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P. P. GORSKI.

DEVICE FOR FILLING VALVED RECEPTACLES WITH CHARGED LIQUIDS.

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Fig. 1

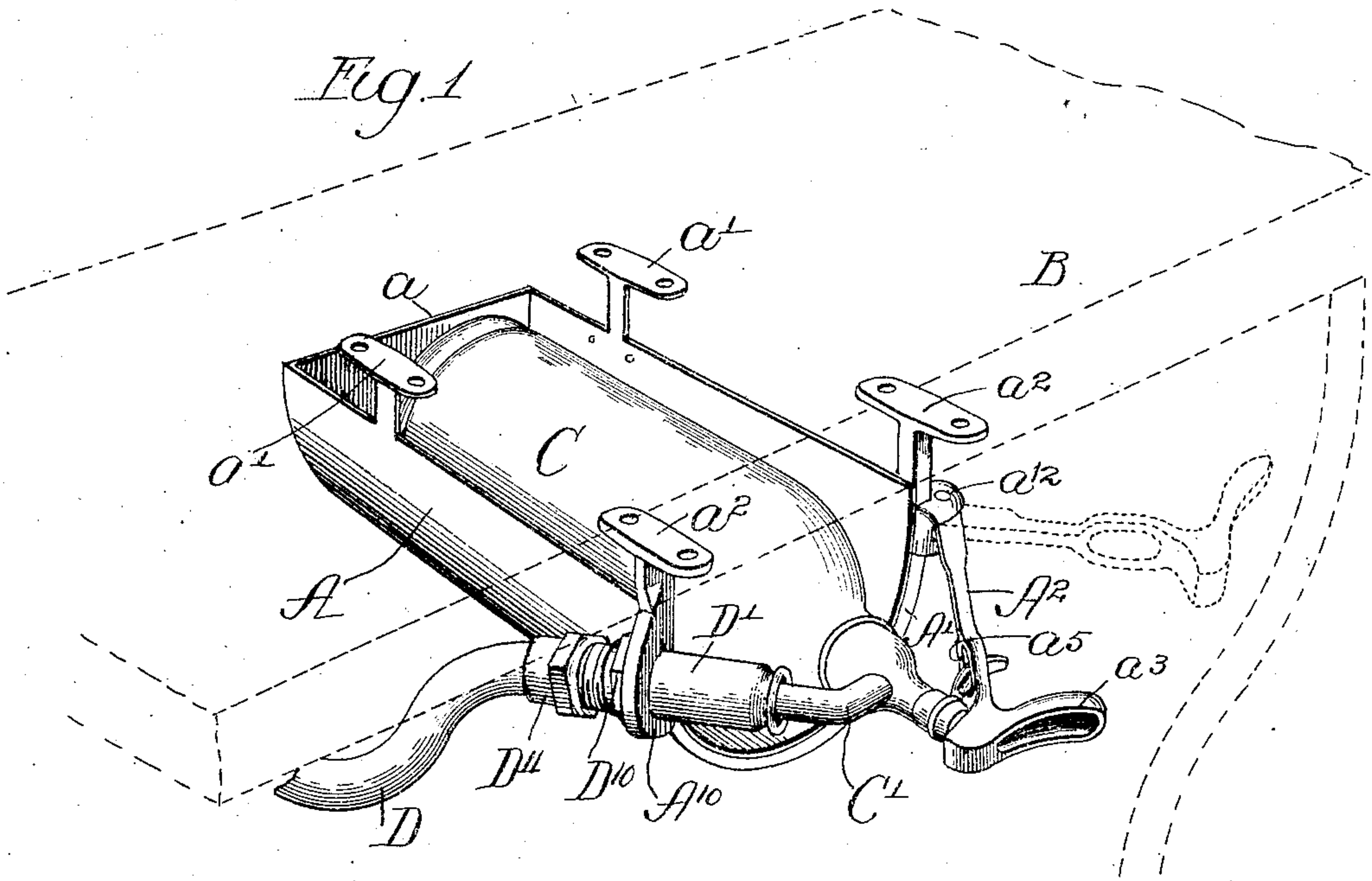


Fig. 2

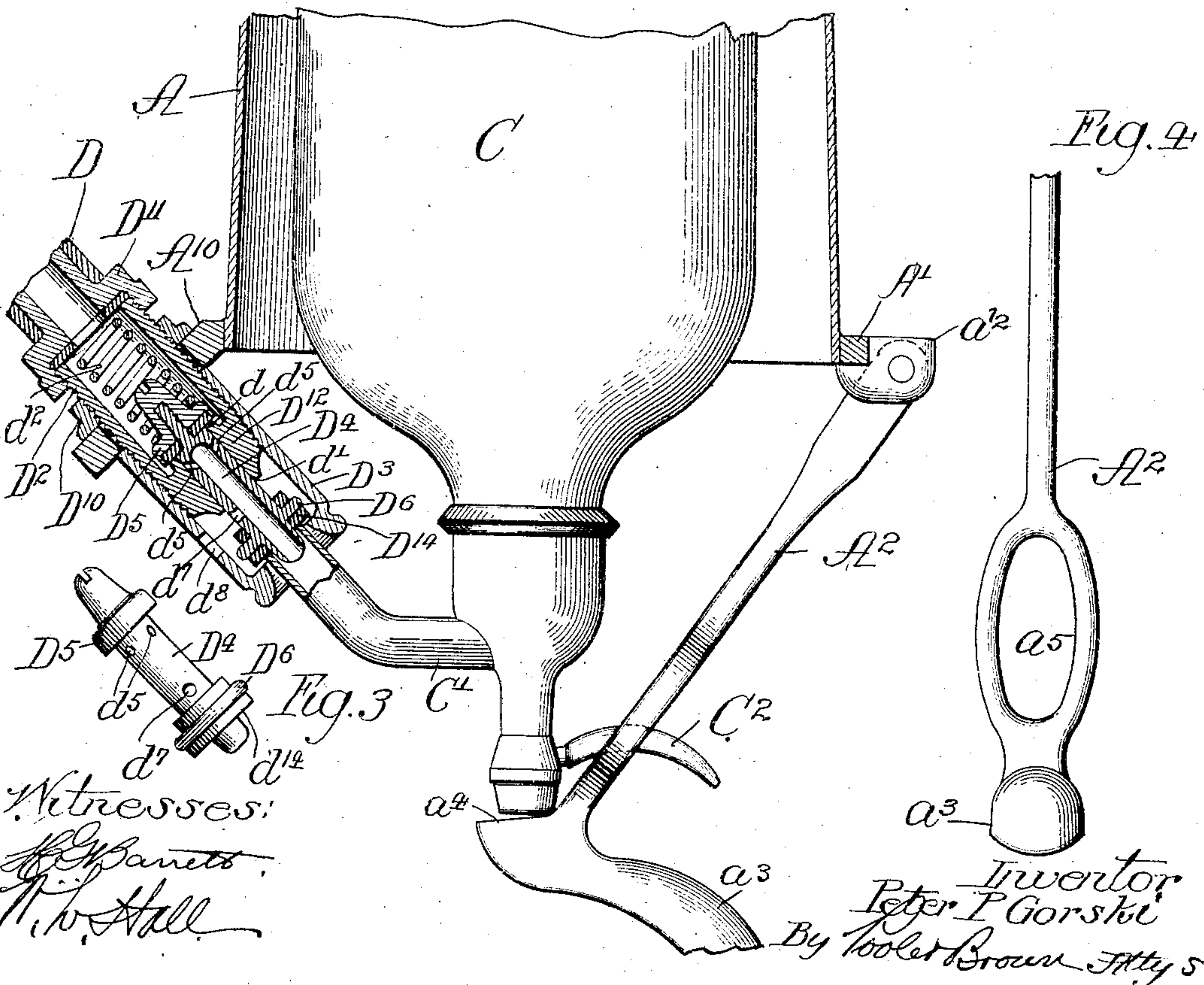
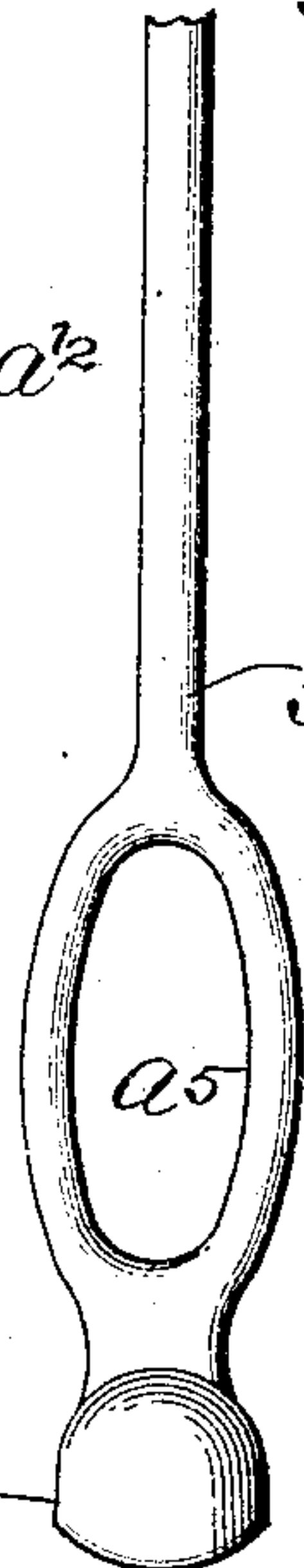


Fig. 3



Witnesses:
H. E. Barlett
H. W. Hall

Inventor
Peter P. Gorski
By Tooler Brown Fitty 5

UNITED STATES PATENT OFFICE.

PETER P. GORSKI, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JOHN CEDERSTROM, OF CHICAGO, ILLINOIS.

DEVICE FOR FILLING VALVED RECEPTACLES WITH CHARGED LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 785,946, dated March 28, 1905.

Application filed April 14, 1904. Serial No. 203,174.

To all whom it may concern:

Be it known that I, PETER P. GORSKI, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Devices for Filling Valved Receptacles with a Charged Liquid; and I do hereby declare that the following is a full, clear, and exact description thereof, reference
10 being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improved device for filling receptacles with charged water under pressure—as, for instance, filling
15 seltzer-bottles from a suitable source supplying the seltzer.

Among the objects of the invention is to provide an improved support for the bottle
20 while it is in the position to be filled, to provide a suitable valved filling device at the end of the liquid-pipe through which the charged liquid is directed to the nozzle of the receptacle, and to provide an improved device for
25 simultaneously opening the valves in said bottle and at the end of the filling-pipe.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

30 In the drawings, Figure 1 is a perspective view of a filling device made in accordance with my invention, showing in dotted lines a saloon-bar and the position of the device with respect thereto. Fig. 2 is a partial plan view
35 and partial horizontal section of said device. Fig. 3 is a separate view of the movable part of the valve located at the discharge end of the filling-pipe. Fig. 4 is a side elevation of a lever constructed to open the valve of the
40 receptacle and to operate through said receptacle the valve of the filling-pipe.

As shown in the drawings, A designates the holder for the receptacle to be filled, as the seltzer-bottle C, and attached to a support B,
45 which may be the counter or bar of a saloon.

D designates a filling-pipe extending from a source supplying charged liquid and provided at one end with a discharge valved device D'.

The holder A is preferably made of sheet
50 metal and is provided with a rounded bottom and closed at its rear end by an end wall *a*. The holder is provided with attaching-lugs, it having two lugs *a'* formed integral with the sheet-metal body and two other lugs *a''* at its
55 front made integral with a cast-metal frame or rim A' at the front end of the device and to which the sheet-metal part of the holder is attached.

The discharge end of the valve D', which is
60 a self-closing valve, is open at its end to receive the spout C' of the seltzer-bottle, and the closure of said valve is adapted to be moved off its seat to permit the charged liquid to pass therefrom to the nozzle of the bot-
65 tle by forcing the nozzle end of the bottle toward the valve. The valve at the end of the filling-pipe is held fixedly in place in a lug A¹⁰, (in a manner hereinafter to be described,) so that said valve is always in proper posi-
70 tion relatively to the holder. Said bottle is provided with the usual lever C² for actuating its own valve. Associated with the holder is a lever A², which is pivotally connected with the rim A' of the holder and is con-
75 structed at its free end to engage the lever C² in a manner to open the valve of the bottle and to engage the head of the bottle in a manner to force the same and nozzle toward the valve D', thereby opening the latter, where-
80 by by the same movement of the lever the valve of the bottle C and the valve D' are opened. Said lever is pivoted to a lug *a*¹² at one side of the holder and is provided at its other end with a handle *a*³ and with an in-
85 wardly-facing seat *a*⁴, adapted to bear against the head of the bottle. The lever is provided between its ends with an opening *a*⁵, through which is adapted to extend the handle or lever C² of the bottle-valve. When said lever A²
90 is swung toward the head end of the bottle, as indicated in full lines in Figs. 1 and 2, the seat *a*⁴ engages the head of the bottle, while the part of the lever at the outer side of the slot *a*⁵ engages the bottle-lever C² in a manner
95 to open said valve. The pressure of said lever A² acts to shift the head end of the bottle toward the valve D' in a manner causing the

nozzle to open said valve. In this manner a single movement of the hand opens both of the valves, while the other hand is free to guide the nozzle into the discharge-valve of the filling-pipe D. The support B serves to sustain the bottle while being filled and relieves the user from the work of holding the bottle in position.

Referring now to the construction of the self-closing valve at the discharge end of the filling-pipe D, said valve is made as follows: The casing of the valve D' consists of two tubular parts D² D³, the former of which extends through an opening in the lug A¹⁰ and the latter fits over and has screw-threaded engagement with the forward end of the part D². Said part D³ bears against one side of the lug A¹⁰, while a clamping-nut D¹⁰, having screw-threaded engagement with the part D², bears against the other side of the lug, whereby said valve is clamped in place. The advance end of the part D³ is open to admit of the insertion thereinto of the nozzle of the bottle C. The pipe D is attached to the valve D' by means of a coupling D¹¹, having screw-threaded engagement with the part D². The wall of the part D² of said casing is thickened at D¹² to provide a reduced passage, having at one end a rearwardly-facing seat d and at its other end a forwardly-facing seat d' . Sliding in said reduced passage is a tubular stem D⁴, having at its rear end a detachable head constituting a forwardly-facing closure D⁵, which engages the rear seat d , and at its other end with a head D⁶, constituting a rearwardly-facing closure adapted for engagement with the forwardly-facing valve-seat d' . Said closures D⁵ D⁶ have yielding faces, made of rubber or the like, to insure fluid-tight closing of the valves. The rear closure D⁵ is normally held against its seat by means of a spring d^2 , interposed between the closure and an internal shoulder in the pipe-coupling D¹¹. The forward open end of the stem extends beyond the head into the opening at the forward end of the part D³ of the valve-casing, and the head D⁶ is provided around said extension of the stem with a yielding face D¹⁴, against which the end of the nozzle bears when pressure is applied therethrough to open the valve, thereby preventing escape of liquid between said parts when the valve is open. The hollow spindle is provided just in advance of the closure D⁵ with radial ports d^5 d^5 , which are contained within the restricted passage of the casing when the closure D⁵ is seated by the action of the spring d^2 . When the tubular stem is moved rearwardly, therefore, by pressure applied through the bottle-nozzle, the closure D⁵ is moved off its seat and the openings d^5 forced rearwardly from the restricted passage of the valve-casing, whereby fluid under pressure is free to pass through said openings d^5 of the tubular stem into the nozzle C' of the bottle, and at this time the bottle-valve is automatic-

ally held open, so that the fluid is free to pass into the bottle. At the time the valve is so opened through the tubular stem to the bottle the closure D⁶ is seated against the seat d' at the forward end of the restricted opening of the casing, whereby the liquid is prevented from escaping between the stem and casing and outside the latter. When pressure on said movable parts of the valve is released, the spring d^2 seats the closure and stops the flow of the charged liquid. Whatever liquid may be imprisoned in said stem and the nozzle when the movable parts of the valve are restored will be vented through a radial opening d^7 in the stem and an opening d^8 in the casing adjacent thereto.

It will be observed that the holder A constitutes not only a support for sustaining the bottle in proper position during the filling operation, but also serves as a guard to prevent injury to persons or articles near the device in case the filling pressure should be sufficient to effect the bursting or explosion of the bottle.

I claim as my invention—

1. A device for the purpose set forth comprising a generally horizontal holder and shield which is open at its forward end for receiving and holding a seltzer-bottle, means for attaching said holder to the lower face of a bar or like support, a stationary self-closing valve adapted to be attached to a filling-pipe, and a rigid lever which is hinged to said holder and adapted to engage at its free end the lever-valve of the seltzer-bottle in a manner to open the valve of said bottle and also the head of the bottle in a manner to force the nozzle of the bottle against the self-closing valve and open the latter.

2. A device for the purpose set forth comprising a holder for a bottle or the like, a self-closing valve adapted for connection with a filling-pipe and fixed on said holder in position to receive the nozzle of said bottle, and a lever hinged to said holder and provided at its free end with a seat which engages the head of the bottle in a manner to force the nozzle of the bottle against the self-closing valve in a manner to open the same and adapted to also open the valve of the bottle.

3. A device for the purpose set forth comprising a holder, a self-closing valve fixed to the holder and a lever hinged at one end to the holder and provided at its free end with a seat adapted to engage the bottle-head in a manner to force the nozzle of the bottle into said self-closing valve to open the latter, and provided between said seat and its hinge with a slot adapted to receive the lever of the bottle-valve, the lever at the outer end of the slot engaging the bottle-valve lever in a manner to open the bottle-valve when forced against the bottle to open the self-closing valve.

4. A device for the purpose set forth com-

prising a holder and a self-closing valve fixed to the holder in position to receive the open end of the nozzle of a bottle supported in said holder, comprising a casing having therein a
5 restricted longitudinal passage, and provided at the ends of said passage with forwardly and rearwardly facing annular seats, a tubular stem sliding in said passage and having at its ends closures adapted to engage said seats,
10 a spring for holding the rear closure against its seat, said stem being provided near the rear closure with radial ports opening into the bore of the stem and the forward closure of the stem engaging the forwardly-facing
15 seat in the casing when the rear closure is unseated.

5. A device for the purpose set forth comprising, in combination with a holder for the bottle or the like, a valve so fixed with re-
20 spect to said holder as to receive the nozzle of a bottle in the holder, the valve having a casing open at its front end to receive said nozzle and provided with an endwise spring-pressed, tubular stem having at its front and
25 rear ends closures adapted to engage annular seats in said casing and near its rear end with a port or ports opening into the bore of the stem, the rear closure being seated to close the valve and the front closure being seated
30 when the rear closure is unseated.

6. A device for the purpose set forth comprising, in combination with a holder for the bottle or the like, a valve so fixed with re-
35 spect to said holder as to receive the nozzle of a bottle in the holder, the valve having a casing open at its front end to receive said

nozzle and provided with an endwise spring-pressed, tubular stem having at its front and rear ends closures adapted to engage annular
seats in said casing and near its rear end with
40 a port or ports opening into the bore of the stem, the rear closure being seated to close the valve and the front closure being seated when the rear closure is unseated, the tubular stem and casing being provided with vent-
45 openings in front of the forward seat.

7. A device for the purpose set forth comprising, in combination with a holder for the bottle or the like, a valve so fixed with re-
spect to said holder as to receive the nozzle
50 of a bottle in the holder, the valve having a casing open at its front end to receive said nozzle and provided with an endwise spring-pressed, tubular stem having at its front and
55 rear ends closures adapted to engage annular seats in said casing and near its rear end with a port or ports opening into the bore of the stem, the rear closure being seated to close the valve and the front closure being seated
60 when the rear closure is unseated, the forward open end of the tubular stem being adapted to enter said nozzle and provided around said open end with a yielding seat adapted for engagement by the nozzle of the bottle.

In testimony that I claim the foregoing as
65 my invention I affix my signature, in presence of two witnesses, this 11th day of April, A. D. 1904.

PETER P. GORSKI.

Witnesses:

WILLIAM L. HALL,
GERTRUDE J. BRYCE.