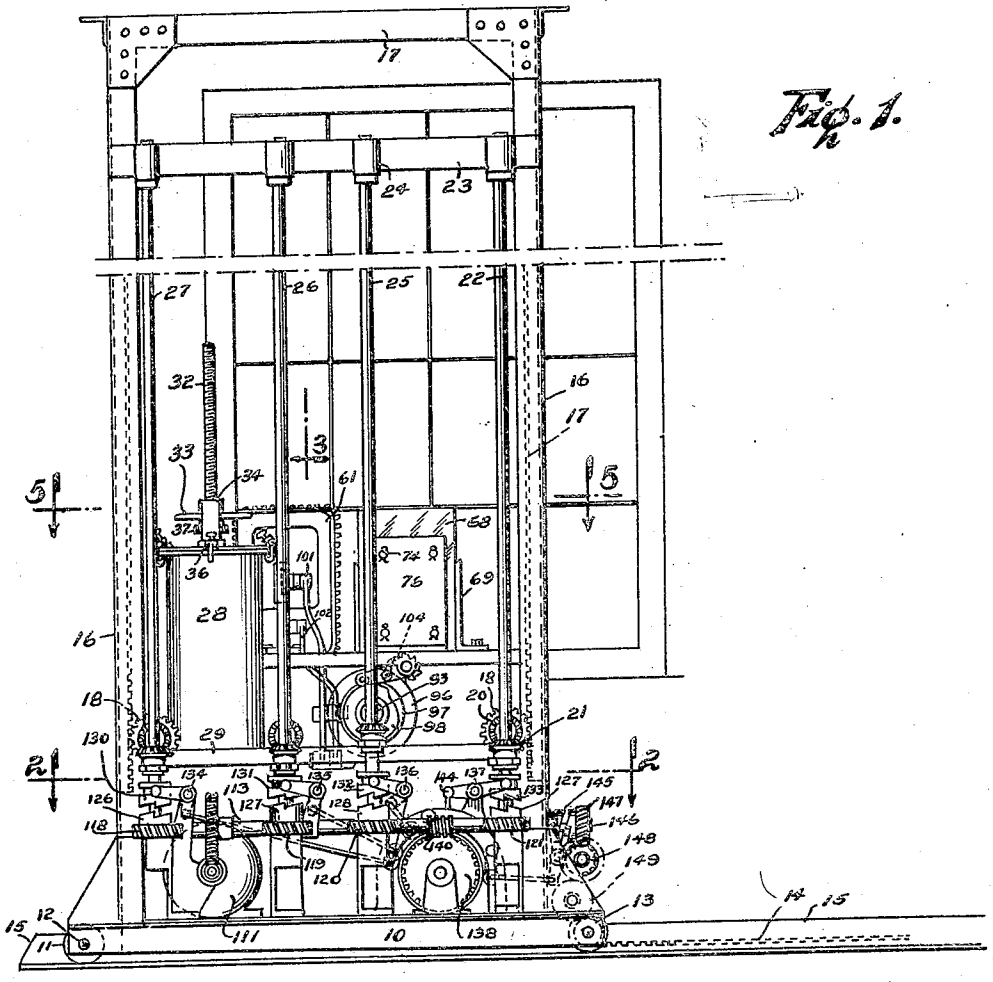
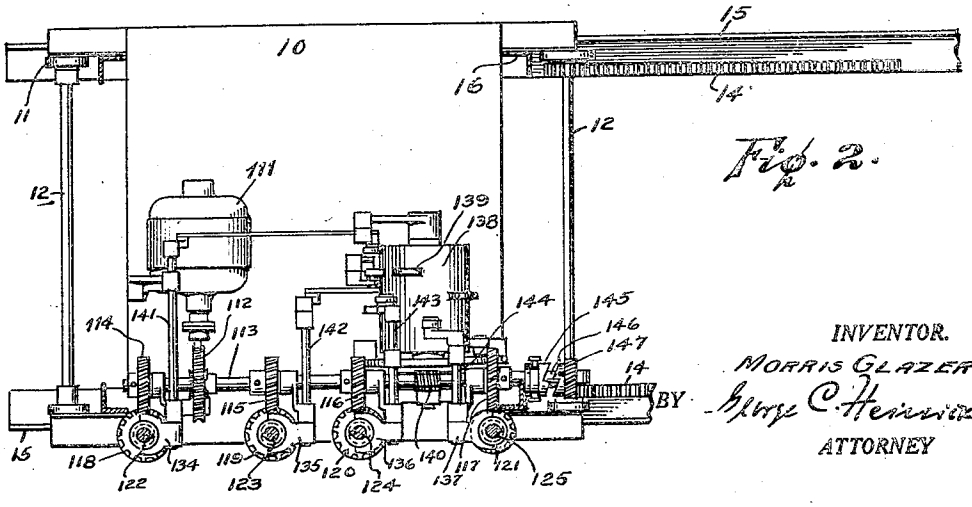


Fig. 2.



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Filed July 5, 1929 4 Sheets-Sheet 2

Fig. 3.

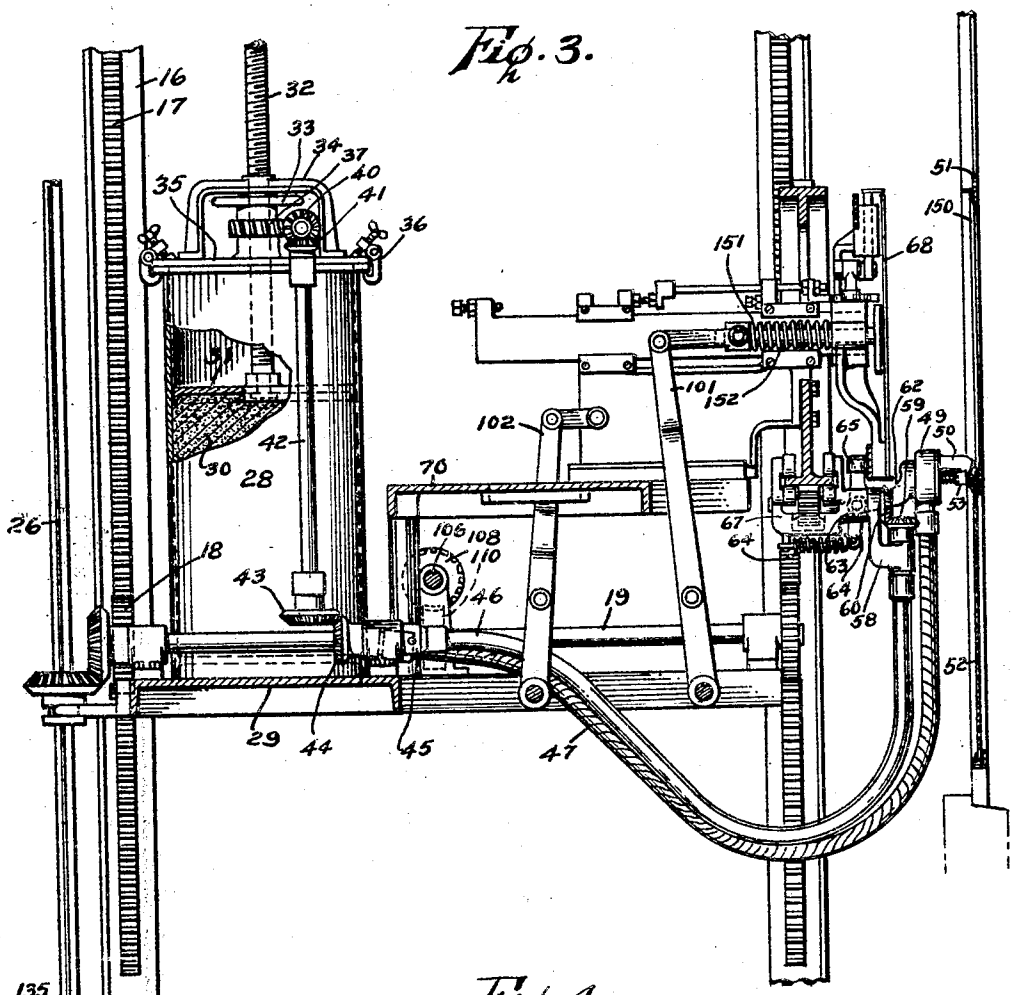
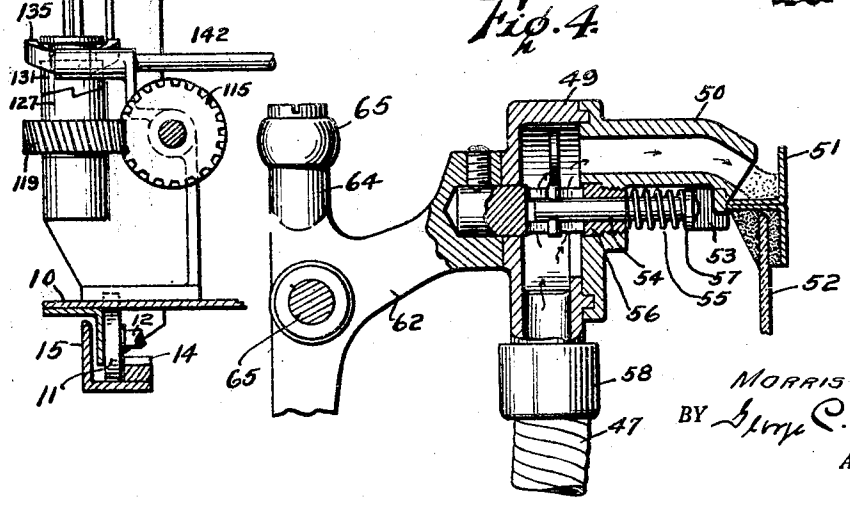


Fig. 4.



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April 28, 1931. M. GLAZER 1,802,597

GLAZING MACHINE

Filed July 5, 1929 4 Sheets-Sheet 3

Fig. 5.

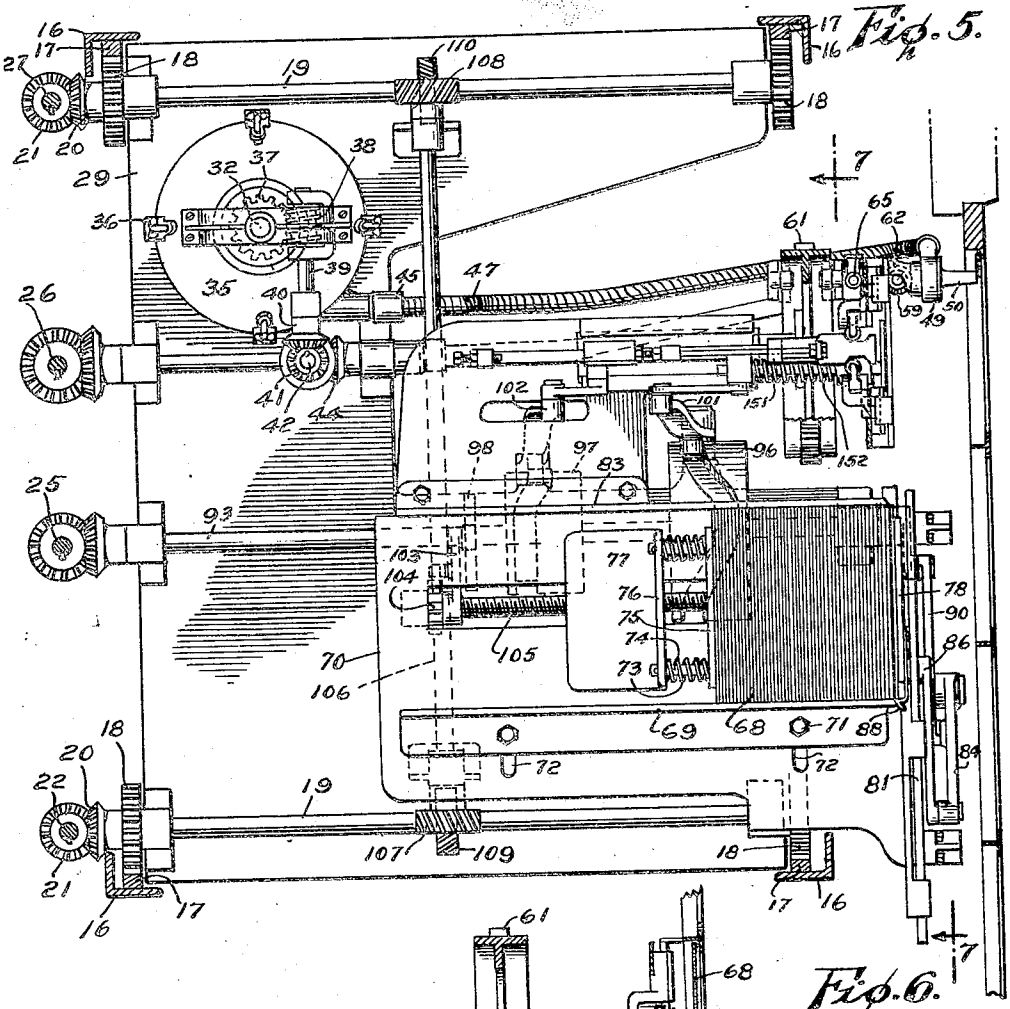
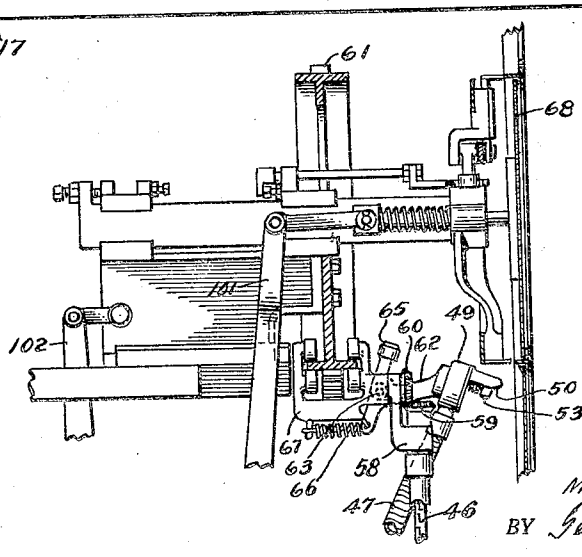


Fig. 6.



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April 28, 1931. M. GLAZER 1,802,597

GLAZING MACHINE

Filed July 5, 1929 4 Sheets-Sheet 4

Fig. 7.

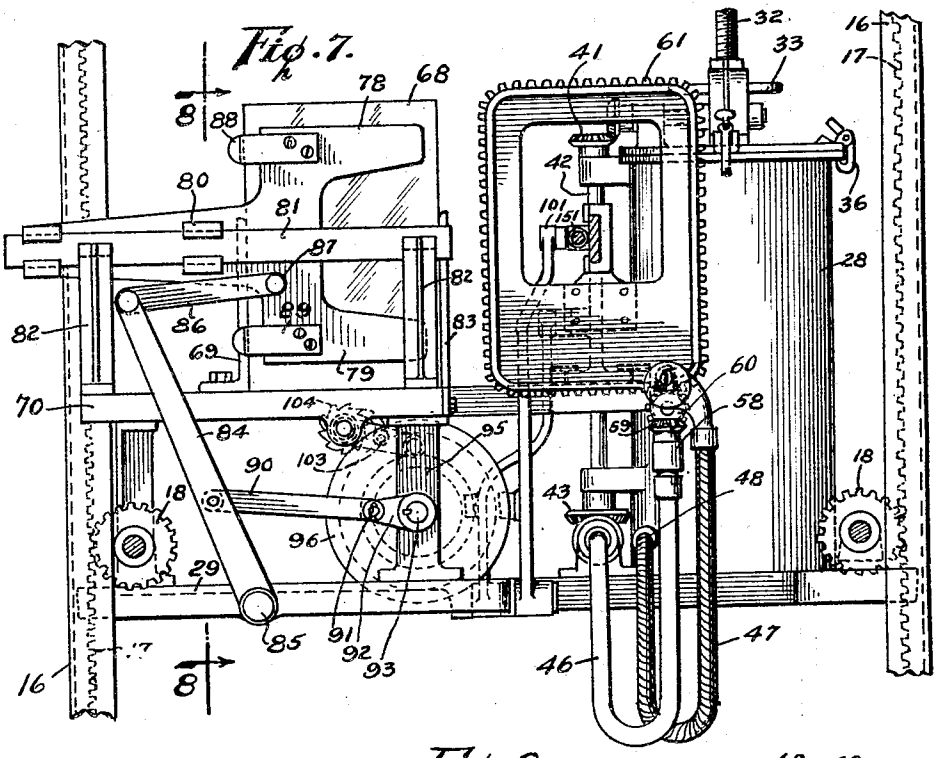
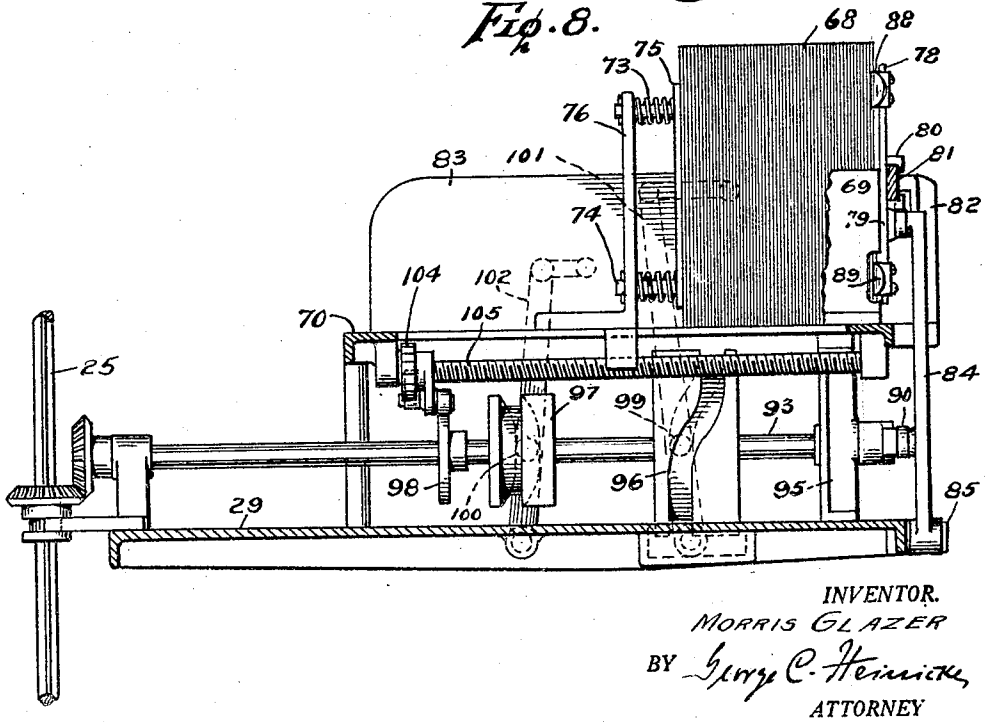


Fig. 8.



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Patented Apr. 28, 1931

1,802,597

UNITED STATES PATENT OFFICE

MORRIS GLAZER, OF BROOKLYN, NEW YORK

GLAZING MACHINE

Application filed July 5, 1929. Serial No. 376,044.

This invention relates to the art of glazing and principally a new automatically working window pane setting and puttying machine, and it is the principal object of my invention to provide a machine of this character adapted to set any size and number of windows into their respective frames to supply putty to the windows placed in the frame, press and smooth the putty.

Another object of my invention is the provision of a motor operated machine of this character equipped with suitable means for guiding and swinging the puttying nozzle around all four sides of a pane set into a frame.

A further object of my invention is the provision of a machine of the above identified character, equipped with means to successively and alternately regulate the operation of the glass setting and puttying mechanisms to suit the prevailing conditions.

A still further object of my invention is the provision of a glass setting and puttying machine equipped with suitable means for stacking and holding the glass panes prior to their setting.

These and other objects and advantages of my invention will become more fully known as the description thereof proceeds, and will then be specifically defined in the appended claim.

In the accompanying drawings, forming a material part of this disclosure:—

Fig. 1 is a front elevation of a window pane setting and puttying machine constructed according to my invention.

Fig. 2 is a plan view in section on line 2—2 of Figure 1.

Fig. 3 is a side elevation of the machine seen in the direction of arrow 3, Figure 1.

Fig. 4 is a fragmentary enlarged detail sectional view of the puttying head.

Fig. 5 is a plan view in section on line 5—5 of Figure 1.

Fig. 6 is a fragmentary detail view of the window pane setting mechanism.

Fig. 7 is a rear view of the machine seen along line 7—7 of Figure 5.

Fig. 8 is a section on line 8—8 of Figure 7.

As illustrated, the machine comprises a bed or base plate 10 on wheels 11 carried by axles 12 which also carry near the inner faces of wheels 11 gears 13 meshing with and running along rack bars 14 on substantially L-shaped tracks 15 for the wheels 11.

A frame composed of pairwise arranged posts 16 substantially L-shaped in cross-section, and connected on top by cross-bars 17 rests on suitable supports on base 10, and carries on the inside of posts 16 toothed bars or racks 17 with which engage gears 18 on transverse shafts 19 carrying on their outer faces bevel gears 20 in mesh with bevel gears 21, on vertical bars 22. A cross bar 23 in frame has a plurality of sockets 24 formed therewith in which the upper ends of the vertical bar 22 for the return strike, bar 25 for the glass setting mechanism, 26 for the puttying mechanism, and 27 for the upward stroke are slidably guided.

The putty container or drum 28 rests on a platform 29 adapted to be elevated and lowered by means of a motor operated and clutch controlled mechanism hereinafter to be more fully described.

The putty drum 28 contains the putty 30 standing under the pressure of a piston 31, the rod 32 of which is threaded and adapted to be operated by a hand wheel 33.

The rod 32 is guided in a suitable bracket 34 on the lid 35 which is adapted to be clamped to the upper flange of the container by means of a plurality of clamping arrangements 36.

Between bracket 34 and lid the piston rod carries a worm gear 37 in mesh with a worm 38 (Fig. 6) on a shaft 39 which carries also a bevel gear 40 in mesh with a bevel gear 41 at the upper end of a vertical shaft 42 car-

rying at its lower end a bevel gear 43 in mesh with a bevel gear 44 on a socket 45 to which is attached the flexible shaft 46 from which the putty distribution is controlled, as will be hereafter described. The putty 30 is distributed through a flexible hose 47 attached at one end to a nipple 48 of the putty container, while its other end carries a putty distributing head, generally designated 49, and shown in detail in Figure 4.

The head comprises a nozzle 50 from which the putty under the pressure of piston 31 issues in the direction of the arrows, and is pressed against the frame 51 in which a window 52 is to be set.

During the movements of the puttying head and nozzle along a window frame, the putty from the nozzle is pressed in place by means of a finger 53 or the like controlled by a pin 54 arranged within a suitable chamber of head 49 about the front end of which a spring 55 is wound resting at its inner end against a plug or bearing 56, while its outer end engages a collar 57 on the finger 53.

The upper end of flexible shaft 46 is held in a bracket 58, and carries a bevel gear 59 in mesh with a bevel gear 60 meshing with the teeth of a frame 61.

The arm 62 of the head 49 has pivotally attached thereto, as at 63, a link 64 having a weighted head 65, while its lower end has secured thereto one end of a spring 66, the other end of which is attached to a pin of a bracket 67.

The glass panes 68 rest in juxtaposition between the upright arms of the brackets 69 on a supporting table 70. These brackets can be adjusted to receive arms of any size by means of bolts 71 displaceable in slots 72 in table 70. The glass plates are securely held in juxtaposition on table 70 by means of springs 73 wound about bars 74 and resting with one of their ends against a holder plate 75 while their other ends rest against the upright flange 76 of a plate 77.

The plates 68 are held in their stacked position in frame 69 by means of a suitable clamp plate 78, 79, guided by means of guide lugs 80 or the like, along a central bar 81 normally held between guide rests 82 and a rod 83.

This entire mechanism can be lifted to expose the furnished glass plate at the place of setting by means of a bell crank lever arrangement, the longer arm 84 of which is pivoted at its lower end in the machine frame, as at 85 while its shorter arm 86 is pivoted to the upper end of arm 84 at one end, and at its opposite end pivoted to plate 78, as at 87. Lips or tongues 88 and 89 guide plates 78, 79 suitably.

The arm 84 of the bell-crank lever arrangement has pivotally secured thereto intermediate its ends an arm 90, having its other end pivotally attached, as at 91, to a link 92 keyed to a shaft 93 journalled in uprights 94.

The shaft 93 carries a cam wheel 95, and cam wheels 96, 97, and 98. In the cam grooves of wheels 96, 97 the pins 99 and 100 of bell-crank-levers 101, 102, are displaceable for the operation of the puttying device.

The wheel 98 operates through a link connection 103, a toothed wheel 104 on a screw threaded bar 105.

The table 70 rests on a transverse shaft 106 equipped with worm gears 107, 108 in mesh with worm gears 109, 110 on shafts 19.

The machine is operated from a motor 111, the shaft of which operates a worm gear 112 on a shaft 113 carrying other worm gears 114, 115, 116 and 117 in mesh with gears 118, 119, 120, and 121 respectively on shafts 122, 123, 124 and 125 respectively, carrying clutch members 126, 127, 128, and 129 respectively adapted to engage similar clutch members 130, 131, 132 and 133 respectively at the ends of shafts 27, 26, 25 and 22 respectively.

Clutch operating members 134, 135, 136 and 137 respectively are operated from a cam drum 138 having a plurality of cams 139 thereon and operated from a worm 140 on shaft 113 from the motor. The clutch shifting members 141, 142, 143 and 144 respectively are operated from the cams on said drum as will hereinafter be more fully described.

The shaft 113 carries at its inner end a clutch member 145 adapted to be engaged by a clutch member 146 on a worm gear 147 in mesh with a gear 148 in turn meshing with a gear 149 operated from gear 13 on shaft 120.

The machine operates as follows:

The shaft 27 is intended for the elevation of the entire puttying and glass setting mechanism, shaft 26 for the operation of the puttying device, shaft 25 for the operation of the glass setting mechanism and shaft 22 for the return strike of the machine.

Upon the starting of the motor and throwing in of the proper clutches for the operation of the glass setting mechanism the glass plate in its holder is carried opposite to the frame into which the glass is to be set, the front holder devices are swung outwardly and the front glass plate 68 is set into its frame 150 by the plunger 151 spring controlled, as at 152, and held in this position.

Hereafter the puttying mechanism is operated by the throwing of the proper clutches and the puttying is expressed from its container and deposited by the proper manipulation of the nozzle.

Hereafter the mechanism is returned into its original position for a new operation.

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

In a machine of the class described, a putty distributing means, and a glass pane setting means, a motor, means for guiding said putty distributing means to the pane for ap-

plying the putty operated from said motor, clutches for coupling motor and said guiding means, a cam drum operated from said motor, and couplings for coupling said drum with said glass pane setting means, means for holding the set glass pane in its frame, and a means for supplying and smoothing the putty for said distributing means about the four edges of the glass pane on its frame.

Signed at New York, in the county of New York and State of New York this 22nd day of March, A. D. 1929.

MORRIS GLAZER.