U. HOKE.

FILTER.

APPLICATION FILED MAY 25, 1916.

1,205,743. Patented Nov. 21, 1916.

Fig. 1

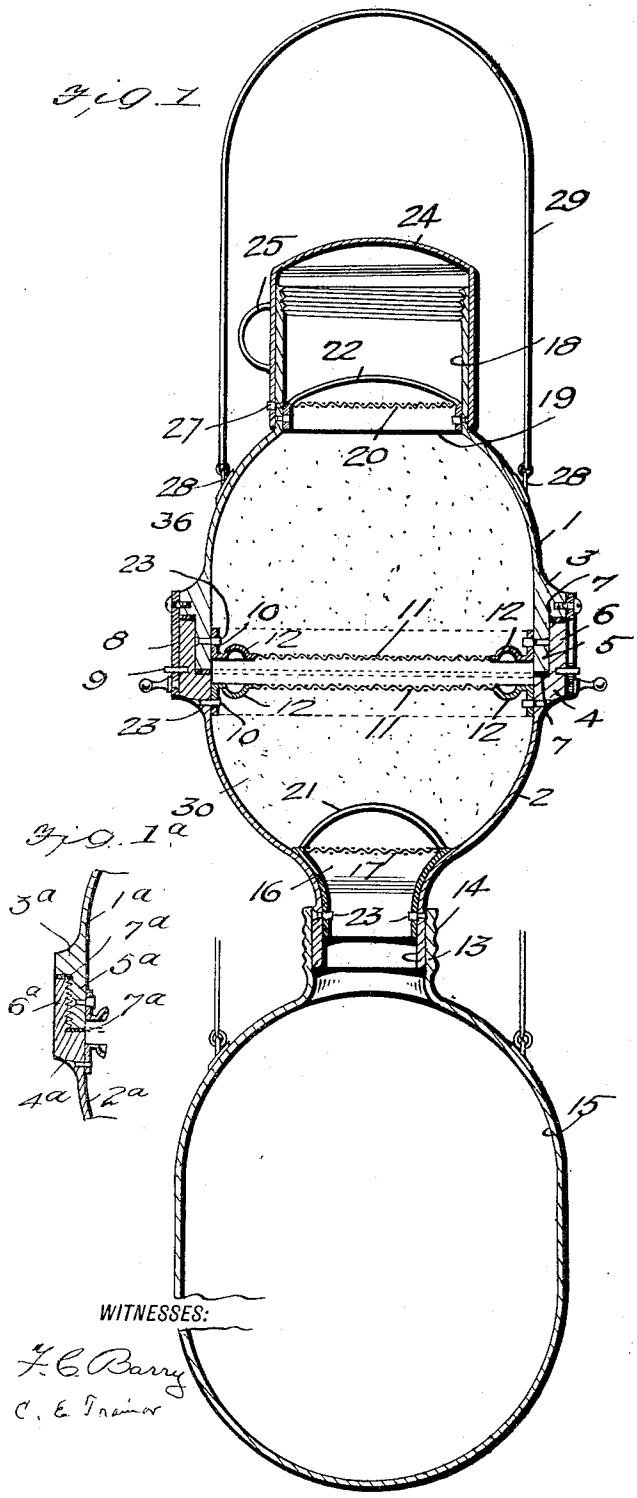


Fig. 1a

Fig. 2.

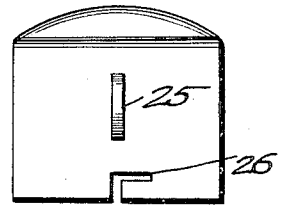


Fig. 3

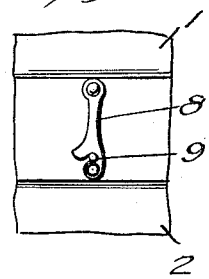
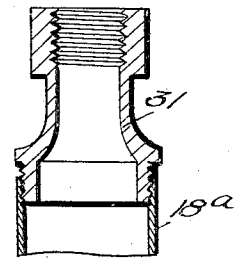


Fig. 4.



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FILTER.

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To all whom it may concern:

Be it known that I, URIAH HOKE, a citizen of the United States, and a resident of Cornwall, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Improvement in Filters, of which the following is a specification.

My invention is an improvement in filters, and has for its object to provide a filter especially adapted for portable use, as for instance, by travelers, soldiers, and the like, wherein the filter may be connected with the ordinary canteen, in such manner that the canteen may be filled by water passed through the filter, and wherein a cup is detachably connected with the inlet of the filter to permit the canteen to be filled.

In the drawings, Figure 1 is a longitudinal section of one embodiment of the improved filter, Fig. 1ª is a detail section of a modified construction, Fig. 2 is a side view of the cup, Fig. 3 is a partial side elevation showing the detachable catches for the filter sections, Fig. 4 is a sectional view of a reducing connection.

In the embodiment of the invention shown in Figs. 1 to 3, the improved filter consists of sections 1 and 2 of suitable material, as for instance, sheet metal, the sections being detachably connected and with a fluid tight joint between them. As shown, each section 1 and 2 is provided at its meeting edge with an enlargement or marginal rib 3 and 4, respectively, and these ribs are rabbeted, the rib 3 on its outer face and the rib 4 on its inner face to fit each other, the rib 5 formed by rabbeting the enlargement 3 fitting within the rib 6 formed by rabbeting the enlargement 4, and gaskets 7 are arranged between the abutting surfaces of the enlargements to make a fluid tight joint.

The sections are detachably connected by means of the latches 8 shown more particularly in Fig. 3. Each of these latches is pivoted to the enlargement of the section 1, and each latch has a notch or recess for receiving a pin 9 on the section 2, and each latch is provided with a knob or handle for convenience in manipulating the same. The latches are oppositely arranged, and it will be noticed that each notch or recess for receiving the pin 9 is undercut and that a rounding shoulder is formed at the inner face of each notch or recess to draw the sections tightly together on the gaskets when the latches are closed.

The sections are similarly shaped and cooperate to form an oblong flattened receptacle resembling somewhat in shape a canteen. An angle ring 10 is secured to the inner face of each section near its connection with the other section, each ring having a portion fitting the inner face of the section and a portion extending at right angles to the first-named portion, and a sheet of wire cloth 11 is arranged in the ring, each sheet being connected to the inwardly extending portion of the adjacent ring.

The rings are connected to the sections as shown, and each section is provided with a nipple or port at its outer end. The nipple 13 of the section 2 is designed to engage within the discharge nozzle 14 of a canteen 15 of ordinary construction, the nipple and the nozzle forming a connection and a communication between the filter and the canteen.

A flaring sleeve 16 is secured within this outlet, and at the inner or large end of the sleeve a diaphragm or partition 17 of wire cloth or the like, is arranged. The section 1 is provided with an inlet or nozzle 18 at its outer end of larger size than the nipple 13, and a ring 19 is arranged within this outlet at the inner end thereof, the ring carrying a diaphragm or partition 20 of wire cloth.

The sleeve 16 and the ring 19 are riveted in place, and each is provided with a handle, the handle 21 of the sleeve 16 being at the inner end thereof, while the handle 22 of the ring 19 is at the outer end thereof. The sleeve 16, the ring 19, and the rings 10 are detachably held in place by means of pins or rivets 23 extending inwardly from the sections which engage bayonet slots in the sleeves and rings. By turning the rings in the proper direction they may be engaged with or disengaged from the pins. It will be noted from an inspection of Fig. 1 that the inwardly extending portion of each ring is provided with depressions 12 forming a thumb hold for permitting the turning of the screens or rings to engage and disengage the same.

A cup 24 is detachably connected with the inlet 18, the cup having a handle 25 and being adapted to seat over the inlet as shown in Fig. 1. Near its free edge the cup has a bayonet slot 26 which is adapted to engage a pin 27, extending outwardly from the periphery of the inlet. By turning the cup to bring the pin 27 into the vertical portion

of the slot 26, the cup may be easily withdrawn from the inlet.

The section 1 is provided with eyes 28 to which are connected the ends of a shoulder strap 29. Filtering material indicated at 30 is arranged within the sections between the screens 17, 11 and 20, and it will be evident that the canteen may be filled, and the water filtered by passing the water through the filter into the canteen. The cup provides a convenient means for filling the canteen.

In Fig. 1[a] is shown a modified construction of filter wherein the filter sections 1[a] and 2[a] have the enlargements 3[a] and 4[a] rabbeted in a manner described, the ribs 5[a] and 6[a] formed by the rabbeting being threaded to engage each other to connect the sections. The gaskets 7[a] are arranged in the same manner as in Fig. 1.

In Fig. 4 is shown a reducing union 31 having its large end externally threaded and its small end internally threaded, the large end being adapted to engage within the outlet 18[a], corresponding to the outlet 18 of Fig. 1. A valve casing or faucet of ordinary construction may be threaded into the small end of the union. With this union an ordinary faucet may be connected with the filter for permitting the discharge of the filtered water.

I claim:—

A filter comprising a casing composed of separable sections and having means for detachably connecting the sections together, each section being adapted to contain filtering material and having screens of perforate material at its ends for holding the said filtering material in place, one section having its outer end reduced to engage the neck of a canteen, and the other section having its outer end reduced to receive a cup, and a cup detachably connected with the said end.

URIAH HOKE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."