S. B. SALSICH.

OIL BURNER.

APPLICATION FILED DEC. 17, 1912.

1,086,405. Patented Feb. 10, 1914.

Fig. 1.

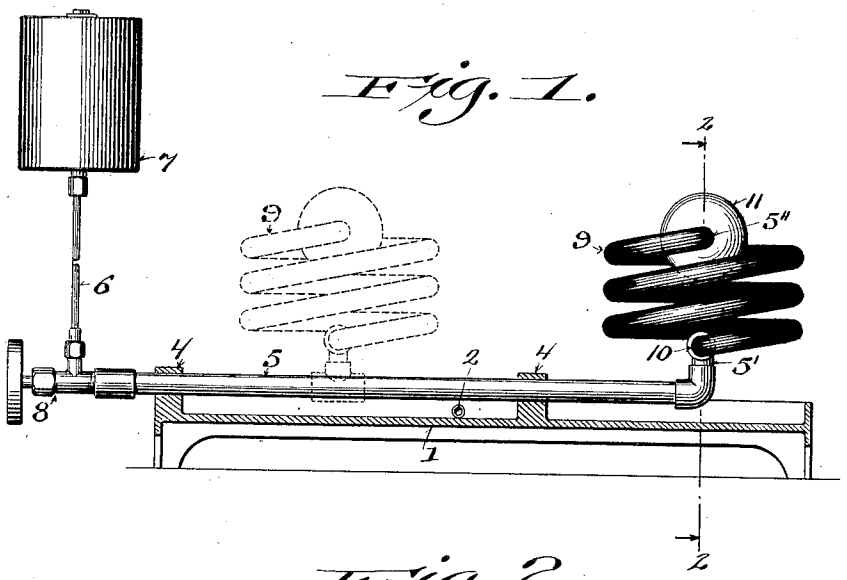
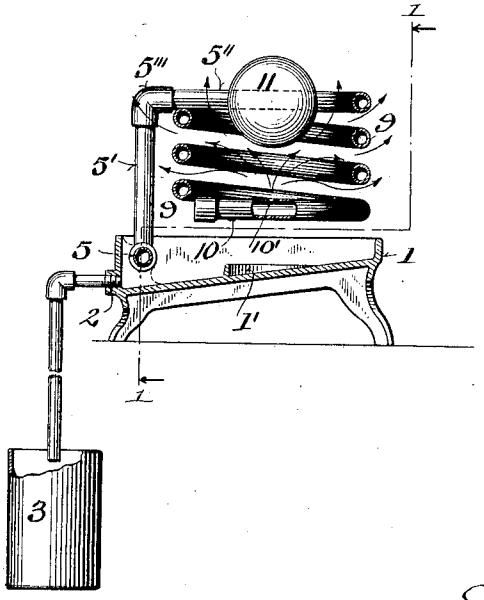


Fig. 2.



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UNITED STATES PATENT OFFICE.

SHERMAN B. SALSICH, OF CUDAHY, WISCONSIN.

OIL-BURNER.

1,086,405. Specification of Letters Patent. Patented Feb. 10, 1914.

Application filed December 17, 1912. Serial No. 737,242.

To all whom it may concern:

Be it known that I, SHERMAN B. SALSICH, a citizen of the United States, and resident of Cudahy, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Oil-Burners; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide a simple, economical and effective oil burner, the construction of which increases the efficiency of the fuel consumed.

Specific objects of my invention are to provide a coiled pipe wherein the oil first rises to the upper section of the coil and thereafter travels downwardly in spiral form to a point of discharge centrally of the coil, whereby the windings of said coil are subjected to the intense heat from the central flame to increase vaporization, ample spaces between the faces of the coil being had through which the necessary supply of oxygen is obtained; to provide a spherical deflector that is suspended from a section of the feed-pipe stretch centrally of the coil and above the flame, whereby said flame is spread to the surrounding surface of the coils, the solid spherical metal deflector also serving to retain the maximum of heat, and to provide a drip-pan for the vaporizer coils having an inclined bottom, the lower surface of which is connected by a pipe to an overflow tank, whereby surplus oil caused by overflow from the burner, owing to the flame being inadvertently extinguished, may be drained off and thus avoid the generation of gases that would otherwise cause explosion within the fire-pot of the stove or furnace to which said burner is applied.

With the above and other minor objects in view the invention consists in certain peculiarities of construction and combination of parts as set forth hereinafter with reference to the accompanying drawings and subsequently claimed.

In the drawings Figure 1 represents an elevation of a burner embodying the features of my invention, the same being mounted upon a pan that is shown in section, the section being indicated by line 1—1 of Fig. 2, and Fig. 2, a transverse sectional view of the burner as indicated by line 2—2 of Fig. 1.

Referring by characters to the drawings, 1 represents a drip-pan having an inclined bottom, the lower edge of which is provided with a discharge nipple 2, which nipple is in pipe connection with an overflow reservior 3 that is disposed below the drip-pan.

Mounted in suitable apertured ears 4, 4, of the drip-pan is a longitudinally disposed feed-pipe 5 having a vertical branch connection 6 which communicates with an oil supply reservoir 7, the said supply pipe 5 at its intersection with the branch pipe 6 being provided with a controlling valve 8.

As shown in Fig. 1, the end of the feed-pipe 5 has connected thereto a vertical stretch 5′ that communicates with a horizontal stretch 5″, which horizontal stretch merges into the upper section of a coil of pipe 9 that constitutes the vaporizer proper. The coils of this pipe are inclined downwardly and terminate with an inwardly extended nozzle 10 having an aperture 10′ that is in axial alinement with the vaporizer coil, said coils of the vaporizer being spaced apart to permit free circulation of air thereabout. Directly under the discharge aperture 10′ of the burner nozzle the drip-pan is formed with an oil pocket 1′ for the reception of a small quantity of oil that is used for initially igniting the burner, the said pocket being provided with a vertically disposed overflow wall having a horizontally disposed upper edge. The horizontal stretch 5″ of the feed-pipe, which extends across the upper coil section of the vaporizer carries a spherical deflector 11, which deflector is apertured whereby it may be slipped upon said pipe section 5″ of the coil, prior to the end of said pipe section being connected to the pipe stretch 5′ through an elbow 5‴ as shown.

Referring to Fig. 1, I have shown a second burner in dotted lines indicating that two or more of such coils may be connected to the feed-pipe, the number of burner-heads forming no part of my invention.

In the operation of the burner, when the valve 8 is opened oil will be fed from the reservoir 7 by gravity through the feed-pipe and its various stretches to the upper coil of the burner-head and from thence said oil will flow spirally downward and be discharged through the aperture 10′ of the nozzle. The flame from the discharge aperture is spread by the spherical deflec-

tor and will thus heat the pipe coils to a high degree of temperature, whereby the oil is vaporized and in such vapor form supplies the fuel for various heating purposes.

For initially lighting the burner a small quantity of oil is placed into the oil pocket 1′ and ignited, the said auxiliary supply being sufficient to superheat a small quantity of oil in the nozzle, whereby gas will be generated within a short space of time and thereafter the generator will be operated through vaporized gas generated by the heat absorbed from the flame by the coils.

I claim:

1. A burner-head comprising a downwardly inclined spiral coil of pipe, the same terminating with a straight stretch that extends across the coil and constitutes a discharge nozzle having an aperture in axial alinement with the coil, a feed-pipe section extending crosswise of the coil, the said feed-pipe section forming a continuation of the upper stretch of the coil, and a solid globular deflector suspended from the feed-pipe section centrally of said coil.

2. In an oil burner having a head; the combination of a drip-pan disposed under the head having an inclined bottom, an oil pocket extending upwardly from the inclined bottom, the said oil pocket being provided with a vertically disposed overflow wall having a horizontally disposed upper edge, and a drain pipe in communication with the bottom of the drip-pan, the said drain pipe being positioned adjacent to the lowest point of said bottom relative to its inclination.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

SHERMAN B. SALSICH.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."