July 21, 1953 E. J. BERGER ET AL 2,646,194

TEXTILE TREATING MACHINE

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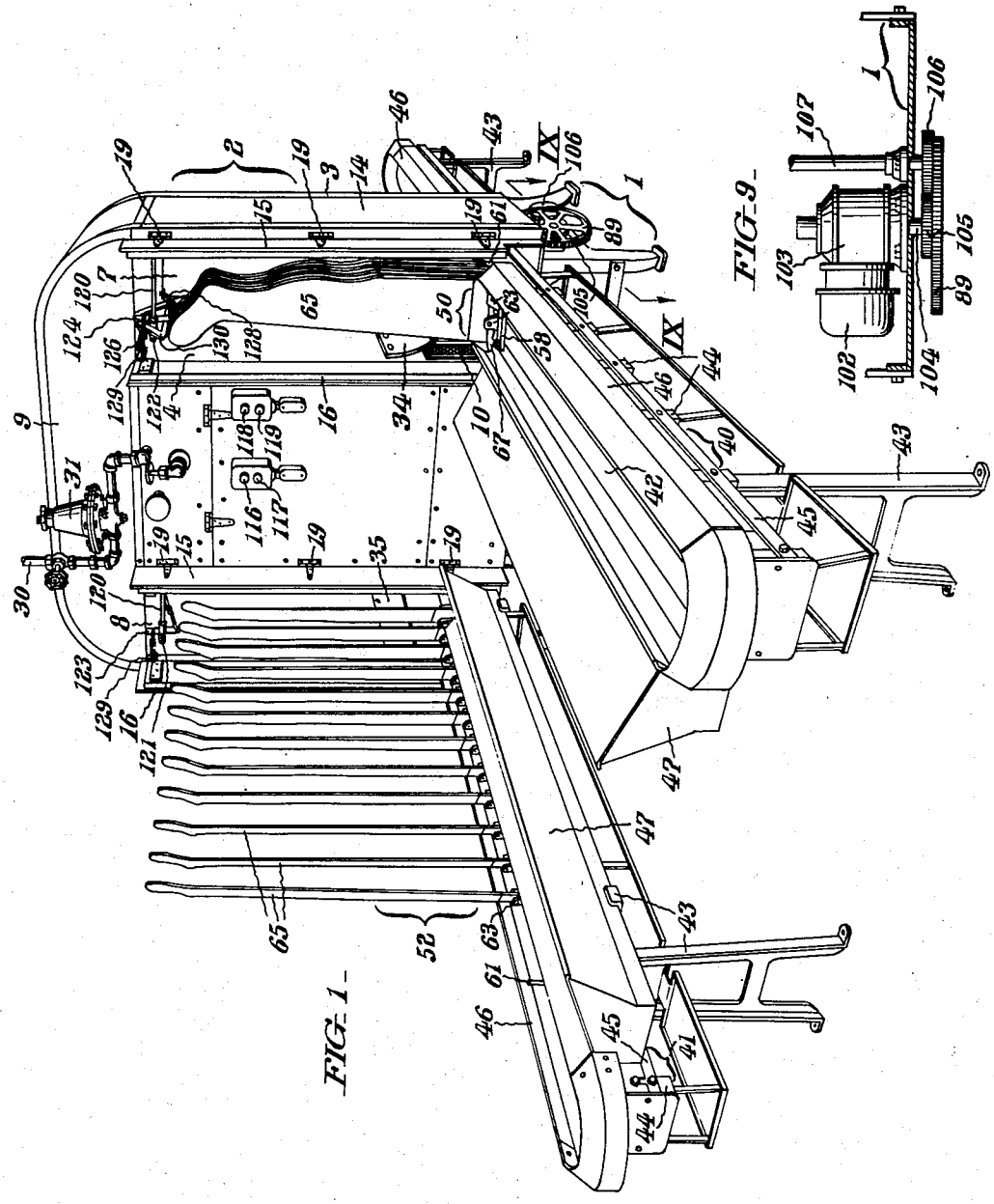


FIG. 1.

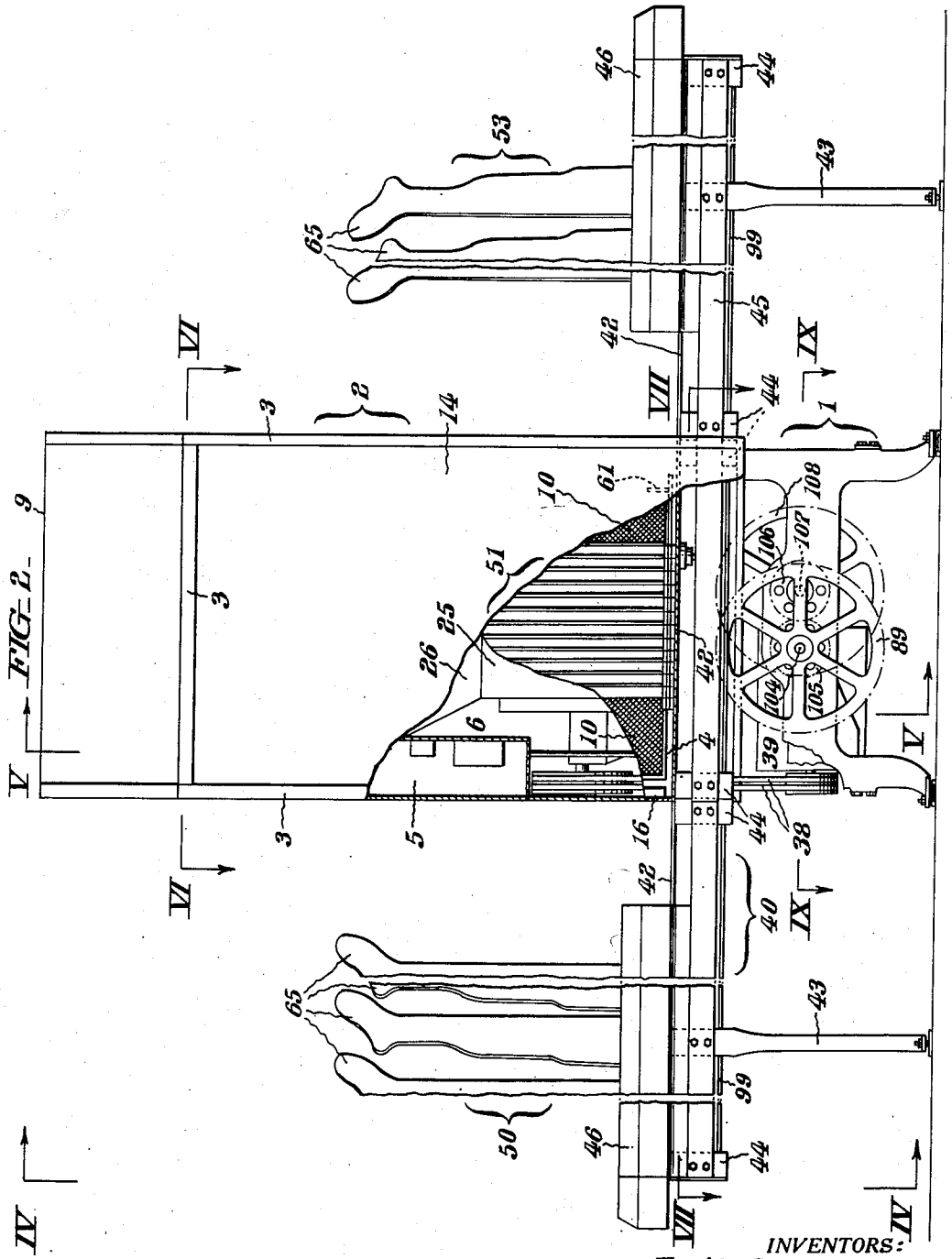
FIG. 9.

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July 21, 1953 E. J. BERGER ET AL 2,646,194

TEXTILE TREATING MACHINE

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TEXTILE TREATING MACHINE

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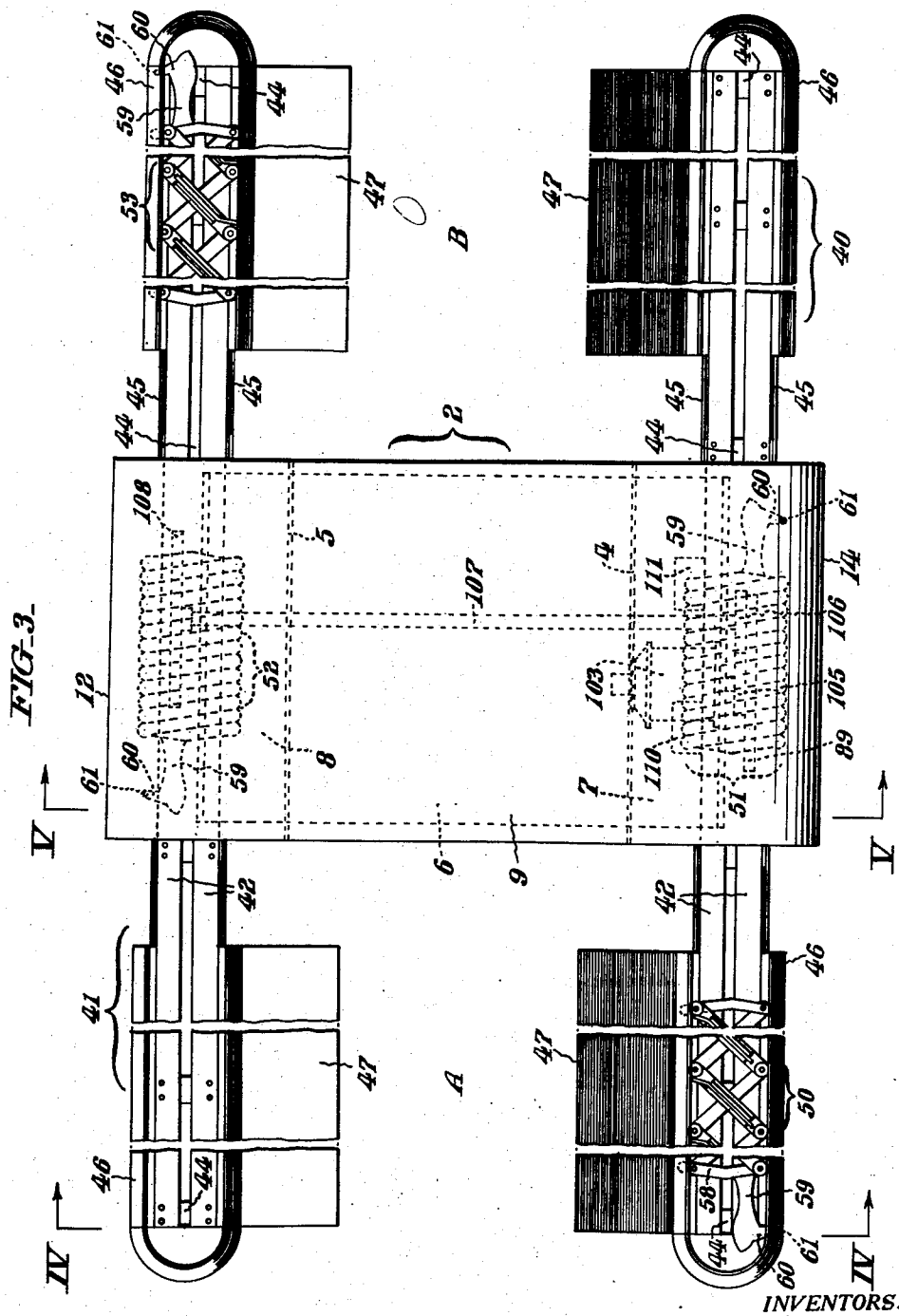


FIG-3

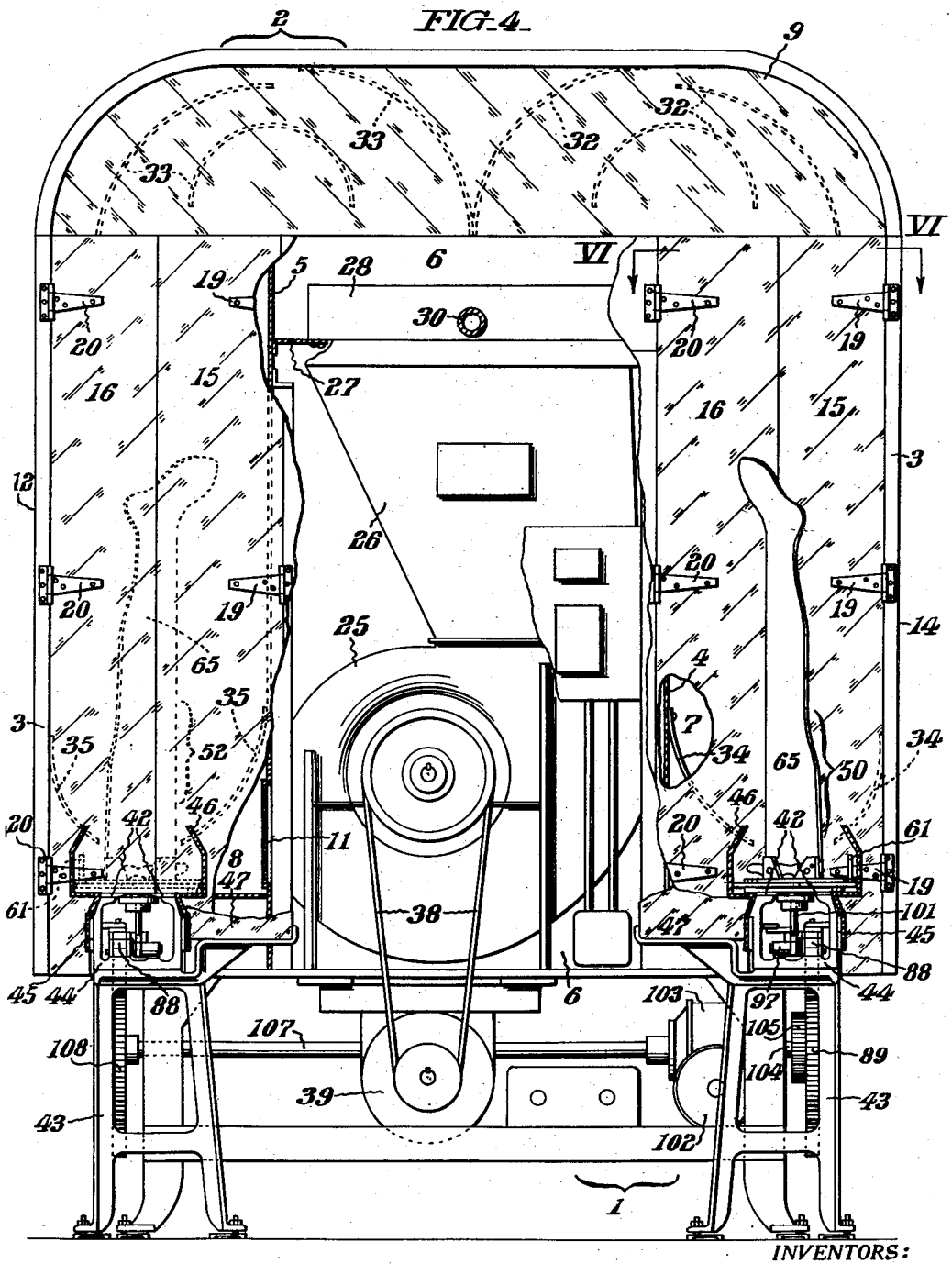
INVENTORS:
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July 21, 1953 E. J. BERGER ET AL 2,646,194

TEXTILE TREATING MACHINE

Filed Feb. 14, 1951 15 Sheets-Sheet 4

FIG-4



INVENTORS:
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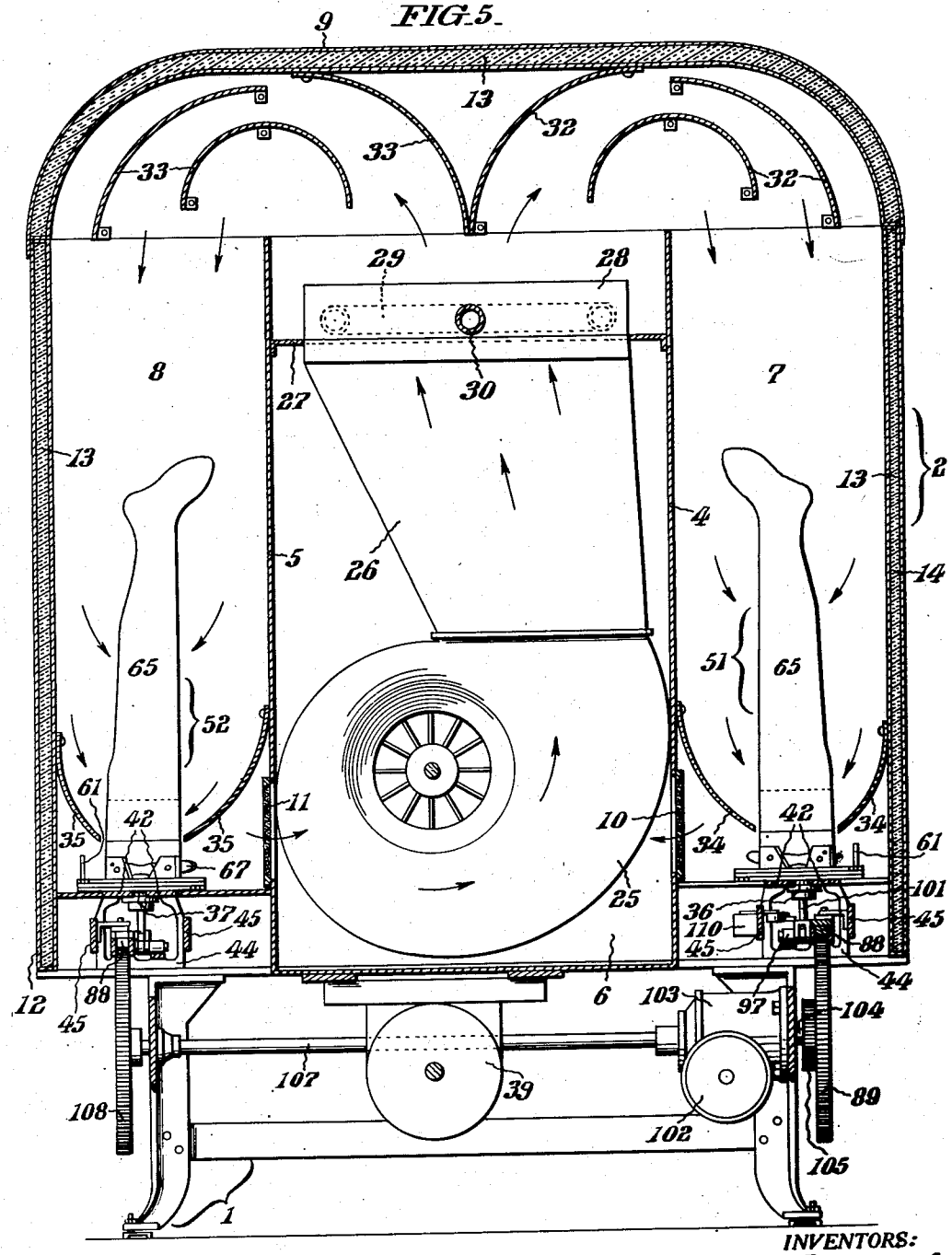
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July 21, 1953 E. J. BERGER ET AL 2,646,194

TEXTILE TREATING MACHINE

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FIG. 5.



INVENTORS:
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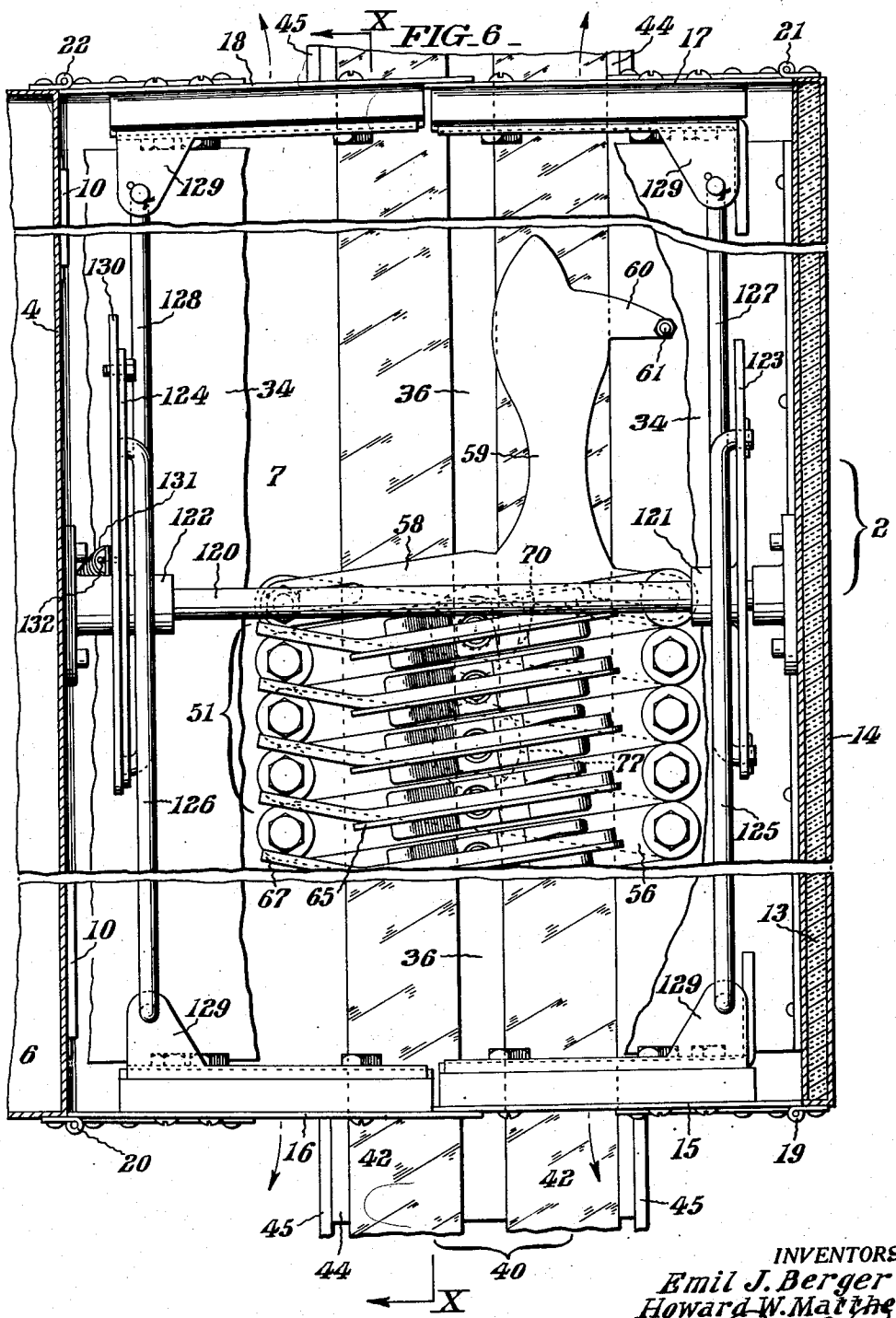
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TEXTILE TREATING MACHINE

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FIG. 6



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TEXTILE TREATING MACHINE

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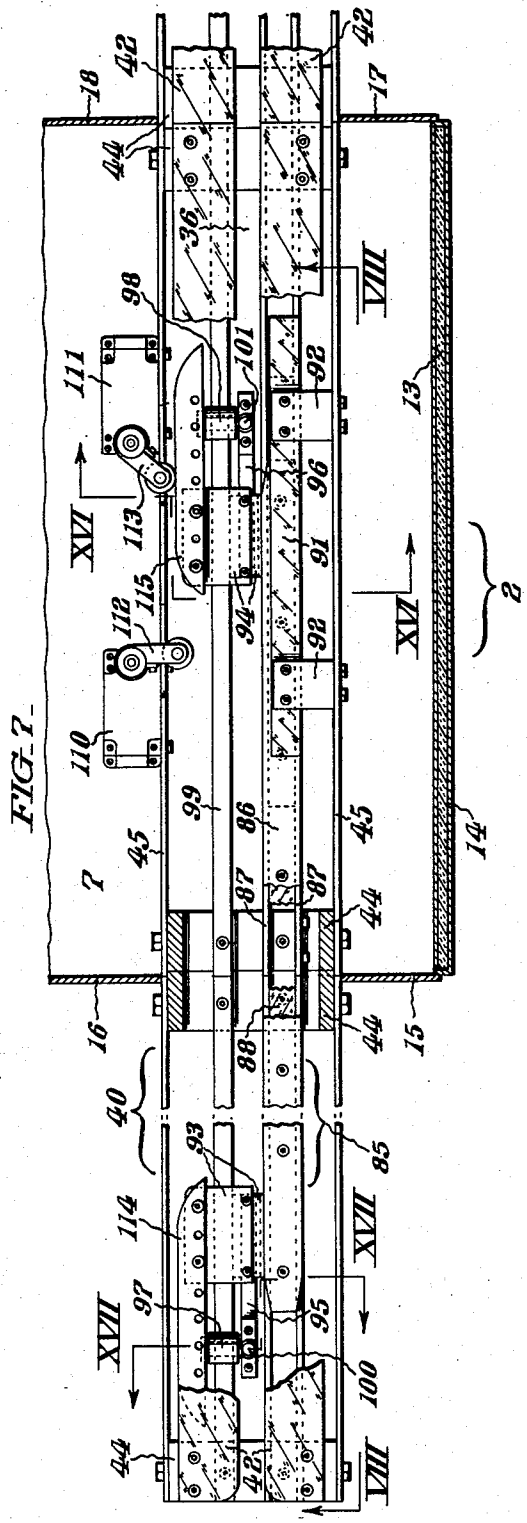


FIG. 7.

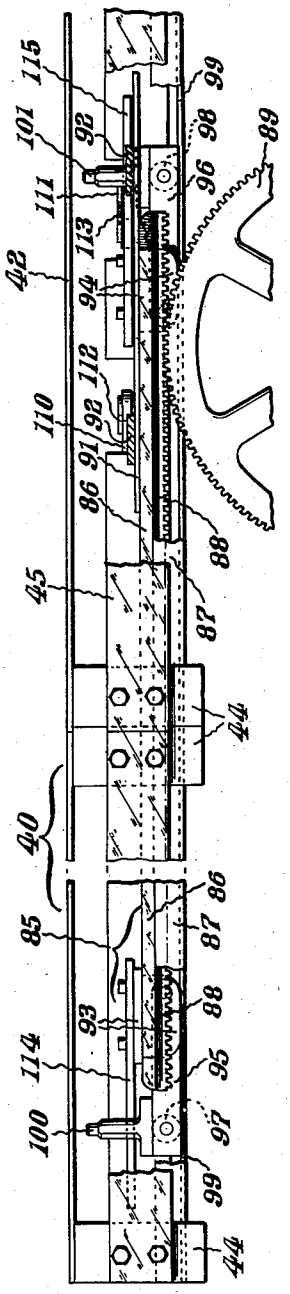


FIG. 8.

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TEXTILE TREATING MACHINE

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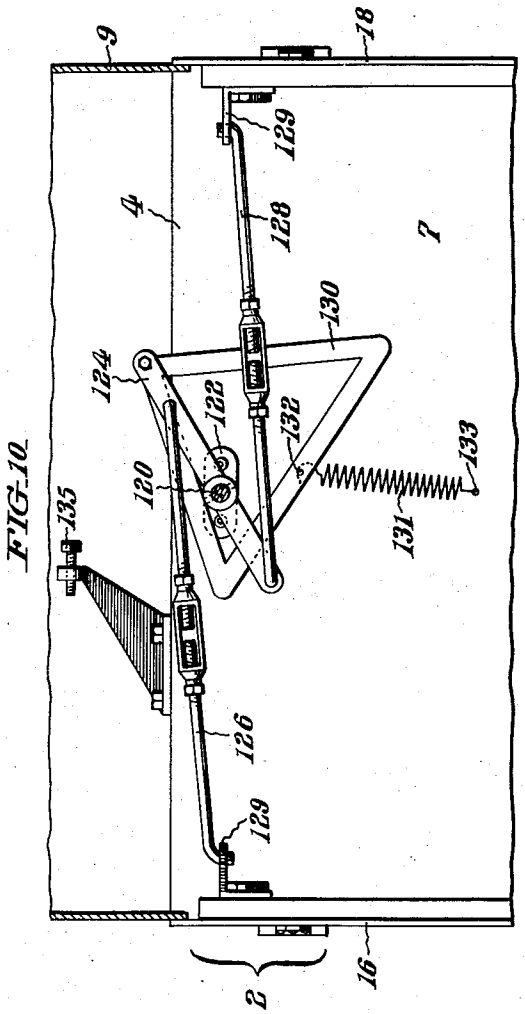


FIG. 10

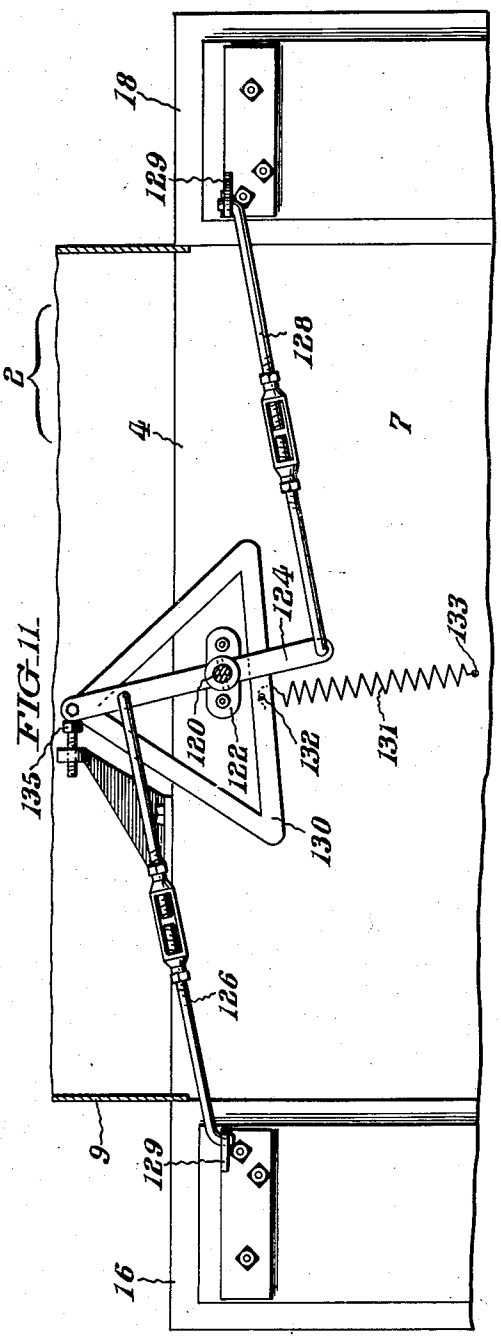


FIG. 11

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FIG. 12.

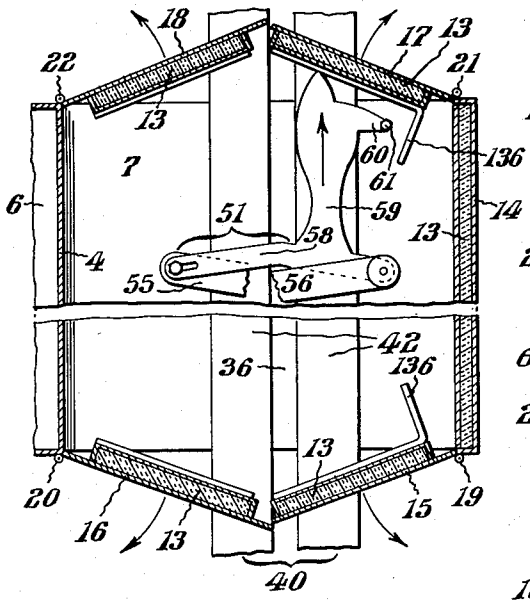


FIG. 13.

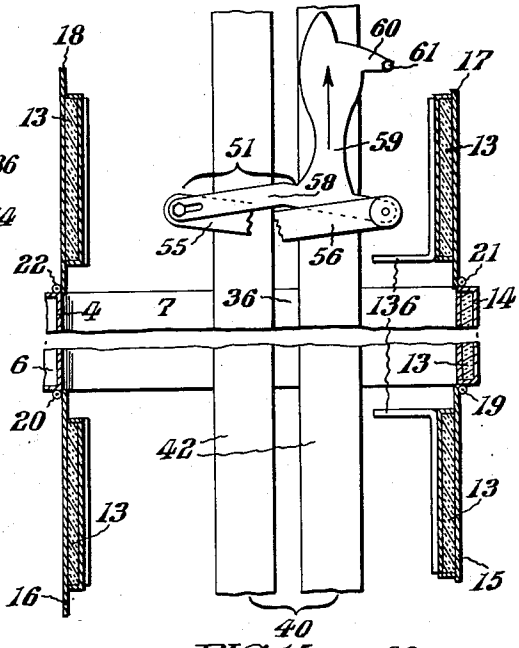


FIG. 14.

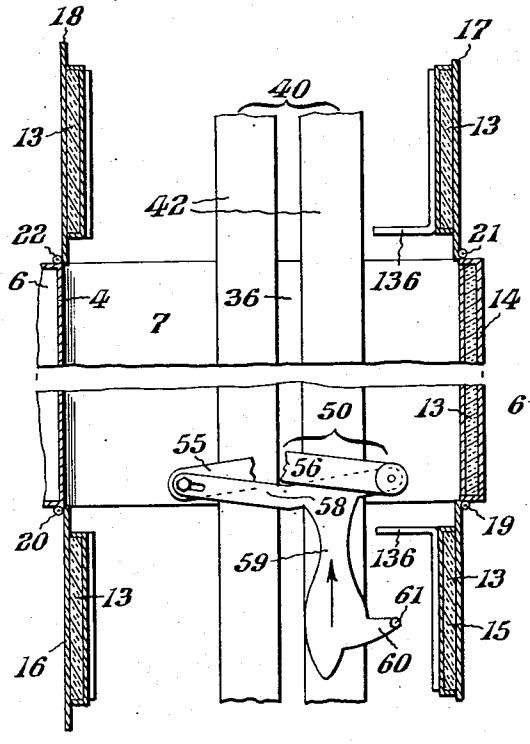
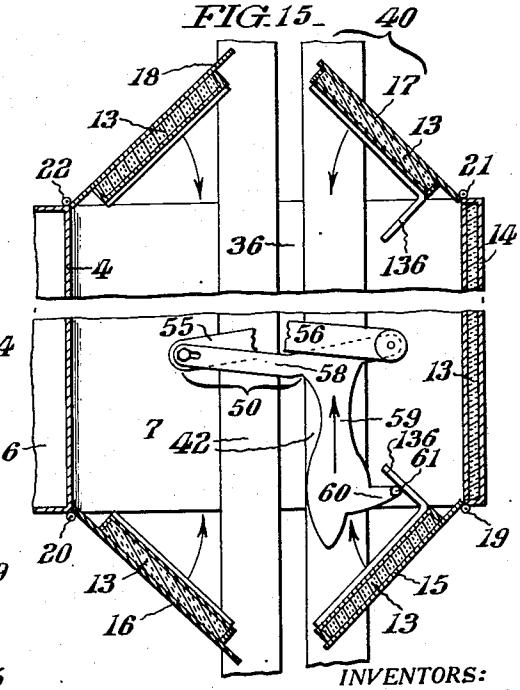


FIG. 15.



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FIG. 16

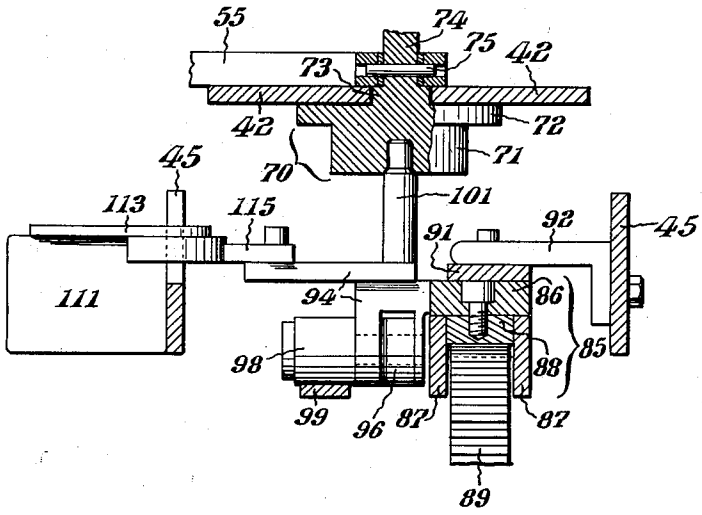
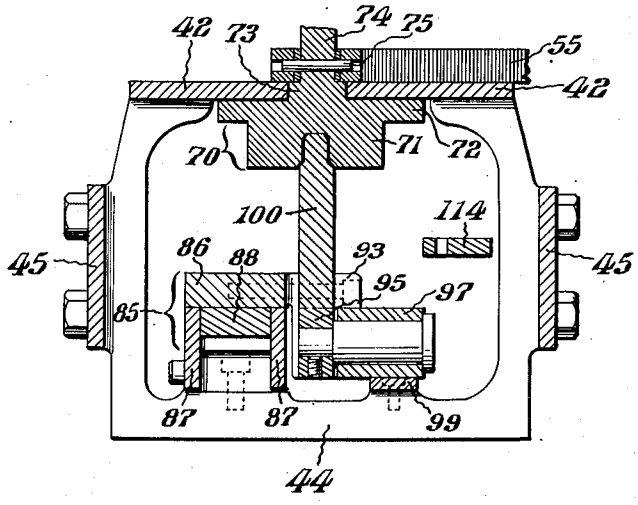


FIG. 17



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TEXTILE TREATING MACHINE

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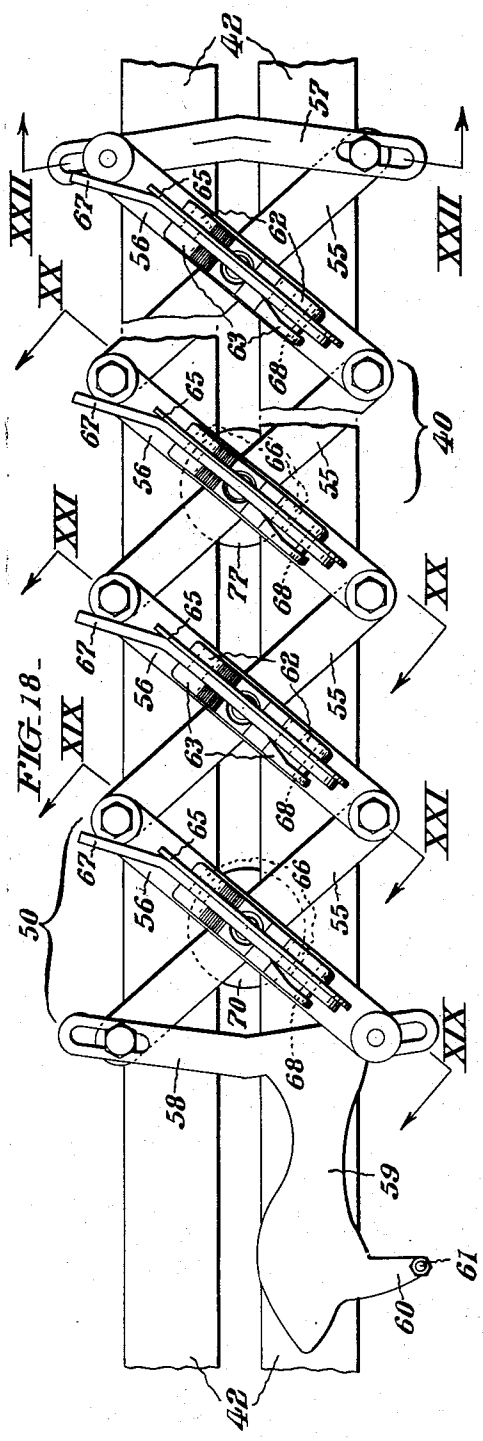


FIG. 18.

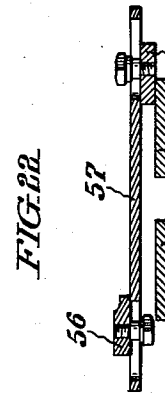


FIG. 22.

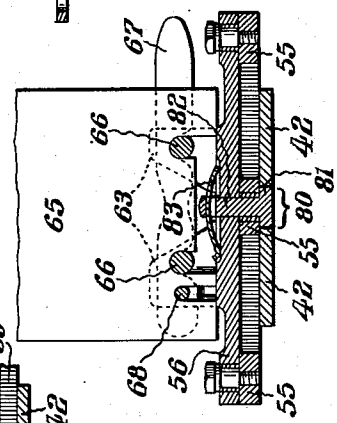


FIG. 21.

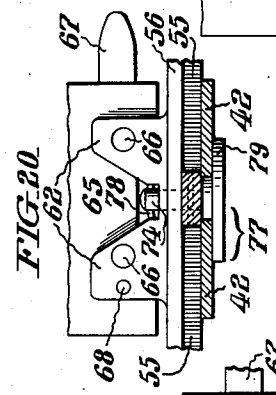


FIG. 20.

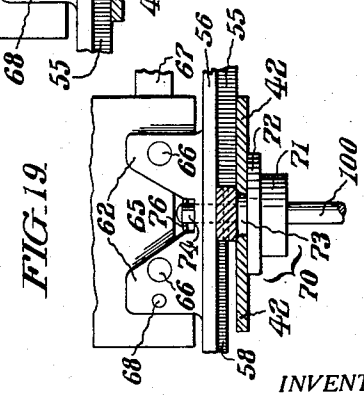


FIG. 19.

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TEXTILE TREATING MACHINE

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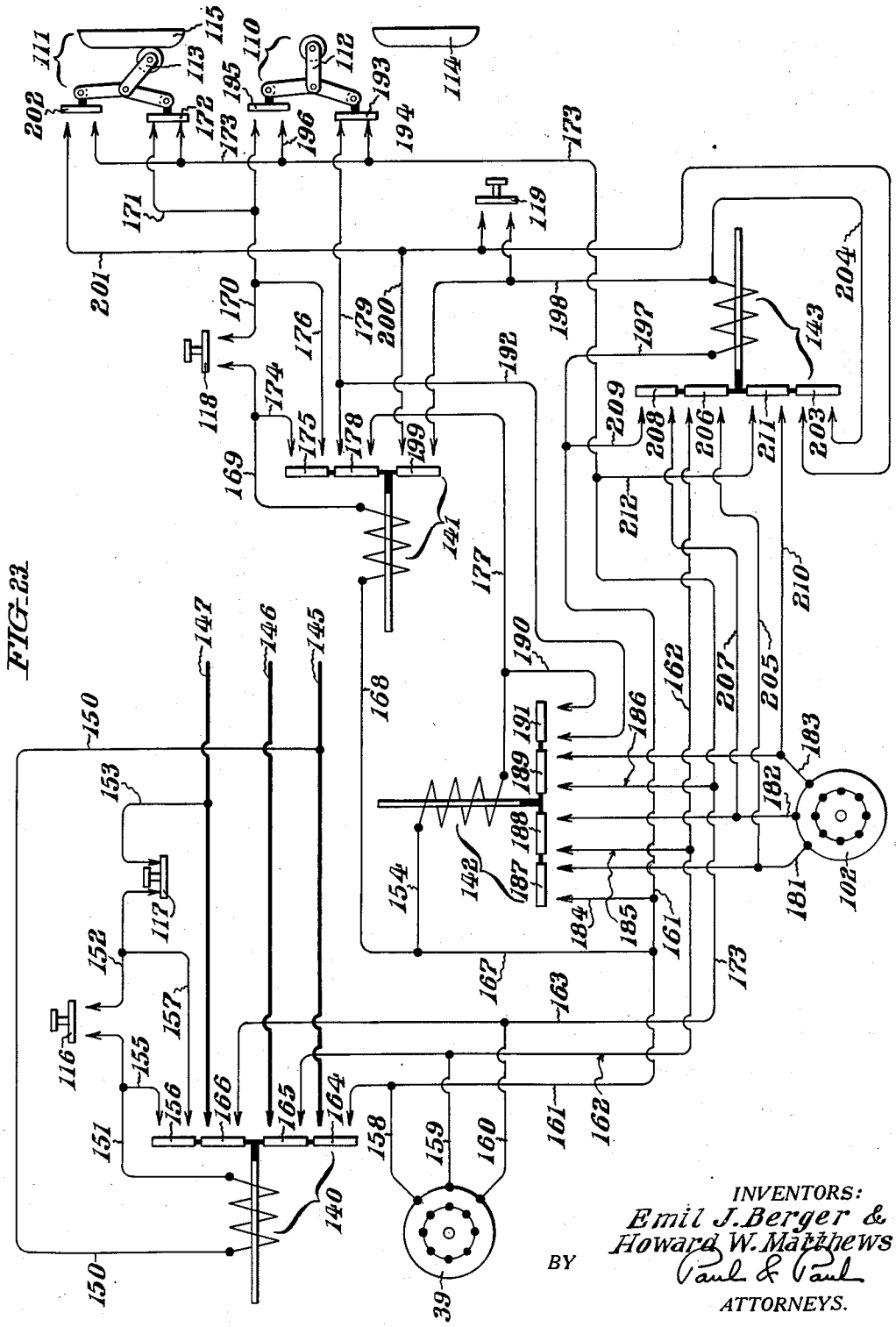


FIG. 23

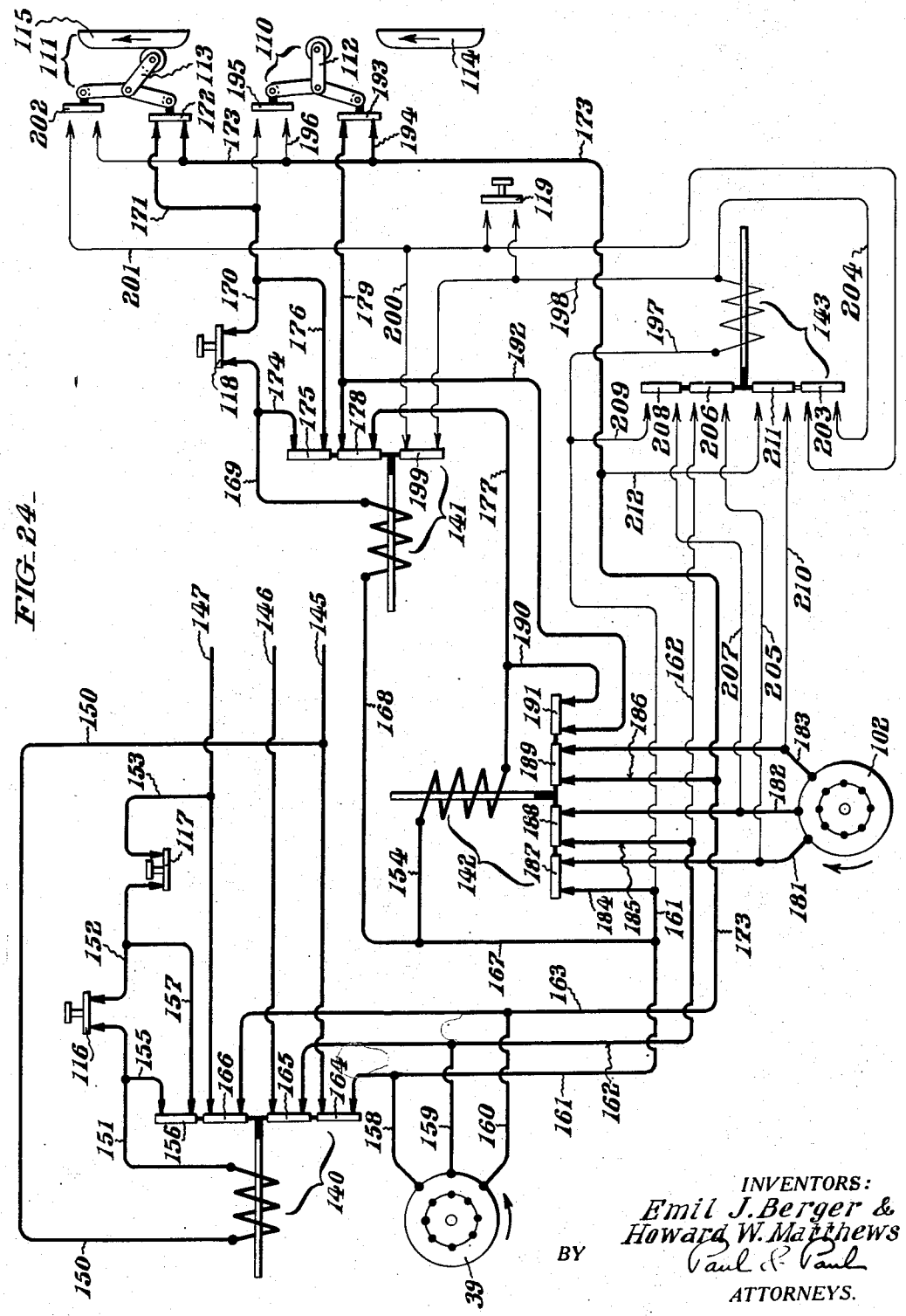
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TEXTILE TREATING MACHINE

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FIG. 24



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TEXTILE TREATING MACHINE

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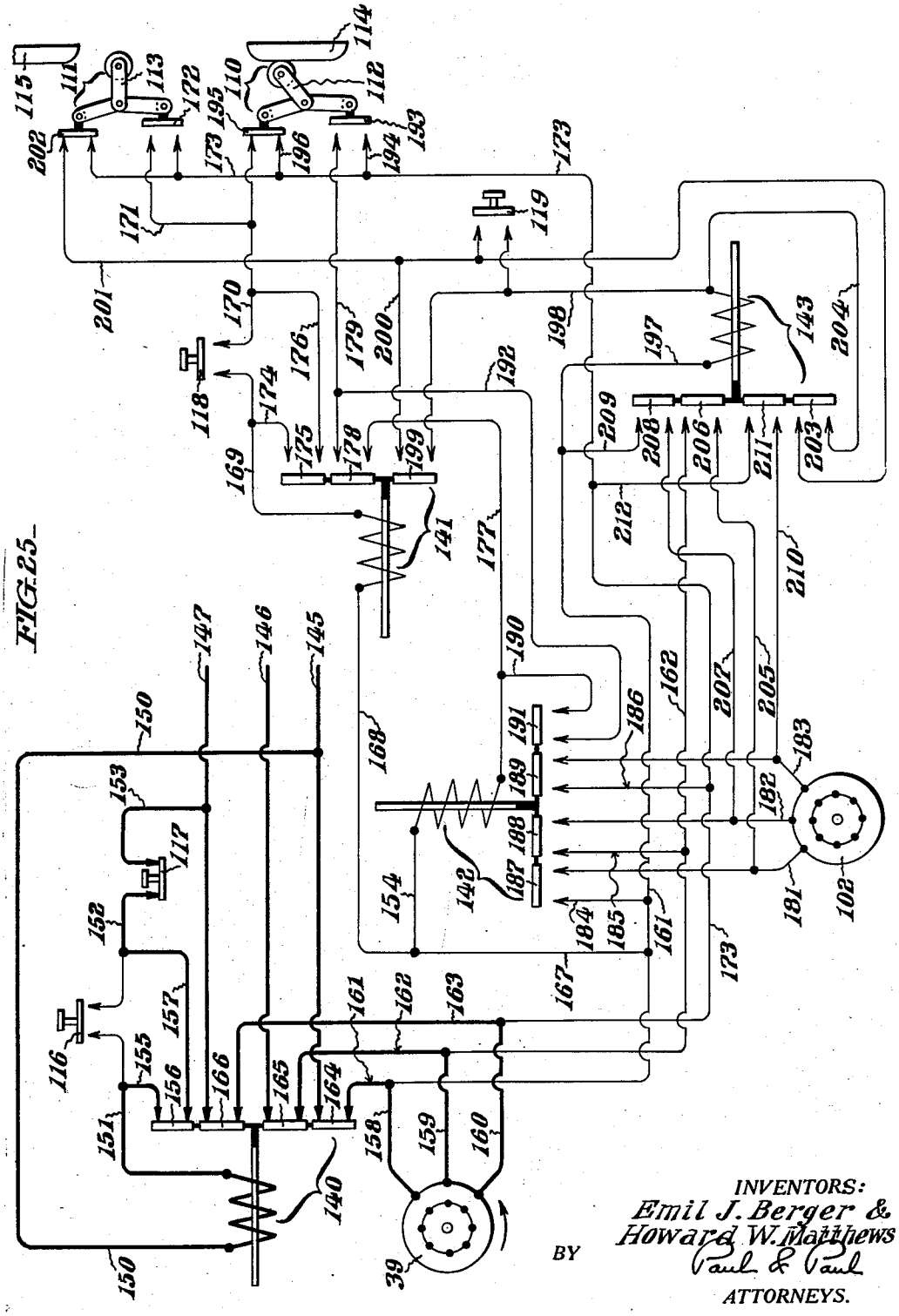


FIG. 25

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TEXTILE TREATING MACHINE

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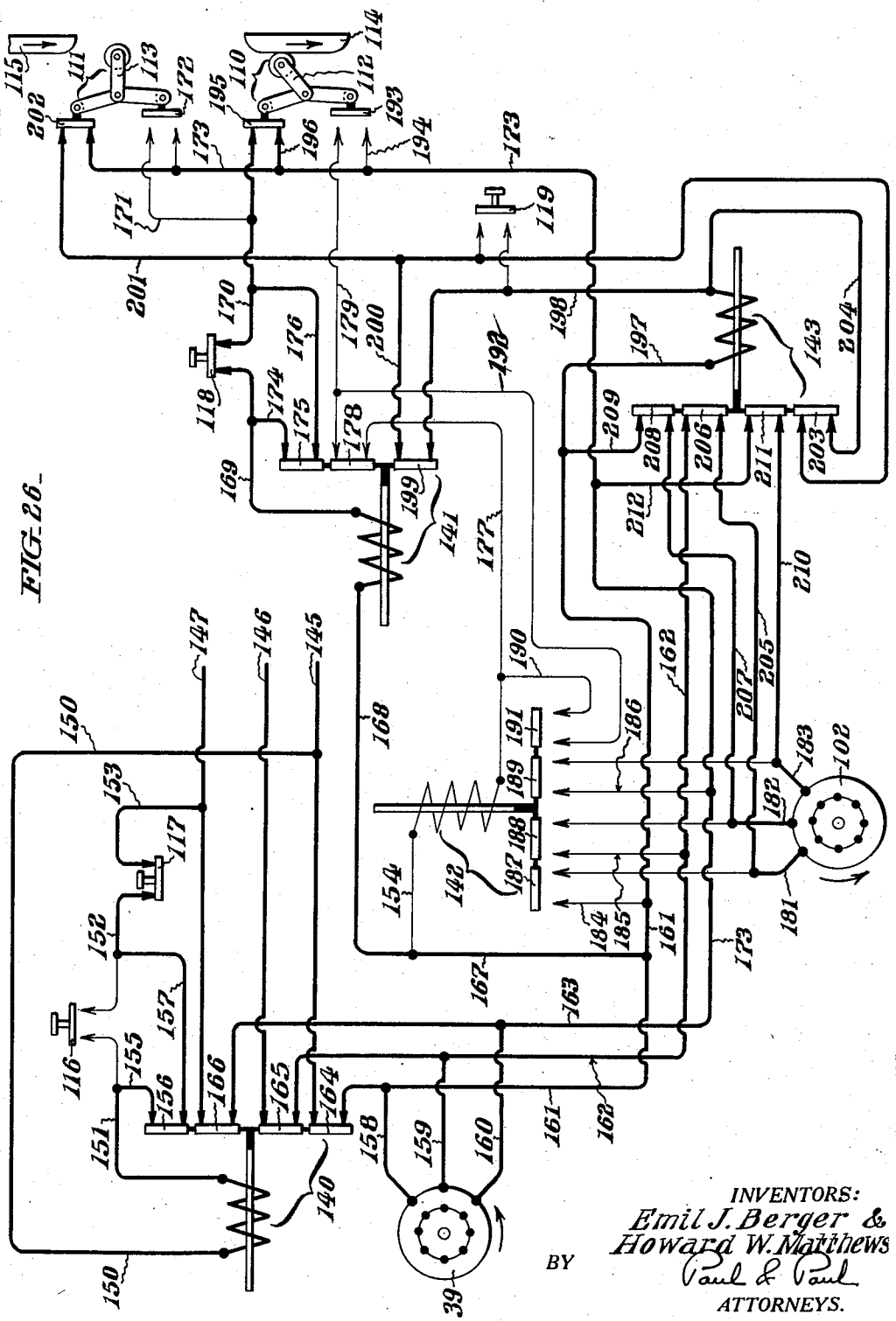


FIG. 26.

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Patented July 21, 1953 2,646,194

UNITED STATES PATENT OFFICE

2,646,194

TEXTILE TREATING MACHINE

Emil J. Berger, Lansdale, and Howard W. Matthews, Souderton, Pa., assignors to Dexdale Hosiery Mills, Lansdale, Pa., a corporation of Pennsylvania

Application February 14, 1951, Serial No. 210,894

17 Claims. (Cl. 223—76)

1

This invention relates to machines useful in setting, drying or otherwise treating textile products such as hosiery or the like in preparation for marketing. More particularly, it is concerned with machines generally of the type disclosed in U. S. Patents Nos. 2,243,997 and 2,321,452, granted us on June 3, 1941, and June 8, 1943, respectively, wherein the articles are placed on supports which are shiftable along guideways and movable into a chamber wherein a suitable fluent treating medium is circulated to permanentize the shape of the articles. In each of the patented structures a section of the guideway is attached to the door of the compartment and must be displaced laterally to introduce the article supports into and remove them from the treating chamber. This door displacing consumes considerable time and detracts to a corresponding degree from the efficiency of the machines from the standpoint of their output capacity.

One of the aims of our present invention is to overcome the drawback just referred to. This objective is realized, as hereinafter more fully disclosed, through provision of an improved treating apparatus having a treating chamber with doors at opposite ends thereof, a guideway which extends through the treating chamber at the bottom, and means whereby one support is passed in to the chamber concurrently with the removal of another.

In connection with a textile treating apparatus having the foregoing attributes, it is a further object of our invention to provide mechanism whereby the doors of the treating chamber are automatically opened and closed by the form supports as the latter are moved along the guideway.

Another aim of our invention is to attain further increased output from and greater operative economy in a machine of the character referred to which desideratum is made possible of realization as also set forth more specifically hereinafter, through incorporation in a compact unit, of duplicate treating chambers with individually associated guideways and form-supporting carriages, and with means common to said chambers for circulating the treating medium through them.

Other objects and attendant advantages will appear from the following detailed description of the attached drawings, wherein

Fig. 1 is a perspective view of our improved textile treating machine looking toward the front end thereof.

Fig. 2 is a broken out view showing the machine

2

partly in side elevation and partly in longitudinal section.

Fig. 3 shows the top plan of the machine.

Figs. 4 and 5 are transverse sectional views taken as indicated respectively by the angled arrows IV—IV and V—V in Figs. 2 and 3.

Fig. 6 is a horizontal sectional view taken as indicated by the angled arrows VI—VI in Figs. 2 and 4.

Fig. 7 is a broken out fragmentary view in horizontal section taken as indicated by the angled arrows VII—VII in Fig. 2.

Fig. 8 is a broken out fragmentary view in longitudinal section taken as indicated by the angled arrows VIII—VIII in Fig. 7.

Fig. 9 is a fragmentary detail view in horizontal section taken as indicated by the angled arrows IX—IX in Figs. 1 and 2.

Fig. 10 is a fragmentary view in horizontal section taken as indicated by the angled arrows X—X in Fig. 6 and showing part of the operating mechanism for the doors of the treating chamber, with the doors in normal or closed position.

Fig. 11 is a view like Fig. 10 showing the doors in open position.

Figs. 12, 13, 14 and 15 are diagrammatic views in horizontal section showing successive stages in the opening and closing of the compartment doors.

Figs. 16 and 17 are detail views in cross section taken as indicated respectively by the angled arrows XVI—XVI and XVII—XVII in Fig. 7.

Fig. 18 is a broken out fragmentary detail view in top plan of one of the form supporting supports drawn to a larger scale.

Figs. 19, 20, 21 and 22 are detail views in cross section taken as indicated respectively by the angled arrows XIX—XIX, XX—XX, XXI—XXI and XXII—XXII in Fig. 18.

Fig. 23 is a wiring diagram of the various electrical instrumentalities by which the machine is operated and controlled.

Figs. 24–26 are views like Fig. 23 showing how the control system functions under different conditions of operation.

With reference first more particularly to Figs. 1–6 of these illustrations, it will be seen that our improved textile treating machine comprises a transversely-arranged base frame 1 whereon is rigidly mounted a housing 2. As shown, this housing 2 is constructed with walls of sheet material whereof the component panels are united at their meeting edges by angle strips 3. Laterally spaced partitions 4 and 5 set apart within the housing, a central compartment 6 between two

flanking treating chambers 7 and 8. The partitions 4 and 5 terminate short of the roof 9 of the housing, see Fig. 5, for communication of the treating chambers 7 and 8 at their tops with the central compartment 6. At their bottoms, the chambers 7 and 8 communicate by way of screened window openings 10 and 11 in the partitions 4 and 5. From Fig. 5 it will be noted that the side walls 12, 14 and the roof 9 of housing 1 are lined with thermal insulation 13. Each chamber 7, 8 is provided at opposite ends with double doors 15, 16 and 17, 18 which, like the housing walls, are lined with insulation, and which are hinged as at 19, 20 and 21, 22 to the framing of the housing at the opposite side edges of the door openings.

Disposed in the central chamber 6 is a blower 25 with its discharge duct 26 extended upwardly and fitted into an opening in a diaphragm 27 bridged between the partitions 4 and 5. Surmounting the discharge outlet of the blower above diaphragm 27 is an open shroud 28 which surrounds a transversely-positioned heating coil 29 supplied with steam by way of piping 30 under control of the pressure reducing valve shown at 31 in Fig. 1. During the operation of the machine, air drawn into the side of the blower 25 is discharged through the outlet 26 of the latter and caused to divide equally into two separate streams by curved baffles 32 and 33 in the top corners of the housing, the air being thereby diffused and at the same time directed to pass downwardly in the treating chambers 7 and 8. Similar curved baffles 34 and 35 in the lower portions of the chambers serve to retard the two air streams before they pass through the screened windows 10 and 11 into compartment 6 for recirculation by the blower 25. In traversing the coil 29, the air is of course heated before division of the flow as above explained. The blower 25 is driven, through a belt connection 38, from an electric motor 39 supported within the base frame 1.

Arranged longitudinally of the machine to equal distances beyond the housing 2 centrally of and below the treating chambers 7, 8 are guideways 40 and 41 which are identical in construction. As instanced in Figs. 3–5 and 16, 17 each of the guideways 40, 41 comprises a pair of laterally-spaced track rails 42 which are supported at opposite ends of the guideways by stool frames, and which at intermediate points, are supported by crosswise-arranged U-shaped castings 44. The parts just described are rigidly connected together by longitudinally-extending tie bars 45. Extending around the ends of the guideways 40, 41 and throughout the greater portions of their lengths at opposite sides thereof are guards 46; and attached to the guideways at the inner sides are trays 47 for holding piles of the textile articles which are to be treated.

Movable on the rails 42 of the guideways 40 and 41 are supports 50, 51 and 52, 53 respectively. These supports 50 and 51 are identical in construction but oppositely arranged on the tracks, each being in the form of a lazy tong, see Figs. 16–22, comprising a plurality of crossed links 55, 56 and transverse links 57, 58 which latter are slotted to engage with the terminal pivots of the endmost pairs of the crossed links. In each instance the transverse link 58 is formed, for a purpose later on explained, with a dagger-like cam projection 59 having a lateral projection 60 with an upright stud 61. Upstanding from alternate crossed links 56 are pairs of lugs 62 and 63 which are laterally spaced for reception between them of flat upright forms 65 over which the textile articles are drawn and held to shape during treatment. For convenience of exemplification herein, the forms 65 are shown as being profiled for ladies' hosiery. Each form 65 has notches in its bottom edge to engage downwardly over pins 66 extending crosswise between the lugs 62, 63, of the corresponding link 56, and is held in place by a wedge lever 67 fulcrumed about a pivot pin 68 secured between said lugs. As best seen in Figs. 16–19, the pivot element 70 connecting the endmost pair of crossed links 55, 56 has a cylindric stop head 71 with a circumferential flange 72 to engage upwardly against the bottom faces of the rails 42, a diametrically-reduced cylindric portion 73 to engage between the rails, and a rounded 74 shank to serve as the connecting pivot for said links. The pivot element 70 is held in assembly by a pin 75 passed through a diametral aperture in the shank portion 74 of said element and through registering apertures in the link. An arcuate keeper element 76 of flat spring metal engaged through a transverse aperture in the top protruding end of the shank of pivot element 70 holds the link 56 assembled with its mate 57. The pivoting elements 77 (Fig. 20) for some of the other pairs of links 56, 57, except for the lack of a bottom head, are like the pivot element 70, and are held in assembly by a spring keeper 78, with their flanges 79 engaging the undersides of the rails 42. The center pivoting elements 80 (Fig. 21) for the remaining pairs of crossed links are in the form of bolts whereof the heads 81 fit into the interval between the track rails 42, and whereof the shanks 82 engaging upwardly through said links. Here again, in each instance, the parts are held assembled by an arcuate keeper 83 of flat spring metal.

The means provided for progressing the form supports associated with each guideway, includes an elongate subcarriage 85, see Figs. 7 and 8, consisting of a bar 86 which is arranged for travel on a pair of laterally-spaced longitudinal rails 87 supported by and secured to the main frame 1, the stool frames 43 and the castings 44 at a level below the rails 42. Secured centrally of the bottom of the bar 86 is a co-extensive toothed rack 88 which fits into the interval between the rails 87 and whereof the teeth are in mesh with a spur gear 89 affixed to a transverse shaft 104. In the region of the spur gear 89, the carriage 85 is prevented from rising from the rails 87 by an overlapping hold down plate 91 rigidly sustained by the brackets 92. Affixed to and extending from the carriage bar 86 adjacent opposite ends thereof, are lateral brackets 93 and 94 whereto are secured in turn, arm extensions 95 and 96 with rollers 97 and 98 to run on a supplemental track rail 99 which is supported by the frame members in the same manner as the rails 87 in parallel relation to the latter. Upstanding from the extensions 95 and 96 are coupling studs 100 and 101 which engage upwardly into socket holes in the central pivot elements 70 of the form supports as best seen in Figs. 16 and 17.

The machine is powered by a separate reversible electric motor 102 (see Figs. 2, 4, 5 and 9) with an associated speed reducer 103 to the output shaft 104 of which latter is affixed the rack gear 89. Through a pair of spur pinions 105, 106, rotary motion is communicated to a transverse shaft 107 having a spur wheel 108 thereon for driving the carriage rack 88 at the other side

of the machine. Accordingly, by operation of the motor 102, the carriages on the respective guideways are propelled in opposite directions at each actuation. For the purpose of automatically stopping the motor 102 when the carriages reach the limits of travel in opposite directions, we have provided on one of the guideways, a pair of limit switches 110 and 111 (Fig. 7) which are fixedly secured to such guideway. As shown, the switches 110 and 111 are so located that their actuating arms 112 and 113 respectively extend into the path of cam pieces 114 and 115 at opposite ends of the carriage. Centrally of the front end of the housing 2 is a switch with push buttons 116 and 117 for starting and stopping the fan motor 39, and a switch with push buttons 118 and 119 respectively for starting the carriage propelling motor 102 and for emergency control of the machine.

For description of the mechanism provided for automatically opening and closing the doors of the respective treating chambers 7 and 8, reference will now be had to Figs. 6, 10–15 and 18 of the drawings. Extending crosswise of each treating chamber at the top is a shaft 120 which, at opposite ends, is journalled in bearings 121 and 122 respectively on a side wall and on a partition of the housing 2. Pinned to the shaft 120 are levers 123 and 124 whereof the oppositely-extending arms are connected respectively, by means of adjustable link rods 125, 126 and 127, 128, to lug brackets 129 secured to the doors 15, 16 and 17, 18 at opposite ends of the compartment adjacent swinging edges of said doors. One arm of lever 124 is somewhat longer than the other arm, and pivotally connected by one of its corners to the end of said longer arm is a triangular element 130 which is made to open configuration so as to clear shaft 120. The element 130 is subject to a toggle spring 131 whereof one end is hooked to a pin 132 centrally of the side opposite the pivot corner of said element, and whereof the other end is secured to a fixed anchorage 133 on the partition. Incident to advance of one of the form supports 51 along its guideway from within the compartment in the direction of the arrow in Fig. 12 for example, the dagger 59 of said support will engage the door 17 to start opening it. Through motion communicated by the link rod 127 to shaft 120, the other doors 15, 17 and 18 of the group will be opened at the same time. Eventually, when lever 124 has been moved beyond vertical dead center relation in respect to shaft 120, the toggle spring 131 will take over and cause the doors to be swung suddenly to full open position as in Fig. 11, such position being determined by engagement of lever 124 with a fixed adjustable stop 135. As the other form support 50 enters the compartment (which in the meantime has been vacated by the form support 51) as shown in Figs. 14 and 15, the upstanding stud 61 on the dagger 59 thereof will eventually engage a lateral projection 136 adjacent the hinged edge of door 15 to start closing it. This movement is communicated through the linkage to shaft 120 which will now be oppositely turned, and, upon movement of the lever 124 past center in the reverse direction, the toggle spring 131 will again take over and cause all of the doors to be swung the rest of the way to closed position.

In addition to the switches 110, 111, 116, 117, 118, 119 already referred to, other instrumentalities utilized in controlling the functioning of the machine include, as shown in Figs. 23–26, multiple contact relays 140, 141, 142 and 143, the specific functions of which will be presently described.

The current for operating the machine is supplied from a three phase line of which the mains are designated 145, 146 and 147. In order to facilitate reading of the diagrams of Figs. 23–26, the "dead" circuits are indicated in light lines, and the live circuits in heavy lines.

Operation

Assuming the form supports to be positioned as shown in Fig. 3, i. e., with the supports 50 and 53 extended at the extreme left and right hand ends of guideways 40 and 41 and the supports 51 and 52 collapsed within the chambers 7 and 8. With the supports so positioned, attendants respectively stationed at A and B between the guideways 40 and 41 apply the stockings to the forms 65 on said supports. The "Start" button 116 (Fig. 24) is then pressed to establish current flow from main 145 through conductor 150, coil of relay 140, conductors 151, 152, closed stop switch 117 and conductor 153 to main 147, with consequent closing of said relay as in Fig. 24. Upon release of button 116, the current will by-pass from conductor 151 through branch conductor 155, contact bridge 156 of relay 140, branch conductor 157, conductor 152, closed switch 117 and conductor 153 to main 147, to keep relay 140 closed. Current will now be supplied from the mains 145, 146 and 147 to the tap wires 158, 159 and 160 of fan motor 39 by way of conductors 161, 162 and 163, and contact bridges 164, 165 and 166 of relay 140. The fan motor 39 being now in operation, the start button 118 is pressed, whereupon current flow will take place from conductor 161, through conductors 167, 168 coil of relay 141, conductors 169, 170 and 171, bridge plate 172 of limit switch 111, and conductor 173 to conductor 163, likewise as shown in Fig. 24. The circuit just described is maintained upon release of switch 118, by current by-passed across the contacts of the latter through branch conductor 174, bridge plate 175 of relay 141, and branch conductor 176. Closing of relay 141 results in current flow from conductor 161 by way of conductor 167, tap 154, coil of relay 142, conductor 177, plate 178, conductor 179, contact 193 of limit switch 110, and conductors 194 and 173, to conductor 163. As a consequence of the closing of relay 142, current will be supplied to the leads 181, 182, 183 of carriage rack drive motor 102 respectively by way of conductors 184, 185 and 186, and contact bridges 187, 188, 189 of said relay. Under drive of motor 102 in the direction of the arrow thereon in Fig. 24, the form supports 50 and 51 will be progressed rightward on guideway 40 in Fig. 3, and the supports 52 and 53 progressed leftward on guideway 41. Incident to such travel, the form supports 51 and 52 will be extended as they leave the treating chambers 7 and 8, and the supports 50 and 53 will be collapsed as they enter said chambers, this action taking place automatically due to friction between the center pivots of the lazy tongs with the track rails 42. Also incidently, the doors of the chambers 7 and 8 will be opened and closed automatically in the manner already understood. As the form support carriages approach the opposite ends of guideways 40 and 41, cam 115 will pass beyond the actuating arm 113 of limit switch 111, with consequent retraction of contact bridge 172 from the terminals of conductors 171 and 172, and interruption of the current flow in the

coil of relay 141 which will then open. Notwithstanding this however, relay 142 will remain closed due to maintenance of the current flow in its coil by way of branch conductor 190, contact bridge 191 of said relay, branch conductor 192, conductor 179, contact bridge 193 of limit switch 110, and tap 194. Upon eventual actuation of limit switch 110 by cam 114, the contact bridge 193 of said switch will be retracted as in Fig. 25, with attendant interruption of current flow in coil of relay 142 which will then open to stop the fan motor 39 when the form support propelling carriages have reached the ends of their traverse. At the completion of this operative cycle with the parts positioned as in Fig. 25, the relay 140 will still be held closed through energization of its coil by current flow from conductor 155, contact bridge 156, relay 140, branch conductor 157, conductor 152, closed switch 117 and conductor 153, to main 147. Also at the completion of the cycle, the form supports 50 and 53 will be collapsed and within the chambers 7 and 8, and the supports 51 and 52 expanded and positioned respectively at the right and left hand distal ends of the guideways 40 and 41. While the articles on form supports 50 and 53 are undergoing treatment in the chambers 7 and 8, the attendants stationed at A and B remove the previously treated articles from the forms on supports 51 and 52 and replace them with new ones in readiness for treatment during the next operative cycle of the machine, which is initiated by again pressing the "Start" button 118. Due to setting of the limit switches 110 and 111 as in Fig. 25 by the cams 114 and 115 during the first described cycle, the live circuits of the control system will now be as in Fig. 26, i. e., with the coil of relay 141 energized and the latter closed by current flow through conductors 167, 168, 169, 170, contact bridge 195 of limit switch 110, tap 196, and conductors 173, 163. Relay 143 will also be closed now by current flow through its coil by way of conductors 161, 197, 198, contact bridge 199 of relay 141, conductors 200, 201, contact bridge 202 of limit switch 111, and conductors 173, 169, and be held closed by current flow through conductor 204, contact bridge 203 and conductor 201. As a consequence, current is supplied to the leads 181, 182 and 183 of carriage motor 102 respectively from conductors 162, 161 and 163, by way of conductors 205 and contact bridge 206; by way of conductor 207, contact bridge 208 and tap 209; and by way of conductor 210, contact bridge 211 and tap 212. This time carriage motor 102 is thus driven reversely as indicated by the arrow in Fig. 26. During this cycle, therefore, the form supports are returned to the relative positions in which they are shown in Fig. 3. As the cams 114 and 115 move in the direction of the arrows in Fig. 26, the switch 110 will be the first to be actuated when its contact bridge 195 will be retracted and its contact bridge 193 brought into engagement with the terminals of conductor 179 and tap 194. Eventually, the limit switch 111 will be actuated by cam 115 for retraction of its contact bridge 202, and replacement of its contact bridge 172 in engagement with the terminals of conductors 171 and 173. The circuits through the coils of relays 141 and 143 will thereby be broken, with consequent opening of said relays and stopping of carriage motor 102. At the completion of the last described cycle, the control system will be restored to the condition of Fig. 23.

The machine can be stopped at any time during either cycle by pressing "Stop" button 117, with attendant opening of relays 140 and 141, as well as of relay 142 or 143 whichever of the latter two may be closed at the time. If, after such stoppage, the "Reset" button 119 is pushed, the motor 102 will be reversed as in Fig. 26 and the form support carriages returned to the positions in which they are shown in Figs. 2 and 3.

Having thus described our invention, we claim:

1. In a textile treating machine, a treating chamber having a hinged door at each end thereof; a longitudinal guideway extending beyond opposite ends of the chamber; a carriage movable back and forth on the guideway; a pair of supports for textile materials spaced on the carriage so that one of them is positioned within the chamber when the other is positioned at one end of the guideway, and vice versa; mechanism interconnecting the doors for simultaneous opening and closing; and door actuating means including, on each support, means for engaging one door to effect door opening for the exit of such support from the chamber as the carriage moves in one direction, and for engaging said one door to effect door closing upon entry of such support into the chamber as the carriage moves in the opposite direction.

2. A textile treating machine, according to claim 1 for treating articles such as hosiery, wherein the supports are provided with plural shaping forms over which the articles are adapted to be drawn.

3. A textile treating machine, according to claim 1, for treating articles such as hosiery, wherein the supports are longitudinally extensible and provided with plural shaping forms over which individual articles are adapted to be drawn; and further including means along the guideway operative during movement of the carriage in one direction to collapse one support incident to its entry into the treating chamber and for extending the other support as it leaves the chamber, and vice versa during movement of the carriage in the opposite direction.

4. A textile treating machine, according to claim 1, for treating articles such as hosiery, wherein the supports are in the form of lazy tongs with shaping forms upstanding from alternate centrally interpivoted links thereof, over which forms individual articles are adapted to be drawn; and further including means along the guideway operative during movement of the carriage in one direction to collapse one support incident to its entry into the chamber, and to extend the other support longitudinally as it leaves the chamber, and vice versa during movement of the carriage in the opposite direction.

5. A textile treating machine, according to claim 1, for treating articles such as hosiery, wherein the supports are in the form of lazy tongs with shaping forms upstanding from alternate centrally interpivoted links thereof, over which forms individual articles are adapted to be drawn; means connecting the remote end pivots of each support operative by friction with the guideway during movement of the carriage in one direction to collapse one support incident to its entry into the chamber, and to extend the other support longitudinally as it leaves the chamber, and vice versa during movement of the carriage in the opposite direction.

6. A textile treating machine according to claim 1, further including a reversible electric motor and interposed gear connections for moving the carriage in opposite directions on the

guideway; reversing limit switches on the guideway interposed in a wiring system with the motor and arranged to be actuated respectively by the carriage as the latter reaches the limits of its travel in opposite directions to set the system for reversal of the motor; and a manual switch also embodied in the wiring system for starting the motor.

7. Textile treating apparatus according to claim 1, further including blower means for drawing air from the exterior and circulating it within the chamber, and a radiator at the discharge outlet of the blower for heating the air as it is circulated within the chamber.

8. In a textile treating machine, a treating chamber having an outwardly swinging hinged door at each end thereof; a longitudinal guideway extending beyond opposite ends of the chamber; a carriage movable back and forth on the guideway; a pair of supports for textile material spaced on the carriage so that one of them is positioned within the chamber when the other is positioned at one end of the guideway, and vice versa; mechanism interconnecting the doors for simultaneous actuation; and door actuating means including, on each support at one end, a projection for engaging one door from the inside to effect door opening in preparation for the exit of the support from the chamber as the carriage moves in one direction; and another projection for engaging a lateral projection adjacent the hinge of the same door at the inside to effect door closing upon entry of the support into the chamber as the carriage moves in the opposite direction.

9. In a textile treating machine, a treating chamber having a pair of outwardly swinging hinged doors at each end thereof; a longitudinal guideway extending beyond opposite ends of the chamber; a carriage movable back and forth on the guideway; a pair of supports for textile material spaced on the carriage so that one of them is positioned within the chamber when the other is positioned at one end of the guideway, and vice versa; mechanism interconnecting the doors for simultaneous actuation; and door actuating means including, on each support at one end, a projection for engaging a door of one pair from the inside to effect door opening for exit of the support from the chamber as the carriage moves in one direction; and another projection for engaging a lateral projection adjacent the hinge of the same door of said one pair at the inside to effect door closing upon entry of the support into the chamber as the carriage moves in the opposite direction.

10. In a textile machine, a housing providing a pair of transversely spaced treating chambers; hinged doors at opposite ends of the respective chambers; mechanism interconnecting the doors of each chamber for simultaneous actuation; longitudinal guideways extending beyond opposite ends of the respective chambers; individual carriages movable back and forth on the respective guideways; a pair of supports for textile material spaced on each carriage so that one of them will be positioned within the corresponding chamber and the other will be positioned exteriorly at one end of the corresponding guideway and vice versa; reversible drive means including gearing for moving the carriages simultaneously in opposite directions on the respective guideways between successive treating periods; and door actuating means including on the support of each carriage a projection for engaging one door of the corresponding chamber to effect door opening for exit of the support from such chamber as the carriage moves in one direction, and another projection for engaging said one door to effect door closing upon entry of the support into the chamber as the carriage moves in the opposite direction.

11. A textile treating machine, according to claim 10, for treating articles such as hosiery, wherein the supports of each carriage are provided with plural shaping forms over which individual articles are adapted to be drawn.

12. A textile treating machine, according to claim 10, for treating articles such as hosiery, wherein each support of each carriage is longitudinally extensible and each provided with plural shaping forms over which individual articles are adapted to be drawn; and further including means along each guideway operative during movement of the corresponding carriage in one direction to collapse one support incident to its entry into the corresponding treating chamber and for longitudinally extending the other support on such carriage as it leaves the chamber, and vice versa during movement of such carriage in the opposite direction.

13. A textile treating machine, according to claim 10, for treating articles such as hosiery, wherein each support of each carriage is in the form of longitudinally extensible lazy tong with shaping forms upstanding from alternate centrally interpivoted links over which forms individual articles are adapted to be drawn; and further including means along each guideway operative during movement of the corresponding carriage in one direction to collapse one support incident to its entry into the corresponding treating chamber and for extending the other support on such carriage as it leaves the chamber and vice versa during movement of such carriage in the opposite direction.

14. A textile treating machine, according to claim 10, for treating articles such as hosiery, wherein each support of each carriage is in the form of longitudinally extensible lazy tong with shaping forms upstanding from alternate centrally interpivoted links over which forms individual articles are adapted to be drawn; means connecting the remote end pivots of each support of each carriage operative by friction with the corresponding guideway during movement of the carriage in one direction to collapse one such support incident to its entry into the corresponding chamber and to extend the other such support as it leaves such chamber and vice versa, during movement of such carriage in the opposite direction.

15. A textile treating machine according to claim 10 wherein the power drive means comprises a reversible electric motor; and further including reversing limit switches on one of the guideways interposed in a powered wiring system with the motor and arranged to be actuated respectively by the corresponding carriage as the latter reaches the limits of its travel in opposite directions to set the system for reversal of the motor; and a manual switch also embodied in the wiring system for starting the motor.

16. A textile treating machine according to claim 10 wherein the treating chambers are set apart by a pair of partitions from a central compartment within the housing, said partitions terminating short of the roof of the housing for communication of the compartment with the

chambers at the bottom; and further including a blower within the compartment for drawing in air from the exterior and circulating it in the two chambers.

17. A textile treating machine according to claim 10, wherein the treating chambers are set apart by a pair of partitions from a central compartment within the housing, said partitions terminating short of the roof of the housing for communication of the compartment with the chambers at the top; and further including a blower within the compartment for drawing in

air from the exterior and circulating it in the two chambers, and a radiator at the discharge outlet of the blower for heating the circulated air.

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