

Dec. 1, 1959

J. HOHL ET AL
MACHINE FOR ASSEMBLING AND SECURING
RING GASKETS IN CLOSURE CAPS

2,915,029

Filed March 7, 1955

9 Sheets-Sheet 1

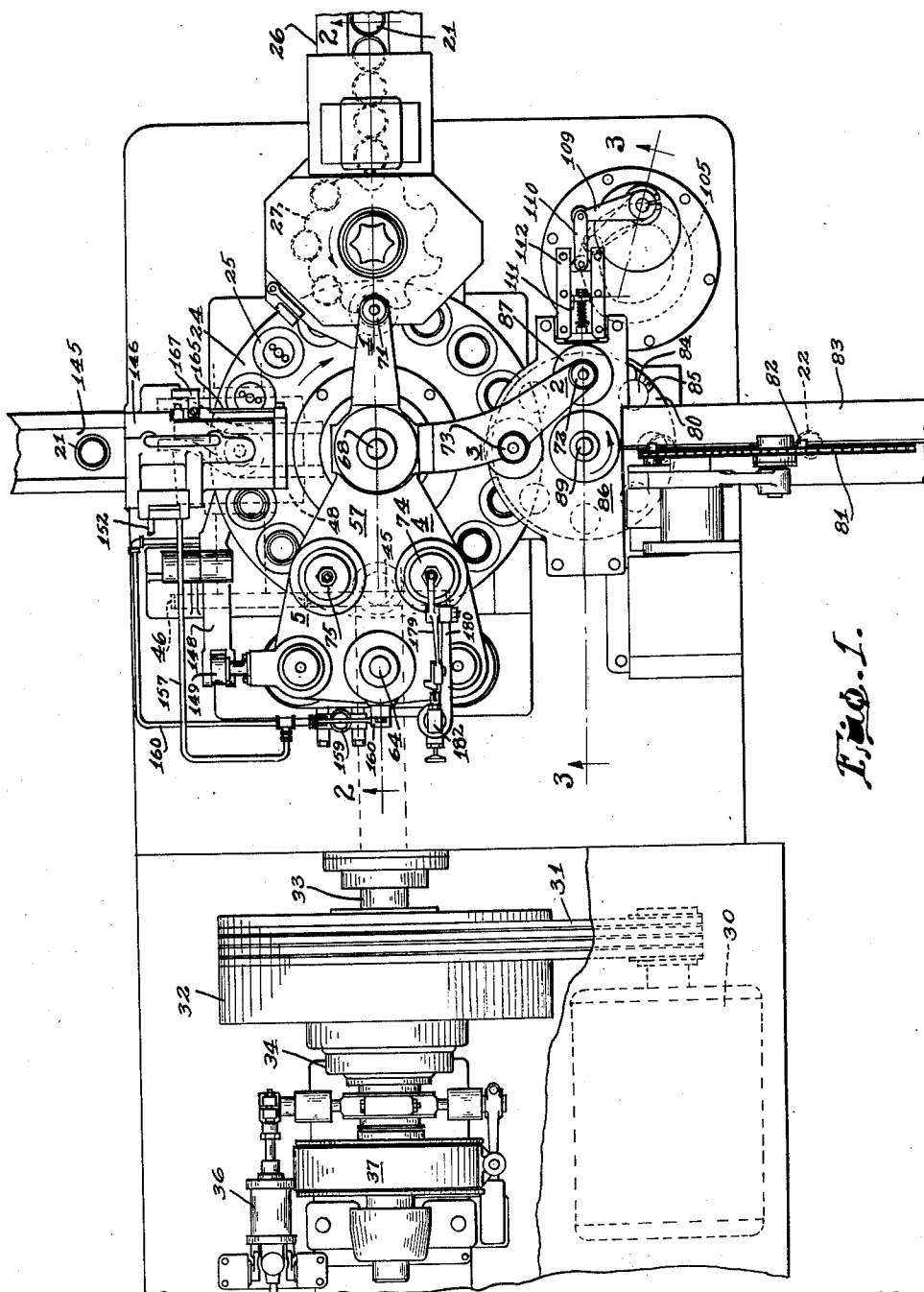


Fig. 1.

INVENTORS
JOHN HOHL
OLAV BIERING
BY *Rule and Hoge*
ATTORNEYS

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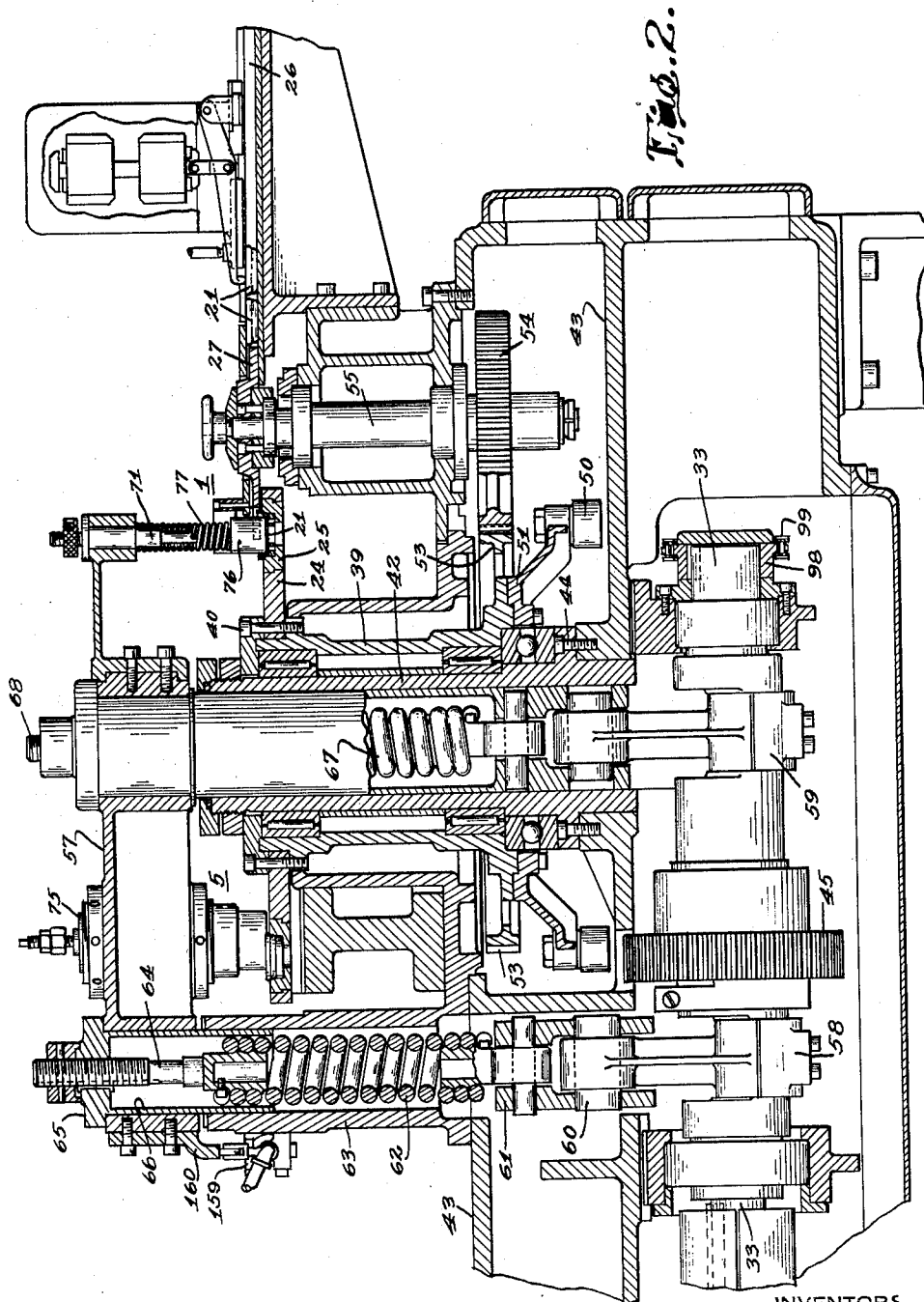


Fig. 2.

INVENTORS
JOHN HOHL
OLAV BIERING
BY
Paul Hoge
ATTORNEYS

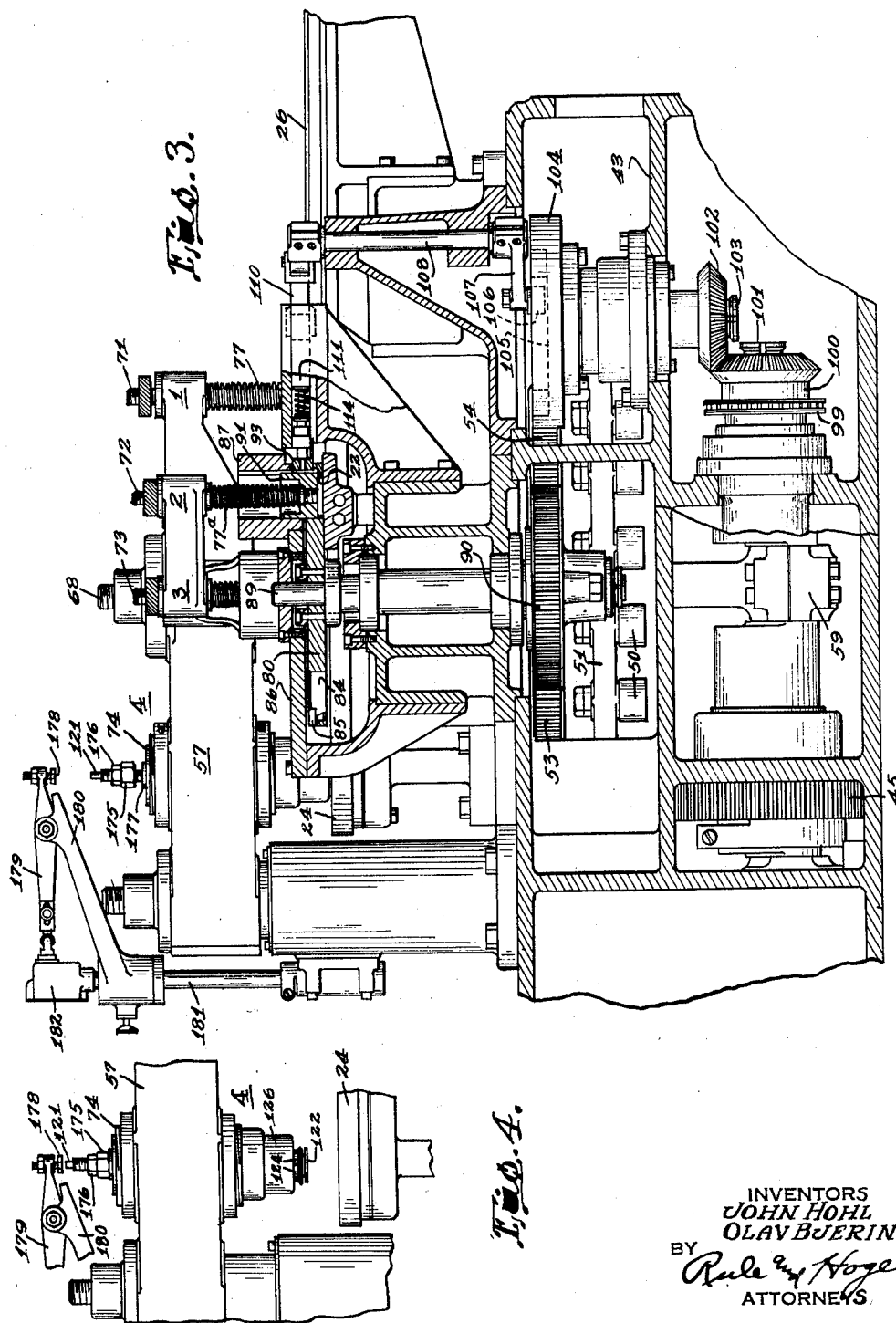
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INVENTORS
JOHN HOHL
OLAV BJERING
BY *Paul H. Hoge*
ATTORNEYS

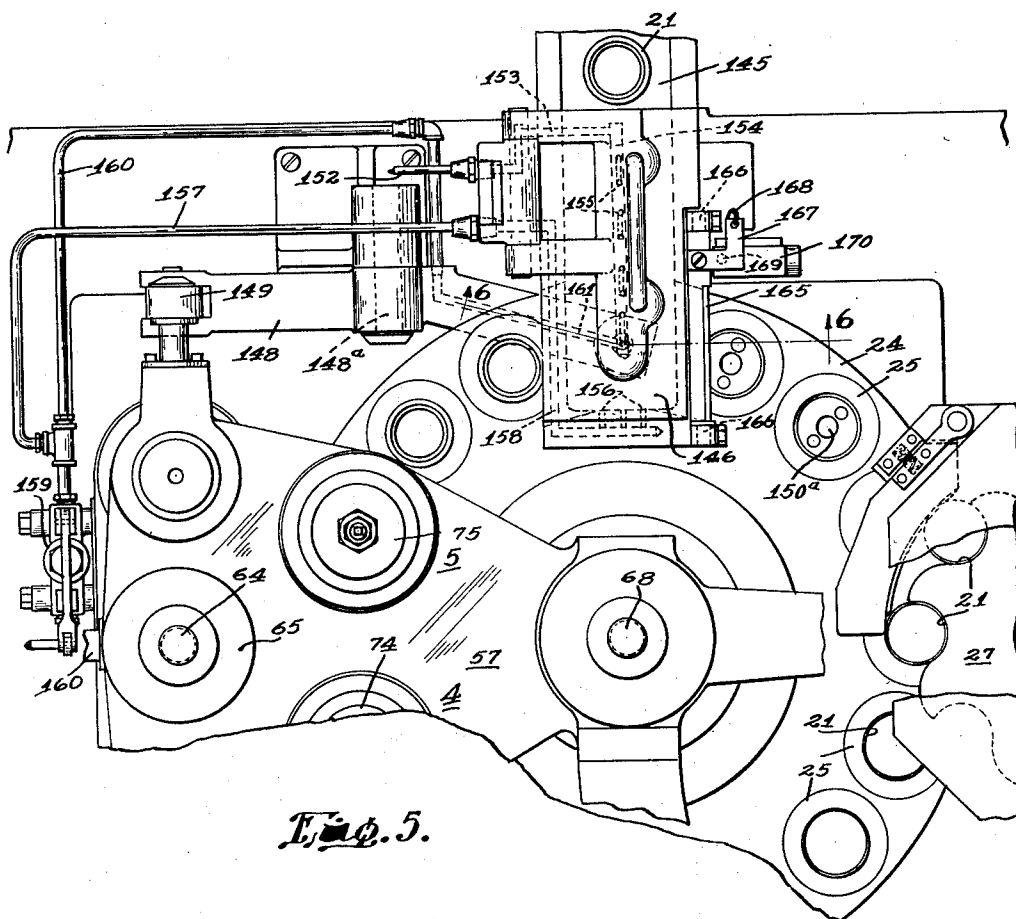
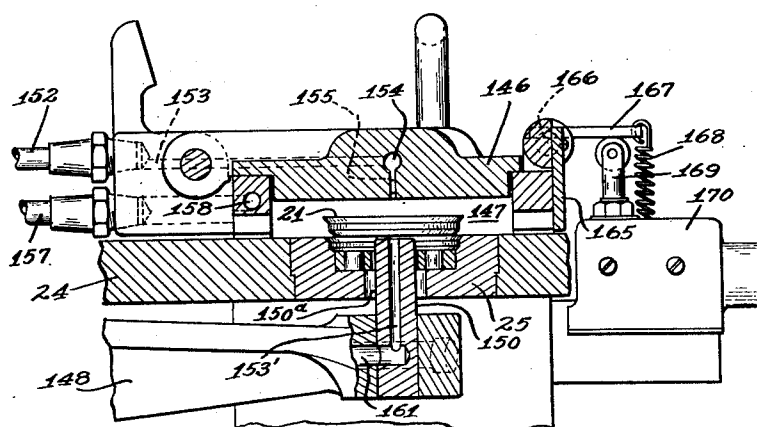
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INVENTORS
JOHN HOHL
OLAV BUERING
BY *Rele and Hoge*
ATTORNEYS

Dec. 1, 1959

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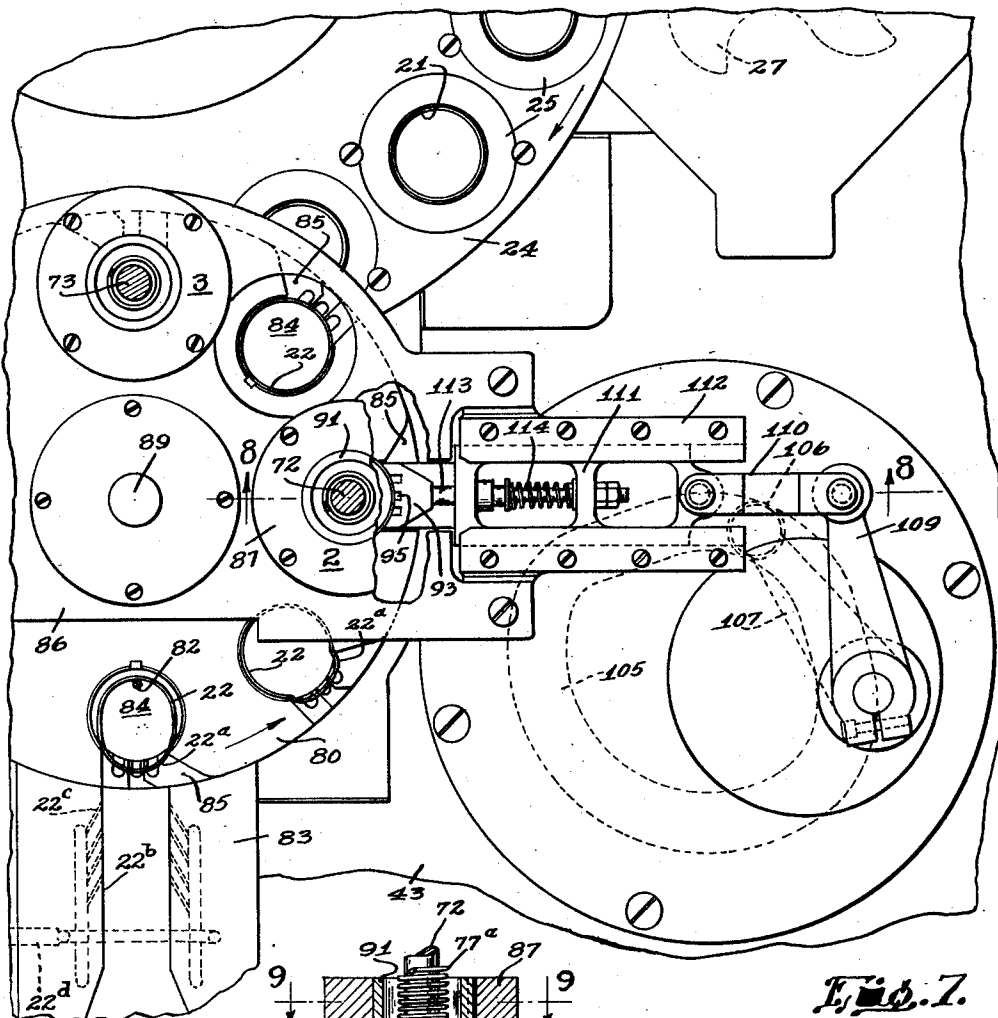


Fig. 7.

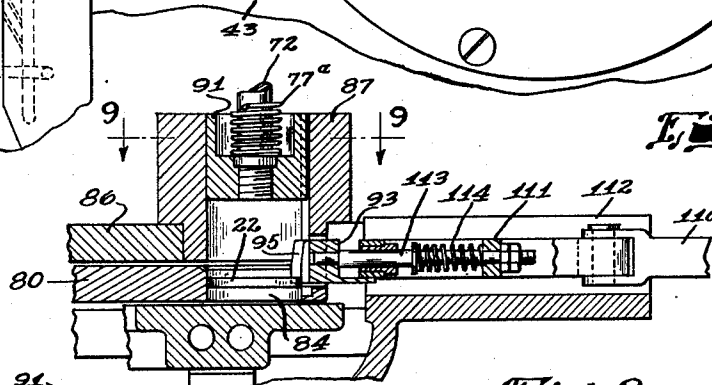


Fig. 8.

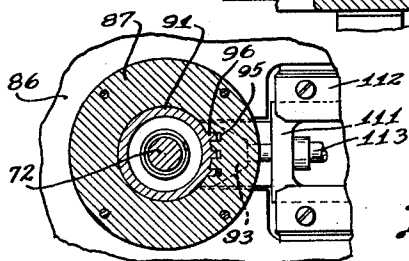


Fig. 9.

INVENTORS
JOHN HOHL
OLAV BJERLING
BY *Paul Hoge*
ATTORNEYS

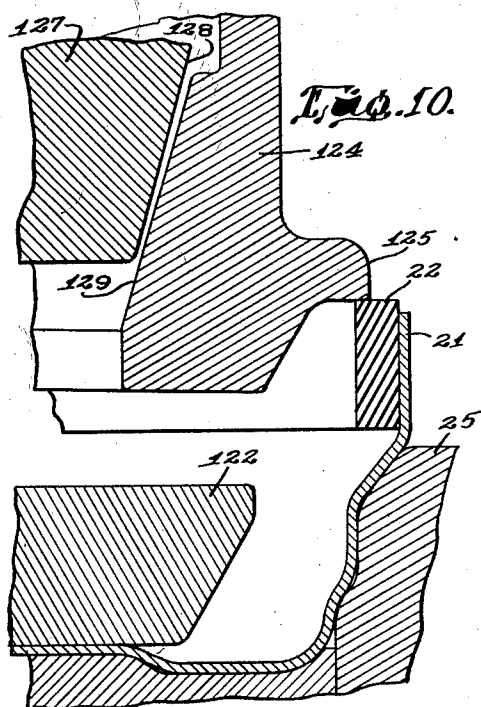
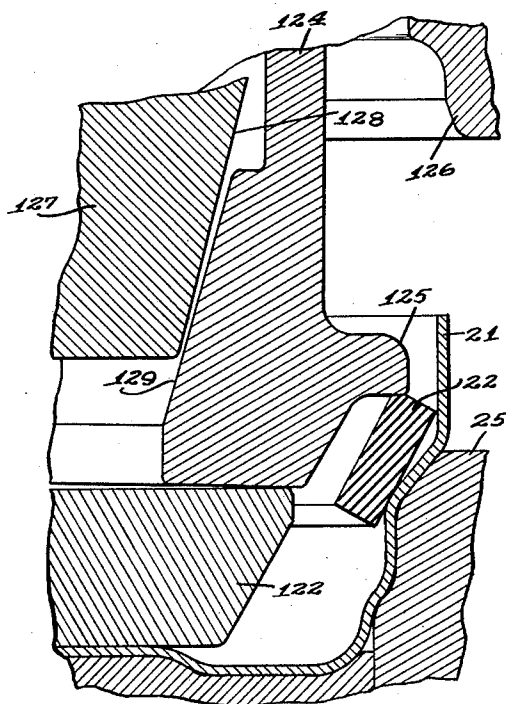
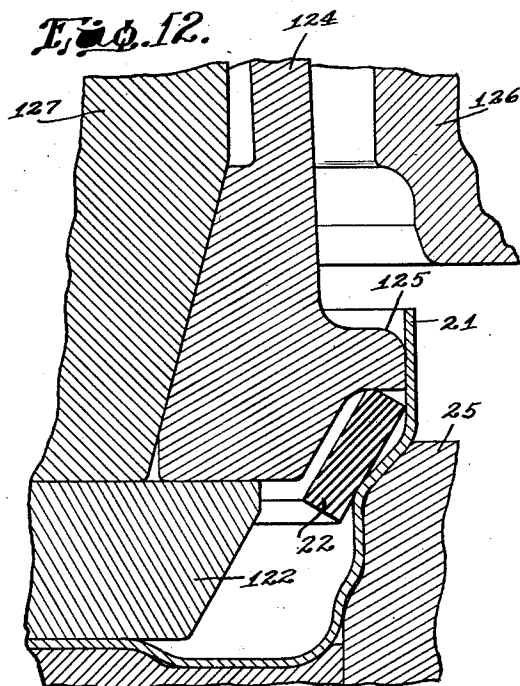
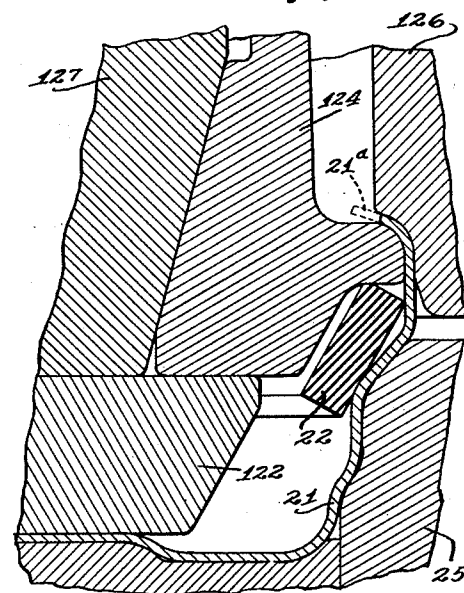
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INVENTORS
JOHN HOHL
OLAV BØERING
BY *Rule & Hoge*
ATTORNEYS

Dec. 1, 1959

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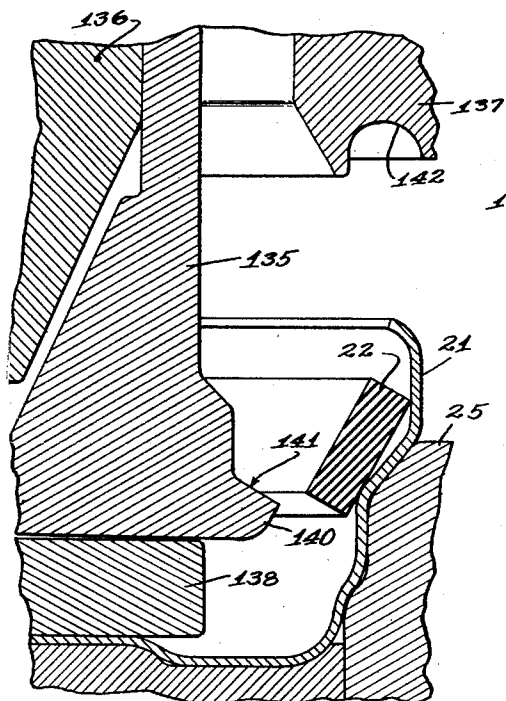


Fig. 14.

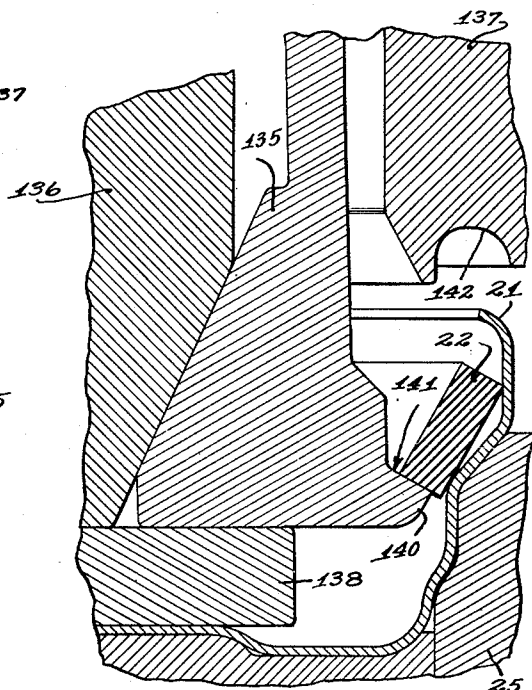


Fig. 15.

Fig. 16.

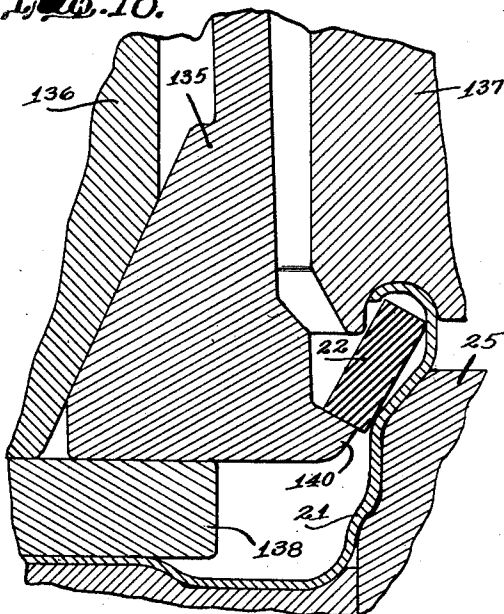
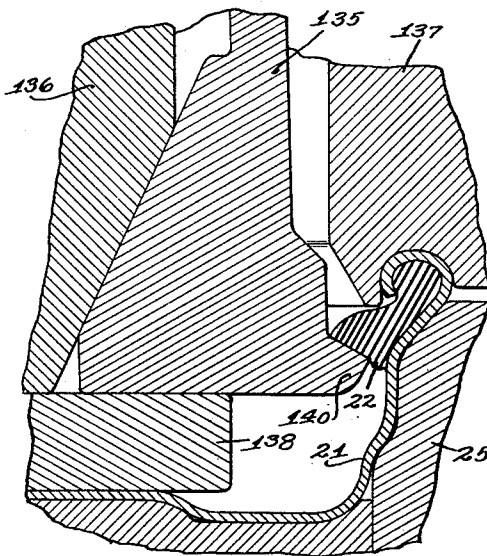


Fig. 17.

INVENTORS
JOHN HOHL
OLAV BIERING
BY
R. L. Hoge
ATTORNEYS

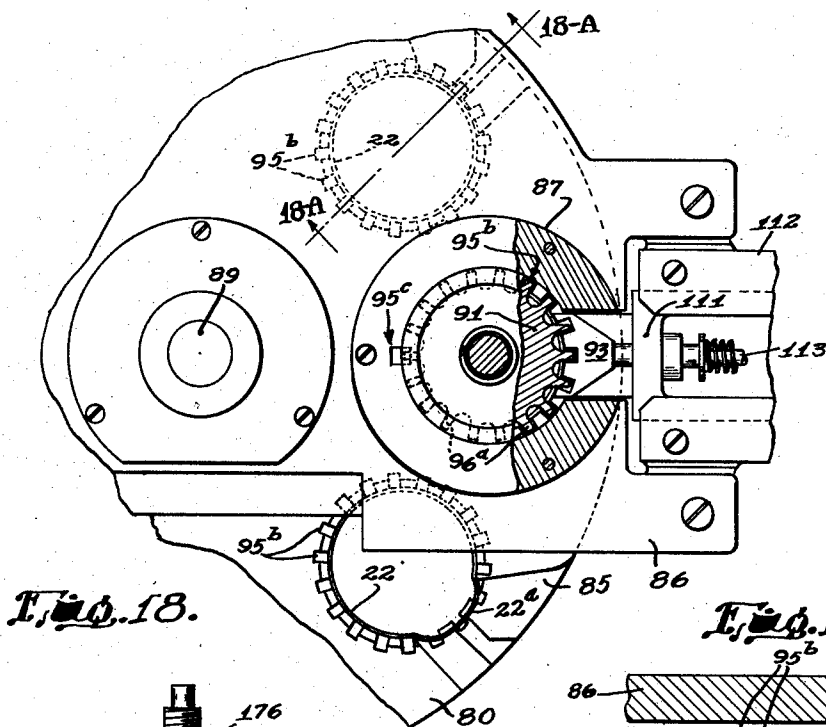
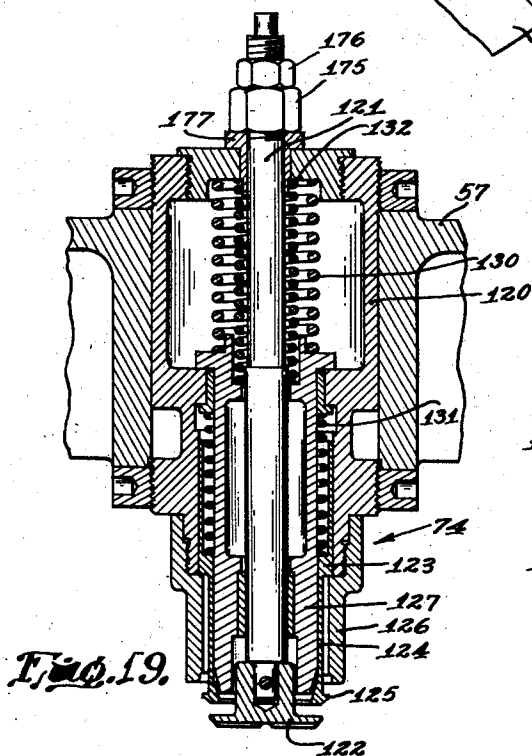
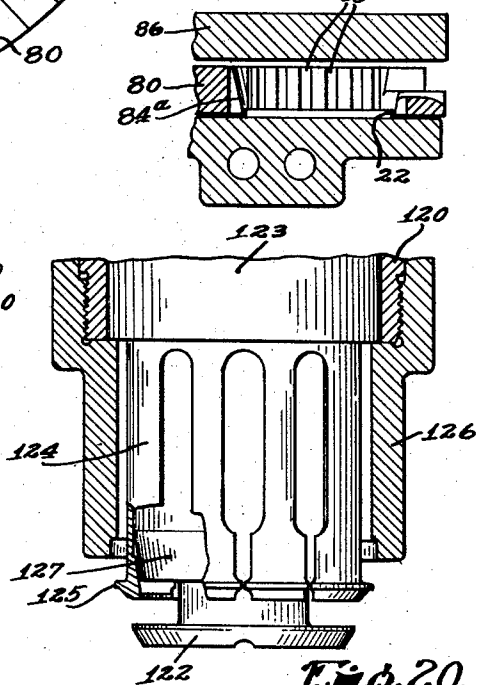
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INVENTORS
JOHN HOHL
OLAV BJERING
BY *Rule & Hoge*
ATTORNEYS

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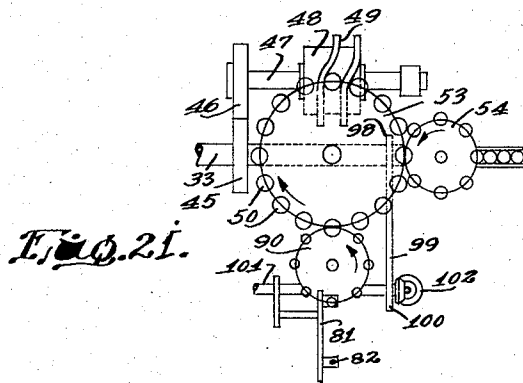
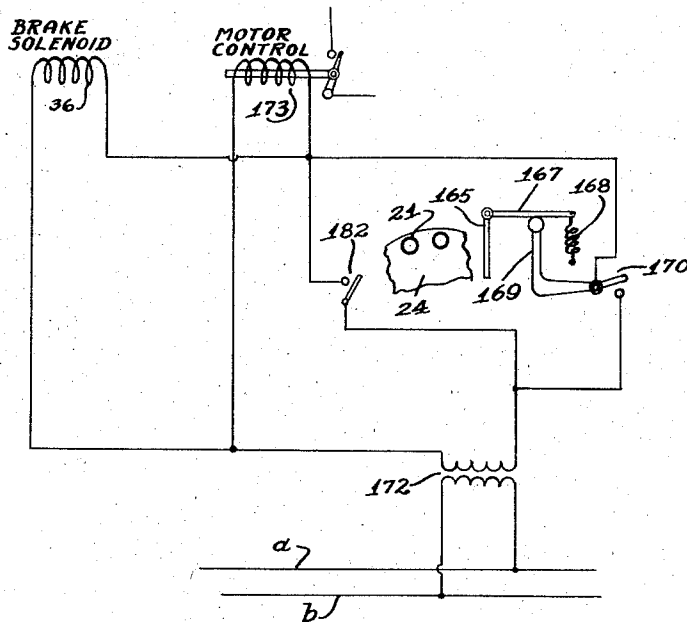


Fig. 22.

INVENTORS
JOHN HOHL
OLAV BJERING
BY
Paul and Hoge.
ATTORNEYS

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2,915,029

MACHINE FOR ASSEMBLING AND SECURING RING GASKETS IN CLOSURE CAPS

John Hohl and Olav Bjerling, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

Application March 7, 1955, Serial No. 492,335

2 Claims. (Cl. 113—80)

Our invention relates to machines for assembling caps and ring gaskets. The gasket is secured within the cap by curling the margin of the cap skirt or flange over the edge of the gasket and crimping or clinching it to the gasket. The machine as herein illustrated is adapted for assembling metal shells, used as closure caps, and ring gaskets made of rubber or like material.

Prior art machines and methods for such assembling operations are comparatively slow in operation and involve a large number of working parts that are costly and difficult to maintain. An object of the present invention is to provide an improved machine which is materially simplified and the number of working parts reduced.

A further object of the invention is to provide a machine which is readily adaptable for assembling caps and gaskets of various sizes and which includes readily interchangeable units permitting the assembly of caps and gaskets of different sizes without extensive changes in the machine. The invention further provides basic improvements in the capping contour and dimensions and positioning of the gasket within the cap.

A further object of the invention is to provide novel means for assembling the gaskets and shells. The ring gaskets which are made of rubber or like material are thin and flexible and are distorted or misshapen by any slight pressure. In prior art machines difficulty has been experienced in positioning the gaskets within the shells and preventing distortion of the gaskets, the machines moreover involving complex mechanism designed for such purpose. The present invention provides novel and improved means for holding the gaskets in circular form and without distortion while they are being introduced into the shells and secured in place.

A further object of the invention is to provide a novel method and means for pneumatically discharging the assembled caps and gaskets from the machine. For this purpose blower mechanism is provided for lifting the caps out of their pockets after the gaskets are secured in the caps, by air pressure applied beneath the caps and then laterally to eject the caps from the machine.

A further object of the invention relates to a safety device associated with the cap ejector means for automatically closing a switch in the motor controlled circuit if the caps become jammed, thereby stopping the machine.

The invention provides safety means for stopping the machine when a shell with the ring gasket secured therein is misshapen or when the shell flange extends abnormally beyond the gasket.

A further object of the invention relates to means for temporarily stopping the feed of the empty shells to the machine when a gasket or gaskets are missing from the gasket feed line. The stopping of the shell feed is so timed automatically that no empty shell will go through the assembling machine.

Other objects of the invention will appear hereinafter.

The machine comprises a horizontal circular cap plate mounted for rotation about its axis and provided with an

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annular series of pockets to receive and hold the cap shells in inverted position during the assembling and clinching of the gaskets therein. The shells are brought by an endless conveyor to a position adjacent to the cap plate and transferred by a star wheel to the pockets in the cap plate. The ring gaskets are brought by a traveling conveyor to a position near the cap plate and then carried by a transfer disk to an assembling position over the cap plate at which the gaskets are transferred to the caps. The said transfer disk comprises cylindrical holders or pockets to receive the ring gaskets and means for adjusting the rings within said pockets preparatory to their transfer to the cap shells.

A head mounted over the cap plate carries a plurality of depending plungers or dies. The head is periodically reciprocated vertically and the cap plate is rotated intermittently step-by-step in alternation with the vertical reciprocations of said head. One of the plungers carried by said head operates to seat the cap shells firmly within the pockets in the cap plate. A second plunger on said reciprocating head is positioned over the transfer disk for the ring gaskets and operates to move the gaskets downwardly within their pockets in the said transfer disk. A third plunger on the said head operates to transfer the rings into the inverted shells. A fourth plunger positions each ring within its shell and starts the curling of the shell flange. A fifth plunger operates the dies by which the curling of the cap flange and clinching of the ring gasket within the shell is completed. The caps are thereafter transferred from the cap plate to a traveling conveyor by the pneumatic transfer means which lifts the caps out of their pockets in the cap plate by pneumatic pressure and then blows them on to the traveling conveyor.

Referring to the accompanying drawings:

Fig. 1 is a plan view of the machine;

Fig. 2 is a central sectional elevation at the line 2—2 on Fig. 1, parts being broken away;

Fig. 3 is a sectional elevation at the line 3—3 on Fig. 1 with parts broken away;

Fig. 4 is a detail view of certain parts shown on Fig. 3 but with the head plate in its lifted position;

Fig. 5 is a plan view of a portion of the machine shown in Fig. 1 but on a larger scale showing particularly the cap ejecting means;

Fig. 6 is a section at the line 6—6 on Fig. 5;

Fig. 7 is a fragmentary plan view showing particularly the transfer disk for the ring gaskets and means for adjusting the gaskets within their pockets;

Fig. 8 is a sectional elevation at the line 8—8 on Fig. 7;

Fig. 9 is a section at the line 9—9 on Fig. 8;

Figs. 10—17 are fragmentary sectional elevational views showing successive steps in the operation of positioning the ring gaskets in the shells, shaping the shells and clinching the gaskets therein: Figs. 10—13 show the dies and their operation at one station; Figs. 14 to 17 show the dies at a succeeding station at which the assembly operations are completed;

Fig. 18 is a part sectional plan view showing a modification of the means for centering the ring gaskets within their holder prior to their transfer to the cap shells;

Fig. 18A is a section at the line 18A—18A on Fig. 18.

Fig. 19 is a sectional elevation of the die assembly at station 4;

Fig. 20 is a fragmentary part sectional view on a larger scale of the dies shown in Fig. 19;

Fig. 21 is a diagrammatic view of the main drive shaft and parts driven thereby; and

Fig. 22 is a wiring diagram.

Referring to the drawings, the machine is designed for assembling closure caps or shells 21 and ring gaskets 22

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and clinching the gaskets within the shells. Referring to Figs. 1, 2, and 3 the machine comprises a horizontal circular cap plate 24 mounted for rotation about a vertical axis. The cap plate is formed with an annular series of pockets 25 to receive the empty shells 21. The shells are brought by a horizontally traveling conveyor 26 to a star wheel 27 by which they are transferred to a position over the cap plate 24 and dropped into the pockets 25. The cap plate 24 and the star wheel 27 are rotated intermittently step by step as presently described, and a shell 21 is thereby brought by each step movement into register with a pocket on the cap plate and transferred thereto.

The machine is driven by a motor 30 (Fig. 1) which has driving connection through a belt 31 and pulley 32 to a main drive shaft 33. The pulley 32 is connected through a clutch mechanism 34 to the drive shaft 33. The clutch is operated by a solenoid 36 for connecting and disconnecting the pulley 32 to and from the shaft as hereinafter described. A brake comprising a brake band 37 is also operated by the solenoid 36 for applying the brake to the drive shaft when the clutch is released and thereby quickly stopping the machine.

The cap plate 24 is mounted on the upper end of a tubular shaft or hub 39 (Fig. 2) and connected thereto by bolts 40. The shaft 39 is mounted for rotation about a stationary tubular shaft or column 42 carried on the machine base 43 to which it is attached by bolts 44. The driving connections between the main drive shaft 33 and the cap plate 24, for rotating the latter intermittently, comprise a train of gearing including a gear 45 on the shaft 33 running in mesh with a gear 46 (Fig. 21). The gear 46 drives a cam shaft 47 on which a cam 48 is mounted. The cam is formed with a continuous cam track 49 in which run cam follower rolls 50. Referring to Fig. 2, the rolls 50 are carried on an annular plate 51 bolted to the hub shaft 39. The gearing is so proportioned that each complete rotation of the drive shaft 33 imparts one complete rotation to the cam. The cam track is so shaped that it rotates the cap plate the angular distance between centers of each two adjoining pockets 25 during each rotation of the cam and then holds the cap plate stationary during a greater part of the cam rotation.

The star wheel 27 is rotated step by step in time with the step rotations of the cap plate, by means of intermeshing gears 53 and 54 on the hub 39 and a shaft 55. The star wheel 27 is attached to the shaft 55.

A head plate 57 is mounted over the cap plate 24 and is reciprocated vertically in timed relation to the step rotations of the cap plate. The head plate 57 is reciprocated by cranks 58 and 59 connected to the drive shaft 33. The crank 58 is connected by a pivot 60 to a link 61. The link is connected to the lower end portion of a coil spring 62 extending upwardly within a stationary tubular column 63 mounted on the machine base 43. The spring 62 is attached at its upper end to an adjustable rod 64. The rod is screw-threaded and extends through a cap plate 65 on a tube 66 having a fixed connection with the head plate 57. Rotation of the drive shaft 33 operates through the cranks 58, 59 and coil springs 62 and 67 to reciprocate the head plate 57. The crank 59 has driving connection with the coil spring 67 which is connected to a rod 68 corresponding to the rod 64. The connections between crank 59 and shaft 68 are of substantially the same construction as those described in connection with crank 58. It will be seen that with the construction just described the head plate 57 is given one complete up-and-down reciprocating movement for each rotation of the drive shaft. This reciprocation is so timed that the head 57 is held in an upward position during the step rotation of the cap plate.

The head plate 57 carries plungers 71, 72, 73, 74 and 75 depending therefrom and having heads or dies which

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function as presently described in the operations of assembling the caps and gaskets and clinching the gaskets. These plungers operate at stations 1, 2, 3, 4, and 5 respectively. The plunger 71 is positioned directly over the star wheel 27 and the path of the pockets 25 therebeneath. Each step rotation of the star wheel brings a cap directly over and in register with a pocket 25 in the cap plate, permitting the cap to drop into the pocket. The head plate and plunger then move downwardly, causing a head 76 on the plunger to seat the cap firmly within its pocket. The head 76 is spring loaded by a spring 77.

The ring gaskets 22 are brought to a transfer disk 80 by an endless chain conveyor 81 (Fig. 1), having depending pins 82 attached at intervals along conveyor chain for moving the gaskets along the conveyor platform 83 to the transfer disk 80. The transfer disk 80 is formed with pockets 84 to receive the rings 22, said pockets having side openings 85 through which the rings enter the pockets. The rings 22 travel through a channel 22^b (Fig. 7) as they approach the disk 80. The movement of the rings into the pockets is assisted by air blasts through a series of nozzles 22^c which are forwardly inclined and open into the channel. The air under pressure is supplied through a pressure pipe 22^d. A stationary plate 86 is positioned directly over the transfer disk 80 and has mounted thereon a hollow cylindrical guiding member 87 directly over the path of the pockets 84 so that pockets are brought into register therewith by the step rotation of the transfer disk.

The transfer disk 80 is mounted on a vertical shaft 89 (Fig. 3) rotated by the gear 53 which meshes with a gear 90 on the shaft 89. The transfer disk 80 is thus rotated step by step, each step rotation bringing a pocket 84 directly beneath and in register with the stationary guide 87 (Fig. 8). The plunger 72, carried on an arm of the head plate 57, is positioned directly over the guide 87 and carries at its lower end a head 91 spring loaded by a spring 77^a. When the plunger is lowered it forces the ring gasket 22 downwardly within the pocket 84 in the transfer disk 80.

The ring gaskets 22, made of soft flexible elastic material, are deformed or drawn out of circular form by very slight force and require special means for positioning them within the pockets in the transfer disk and holding them in circular form. As shown in Fig. 7 the pins 82 by which the rings are drawn into the pockets, pull the rings into an elongated or oval form leaving a portion 22^a protruding through the side openings in the pockets. The walls 84^a (Fig. 18A) of the pockets 84 are inclined and upwardly divergent to provide more room for the ring gaskets and thus reduce the extent to which the portions 22^a protrude. Means for completing the insertion of the rings within the pockets and restoring them to circular form prior to assembling them with the shells 21 will now be described. Such means, illustrated in Figs. 1, 3, and 7-9 includes a shaping die or head 93 which is mounted for horizontal reciprocating movement within the side openings 85 of the pockets 84 and a side opening in the guiding member 87. The front face of the head 93 is concave or rounded so that when the head is moved forward it completes the cylindrical interior surface of the guiding sleeve 87 and pocket 84 in register therewith. The head 93 is formed with vertical grooves 95 forming guideways for cooperating ribs 96 formed on the vertically reciprocating head 91.

The die 93 is driven by the main drive shaft 33 operating through a train of gearing including a sprocket wheel 98 (Figs. 2 and 21) keyed to the drive shaft. Sprocket chain 99 is trained over the gear 98 and a gear 100 (Fig. 3) on a shaft 101 mounted forwardly of the drive shaft 33. The gear 100 meshes with a gear 102 on a vertical shaft 103 to which is keyed a cam 104 formed with a continuous cam track 105 (Figs. 3 and 7). A cam follower roll 106 running on the track 105 is mounted on a rock

arm 107 on a vertical rock shaft 108 journaled in the machine frame. A rock shaft 109 on the upper end of the shaft 108 is connected by a link 110 to a slide plate 111 which is slidable in guideways 112.

The stem 113 of the die 93 has a slidable connection with the plate 111. A coil spring 114 mounted on the stem 113 provides a yielding connection which serves as a safety means in the event of any obstruction preventing full forward movement of the die. The gearing is proportioned to give one complete rotation to the cam 104 for each step movement of the cap plate 24. The movements are so timed that the die 93 is moved to its forward position (Figs. 7 and 8) while the disk 80 is at rest with a pocket 84 in register with the stationary guide 87. The forward movement of the die 93 brings it into contact with the protruding portion 22^a of the ring and pushes the ring into place within the pocket so that the ring assumes its circular form in which it is held by the inner, circular wall surface of the pocket. While the parts are in this position the plunger 72 is moved downward so that the head 91 engages the ring 22 and moves it downwardly within the transfer disk 80. A coil spring 77^a mounted on the plunger rod 72 and held under compression permits the rod to yield upwardly through the head 57 if the downward movement of the plunger head 91 is obstructed.

Fig. 18 shows a modification in which the vertically reciprocating head 91 is formed with a series of vertical ribs 96^a extending throughout the circumference of the head. These ribs cooperate with the grooves in the die 93 and also are guided in grooves 95^b formed in the plate 80. This construction gives surface contact and support of the ring gaskets at closely spaced points throughout its circumference. A key on the plunger 91 slides in the member 87 and prevents rotative movement of the plunger. The step-by-step rotation of the cap plate 24 with the empty caps therein and the concurrent step rotation of the transfer disk 80 bring the caps and rings to the assembly station 3 at which the plunger 73 is located. This brings the pocket 84 with the gasket 22 therein directly over a cap 21. The plunger 73 then moves downward and pushes the ring gasket out of its pocket into the cap therebeneath.

The assembled caps and rings are advanced from station 3 to station 4 by the rotation of the cap plate. Referring to Figs. 10-13, 19, and 20, the plunger assembly 74 and its operation are as follows:

This assembly includes a cylindrical member 120 having a fixed mounting within the head 57. A vertical rod 121 extending centrally through the member 120, is formed with a foot 122 to seat on the shell 21 when the head 57 is lowered. Mounted within the housing 120 is a tubular expansion die 123 formed with an annular series of spring fingers 124. Each finger is formed adjacent its lower end with a rib 125 or projection. These ribs are adapted to engage the ring 22 and move it downwardly within the shell 21 as presently described. Surrounding the expansion die is a curling die 126 for curling the upper marginal portion of the shell 21 as an initial step in the curling operation by which the ring gasket is gripped within the shell. A die or spreader 127, positioned between the shaft 121 and the expansion die fingers 124, is mounted for vertical movement relative to said shaft and the expansion die. The lower end portion of the spreader 127 is tapered, providing an inclined surface 128 opposite correspondingly inclined surfaces 129 on the expansion fingers 124.

In operation, when the head 57 is moved downward the foot 122 seats within the shell 21 during the initial downward movement of said head. Continued downward movement of the head 57 brings the ribs 125 into engagement with the ring 22 (Fig. 10) and then moves the ring downwardly to the position shown in Fig. 11. The downward movement of the expansion die is arrested at this point by its engagement with the foot 122.

Continued downward movement of the head 57 carries the spreader 127 downward to the Fig. 12 position at which it is arrested by the foot 122. This downward movement of the spreader, during which the inclined surfaces 128 and 129 are in contact, spreads the die fingers 124, bringing the ribs 125 into contact with the inner surface of the shell 21. During the expansion of the die fingers 124 the curling die 126 commences its downward movement which is continued after the die 124 is expanded (Fig. 12) thereby bringing the curling die 126 into contact with the shell 21 and curling the margin of the shell inwardly over the curved surface of the ribs 125. The downward force for operating the several die members when the head 57 is lowered is applied through a coil spring 130 held under compression within the member 120. The expansion die 123 is held in its lowered position relative to the spreader 127 by a coil spring 131. The rod 121 is yieldingly held in its lowered position within the housing 120 by a coil spring 132.

After the operation at station 4 the caps are advanced by the cap plate to station 5 at which the clinching of the ring within the shell and final formation of the assembled cap and ring gasket are completed. The plunger assembly at this station includes dies similar to those at station 4 as above described. These include an expansion die 135, spreading die 136, and a curling die 137. The successive steps in the operation at station 5 are shown in Figs. 14 to 17. A foot plate 138 (Fig. 14) corresponding to the foot 122 seats on the shell 21 when the head 57 is lowered. The expansion die 135 is then expanded by the downward movement of the spreader 136 relative thereto, bringing the parts to the position shown in Fig. 15 wherein an inclined annular rib or shoulder 140 formed on the expansion die 135 is brought beneath the ring 22. The upper inclined surface 141 of the rib 140 provides a bottom support for the ring 22, holding the ring securely against downward movement during the succeeding operations of the dies. During the expansion of the die 135 the curling die 137 is moved downward to an intermediate position (Fig. 15). The continued downward movement of the curling die brings the curved die surface 142 into engagement with the shell 21, curling it around the upper portion of the ring gasket. The curling or crimping operation is completed by the further downward movement of the curling die to the position shown in Fig. 17.

The caps are advanced from station 5 by the cap plate 24 to a discharge station where they are discharged from the cap plate and delivered to a traveling belt conveyor 145. The discharging mechanism (Figs. 5 and 6) includes a stationary plate 146 mounted over the cap plate 24 and spaced thereabove to provide a chamber 147 or passageway. Means for lifting the caps out of their pockets in the cap plate includes a rocker 148 mounted to swing about a horizontal pivot pin 148^a. The rocker has an operating connection 149 with the die head 57 for swinging the rocker during each up-and-down movement of the die head. The rocker has mounted therein at its forward end an upright stem 150. Each downward movement of the die head 57 moves the stem 150 upwardly through an opening 150^a in the cap die 25 thereby lifting the cap out of its pocket and permitting it to be transferred to the conveyor 145.

Air under pressure is supplied to the channel 147 for blowing the caps on to the conveyor 145. The air is transmitted through a pressure pipe 152 (Fig. 5). The air line 153 includes a horizontal channel 154 extending lengthwise of the plate 146. Branch openings or passageways 155 extend in a downwardly and outwardly inclined direction through the plate 146 into the chamber 147. The inclined channels 155 distributed at intervals lengthwise of the plate 146 supply a continuous blast of air by which the caps are blown outwardly on to the conveyor 145.

This continuous draft of air through the chamber 147 is supplemented by blowing air supplied intermittently to a series of ports 156 in the inner end wall of chamber 147. This intermittent air pressure is supplied through a pipe 157, the air line being extended from pipe 157 through a channel 158 to the ports 156. The intermittent air supply is controlled by a valve 159 (Figs. 5 and 2) connected through a plate 160 with the die head 57. The valve 159 is opened and closed during each up-and-down movement of the die head. When the rocker 148, during the downward movement of the die head lifts the ejector stem 150, the valve 159 is opened, supplying a blast of air for blowing the cap outwardly on to the conveyor 145. Such air blast is supplemental to the continuous blast through the jets 155. The ejector stem 150 is formed with a channel 153^a extending upwardly there-through. Air under pressure is supplied to the channel 153 through a pipe 160, the pressure line being continued through a channel 161 extending through the rocker 148 to channel 153. This air pressure is also intermittent, being controlled by the valve 159, thereby supplying an intermittent blast of air through the ejector 150, said blast occurring while the ejector is moving upwardly. An object of this air blast which is directed against the bottom of the cap is to lift the cap by the air pressure, maintaining it out of direct contact with the ejector. This air cushion prevents marring or scratching of the cap by the ejector. If the air pressure fails or is insufficient of itself to lift the cap, the stem 150 operates positively as a lifting means.

A safety device for automatically stopping the machine in the event of failure of the discharging mechanism to eject the caps is as follows:

Referring to Figs. 5 and 6, a gate 165 at one side of the chamber 147 is hinged to swing about a pivot 166. A horizontal arm 167 connected to swing with the gate is held in contact with a switch operating member 169 by a coil spring 168, thereby holding a safety switch 170 (Figs. 5 and 22) in open position. If the caps 21 become jammed or accumulate within the chamber 147 through failure of the discharging mechanism, a cap will be crowded over against the gate 165, swinging it about its pivot and effecting the closing of the switch 170.

Referring to the wiring diagram (Fig. 22), alternating current is supplied through the mains *a* and *b* to a transformer 172. The secondary of the transformer is connected through the switch 170 to a solenoid 173 which operates a switch in the motor control circuit. When the switch 170 is closed as above described, the motor control circuit is opened, thereby stopping the motor 30 (Fig. 1). Closing of the switch 170 also makes a circuit for the brake magnet solenoid 36 so that the brake is applied, thereby quickly stopping the machine.

Another safety device is provided for automatically stopping the machine when a cap gets stuck in the die plate or a deformed cap shell prevents normal operation of the dies, particularly a shell in which the flange portion is of abnormal shape or extends beyond its normal position. Such a safety device is brought into operation while the cap is at station 4. Referring to Figs. 3, 4, and 19, the rod 121 comprises a screw-threaded portion on which nuts 175 and 176 are threaded. The stop nut 175 seats on a collar 177 while the head 57 is in its upper position (Fig. 4). When the head 57 moves downward the foot 122 is brought against the cap shell and the continued downward movement of the head 57 causes a relative movement of the rod 121 so that the stop nut 175

is spaced above the collar 177 as shown in Fig. 3. When the head 57 is lifted, the rod 121 is normally moved back to the position shown in Fig. 19.

If a cap shell 21 is deformed, as for example, by extending upwardly as indicated at 21^a, Fig. 13, it will project over the rib 125 when the latter is retracted so that the foot 122 is held clamped between the shell and the expansion die 124. This holds the rod 121 in its upper position relative to the dies. As a result, when the head 57 is lifted the rod 121 engages a contact screw 178 in a switch operating arm 179. The arm 179 is pivoted to a bracket 180 adjustably mounted on a rod 181 attached to the machine frame. The arm 179 when operated closes a switch 182. This switch, as shown in Fig. 22, is connected in parallel with the switch 170 and when closed operates the same as switch 170 to actuate the motor control circuit and to energize the brake magnet 36 for stopping the motor. It will be seen that if a cap gets stuck to the dies or prevents the rod 121 from dropping to normal position when the head 57 is lifted, it will cause operation of the safety switch and stop the machine.

Modifications may be resorted to within the spirit and scope of our invention.

We claim:

1. A machine for assembling flanged caps and ring gaskets which comprises a horizontal cap plate formed with cap receiving pockets in its upper face, said plate being mounted for rotation about a vertical axis, means for rotating the cap plate intermittently step by step, means for placing caps in an inverted position in said pockets, means for introducing the gaskets into the inverted caps comprising a gasket plate mounted for horizontal rotation, said plate having circular openings extending downwardly therethrough forming wells to receive the gaskets, said gasket plate having side openings communicating with said wells, means for rotating said gasket plate intermittently step by step to bring said side openings into a gasket receiving station, an adjusting die mounted at said station for horizontal reciprocation toward and from said well, means for reciprocating said die in timed relation to said cap plate and said gasket plate, said die having a concave face adapted to form a wall of a well when the die is in its forward position filling said side opening to close said well and complete the cylindrical wall surface of said well, and a vertically reciprocable cylindrical head cooperating with said well to force a gasket into one of said caps.

2. A machine for assembling flanged cap and ring gaskets as defined in claim 1 in which said die and said head are provided with interfitting vertical ribs and grooves, and a fixed cylindrical guide for said head having ribs and grooves cooperating with the ribs and grooves on said head.

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