G. A. OWEN.

HYDRANT.

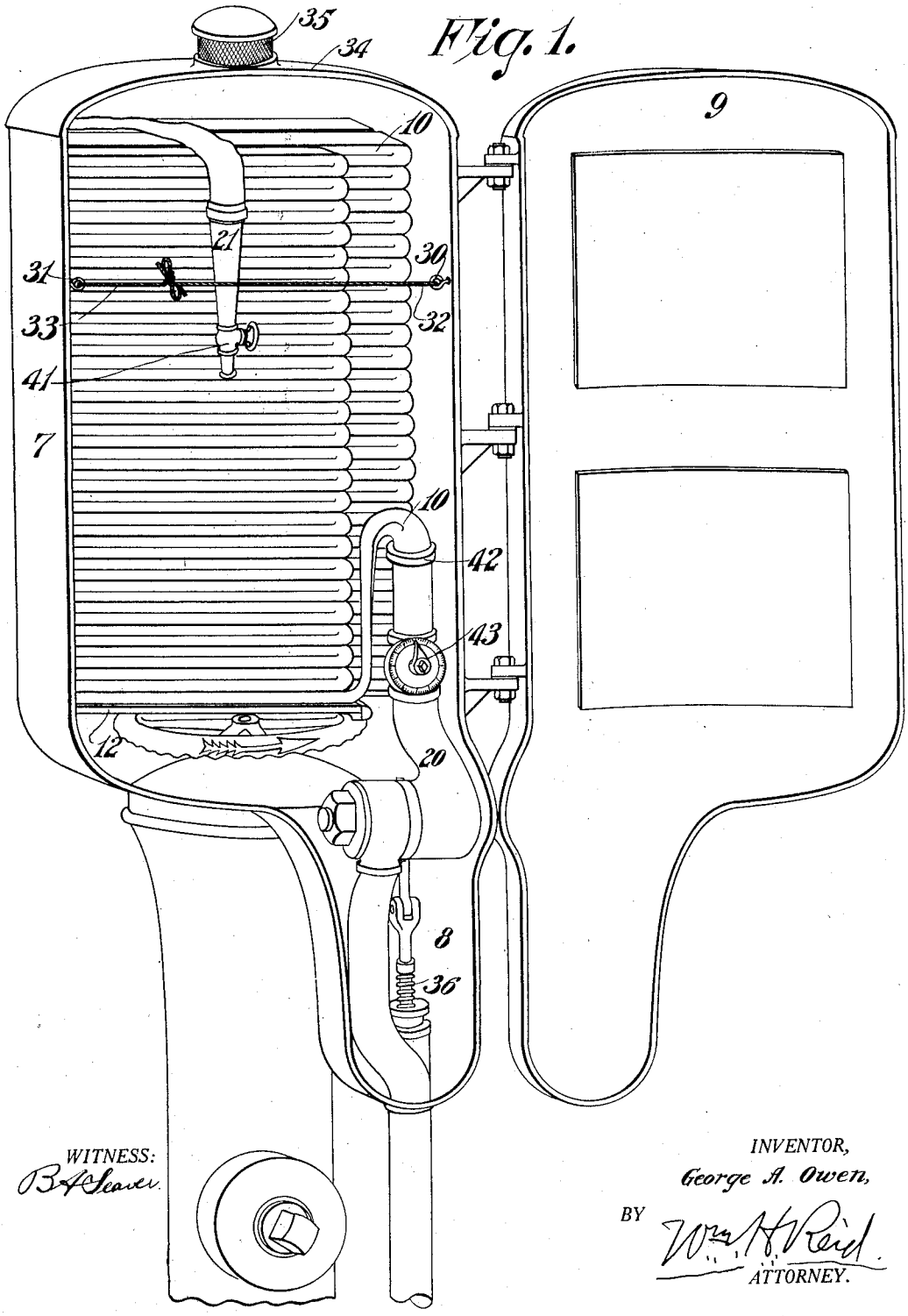
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1,360,436.

Patented Nov. 30, 1920.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

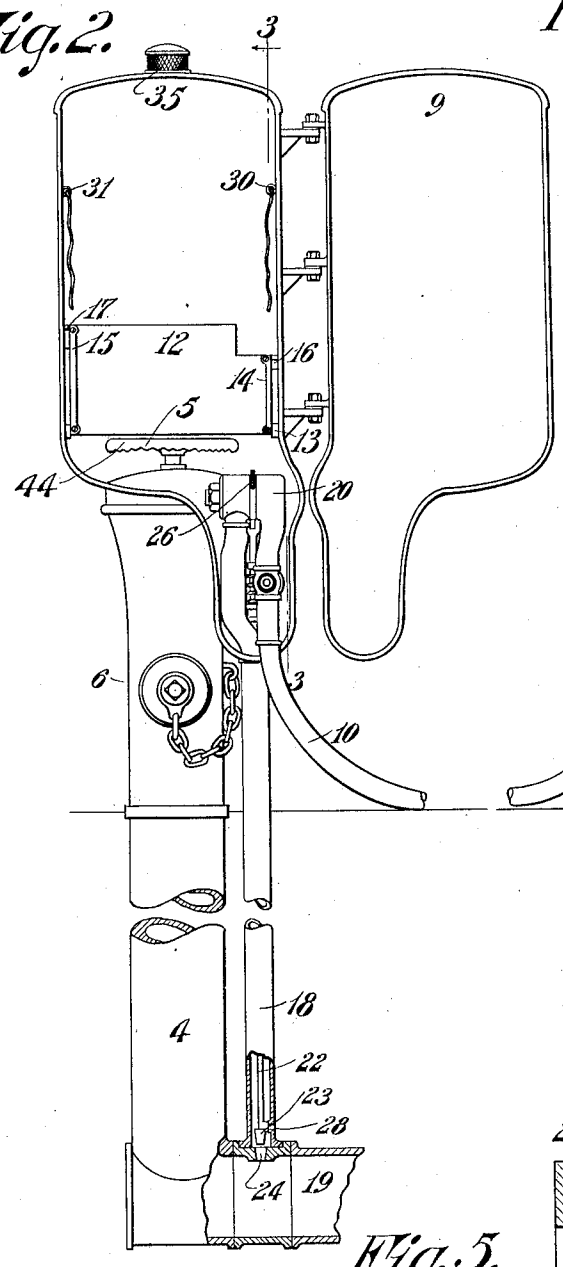


Fig. 3.

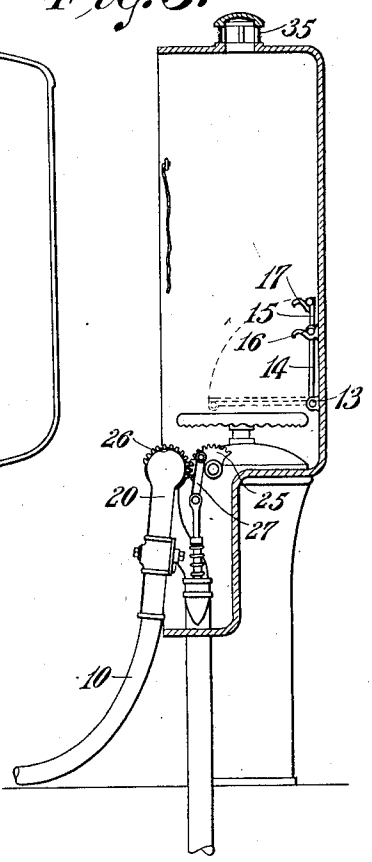


Fig. 4.

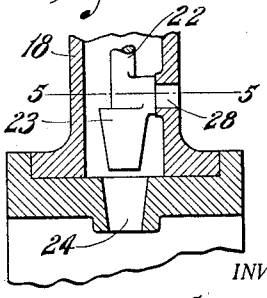
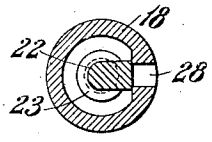


Fig. 5.



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1,360,436. Specification of Letters Patent. Patented Nov. 30, 1920.

Application filed June 1, 1917. Serial No. 172,158.

To all whom it may concern:

Be it known that I, GEORGE A. OWEN, a citizen of the United States of America, and resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Hydrants, of which the following is a full, clear, and exact description.

This invention relates to fire hydrants provided with a closed casing to contain a line of hose in folded condition, adapted to be quickly run out in case of fire, and which is connected with the hydrant for the supplying of water.

The object of this invention is to provide a device of this character in which the hose is permanently attached to the supply pipe with a valve, normally closed, and upon withdrawing the hose from the casing into position for use, the valve will be automatically opened to supply the hose with water, and which valve will be closed by returning the hose to the casing in folded condition.

A further object of the invention is to provide a shelf in the bottom of the case above the valve wheel to support the hose and which will swing to upright position on withdrawal of the hose to permit operation of the wheel.

A further object of the invention is to provide means for retaining the hose in a folded condition on the opening of the case door.

Another object of the invention is to provide ventilating means for the case, that will be suitably screened to prevent admission of insects or dirt.

In the accompanying drawings showing one embodiment of my invention,

Figure 1 is a perspective view with the door of the case opened;

Fig. 2 is a similar view of the hydrant and case, partly in section;

Fig. 3 is a section on the line 3—3, Fig. 2;

Fig. 4 shows the controlling valve and its drainage outlet.

Fig. 5 is a section on the line 5—5 of Fig. 4.

As set forth, the fire hydrant 4 is shown as provided with a valve wheel 5 at the top to control the usual valve therein, to supply the regular fire hose attached at the connection 6.

On top of the hydrant I provide a suitable case 7 in the bottom of which is the wheel 5, the case having an extension 8 at one side; which case is provided with a swinging door 9 that in the open position will expose the case and extension.

The hose 10 is shown as folded up in three sections and located in the case above the wheel 5, resting on a suitable shelf 12 that is hinged at 13 and normally rests on the wheel.

On removal of the hose the shelf can be swung to upright position against the side wall as in Fig. 3, and retained on each side by the arms 14 and 15 that engage lugs 16 and 17.

In this position, with the hose withdrawn, the wheel 5 is accessible to open the valve in the hydrant.

The extremity of the hose is connected to a suitable attachment with a supply pipe and has a valve connected therewith whereby in the normal upright position of the attachment with the hose folded in the case, this valve will be closed; while on withdrawal of the hose and swinging down of the attachment by the hose, this valve will be thereby automatically opened to supply water to the hose.

As represented herein, I provide a supply pipe 18 extending upward from the main 19 of the hydrant into the casing extension 8. At this upper end a supply pipe 20 is hinged thereto by a suitable connection to permit passage of the water in all positions, from the pipe 18 to pipe 20; and the extension 20 is connected to the end of the hose 10 as shown, the other end of the hose having the usual nozzle 21 that may be valved, if desired.

The supply pipe 18 has a valve stem 22 therein carrying a valve 23 at the lower end that controls the opening 24 into the pipe that forms a seat for the valve when lowered.

This valve stem is swung by the arm 20 to close the valve in the upright position of the arm, and when the hose is in the casing, and on withdrawing the hose and lowering the arm, the valve will be opened.

A segment gear 25 swings in the casing and meshes with a segment gear 26 fast to the arm 20. A link 27 connects the upper projecting end of the valve stem 26 with the segment 25. As shown in Figs. 2 and 3, the arm 20 is lowered for use of the hose, and the valve 23 is opened to admit water to the supply pipe and hose.

On folding the hose in the case on the

shelf and swinging the attachment 20 to the upright position of Fig. 1, the valve stem will be lowered and close the valve 23. The closing of the door 9 will retain the extension 20 in the upright position.

To prevent freezing of the water in the pipe 18, I provide an outlet opening at 28 just above the valve, that may be closed by the valve 23 when it is opened to prevent the escape in use, but which outlet is opened when the valve is closed, as shown in Fig. 4.

When the hose is folded on the shelf in the casing, as indicated in Fig. 1, I provide means for retaining the hose in position even when the door is opened.

On each side are suitable eyes 30 and 31 to which are attached cords 32, and 33, that are tied together, as shown, to retain the hose in position, that will be facilitated by letting the nozzle 21 lie between the cords and the hose.

At the top 34 of the case I provide a screened ventilator, 35, that will prevent entrance of insects or dust, yet provide a circulation of the air in the case and allow moisture from the hose to escape to prevent rotting.

To assist in retaining the valve open, I provide a coil spring 36 on the valve stem 18 at its upper portion that will press the valve stem upwardly and tend to retain the extension 20 in a lowered position.

It will be seen that a device of this kind is practically automatic in operation. When a fire occurs, it is only necessary to open the door and loosen the cord and withdraw the hose, which operation will automatically swing the attachment 20 to a lowered position and thereby open the valve, admitting water to the supply pipe and the hose.

The swinging of the extension 20 to its upright position will close the valve again, and the return of the hose to the case and closing the door will retain the valve closed.

A hand wheel 5 may be provided with grooves 44 on its lower edge to furnish a better grip for turning the wheel to open the valve in the hydrant. The swinging pipe 20 is provided with a coupling at 42 for attaching the hose in the usual manner. This arm may also be provided with a regulating pressure valve as indicated at 43.

I claim:—

1. The combination with a fire hydrant, of a hose case mounted on the hydrant, a water supply pipe extending into the case, a hose connected to the pipe, a shelf in the case, the hose being normally supported by said shelf in the case, in folded relation, means for controlling the entrance of water into the hose, means for automatically causing the water to enter the hose after the same is removed from said shelf, and means for automatically moving the shelf to an upright position when the hose is removed therefrom.

2. The combination with a fire hyrant, of a hose case mounted on the hydrant, a supply pipe in the case, a swinging extension on the pipe, a hose attached to the extension and normally folded in the casing, a valve in the said pipe beyond the casing, a stem for said valve projecting up into the casing, a segment gear in the casing connected to the valve stem, and a segment gear on the said extension meshing with said gear, arranged to normally retain the valve closed when the extension is upright with the hose folded in the case, and upon the hose being withdrawn the extension will swing down and open the valve.

3. The combination with a fire hydrant, of a hose case mounted on the hydrant and having the valve wheel in the bottom of the case, of a swinging shelf in the case above the wheel to support the hose, and arranged to be retained in upright position to permit operation of the wheel.

4. The combination with a main, of a fire hydrant mounted on the main, means for controlling the discharge of water from the fire hydrant, a hose case supported by the hydrant, a supply pipe extending from the main into the hose case, a hose in the case, operatively connected with the supply pipe, and means for causing the flow of water into the hose when the same is taken from the case, independently of the water-discharge-controlling means of the hydrant.

5. In combination, a pipe, a hose case mounted on a support, a water pipe leading into the case, a horizontally disposed eye formed on said water pipe, a pipe pivotally connected with said eye to receive water from said pipe through said eye and adapted to swing vertically relative to said pipe, a second pipe for supplying water to said first pipe, a valve for controlling the connection between the said second pipe and said first pipe, a rod connected with said valve and a connection between said rod and said swinging pipe whereby said valve will be opened when said swinging pipe is lowered.

6. In combination, a feed pipe, a second pipe in connection with the feed pipe, a valve for controlling said connection, a hose pipe movably connected with said second pipe, a gear segment pivotally supported, a link connecting said gear segment with said valve and gear teeth on said hose pipe where said gear segment will be actuated to open the valve when said hose pipe is lowered.

GEORGE A. OWEN.

Witness:
Mrs. J. G. CURTIN.