

No. 704,686.

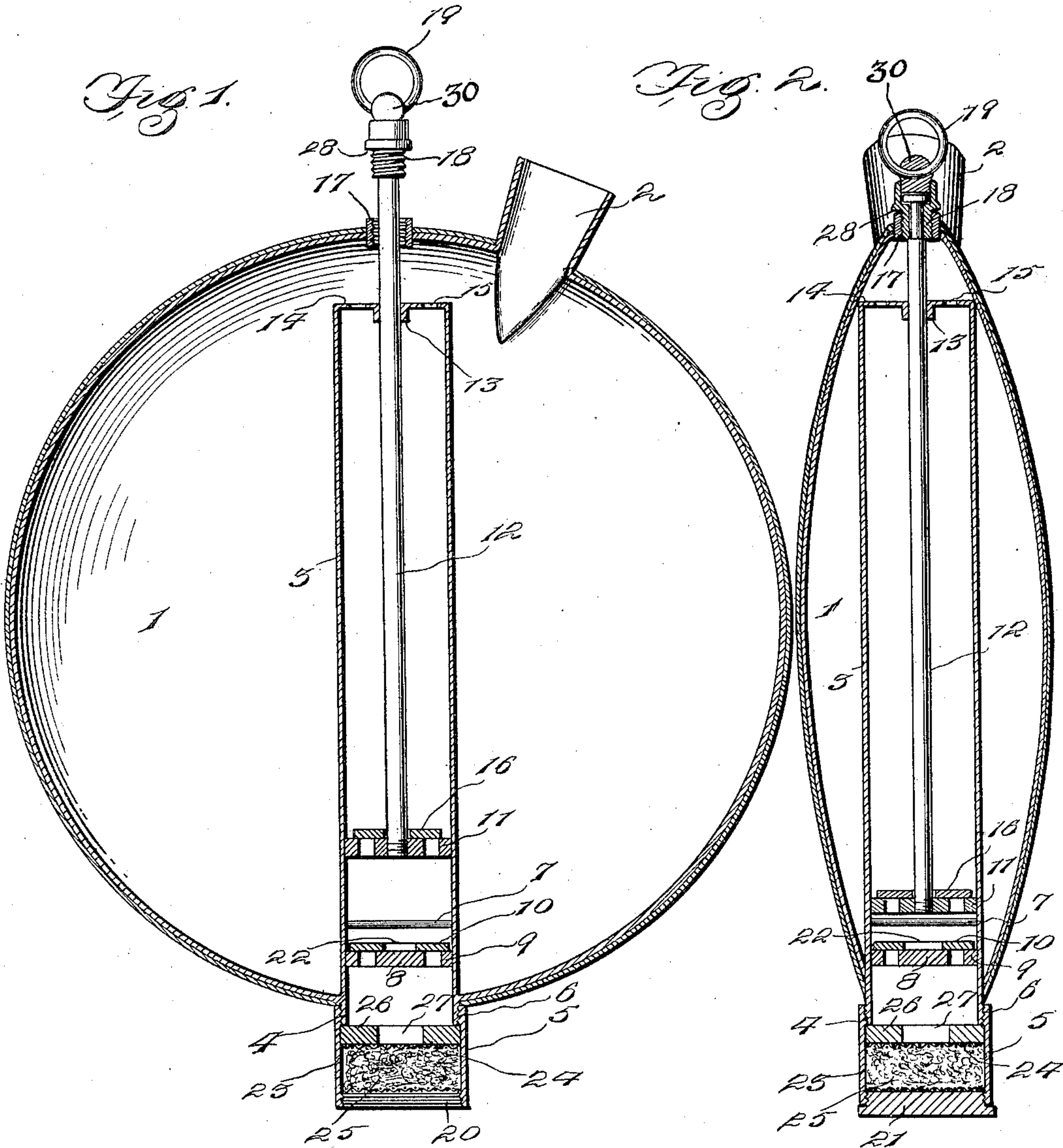
Patented July 15, 1902.

T. KEARNS & I. C. COIN.

ARMY CANTEEN.

(Application filed Sept. 16, 1901.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

THOMAS KEARNS AND INA C. COIN, OF SALT LAKE CITY, UTAH.

## ARMY-CANTEEN.

SPECIFICATION forming part of Letters Patent No. 704,686, dated July 15, 1902.

Application filed September 16, 1901. Serial No. 75,566. (No model.)

*To all whom it may concern:*

Be it known that we, THOMAS KEARNS and INA C. COIN, citizens of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented a new and useful Army-Canteen, of which the following is a specification.

The object of the invention is to provide a canteen of the ordinary approved form for army and tourists' use with an inclosed induction device, preferably forming an inseparable part of the receptacle and being so arranged and constructed as not to modify materially the exterior shape or contour of the ordinary canteen and adapted to facilitate the filling of the receptacle from a shallow or rapid stream or a pool without submerging the receptacle and without disturbing the sediment in the stream or pool, and also to provide such an induction device as to enable the water to be strained or filtered as it is introduced into the receptacle.

Further objects and advantages of the invention will appear in the following description, the novel features thereof being particularly pointed out in the appended claims, it being understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

In the drawings, Figure 1 is a longitudinal central sectional view of a canteen provided with an induction device constructed in accordance with the invention, the plane of the section being parallel with the opposite broad sides of the receptacle. Fig. 2 is a central sectional view taken in a plane at right angles to that of Fig. 1, the movable element of the induction device being secured in its normal or inoperative position.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

The ordinary and approved form of canteen is of a generally disk-like construction, with centrally-bulged or outwardly-convexed side walls drawn together near their edges to form a narrow peripheral rim which is approximately circular, and in order to adapt the canteen 1, embodying the present invention, to perform its ordinary functions in the

usual manner the improvements embodying the present invention are applied to a receptacle of this construction. In the ordinary practice, however, canteens are provided in this peripheral rim with a lip, nozzle, or outlet, such as that indicated at 2 in the drawings, the same being adapted to receive a cork or other suitable form of stopper. (Not shown.) Usually the filling of a canteen is accomplished through this nozzle or neck by submerging or partly submerging the receptacle; but not only is this operation tedious, but it is difficult to accomplish the complete filling of the receptacle, and particularly when the source of the supply of water is a shallow stream or pool, and, moreover, under such adverse conditions it is almost impossible to fill the canteen without disturbing the sediment, and thus clouding the water, to the disadvantage of those who subsequently fill their canteens from the same source. To accomplish the rapid and complete filling of each canteen without disturbing the sediment at the bottom or without introducing any scum or floating impurities which may be on the surface and at the same time to provide such means as may remain permanently attached to each canteen, so that the possessor thereof may fill his canteen without assistance or without the use of auxiliary means, is the essential object of this invention, and it has been found that this object may be attained without involving a material increase in the weight of the canteen and without necessitating the provision of any prominent projections beyond the contour of the ordinary canteen by inclosing within the canteen an induction device consisting, generally speaking, of a pump having a fixed element, such as a cylinder 3, rigidly attached to the shell of the canteen in any suitable manner, and a movable element, such as a piston, operatively related with the cylinder and provided with a terminally-accessible grip or handle adapted to be grasped by the operator and reciprocated to draw the water into the can, the proper valves being provided when preferred to facilitate these operations and prevent the accidental escape of the contents after the pumping operation has been completed.

In the embodiment of the invention which



is illustrated in the drawings both elements of the induction device are normally inclosed within the shell of the canteen, the outer end of the cylinder, which forms the stationary element, being fixed in registration with an opening in the rim of the canteen and the piston-rod being extended through the rim at a diametrically opposite point, where it is provided with a grip or handle consisting of a ring 19 of the ordinary construction now found on canteens and used as means for the attachment of a suspending or shoulder strap or for engagement with means whereby the canteen may be suspended from the belt of the wearer. This ring, however, instead of being attached directly to the rim, as in the ordinary practice, is mounted on the extremity of the piston-rod 12 to facilitate the operation of the latter when the pump is in use, while performing its usual function as a supporting means when the pump is not in use. To adapt the ring to perform this dual function, its connection with the piston-rod is effected by means of a head 30, which is swiveled on the extremity of the piston-rod and is adapted for interlocking connection with the rim of the canteen, the engagement or disengagement of the members of the interlocking joint being effected, preferably, by the turning of the head. In the construction illustrated the head is provided with a threaded extension 18 for reception by a threaded socket 17 in the rim, this socket in turn forming a guide through which the piston-rod extends and which is of a sufficient diameter to give ample clearance during the operation of the pump. Also the head is provided with a shoulder 28 to bear on the outer end of the thimble forming the socket 17, and thus prevent leakage of water through the guide when the induction device is not in use. When it is desired to use the pump, the piston-rod, which is normally secured in place by the interlocking of the head with the rim, is released by the turning of the head, and after the completion of the pumping operation the head may be reengaged with the rim by a reverse movement, thereby not only securing the movable member of the induction device against accidental displacement, but fastening the suspending-ring 19 so that it is adapted to perform its ordinary function in the usual way.

In the construction illustrated the cylinder or barrel forming the stationary member of the induction device terminates short of the upper side of the canteen, is provided with a head 14, having openings 15, through which the water passes from the cylinder or barrel, and also provided with a central guide 13. The piston-head 11 is of a well-known type and is provided with a valve 16, which controls the ports of the head and is mounted to open upwardly, or, in other words, on the downstroke of the piston, so as to allow the liquid contents of the cylinder or barrel to pass to the upper side of the piston. Moreover, the lower or cylinder valve 10 may be of

the ordinary construction, provided with an opening 22 and cooperating with a seat 8, having one or more ports 9 out of registration with the opening 22, a stop consisting of a bar 7 being located in the path of the upward movement of this valve, so as to prevent displacement thereof and hold it in operative relation with the seat.

With the apparatus as thus far described it will be seen that the canteen can be filled by submerging only the extreme lower portion of the rim and reciprocating the piston after having previously disengaged the grip end thereof and that after the desired quantity of liquid has been introduced (the level of the liquid in the canteen being visible through the nozzle 2) the piston may be replaced, or, in other words, moved inward or downward to the limit of its stroke and secured, as above described, and that when the movable member of the pump is thus fastened in its normal or inoperative position all parts of the induction device are concealed within the canteen, are protected against injury by contact with adjacent objects, and also protected from accumulations of foreign matter, and at the same time the bulk of the canteen is not increased, and the weight is increased so little as to be practically imperceptible. In order to still further increase the efficiency of the device, however, it may be provided with means for filtering the water as it is introduced, and although various means of attaching the filtering device may be adopted in this connection and various forms of filtering means may be employed it has been found that an efficient embodiment consists of the cup or thimble 5, threaded upon a lip or flange 4, which is in registration with the cylinder or barrel of the pump and carries spaced strainer-disks 24 and 25, of wire-gauze or perforated material, between which is arranged a fibrous filling 23. To prevent displacement of the strainer-disks and filling by the suction caused by the pump when in operation, a restraining disk or head 26 may be employed, the same being interposed between the upper or inner strainer-disk and the edge of the lip or flange 4, said head being provided with an opening 27. Also in order to prevent dust or other foreign matter from collecting in the induction-passage formed by the thimble 5 it may be fitted with a removable stopper plug or cap 21, which in the construction illustrated is threaded in place within the extremity of the thimble below the lower or outer strainer-disk.

In the construction illustrated the filtering attachment projects slightly beyond the contour of the body of the canteen, and it has been found in practice that an advantage of this arrangement resides in the fact that this projection may be inserted into the water of a stream or pool, so as to draw the water from a point below the surface, and hence below the plane of floating objects, without actually submerging the body of the canteen, and ob-



viously the introduction of a small tube will cause less disturbance of the water, and hence there will be less liability of stirring the sediment than if the lower portion of the rim of the can were submerged. It should be observed, however, that the entire induction device is wholly incased within the body of the canteen, so that injury thereto by contact with adjacent objects is prevented, and the filtering device is preferably attachable, as described, whereby in case of injury or when the filling material thereof becomes foul it may be replaced either in whole or in part.

Having described the invention, what is claimed is—

1. The combination with a canteen, of an interiorly-disposed suction device having its inlet end accessible from the exterior thereof.

2. The combination with a canteen, of an interiorly-disposed suction device having its inlet end projected outward therefrom.

3. The combination with a canteen, of an interiorly-disposed suction device and a filter, the suction device having its inlet end accessible from the exterior of the canteen.

4. The combination with a canteen, of an interiorly-disposed suction device having its inlet end accessible from the exterior thereof, and filtering means associated with the said end.

5. The combination with a canteen, of an interiorly-disposed suction device having its inlet end projecting outward therefrom, and filtering means associated with the said end.

6. The combination with a canteen, of an interiorly-disposed suction device having its inlet end accessible from the exterior thereof, and detachable filtering means associated with the said end.

7. The combination with a canteen, of an interiorly-disposed suction device having its inlet end projected outward therefrom, and detachable filtering means associated with the said end.

8. A canteen having an inclosed induction filling device comprising a suction-tube arranged within the canteen with its inlet end exposed at the surface thereof, and means for causing a suction in said tube.

9. A canteen having an inclosed induction filling device comprising an inclosed suction-tube having its inlet end exposed at the surface of the canteen, and a reciprocatory suction-producing element coöperating with said tube and having a grip accessible at the surface of the canteen.

10. A canteen having an induction filling device comprising a cylinder or barrel and a piston arranged wholly within the contour of the canteen, with the inlet end of the cylinder or barrel, and the grip end of the piston exposed at the surface of the canteen.

11. A canteen having an induction filling device consisting of a pump having fixed and movable elements arranged wholly within the contour of the canteen, the fixed element hav-

ing an exteriorly-exposed inlet, and the movable element having a grip or handle exposed at the surface of the canteen.

12. A canteen having an inclosed induction filling device comprising fixed and movable elements, and a canteen-supporting device mounted upon the movable element and having an interlocking engagement with the wall of the canteen to secure said supporting device and the movable element in a fixed position.

13. A canteen having an inclosed induction filling device comprising fixed and movable elements, and a canteen-supporting ring mounted upon the extremity of the movable element and having means for effecting an interlocking engagement with the wall of the canteen to secure the ring and said movable element in a fixed position.

14. A canteen having an inclosed induction filling device including a reciprocatory element, and a canteen-suspending device having a head swiveled on said reciprocatory element and provided with means for effecting an interlocking engagement with the wall of the canteen.

15. A canteen having an inclosed induction filling device including a reciprocatory element having a rod mounted for operation through a guide-opening in the wall of the canteen, and a canteen-suspending ring having a head swiveled upon said rod and provided with means for effecting an interlocking engagement with the wall of the canteen.

16. A canteen having an inclosed induction filling device including a reciprocatory member having a rod for operation through a guide-opening in the wall of the canteen, and the canteen being provided with a threaded socket concentric with said guide, and a canteen-suspending ring having a head swiveled on said rod and provided with a threaded portion for engagement with said socket.

17. The combination with a canteen, of a pump located therein and having an exteriorly-accessible piston-rod, a guide-collar in the canteen through which the piston-rod has movement, and a head swiveled on the piston-rod and adapted for engagement with said collar.

18. The combination with a canteen having an outlet-mouthpiece, of a pump attachment inclosed by and having one terminal exposed at the surface of the canteen, the said pump being located to one side of the outlet-mouthpiece for vertical disposition during the operation thereof.

19. The combination with a canteen, of a pump attachment having one terminal disposed at the surface of the canteen, and a filtering attachment connected with said terminal of the pump attachment and having a closure removably applied to the outer end thereof.

20. The combination with a canteen, of a pump attachment having one terminal disposed at the surface of the canteen, and a



filtering attachment connected with said terminal of the pump attachment and having a disk nut removably fitted in the outer portion thereof.

- 5 21. The combination with a canteen, of a pump attachment inclosed therein and having one terminal exposed at the surface of the canteen, said pump attachment including a piston and piston-rod, of which the latter  
10 projects through a guide in the wall of the canteen, a closing device applied to the extremity of the piston-rod to close the portion of the canteen through which said rod extends, and means for closing the exposed terminal  
15 of the pump.

22. A canteen having an inclosed induction filling device comprising fixed and movable elements of which their opposite extremities are exposed at opposite openings in the wall of the canteen, and movable closures for said 20 opening.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

THOMAS KEARNS.  
INA C. COIN.

Witnesses:

A. C. ELLIS, Jr.,  
I. VANMETER.