July 14, 1925. 1,545,493

R. HOFFMAN

SUPPLY PIPE CONNECTION FOR OIL BURNERS

Filed March 22, 1923

Fig. 1

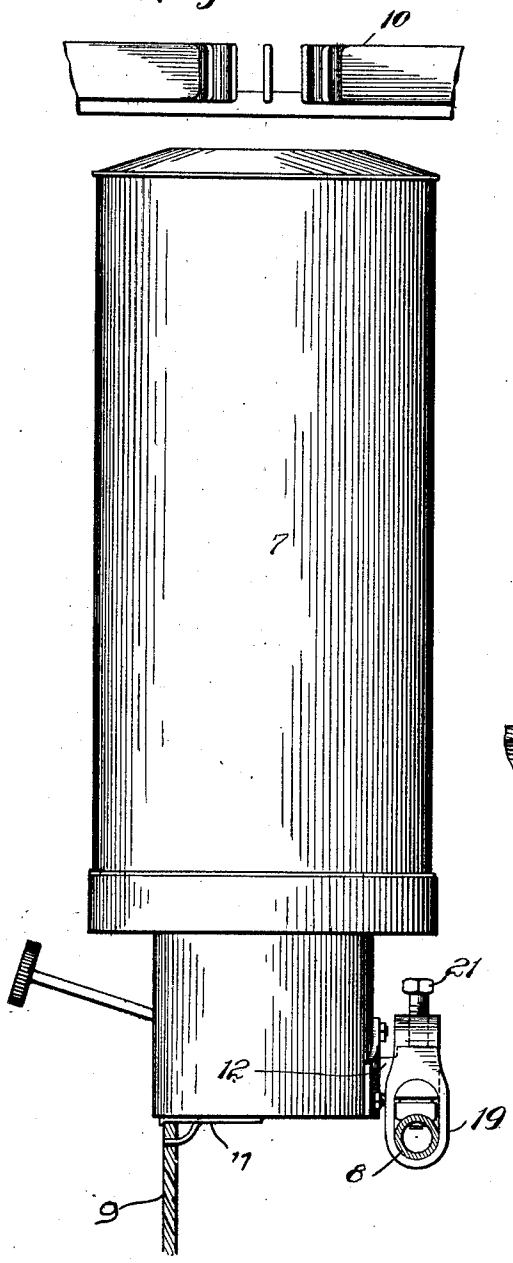


Fig. 2

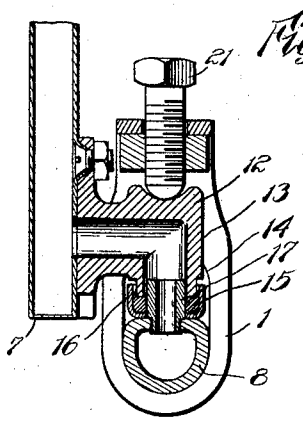
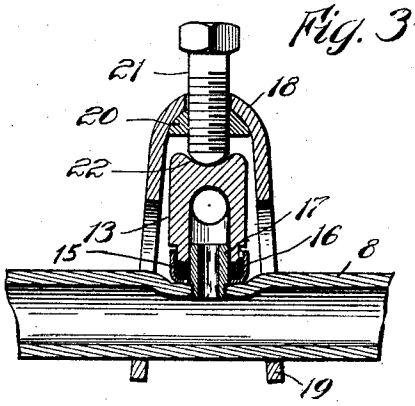


Fig. 3



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UNITED STATES PATENT OFFICE.

RUDOLPH HOFFMAN, OF KANKAKEE, ILLINOIS, ASSIGNOR TO SEARS, ROEBUCK AND CO., OF CHICAGO, ILLINOIS, A CORPORATION OF NEW YORK.

SUPPLY-PIPE CONNECTION FOR OIL BURNERS.

Application filed March 22, 1923. Serial No. 626,946.

To all whom it may concern:

Be it known that I, RUDOLPH HOFFMAN, a citizen of the United States, residing at Kankakee, in the county of Kankakee and State of Illinois, have invented a certain new and useful Supply-Pipe Connection for Oil Burners, of which the following is a specification.

The invention pertains in general to oil stoves, and has particular reference to a connection between the oil supply pipe and the burner or burners.

The object of the invention is to produce a means of simplified construction providing an effectual connection between an oil supply pipe and the fitting which communicates with the burner.

In the accompanying drawings wherein I have illustrated a preferred embodiment of my invention, Figure 1 is a fragmentary side elevational view of a burner in the position which it occupies in the stove. Fig. 2 is a vertical sectional view illustrating the connection between the burner and the oil supply pipe. Fig. 3 is a longitudinal sectional view through the connection and a portion of the supply pipe.

A burner 7, of usual or preferred construction, is herein shown as mounted directly upon an oil supply pipe 8 and a parallel supporting bar 9 beneath the grid 10 of the stove. For engagement with the bar 9, the lower portion of the burner carries a bracket 11 adapted to interengage with the bar in such a manner as to prevent the burner from being moved upwardly when the burner is connected to the supply pipe.

The connection between the burner and the supply pipe comprises a fitting 12 which in the present instance is rigidly secured directly to the lower portion of the burner 7 at one side thereof so as to be in communication with the annular wick chamber of the burner. Preferably the fitting is brazed to the burner so as to form an oil-tight joint.

The fitting 12 has a passageway 13 therethrough for the oil, and the outer or free end of the fitting has a depending tubular portion 14 which is adapted to seat upon a washer 15 of relatively soft metal, such as lead, within a cup member 16 seated upon the supply pipe 8. This cup member is apertured centrally thereof to receive a nipple 17 screw-threaded into the pipe 8. Preferably the lower end of the nipple is tapered so that when screwed down tightly into the screw-threaded aperture provided therefor in the pipe, a tight joint will be secured.

As shown clearly in Figs. 2 and 3, the upper surface of the pipe surrounding the nipple 17 is flattened, and this for a two-fold reason. Thus, the flattened surface provides a broad and flat seat for the cup member 16; and more important, the entire thickness of the metal of the pipe is utilized for purposes of threading the nipple into the pipe. To render the pipe non-corrosive it is dipped in a molten bath of tin or other suitable metal. This tinning of the pipe serves incidentally to seal the joint between it and the nipple around the threads, thus rendering the joint absolutely oil-tight.

The washer 15 encircles the nipple 17 with a snug fit, and the aperture in the bottom of the cup member for receiving the nipple is made of the same diameter as the external diameter of the nipple. The depending tubular portion 14 of the fitting may be made slightly larger in diameter than the external diameter of the nipple, and this fitting is clamped downwardly upon the washer 15 by suitable means, such as a yoke 18 having depending apertured portions 19 encircling the pipe on opposite sides of the fitting. A nut 20 engages in the bottom of the yoke, and this nut receives a clamping screw 21 the lower end of which bears in a socket 22 formed in the upper side of the fitting 12.

It will be apparent that upon tightening the screw 21, the lower depending portion 14 of the fitting becomes embedded in the soft metal of the washer 15 and thus prevents the passage of the oil between the lower end of the fitting and the upper surface of the washer. At the same time the metal of the washer becomes compressed and, expanding laterally, is forced against the outer periphery of the nipple thus forming an oil-tight joint between the washer and the nipple also.

In the manufacture of the supply pipe and burner connection herein illustrated and described, the pipe may be punched and flattened in a single operation to form the seat for the cup member and to form the aperture to receive the nipple. The aperture is then tapped and the nipple screwed into position whereupon the pipe is dipped for tinning as above set forth.

I claim as my invention:

In an oil stove, the combination with a burner and an oil supply pipe, of a connection between the burner and the supply pipe including a tubular member connected with the burner, a nipple screw-threaded into the pipe, said pipe together with the nipple mounted therein having a coating of tin or the like serving to seal the joint between the nipple and the pipe, and means for providing an oil-tight joint between the nipple and said tubular member including a soft metal washer, and a cup member in which said washer is seated and having an aperture in its bottom closely encircling said nipple, said pipe being flattened to form a flat seat for the cup-like member and to utilize the entire thickness of the metal of the pipe at the joint between it and the nipple.

In testimony whereof, I have hereunto affixed my signature.

RUDOLPH HOFFMAN.