

No. 734,231.

PATENTED JULY 21, 1903.

F. W. & G. N. INDEN.
BARREL FILLER.

APPLICATION FILED MAR. 28, 1902.

NO MODEL.

Fig. 1.

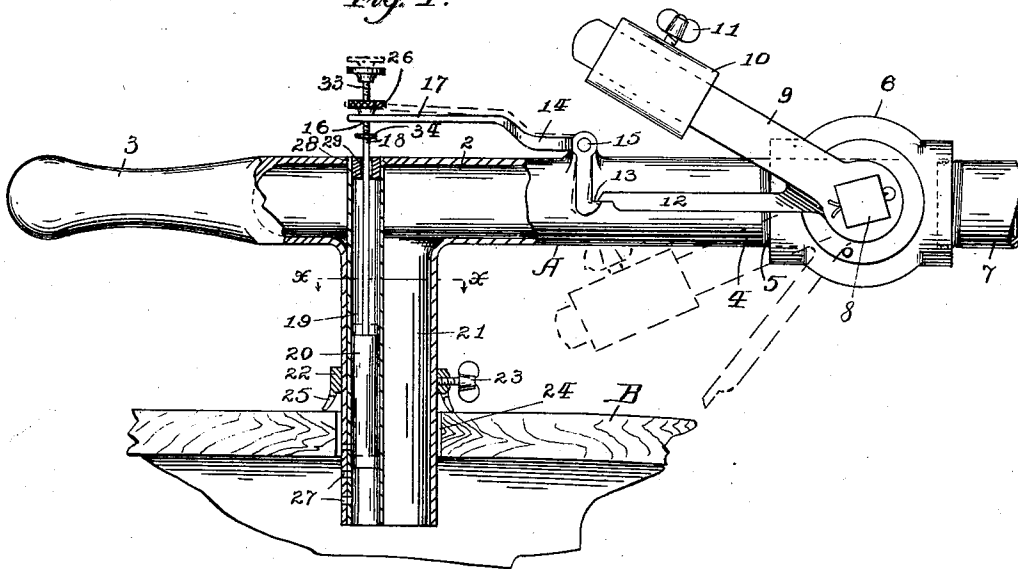


Fig. 2.

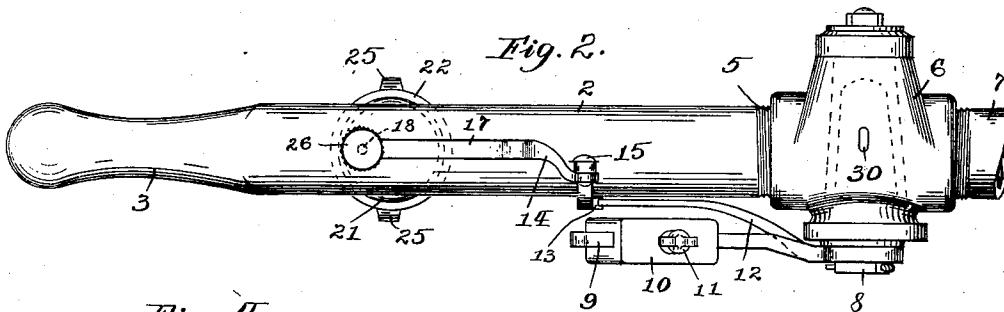


Fig. 4.

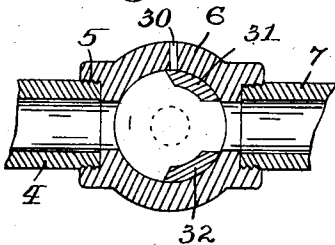


Fig. 3.

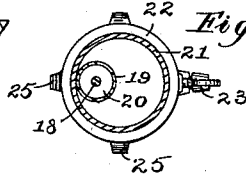
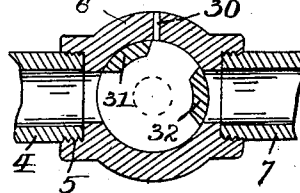


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANCIS W. INDEN AND GOTTFRIED N. INDEN, OF ST. PAUL, MINNESOTA.

BARREL-FILLER.

SPECIFICATION forming part of Letters Patent No. 734,231, dated July 21, 1903.

Application filed March 28, 1902. Serial No. 100,362. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS W. INDEN and GOTTFRIED N. INDEN, citizens of the United States of America, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Barrel-Fillers, of which the following is a specification.

Our invention relates to improvements in barrel-fillers. These devices are used principally in filling barrels and other receptacles with oil or other liquid. With oil-fillers now in general use much trouble is caused because of lack of means to determine when the barrel is full. If overfilled, oil is wasted and splashes around the barrel, on the operator, and surrounding objects. If the barrel is not completely filled, the purchaser is of course dissatisfied and an adjustment of account between the vender and purchaser becomes necessary. Further trouble is caused by foam collecting around the operative parts of filling device, rendering the parts inert, and in consequence the mechanism fails to work. With our invention these objections are obviated.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of our invention, shown applied to a barrel. Fig. 2 is a plan view of our invention. Fig. 3 is a cross-section of what we have chosen to term the "spout," taken on the line X X of Fig. 1. Fig. 4 is a sectional view of the valve shown in open position, and Fig. 5 is a similar view showing the valve closed.

In the drawings, let A represent our improved barrel-filler, which consists, preferably, of the horizontal ingress-pipe 2, which is provided with a handle 3. The open end 4 of the pipe is threaded at 5 to receive the check-valve 6 of ordinary construction. This valve also connects with the pipe 7, leading to the source of liquid supply. (Not shown.) The operating-shaft 8 of the valve extends horizontally with relation to the spout 21 and is attached to the lever-arm 9, which carries the weight 10. This weight is provided with the thumb-screw 11 for adjusting the weight on the lever-arm and causes the valve to turn and operate when the arm is lifted and allowed to fall. The lever-arm carries

the trip-rod 12, which is adapted to engage the shoulder 13 on the bell-crank lever 14 when the valve is open and the barrel filling. This bell-crank lever is pivoted at 15 on the ingress-pipe 2 and threaded at 16 on the outer end of its operating-arm 17 to the float-rod 18. The float-rod passes loosely through the opening 29 and vertically through the inner tube 19, in which the float 20, carrying the rod 18, is adapted to slide. The tube 19 is threaded at 28 to the ingress-pipe and is preferably positioned in the vertical spout 21, as shown in Fig. 3, and fastened to the side of the spout by soldering or other suitable means. The spout is formed on the horizontal ingress-pipe 2 and is provided with the sliding collar 22, which is adjustable by means of the thumb-nut 23. This thumb-nut is adapted to impinge against the outer surface of the spout to regulate the collar 22 in adjusting the lower end of the spout through the bung-hole 24 in the barrel B. The collar is provided with the outwardly-projecting arms 25 for the purpose of allowing the air to escape from the barrel through the opening between the outer surface of the spout and the wall of the bung-hole 24. The position of the float in the tube 19 may be adjusted vertically by screwing the rod 18 up or down through the operating-arm 17, and when adjusted so as to check the flow of oil into the barrel through the spout when the barrel is filled the float-rod may be locked in position by the thumb-nuts 26.

In operation the float is first adjusted to the desired position, as above described, and the spout inserted in the bung-hole of the barrel, as shown in Fig. 1. The barrel-filler then rests by the collar 22 on the surface of the barrel. The valve 6 is opened by raising the lever-arm 9 to the position shown by full lines in Fig. 1 and the trip-rod 12 set on the shoulder 13 of the bell-crank lever. The oil is then free to pass through the ingress-pipe 2 and spout 21 into the barrel from the source of supply, and as the vessel fills to a level with the float, which is constructed of cork or other light material, the liquid causes the float and rod 18 to rise, owing to the greater specific gravity of the liquid. The shoulder 13 of the bell-crank lever 14 then trips from engagement with the arm 12 and allows the valve 6 to close by means of the descending

weight 10 and rod 9. The position of the parts when the valve is closed is shown by broken lines in Fig. 1. The accuracy with which the valve responds is increased by perforating the tube and spout, as shown at 27, thus facilitating the egress of the air and the ingress of the liquid into the tube.

The valve 6 is preferably perforated at 30, and the parts 31 and 32 of the valve are so constructed as to respectively open the perforation 30 and close the passage-way leading from the pipe 7 when the valve is closed, as shown in Fig. 5, and to close the perforation and open said passage-way when the valve is open, as shown in Fig. 4. When the valve is closed, air is free to enter the barrel-filler through the perforation 30, and oil in the barrel-filler after the valve closes is thus free to empty into the barrel quickly. Having described our invention, what we claim as new, and desire to protect by Letters Patent, is—

1. A device of the class set forth, consisting in combination, of a horizontal pipe closed and formed with a handle on one end, a valve on the other end, a spout on the side of said pipe, a vertical tube extending along the inner wall of said spout, a float in said tube, a rod carried by said float and projecting above said pipe, a lever on said valve, a weight adjustable on said lever and adapted to close said valve, a tripping-arm connected with said valve, an adjustable connection between the projecting end of said rod and said tripping-arm, perforations through the lower end of said tube and spout and below said float for facilitating the egress of air and the ingress of liquid below the float in the tube, and a collar vertically adjustable on the outer surface of said spout.

2. A device of the class set forth, consisting in combination of a horizontal pipe closed at one end, a valve on the other end, a spout on the side of said pipe, a vertical tube extending along the inner wall of said spout, a float in said tube, a rod carried by said float and projecting through said pipe, means for automatically closing said valve, a trip-lever attached to said valve and adapted to hold said valve open, a connection between said lever and the projecting end of said rod, said connection adapted to trip said lever and re-

lease said valve into closed position, perforations near the lower end of said spout and tube and below said float for facilitating the egress of air and the ingress of liquid below the float in the tube, and means for supporting said device in position on the barrel.

3. A device of the class set forth, consisting in combination of a horizontal ingress-pipe, a handle which closes one end of said pipe, a check-valve on the other end of said pipe, a horizontal shaft on which said valve works, a passage-way in said valve for admitting air into said pipe when said valve is closed, a lever-arm on the end of said shaft, a weight adjustably attached to said lever-arm for closing said valve, a trip-rod also carried by said valve, a bell-crank lever pivoted on said pipe and having an engaging shoulder for said trip-rod when the valve is open, a spout on the side of said pipe, a tube in said spout, a float in said tube, a rod projecting from said float and through said pipe, an adjustable connection between the projecting end of said rod and the free end of said bell-crank lever, and perforations in the lower end of said spout and tube and below said float.

4. A barrel-filler, consisting in combination with a horizontal pipe 2, closed at one end, of a valve on the other end, a spout on the side of said pipe, a vertical tube 19 extending along the inner wall of said spout and across said pipe, tripping mechanism for the valve, a float 20 in said tube, a float-rod 18 projecting above said pipe, an adjustable connection between the projecting end of said rod and tripping mechanism, perforations through the lower end of said tube and spout and below said float for facilitating the egress of air and the ingress of liquid below the float in the tube, and a collar 22 vertically adjustable on the outer surface of said spout, for the purposes specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FRANCIS W. INDEN.
GOTTFRIED N. INDEN.

Witnesses:

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F. G. BRADBURY.