May 13, 1924. 1,493,936

W. W. HALE

HOSE RETRIEVING DEVICE

Filed Aug. 25, 1920

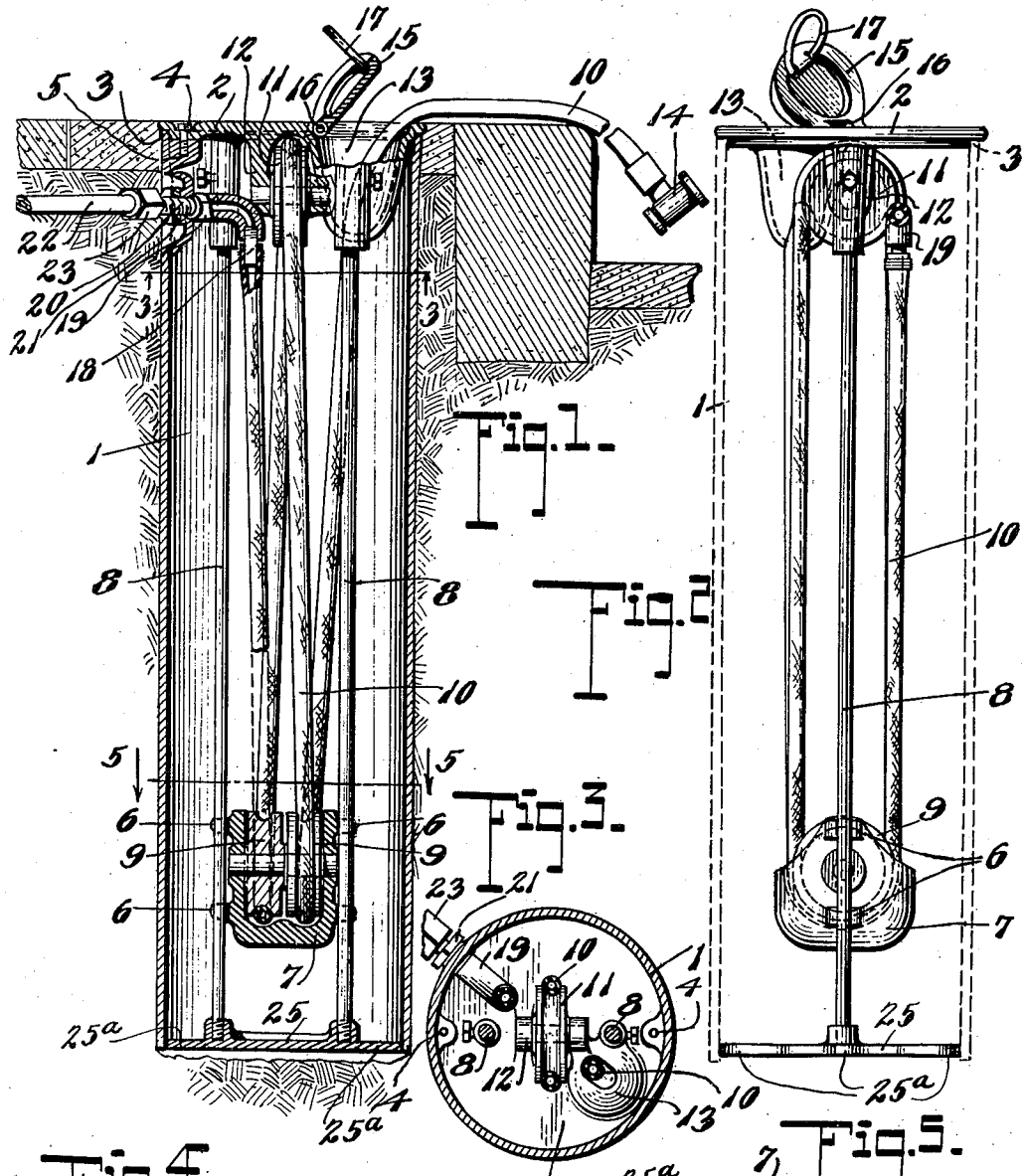

Fig. 1.

Fig. 2

Fig. 3.

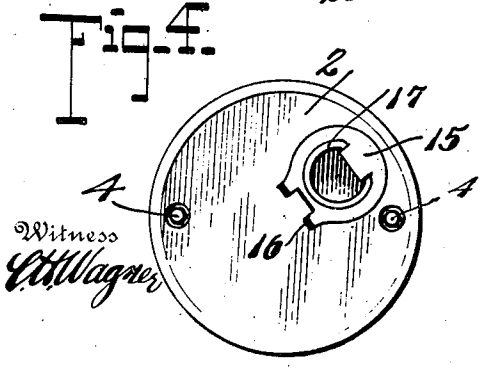

Fig. 4.

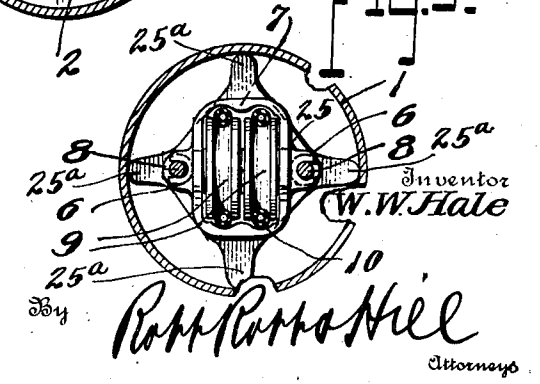

Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIS W. HALE, OF CLEVELAND, OHIO.

HOSE-RETRIEVING DEVICE.

Application filed August 25, 1920. Serial No. 405,873.

To all whom it may concern:

Be it known that I, WILLIS W. HALE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Hose-Retrieving Devices, of which the following is a specification.

The present invention relates to a device for dispensing compressed air or some similar fluid medium, and has for its object to provide a device of this character which embodies novel features of construction whereby the dispensing pipe is automatically withdrawn into a housing and thereby held in an out of the way position when not in use.

The device is more especially designed and adapted for use in dispensing compressed air for the inflation of automobile tires. It is customary for supply houses and gasolene stations to provide free air to their patrons and to the public in general for the purpose of tire inflation. A flexible hose or conduit is necessary for conveying the compressed air from the supply tank or reservoir to the tire, and this hose or conduit is usually in the way and even a source of danger when not in use. When dragged across a side-walk the hose may be the means of tripping pedestrians, and even under other conditions the hose is usually dragged here and there for use as needed, and then dropped without any effort to coil it up or dispose of it in a systematic manner when the user is through with it. Under such conditions the hose becomes covered with grease and dirt so that it is disagreeable to handle, and the rough handling which the hose receives causes it to wear out very quickly.

The present invention provides a device which operates automatically to retrieve and house the air hose as soon as it is released, thereby keeping the hose in an out of the way position when not in use, although holding it in such a manner that it can be instantly withdrawn and brought into operative position when desired.

Further objects of the invention are to provide an air hose retriever which is comparatively simple and inexpensive in its construction, which can be sunk into the ground or floor and used to advantage as a curb box, and which provides a simple and convenient method for the owners of supply stores and stations to cater to the needs of their customers without requiring their employees to waste time in profitless work or their customers to take up valuable space inside with their cars while inflating their tires.

With these and other objects in view, the invention consists in certain combinations, arrangements and association of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention reference is had to the following description and accompanying drawings, in which:—

Figure 1 is a vertical sectional view through a curb box embodying an automatic air hose retriever which is constructed and organized in accordance with the invention.

Fig. 2 is an elevation of the hose retrieving mechanism removed from its casing.

Fig. 3 is a horizontal section on line 3—3 of Fig. 1.

Fig. 4 is a plan view of the device.

Fig. 5 is a horizontal section on line 5—5 of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all of the views of the drawing by like reference characters.

Specifically describing the present embodiment of the invention, the numeral 1 designates an elongated casing which is adapted to be buried in the ground with the upper end thereof substantially flush with the surface of the floor or pavement. A removable cover 2 closes the upper end of the casing, being fitted within a seat 3 at the mouth thereof, and secured by suitable members such as the screws 4 to lugs 5 which project inwardly from the sides of the casing.

Carried by the cover 2 so as to be removable therewith, and extending downwardly into the casing 1, is a guide frame which is formed with the spaced and parallel side bars 8. The weight 7 is slidable up and down within the casing 1, being formed at the sides thereof with spaced guides 6 which loosely engage the side bars 8 to direct the weight in its up and down movements. A number of grooved wheels or pulleys 9 are journalled upon and carried by the weight 7, and the flexible hose or conduit 10 passes around these grooved wheels, as will be hereinafter pointed out.

An upper grooved wheel or pulley 11 is arranged within the upper end of the casing 1, immediately below the cover 2, being journalled between a bracket 12 which projects downwardly from the cover and a depression or pocket 13 which is formed in connection with the cover. This wheel rotates freely and the flexible conduit 10 also passes around the same. The free end of the flexible conduit passes through a guide opening in the bottom of the pocket 13 and has a tire valve engaging fitting 14 applied thereto. When the device is not in use this fitting 14 is completely housed within the pocket 13 and the mouth of the pocket is closed by a lid 15. As indicated by the drawing this lid 15 is hinged at 16 so that it can be opened and closed, and a suitable ring 17 provides a finger piece for swinging the lid into open position when it is desired to withdraw the air conduit. The ring collapses against the lid when not in use, and the lid is substantially flush with the upper surface of the cover 2 when closed.

The other end of the flexible conduit 10 is connected by a suitable fitting 18 to one arm of an elbow member 19 which is arranged at the top of the casing 1. The other arm of the elbow is formed with a reduced neck 20 which passes through an opening in the casing and has a clamping nut 21 threaded thereon to lock the elbow 19 in position. The compressed air supply pipe 22 is connected by a suitable fitting 23 to the reduced end 20 of the elbow member, and this pipe 22 leads to the tank or reservoir of compressed air. Where the device is used as a curb box the pipe 22 may be buried in the ground and extend under the side-walk to a tank or reservoir in the cellar or basement of an adjoining building. Any suitable means may be used to maintain a supply of compressed air in the tank, which air will be dispensed through the medium of the mechanism just described without confusion and without needless loss of time by employees.

From the elbow fitting 19 the flexible conduit 10 extends downwardly and around one of the pulleys 9, then upwardly and around the pulley 11, and then downwardly and around the second pulley 9. From this point the flexible conduit extends upwardly through the opening in the bottom of the pocket 13 of the cover. When the device is not in use the weighted slide 7 will drop to the lower limit of its movement, and in so doing the flexible conduit will be automatically drawn into the casing so as to be completely housed therein. The fitting 14 will then be received within the pocket 13, and with the lid 15 closed the top of the device will be substantially smooth and flush with the pavement, and everything will be out of the way. When it is desired to use the device, it is merely necessary to swing the lid 15 upwardly into an open position and to forcibly pull the flexible conduit 10 from the casing by grasping the fitting 14 and pulling thereon. The weighted slide 7 will then move upwardly upon the side bars 6 to admit the flexible conduit to unwind from the pulleys. The fitting 14 can be applied to the valve of the tire or other container to be inflated and the device used in the customary manner. As soon as the fitting 14 and flexible conduit 10 are released, the weighted slide 7 again drops to the lower limit of its movement and in so doing retrieves the conduit and draws it into the casing, in the manner previously described. It will be understood that the guide frame of which the side bars 7 form a part, together with all of the guide pulleys and the flexible conduit, are carried by the cover 2 so that they are withdrawn from the casing when the cover is released and lifted from position. The lower end of the casing 1 is open, and the plate 25 connecting the lower ends of the guide bars 6 is formed with lateral arms 25ª which serve to keep the guide frame properly centered within the casing so that the weight will move freely up and down without danger of coming into contact with the sides of the shell 1.

While I have illustrated and described one particular embodiment of my invention, it will be understood that numerous changes and modifications can be made without departing in any manner from the spirit of the invention.

Having thus described the invention what I claim as new is:—

1. A device of the character described, including a casing, a removable cover provided with a conduit guide, conduit retrieving means carried by the cover so as to be removable therewith as a unit and positioned within the casing, a flexible conduit operatively associated with the conduit retrieving means and passing loosely through the guide of the cover, a valve engaging fitting applied to the free end of the conduit and means for supplying fluid to the conduit, said conduit being adapted to be withdrawn from the casing and being automatically retrieved within the same as soon as released.

2. A device of the character described, including a casing, a removable cover formed with a depressed pocket having a guide opening in the walls thereof, conduit retrieving means carried by the cover so as to be removable therewith as a unit and normally positioned within the casing, a flexible conduit operatively associated with the retrieving means and extending through the opening of the pocket, a valve engaging fitting applied to the free end of the conduit and received within the pocket when the conduit is retrieved within the casing, and

means for supplying fluid to the conduit, said conduit being adapted to be withdrawn for use.

3. A device of the character described, including a casing, a cover provided with conduit guide means, a gravity actuated automatic conduit retrieving means carried by the cover so as to be removable therewith as a unit and positioned within the casing, a flexible conduit operatively associated with the gravity actuated retrieving means and extending through the conduit guide means of the cover, and means for supplying fluid to the conduit.

4. A device of the character described, including a casing, a cover provided with conduit guide means, a guide frame carried by the cover and removable therewith as a unit, said guide frame including an upright bar, a weight slidable up and down upon the bar, guide means upon the weight, fixed guide means above the weight, a flexible conduit passing around the guide means of the weight and the fixed guide means and extending through the guide means of the cover, and means for supplying fluid to the conduit.

5. A device of the character described, including a casing, a weight mounted to slide freely up and down within the casing, guide means carried by the weight, fixed guide means, a flexible conduit extending around the said guide means and having an end thereof projecting from the casing, said conduit being adapted to be withdrawn from the casing and being automatically retrieved within the casing as soon as it is released, and means for supplying fluid to the conduit, and a removable cover for the casing, said weight, guide means and flexible conduit being carried by and removable with the cover as a unit.

6. A device of the character described, including a casing adapted to be buried in the ground, a removable top member for the casing, conduit retrieving means carried by the top member so as to be removable therewith as a unit and positioned within the casing, a flexible conduit operatively associated with the conduit retrieving means and adapted to be withdrawn from the casing and automatically retrieved within the same as soon as released, means for supplying fluid to the conduit and a valve engaging fitting applied to the free end of the conduit.

7. A device of the character described, including a hollow casing, a removable cover for the casing, a guide bar carried by the cover and extending through the casing, means cooperating with the cover to hold the guide bar properly centered within the casing, a weight slidable upon the guide bar, guide means upon the weight, fixed guide means above the weight, the guide bar together with the weight and guide means being removable from and replaceable within the casing as a unit, a flexible conduit passing around the guide means of the weight and fixed guide means so that it can be withdrawn from the casing and will be automatically retrieved as soon as released, and means for supplying fluid to the conduit.

8. A device of the character described, including a casing, a removable cover for the casing, a guide bar carried by the cover and extending through the casing, means upon the guide bar for loosely engaging the walls of the casing and cooperating with the cover to hold the guide bar properly positioned within the casing, a weight slidable upon the guide bar, guide means upon the weight, fixed guide means above the weight, the guide bar together with the weight and guide means being removable from and replaceable within the casing as a unit, a flexible conduit passing around the guide means of the weight and the fixed guide means, so that it can be withdrawn from the casing and will be automatically retrieved as soon as released, and means for supplying a fluid to the conduit.

9. A device of the character described, including a hollow casing, a removable cover for the casing, a frame carried by the cover and projecting into the casing, means carried by the frame and loosely engaging the walls of the casing for cooperation with the cover to hold the frame properly positioned within the casing, conduit retrieving means mounted upon the cover and frame, a flexible conduit operatively associated with the conduit retrieving means so that it can be withdrawn from the casing and will be automatically retrieved within the same as soon as released, and means for supplying fluid to the conduit.

In testimony whereof I affix my signature.

WILLIS W. HALE.