B. M. WILHITE & F. I. LETSON.

HOSE DRIER.

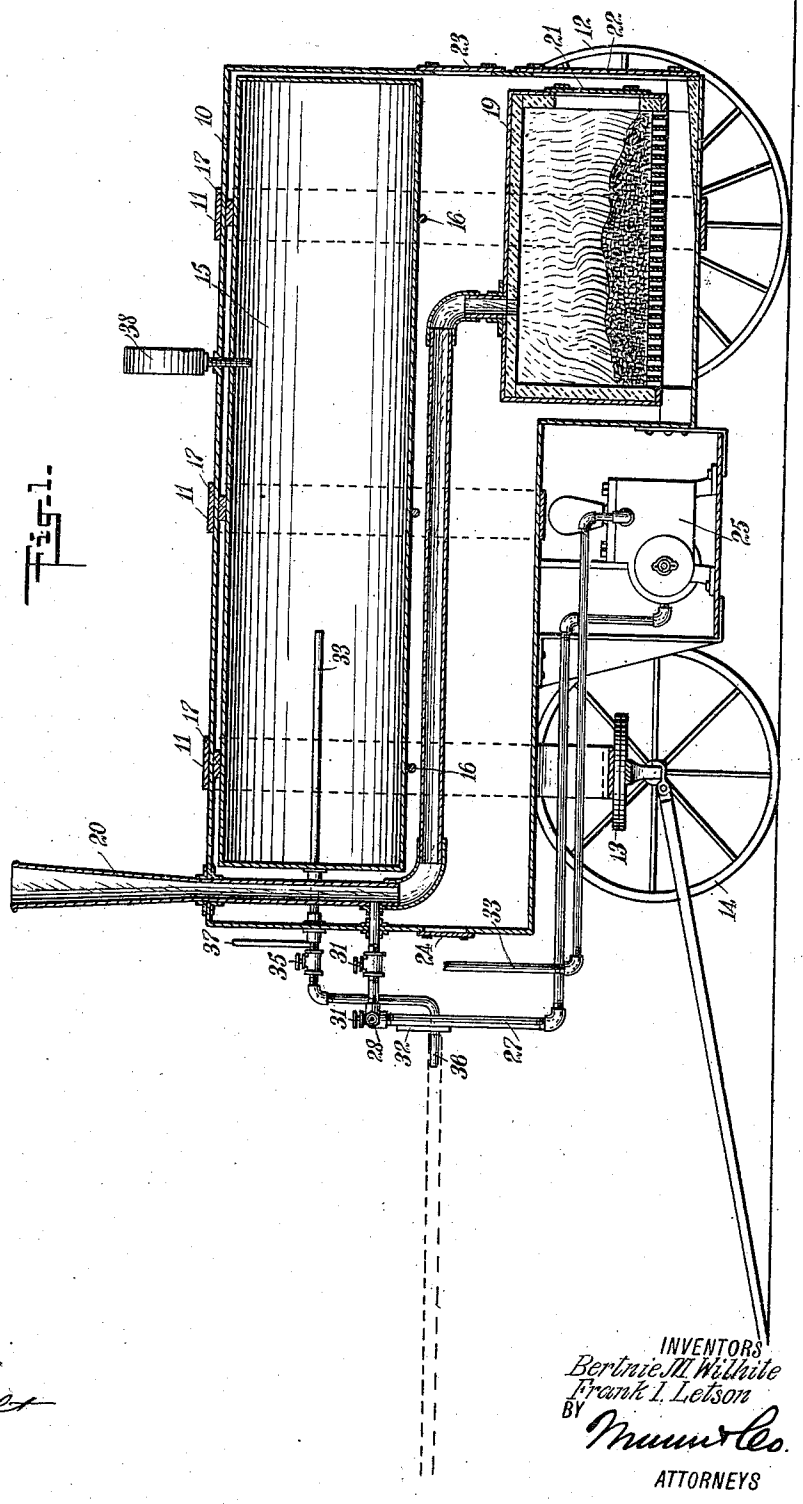
APPLICATION FILED FEB. 16, 1910.

984,725.

Patented Feb. 21, 1911.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

F. G. Hachenburg

W. W. Stocker

INVENTORS

Bertrand M. Wilhite

Frank I. Letson

BY Munn & Co.

ATTORNEYS

B. M. WILHITE & F. I. LETSON.

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3 SHEETS—SHEET 2.

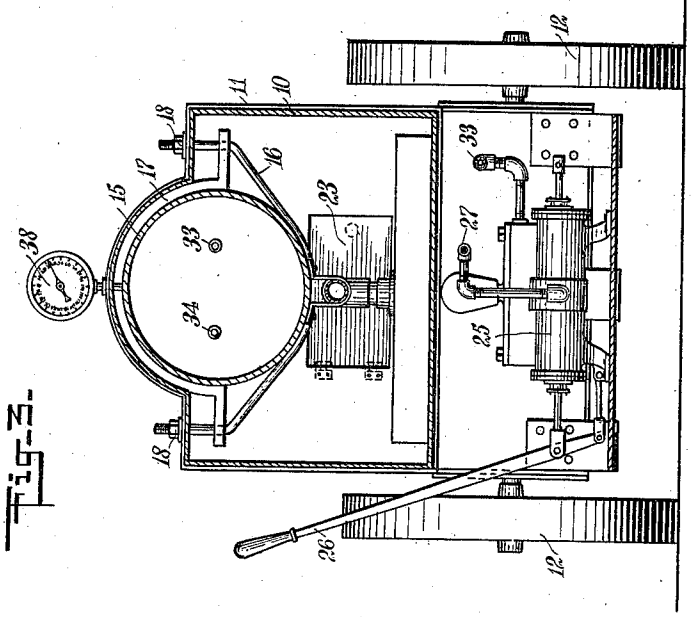

Fig-2.

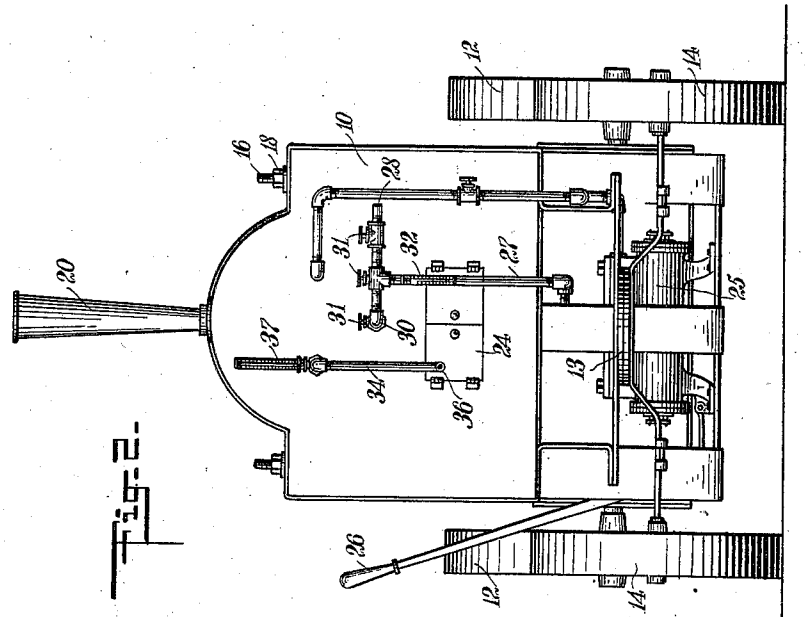

Fig-1.

WITNESSES:

F. G. Hachenberg

INVENTORS

Bertnie M. Wilhite

Frank I. Letson

BY Munn & Co.

ATTORNEYS

B. M. WILHITE & F. I. LETSON.

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3 SHEETS—SHEET 3.

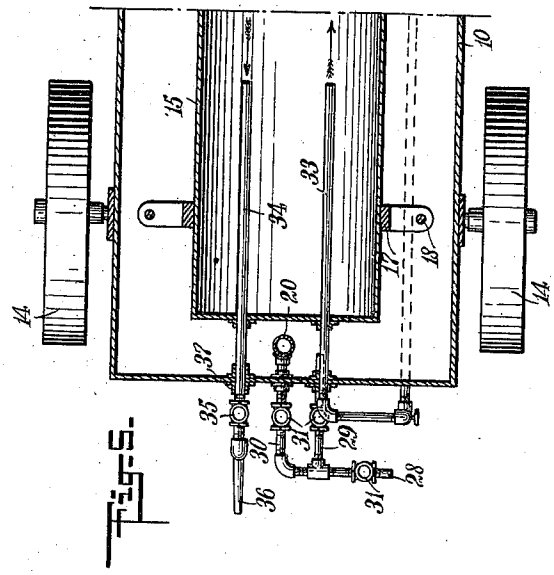

Fig. 5.

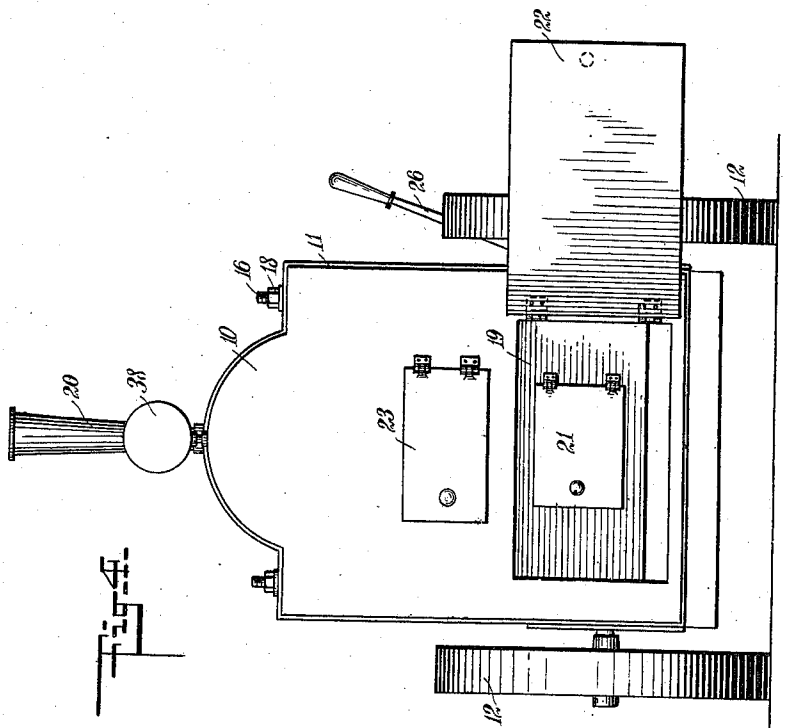

Fig. 4.

WITNESSES:

F. J. Hachenberg.

W. W. Poles

INVENTORS

Bertnie M. Wilhite

Frank I. Letson

BY Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

BERTNIE M. WILHITE AND FRANK I. LETSON, OF GORDON, NEBRASKA.

HOSE-DRIER.

984,725. Specification of Letters Patent. Patented Feb. 21, 1911.

Application filed February 16, 1910. Serial No. 544,184.

To all whom it may concern:

Be it known that we, BERTNIE M. WILHITE and FRANK I. LETSON, citizens of the United States, and residents of Gordon, in the county of Sheridan and State of Nebraska, have invented a new and Improved Hose-Drier, of which the following is a full, clear, and exact description.

The invention has in view an appliance for furnishing a supply of compressed hot air for drying out fire hose in cold weather. In winter, after the fire has been extinguished it is necessary that the hose be dried out in order that it will not freeze and be rendered thereby unfit for use.

In accordance with our invention we provide a hose drier preferably in the nature of a vehicle, so that it can be driven to the fire and used immediately after the fire is extinguished, the drier having an oven, and an air pressure tank arranged within the oven, having a valve-controlled outlet provided with a hose connection, the air pressure tank being supplied by a pump which is adapted to pump the air supply from the open air, from the oven or from the flue of the heater which heats the oven, thus enabling the temperature of the compressed air to be readily controlled.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a central vertical longitudinal section through a hose drier constructed in accordance with our invention; Fig. 2 is a front end elevation of the same; Fig. 3 is a cross-section of the drier; Fig. 4 is a rear end elevation of the same; and Fig. 5 is a horizontal section through the upper front portion of the drier.

An oven 10, having a form much like the customary horizontal boiler, is arched at the top, as shown in Figs. 2, 3 and 4, and is provided with a number of heavy bands 11, three being shown arranged respectively near the ends and at or near the center, the band at the rear end passing around the depending fire box portion of the oven and provided at opposite sides with stub axles on which the rear wheels 12 are carried. The intermediate band passes around the oven and strengthens the structure, and the band at the forward end carries the fifth wheel 13, against which the front truck bears, having the front wheels 14.

Within the upper portion of the oven is an air pressure tank 15, which extends the greater portion of the length of the oven, from which it is suspended by a number of U-shaped hangers 16, the arms of each of these hangers passing through the offset ends of a spacing bar 17 and through the oven and the adjacent band 11, at which points they are threaded and drawn to place by the nuts 18, the spacing bars 15 conforming to the arched top of the oven and permitting of a free circulation of the heated air of the oven around the tank, the tank being also spaced from the oven at each of its ends, as clearly shown in Fig. 1. Suitably supported within the depressed or depending portion of the oven is a heater, preferably in the nature of a fire-box 19, having a smoke flue passing from the upper portion and extending forwardly close to the under side of the air pressure tank to the forward end thereof, thence upwardly between this tank and the forward end of the oven to the stack 20. The fire-box is spaced from the walls of the oven at all sides, and has the usual door 21, which is accessible through a larger door 22 at the rear of the oven, this wall of the oven being also provided with a smaller ventilating door 23, located between the fire-box and tank. A ventilating door 24 is arranged in the front wall of the oven, which, in connection with the door 23, permits of the temperature of the oven being lowered should the oven become too highly heated. When these doors are opened, in cooling the oven, the fire box door 22 of the oven should be closed to cut off the draft, the operation of this door also adapting the oven to be cooled within certain limits.

Underneath the oven, forward of the fire-box, is suitably supported an air compressor 25, which, as best shown in Figs. 2 and 3, has the cylinder arranged crosswise of the drier and is manually actuated at one side of the machine by an operating lever 26, this lever extending to a convenient height between the front and rear wheels and operatively connected to the piston rod of the compressor. The inlet pipe 27 of the compressor has three branches, viz: a branch 28 leading from the open air, a branch 29 leading from the front of the oven, and a

branch 30 leading from the smoke pipe, each branch having a controlling valve 31, so that the air can be drawn through one of the branches to the exclusion of the others, a thermometer 32 being provided in the length of the inlet pipe 27, to indicate the temperature of the air which is passing to the compressor. The outlet pipe 33 of the compressor discharges into the air pressure tank 15 and, as shown in Figs. 1 and 5, extends thereinto a substantial distance away from the walls of the tank, so as to cause the air to be readily brought to the same temperature. The outlet pipe 34, similarly situated in the tank, leads therefrom to the outside of the oven, where it is provided with a controlling valve 35 and a hose connection 36, and also has a thermometer 37, indicating the temperature of the air discharged. A pressure gage 38 indicates the air pressure within the tank.

In the use of the drier, after the fire has been extinguished, the hose is removed from the fire-plug or fire engine and applied to the hose connection of the discharge pipe of the air pressure tank, the nozzle of the hose being contracted sufficiently to cause a pressure in the air when the valve of the discharge pipe is opened. The escaping air drives the water from the hose and thoroughly dries it within, not only preventing the hose from freezing but also prolonging its life. The provision of the inlet pipe of the compressor, with the several branches, adapts the temperature of the air passing through the compressor to the tank to be readily controlled, the branch of this pipe leading from the smoke flue or pipe enabling the filling of the air pressure tank with heated air of the required temperature at short notice. The air ordinarily will be pumped into the tank at about 100° Fahrenheit, and will be discharged from the tank through the hose at about 120° Fahrenheit. The pumping of the air from the oven permits of the tank being filled with comparatively dry pure air, ordinarily of the right temperature, after the machine has been fired for a reasonable length of time.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. In a hose drier, an oven, a pressure tank arranged within the oven and having a valve-controlled outlet provided with a hose connection, and an air compressor having inlet and outlet connections arranged to draw the air from the oven and compress it in the tank.

2. In a hose drier, a vehicle having an oven, an air pressure tank supported on the vehicle, having a valve-controlled outlet provided with a hose connection, and an air compressor carried by the vehicle and having inlet and outlet connections to draw the air from the oven and compress it within the tank.

3. In a hose drier, a horizontal oven having front and rear supporting wheels, an air pressure tank arranged within and supported in the upper portion of the oven, a fire-box supported within the oven at the rear wheels and having a smoke pipe extending forwardly in the oven under the tank and discharging at the outside of the oven at the front of the tank, and an air compressor supported under the oven forward of the fire-box, having inlet and outlet connections arranged to draw the air from the oven and compress it into the tank.

4. In a hose drier, a vehicle having a horizontal oven, an air pressure tank supported within the oven, a heater arranged within the oven under the air pressure tank, and a discharge pipe leading from the tank, having a connection for the hose.

5. In a hose drier, an oven, an air pressure tank having an outlet provided with a hose connection, a heater for the oven having a flue for the escape of the consumed gases, and an air compressor having pipe connections to draw the air from either the oven or flue and compress it into the tank.

6. In a hose drier, an oven, an air pressure tank for holding a supply of compressed air for drying out the hose, a heater for the oven having a flue for the escape of the consumed gases, and an air compressor discharging into the tank and having valve-controlled inlet connections respectively leading from the open air, from the oven and from the flue.

7. In a hose drier, a vehicle having a horizontal oven, an air pressure tank arranged within the upper portion of the oven and having a valve-controlled outlet provided with a hose connection, and a fire-box arranged within the oven and having a smoke pipe extending forwardly underneath the tank and discharging to the outside of the oven at the front thereof.

8. In a hose drier, a vehicle having a horizontal oven, an air pressure tank arranged within the upper portion of the oven and spaced therefrom, a fire-box arranged within and spaced from the oven underneath the rear end portion of the tank, the fire-box having a door, a door at the rear of the oven through which the fire-box door is accessible, and ventilating doors arranged at the front and rear of the oven below the tank.

9. In a hose drier, a vehicle having a horizontal oven, an air pressure tank for containing a supply of compressed air to dry out the hose, arranged within the upper portion of the oven and spaced therefrom, and a fire-box arranged within the oven below the rear end of the tank and spaced from the walls of the oven, and having a smoke flue extending forwardly through the oven

and discharging therefrom at the front of the tank.

10. In a hose drier, a vehicle having a horizontal oven provided with an arched top, an air pressure tank for containing a supply of heated air for drying out the hose, arranged within the upper portion of the tank, spacing bars interposed between the arched top of the oven and the top of the tank, having offset ends, and U-shaped hangers passing around the underside of the tank, with the arms engaging with the offset ends of the spacing bars and having nuts bearing at the top of the oven.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

BERTNIE M. WILHITE.
FRANK I. LETSON.

Witnesses:
ANNA SCHMITT,
H. D. HUNTINGTON.