Feb. 6, 1951 S. KESTENBAUM 2,540,890

PUMP DISPENSER

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Fig. 1

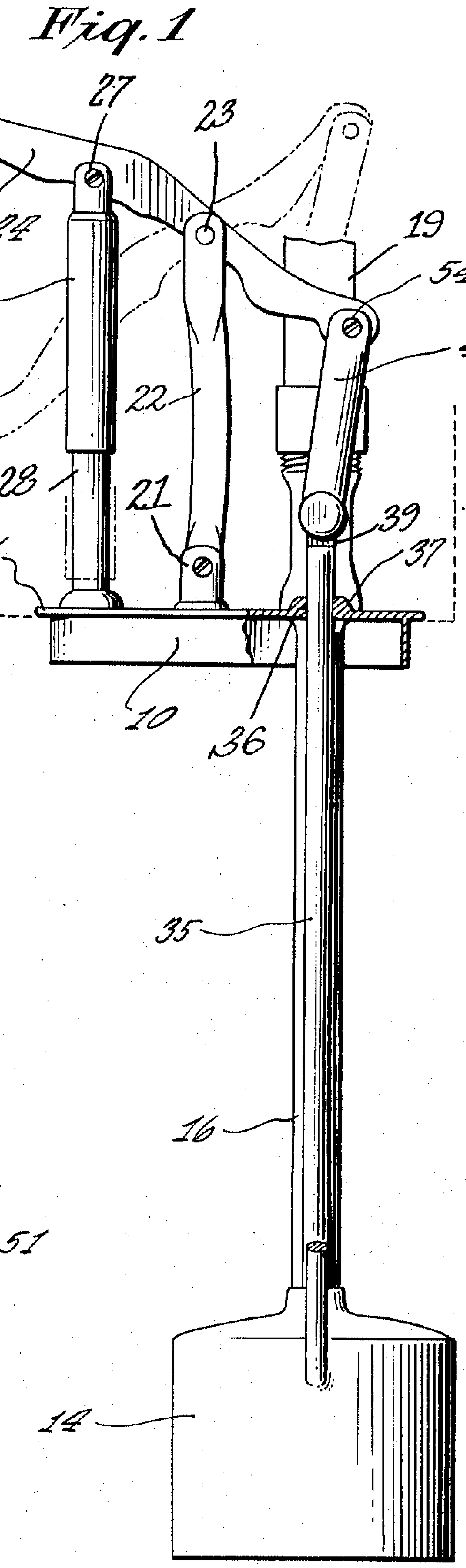

Fig. 2

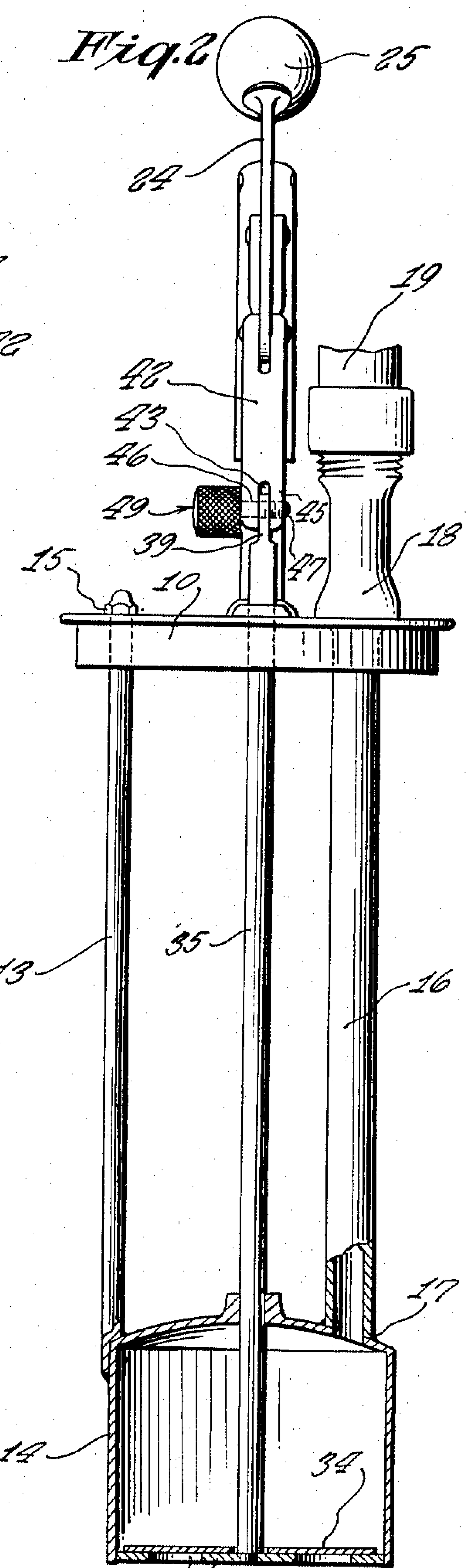

Fig. 3

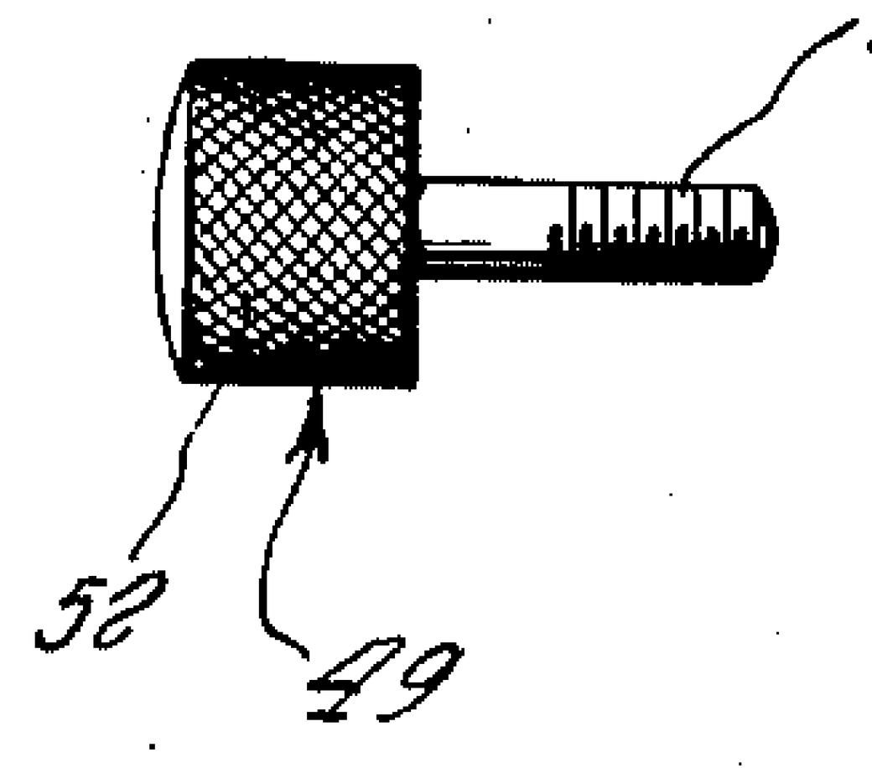

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Fig. 5

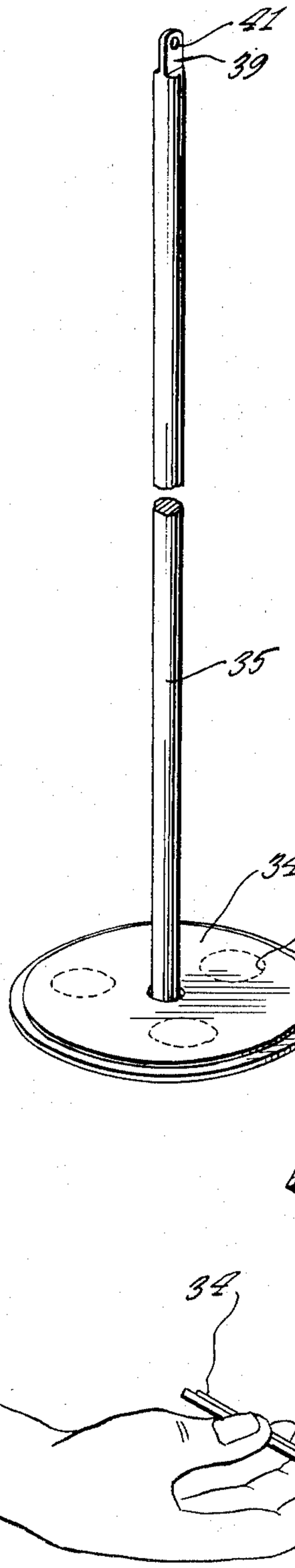

Fig. 4

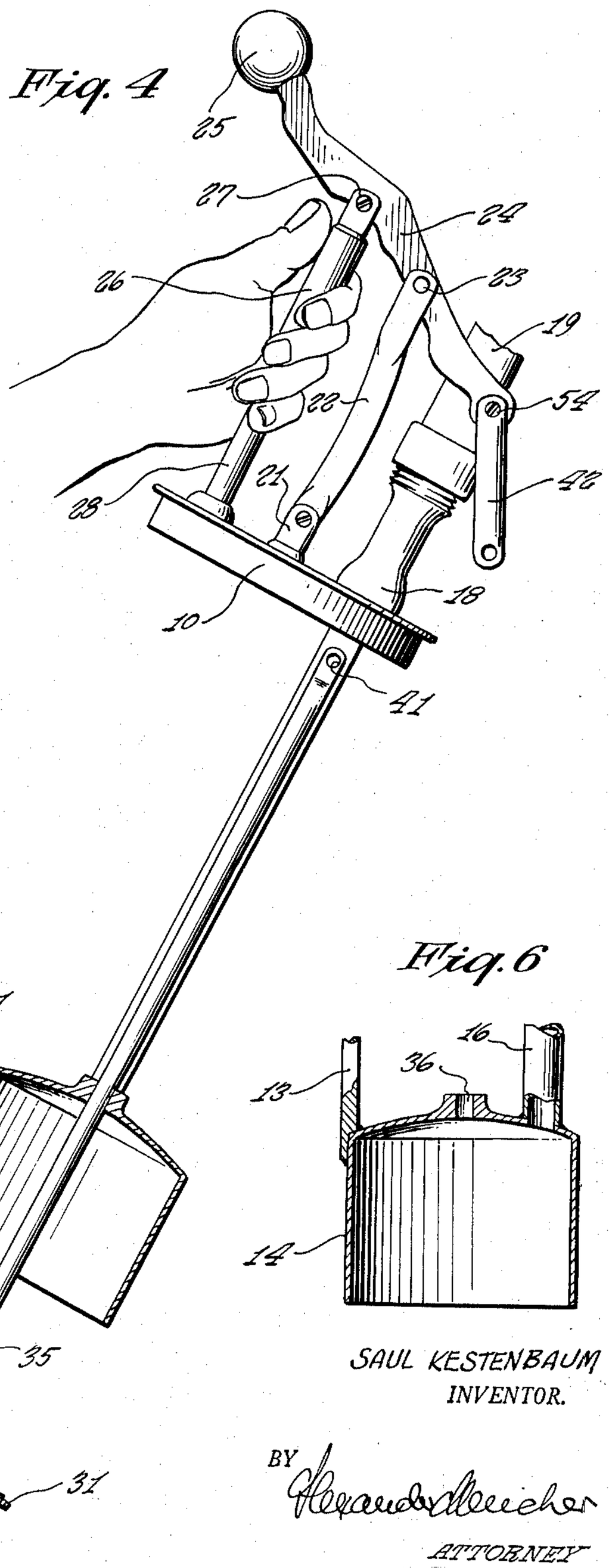

Fig. 6

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Fig. 7

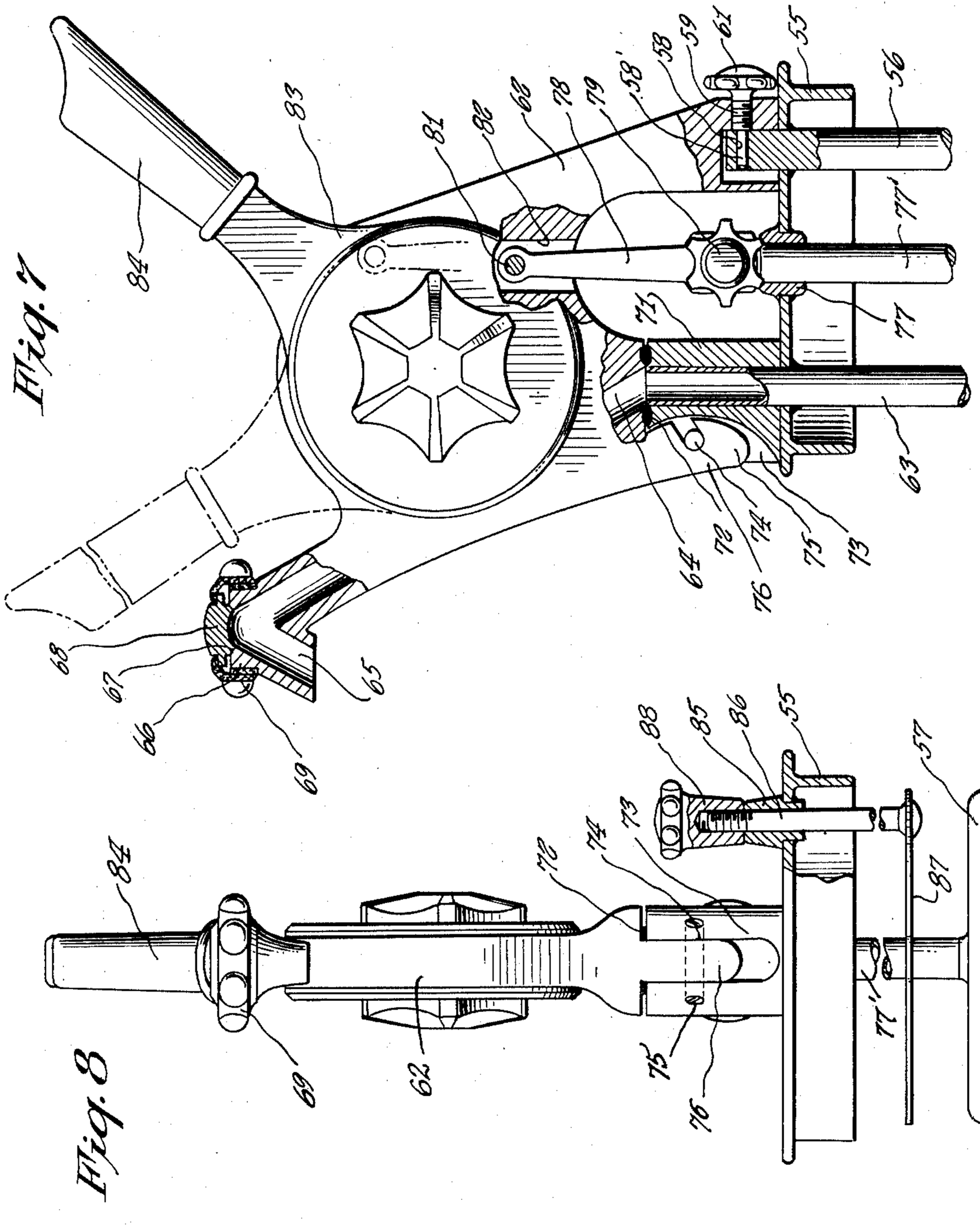

Fig. 8

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UNITED STATES PATENT OFFICE

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PUMP DISPENSER

Saul Kestenbaum, New York, N. Y.

Application February 11, 1948, Serial No. 7,583

4 Claims. (Cl. 222—385)

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This invention relates to a fountain dispenser for fruit juices, milk and other liquids.

It is an object of the present invention to provide a fountain dispenser for fruit juices, milk and other liquids, which when removed from the container of the liquid being dispensed can be easily and quickly disassembled for the purpose of being cleaned and made sanitary without the need of having additional tools to effect this result so that the person at the fountain will find it easy to clean the dispenser.

It is another object of the present invention to provide a fountain dispenser for fruit juices, milk and other liquids having a top structure which can be easily assembled to and disassembled from the top cover of the container for the purpose of being cleaned wherein the spout is removable with the structure with one simple operation upon the structure including the ability of the operating lever to be detached from the cover.

Other objects of the present invention are to provide a fountain dispenser unit which is removable from the container having the liquid to be dispensed, which is of simple construction and wherein the operating pump parts are separable from the unit without the need of tools, and which is inexpensive to manufacture and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawings in which

Fig. 1 is a side elevational view of the dispenser unit with portions broken away to show construction of certain of the parts and showing the handle member in both its raised and lowered positions.

Fig. 2 is a rear elevational view of the unit with the pump chamber broken away to show the interior of the same.

Fig. 3 is a side elevational view of the disconnecting pin.

Fig. 4 is a side elevational view of the dispenser unit with the pump piston detached from the same and slid outwardly of the pump chamber.

Fig. 5 is a perspective view of the pump piston with the valve plate supported thereon.

Fig. 6 is a fragmentary and sectional view taken through the pump chamber and looking upon the interior thereof.

Fig. 7 is a side elevational view of a modified form of top structure utilizing the features of the present invention with portions broken away to show the interior construction.

Fig. 8 is an elevational view taken at a different angle from the view in Fig. 7 and likewise having portions broken away.

Referring now to the figures, 10 represents a

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cover having a flange 11 adapted to be supported in an opening in a container 12 having the liquid to be dispensed. The cover 10 serves as a base for the unit and depending from the same is a rod 13 to the lower end of which there is connected a pump chamber 14. The rod 13 is secured to the plate by a top nut 15. Also depending from the cover plate and serving to support the chamber 14 at the side thereof opposite from the rod 13 is a conduit or pipe 16 which is secured to the top of the chamber 14 as indicated at 17. The cover plate 10 has a fitting 18 secured to it in communication with the conduit 16 and on which there can be fitted an outlet spout 19 from which the liquid is dispensed.

On the top of the plate 10 is a projection 21 to which there is pivotally connected a link 22 extending upwardly and providing for a fulcrum connection 23 for an operating lever 24 having a large handle 25.

Laterally spaced from the projection 21 and disposed between the cover and the lever is a telescopic sleeve device 26 for effecting the return of the lever 24 to a raised position. The device 26 is connected to the lever 24 by a screw 27. The inner member is fixed to the cover 10 and extends upwardly from the sleeve to move downwardly thereover. This inner member is indicated at 28. The device 26 includes a spring, not shown.

The chamber 14 is open on the bottom and there extends into the same a piston 31 having openings 32 therein and on which is a valve plate 34. A rod 35 is connected to the piston 31 at the center thereof and extends upwardly through a boss opening 36 and through a boss portion 37 on the plate 10. The upper end of the rod 35 is flattened as indicated at 39 and has a hole 41 therein. This flattened end 39 is adapted to receive a link 42 having a slot 43 into which the flattened portion 39 of the rod extends. The link 42 is formed of a solid metal cylinder and has at opposite sides of the slot 43, respectively, portions 45 and 46. The portion 45 is threaded as indicated at 47 to receive a threaded connecting pin 49, Fig. 3, having a threaded shank 51. Accordingly, the link 42 can be easily disconnected from the rod 35 by simply removing the connecting screw 49. The screw 49 has a large knurled handle portion 52 by which the same can be turned. The rod 35 can thus be quickly and easily released from the parts above the cover plate so that the piston and the rod can be dropped out of the bottom of the chamber 14 in the manner illustrated in Fig. 4. The piston can thus be easily cleaned and access can be readily had to the chamber 14. With the parts easily separable in this manner, the operator of the fountain will not hesitate to clean the

interior faces of the chamber and the piston parts. There will thus be no cause for the unit to become unsanitary.

The link 42 is connected to lever 24 by a pivot screw 54. When the disconnecting pin 49 is removed, the link 42 will be left free to pivot on the lever 24. It can thereafter be very easily swung into place for its attachment with the upper end of the rod 35.

With the parts connected together and upon the operating lever being raised by the spring return device 26, the piston 31 will be lowered in the chamber 14 and valve plate 34 will be raised to permit a charge of liquid to be extended into the chamber 14. As the lever is depressed to raise the rod, the charge of liquid will be forced upwardly through the pipe 16 and out of the spout 19.

Referring now to Figs. 7 and 8, there is shown a modified form of construction, comprising a cover 55 to which there is welded a rod 56 for supporting cylinder 57. This rod 56 extends upwardly through the top of the cover and has an opening extending horizontally as indicated at 58 to receive a pin projection 58' of a fastening screw 59 having a knob 61. This fastening screw 59 serves to fix a top casting 62 to the cover 55. The extended end of the shaft 56 provides a lug on the cover for receiving the fastener projection 58'.

At the opposite side of the cover 55, there is affixed to and extended upwardly therethrough a pipe 63, communicating with cylinder 57 and which receives the liquid and transmits it upwardly through the cover 55 for delivery to a passage 64 in the casting 62. This passage 64 extends upwardly and downwardly as indicated at 65 to dispense the liquid. The passage 64 at its upper end and the downwardly extending portion 65 is provided in a projection having a top 66 with an opening 67 therein over which there is retained a closure member 68 by a hand ring 69 which is frictionally extended over the top. When the cover 68 is removed, access can be had to the passage 64 so that it can be easily cleaned.

The pipe 63 extends upwardly into and about a seat 71 which can be removed from the upper end of the pipe and which has a sealing washer 72 on its upper end to be engaged by the bottom face of the casting 62 about the passage 64. A seat sleeve 73, affixed to cover 55 has a slot 74 with a removable pin 75 therein adapted to receive a hook portion 76 for fixing the casting 62 to the cover 55 from the opposite side of the fastener connection 59.

Within the center of cover 55 there is fixed a sleeve 77, through which can be slid pump shaft 77'.

On the upper end of the pump shaft 77', there is connected a link 78 with a fastener pin 79 in the same manner in which the link 42 is connected by pin 49 with the rod 35 as above described. Accordingly, the shaft 77' can be readily released from the link 78. The link 78 is connected by a pin 81 within an opening 82 in the casting 62 with a rotatable member 83 having a handle 84 thereon said member 83 being rotatably and springably secured to casting 62 as by a pin having heads 62', the spring not being shown. The handle 84 is swung to the phantom line position to force the liquid upwardly through the pipe 63 to the outlet end 65 of the passage 64, and upon release of hand pressure, handle 84 is automatically returned.

On the cover 55 is a sleeve 85 upwardly through which extends a shaft 86 having an agitator plate 87 thereon. The upper end of the shaft 86 is threaded to receive a handle 88 by which the agitator can be lifted.

It should now be apparent that there has been provided a dispensing unit which can be quickly and easily disassembled and disconnected so that access can be effected without special tools, the pin 49 or 79 having a knurled handle portion to facilitate the turning movement of the pin.

While various changes may be made in the detailed construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

I claim:

1. A dispenser unit comprising a cover plate, a top structure having an outlet passage extending upwardly therein, a member adjustable upon the top structure, a piston rod slidable upwardly through the cover, a link detachably connected between said adjustable member and the piston rod, an outlet pipe extending upwardly from the cover and adapted to be engaged by the top structure to direct liquid to said passage therein, a seat member slidably fitted upon said outlet pipe, and means for releasably connecting the top structure to the cover and said seat member whereby the same can be removed free of the cover and of the seat member upon detaching the link from the piston rod.

2. A dispensing unit as defined in claim 1 and said means for releasably connecting the top structure to the cover including a hook depending from said top structure, said seat member having a pin for receiving said hook, and a releasable fastener arrangement at the opposite side of the cover for securing the top structure thereto.

3. A dispensing unit as defined in claim 1 and said releasable fastener arrangement comprising a supporting rod extending upwardly through the cover to provide a projection thereabove and fixed to the cover, said top structure having a recess for receiving the upper end of the rod, said rod end having a horizontally extending opening, a screw fastening element in the top structure having a portion adapted to extend into the opening of the rod whereby to fix the top structure to the cover.

4. A dispensing unit as defined in claim 1 and said top structure having a projection through which the liquid passage is extended and from which the passage is extended downwardly, said projection having an opening in the top thereof leading to the passage to permit cleaning elements to be extended through the top to the passage, and a releasable cover device adapted to extend over the top opening to normally close the same while the dispenser is in use.

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