

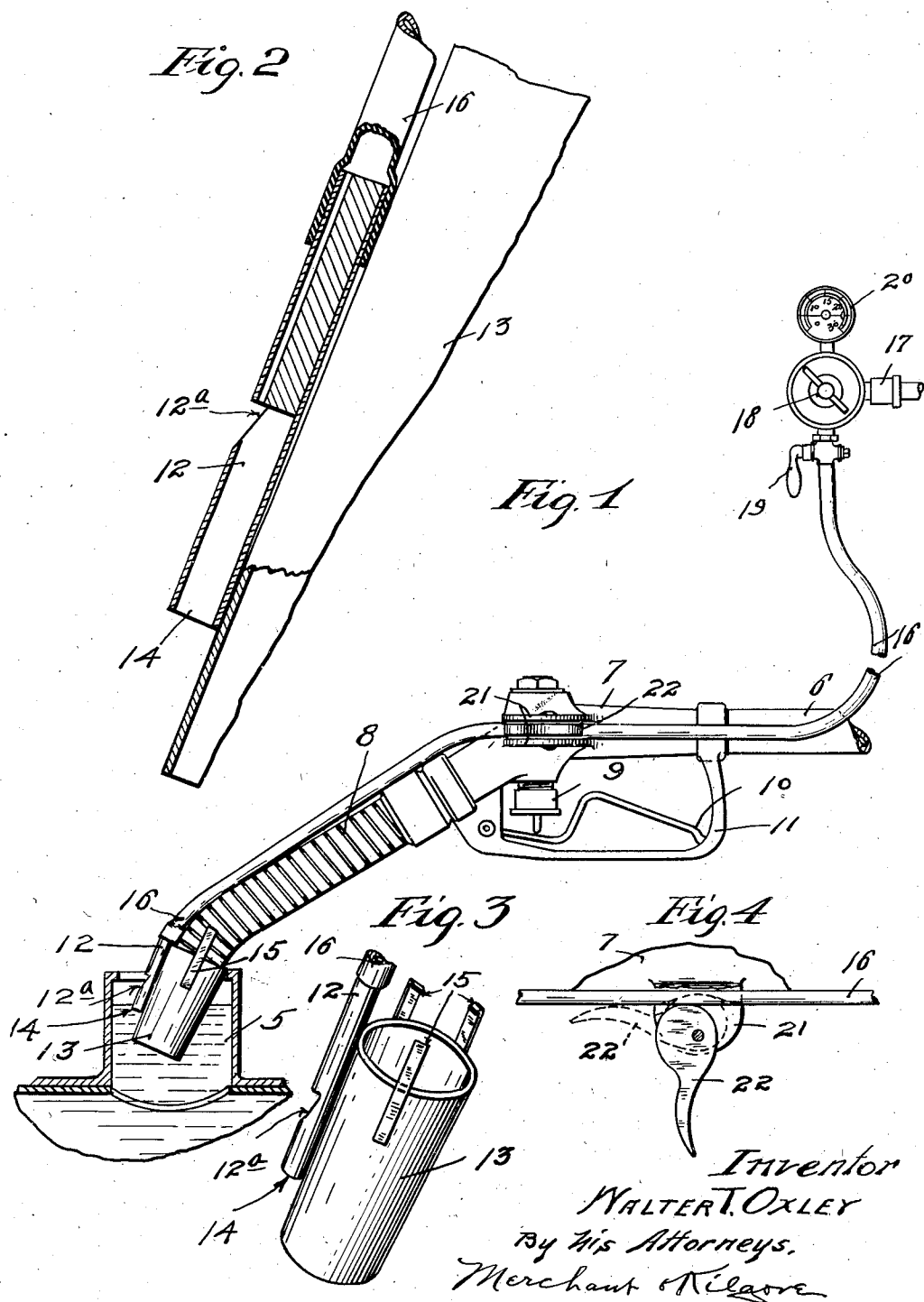
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WHISTLING SIGNAL FOR FLUID DELIVERY HOSE

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WHISTLING SIGNAL FOR FLUID DELIVERY
HOSE

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4 Claims. (Cl. 226-66)

My invention provides an extremely simple and highly efficient device adapted for attachment to the discharge nozzle or end of a liquid delivery pipe to indicate when a receptacle has been filled to the maximum point of safety, and, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

More particularly, the invention is designed for application to and used in connection with the nozzles of gasoline discharge pipes such as used in filling automobile tanks. The signalling device is in the nature of a whistle connected with a source of air supply under light pressure and attached to the discharge nozzle of the gasoline delivery hose. Such nozzles are usually in the form of flexible tubes capable of being bent to the best form for insertion into the neck of gasoline tanks; and in the application of the whistling attachment thereto, the air tube connected for delivery to the whistle is also a flexible structure such as a small rubber hose, the receiving end of which is connected to the source of air supply and is also flexible.

A preferred form and application of the invention is illustrated in the accompanying drawing wherein like characters indicate like parts throughout the several views.

Referring to the drawing:

Fig. 1 is a view chiefly in side elevation showing the whistling attachment applied to the flexible discharge nozzle of a gasoline hose with the nozzle positioned for delivery into the receiving neck of a gasoline tank, such as an automobile tank, portions of the tank being broken away and parts shown being in section;

Fig. 2 is an enlarged fragmentary view partly in elevation and partly in section illustrating the preferred form of the whistling attachment;

Fig. 3 is a perspective showing the whistling attachment removed from the gasoline nozzle; and

Fig. 4 is a fragmentary plan illustrating means for collapsing the tube and closing the air passage through the flexible air tube.

In Fig. 1, the numeral 5 indicates the receiving neck portion of a gasoline tank such as that employed in automobiles, the numeral 6 indicates the ordinary rubber gasoline delivery hose, to the delivery end of which is attached the discharge nozzle made up of a rigid metallic portion 7 and a flexible portion 8, which latter is usually of the well-known metallic flexible tube type. In the rigid section 7 of the nozzle is the customary normally closed valve mechanism 9 which is adapted

to be opened by upward pressure on a valve-operating trigger 10 mounted in a yoke 11 secured to said section 7.

The nozzle attachment proper includes a whistle that is attached to the delivery end of the flexible section 8 of the nozzle. As shown and preferably arranged, this whistle, which is indicated as an entirety by the numeral 12, is rigidly attached to a tubular metallic nozzle cap 13. The extreme lower end of this whistle 12 is open, as shown at 14, this feature being important.

The nozzle 13 cap may be permanently or detachably connected to the end of the flexible nozzle section 8, but as shown it is made detachable by means of a plurality of spring arms or clips 15 attached to said nozzle cap and having intumed ends adapted to engage and interlock with the grooves formed in the flexible section 8. The lower end of the whistle 14 is preferably considerably above the lower open end of the nozzle cap 13.

The upper end of the whistle 12 is connected to a small rubber tube 16 that leads from a source of air supply under pressure such as a tank, not shown, having a discharge pipe 17 between which and the receiving end of the tube 16 is interposed a reduction valve 18 and a manually operated cut-off valve 19. Also as shown, there is a pressure gauge 20 which indicates the pressure delivered to the air tube 16 and which pressure is found to be preferably approximately five pounds per square inch.

The rubber tube 16 will be of sufficient length to permit the ordinary movements of the gasoline hose 6 and its nozzle and, preferably and as shown, its intermediate portion is passed between lugs 21 on the nozzle section 7 and adapted to be pinched to close the tube and cut off passage of air therethrough by suitable means such as an eccentric clamp 22 pivoted to the lugs 21 and operated in lieu of a valve to cut off the supply of air through the air tube when the whistle is to be cut out of action.

With the arrangement described and with the nozzle positioned as or substantially as shown in Fig. 1, as long as the gasoline in the tank 5 is below the lower open end of the whistle 14, the flow of air under the five pounds pressure directly through the whistle and out of the open lower end thereof will not produce a whistling action, but when the gasoline in the tank rises to such elevation that it will close the normally open lower end of the whistle, then all of the air under the five pounds pressure delivered to the whistle will be discharged through the

whistle notch 12a and a whistling action will be produced, clearly and positively indicating that the filling of the tank has been completed to the maximum point of safety, avoiding overflow.

- 5 Obviously, the whistle will be in condition for operation under the above conditions only when the air tube 16 is not choked by the eccentric 22 and also, of course, when the valve 19 is open. The purpose of the choke device 22 is to prevent
10 waste of air while the tank is being partly filled with gasoline. At a safe point before the gasoline tank has approached the filling point, the choke device 22 should be released so that air will be flowing through the air tube ready to
15 produce the whistling action at the proper time. Of course, it is not necessary at any time to choke off the flow of air by the choke device 22 inasmuch as the permanent cut out of the air discharge may be accomplished by closing the
20 valve 19. The choke device 22 is in very convenient position to be operated by the same hand that manipulates the gasoline nozzle and hence this choke device may be used as a means for cutting off and turning on the air independently
25 of the valve 19.

The location of the open lower end of the whistle above the open lower end of the discharge nozzle prevents the lower end of the whistle from being filled with the delivered liquid by
30 splashing and before the liquid level has reached the lower end of said nozzle.

It is important to note that in this signalling device, the whistling attachment is operated by direct and positive pressure and does not rely
35 on the displacement of air from the tank 6 being filled.

From the foregoing it will be understood that while I have described a preferred form of my invention, the same is capable of various mod-
40 ifications as to details of construction and arrangement of parts within the scope of the ap-

ended claims. Also it will be understood that while the device is especially designed for use in connection with gasoline supply nozzles, that it may be used in connection with various other
5 nozzles or devices for the delivery of fluids into receptacles to indicate the approximate or maximum filling thereof.

From the foregoing it is evident that air for sounding the whistle may be supplied by any suitable means such as a pump, storage tank, fan
10 or blower.

What I claim is:

1. The combination with a fluid delivery pipe having a discharge nozzle, of a nozzle cap applied to the delivery end of said nozzle, a whistle
15 applied to said nozzle cap and having a normally open lower end, and an air tube connected to said whistle and to a source of air supply under pressure, the delivery end of said fluid delivery nozzle being a flexible jointed structure, in which the
20 nozzle cap has spring prongs detachably engaging the flexible nozzle portion, and in which said air tube is a flexible hose extended along said nozzle.

2. A flexible liquid delivery hose having a discharge nozzle at its delivery end, a whistle applied to said nozzle and movable therewith, said whistle having a normally open lower end located near
25 to the normally open delivery end of said nozzle, and a flexible air delivery tube extended along said nozzle and connected to the upper end of said whistle, whereby said nozzle and whistle are made portable as a common unit.

3. The structure defined in claim 2 in which the open lower end of said whistle is located
35 materially above the open lower end of said nozzle.

4. The structure defined in claim 2 in further combination with means also applied to said
40 nozzle for opening and closing the passage through said air delivery tube.

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