A. E. OSBORN.

VAPORIZER HEATING DEVICE.

APPLICATION FILED JAN. 13, 1906.

946,806. Patented Jan. 18, 1910.

Fig. 1.

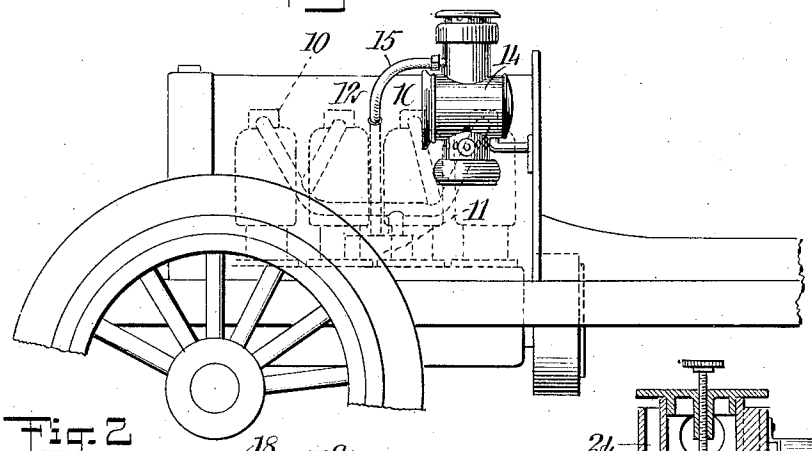


Fig. 2

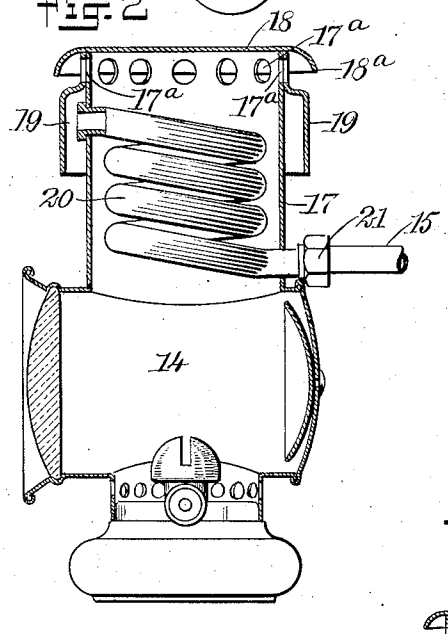


Fig. 3.

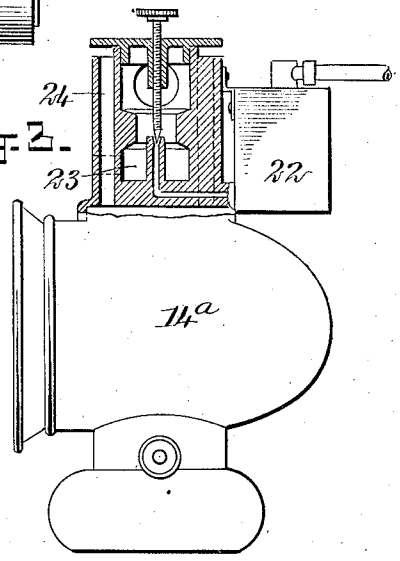
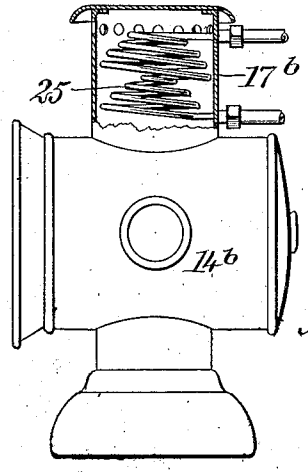


Fig. 4.



WITNESSES:

Geo. H. Maylor

Isaac B. Owens

INVENTOR

Alden E. Osborn

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

ALDEN E. OSBORN, OF NEW YORK, N. Y.

VAPORIZER-HEATING DEVICE.

946,806. Specification of Letters Patent. Patented Jan. 18, 1910.

Application filed January 13, 1906. Serial No. 295,882.

To all whom it may concern:

Be it known that I, ALDEN E. OSBORN, a citizen of the United States, and a resident of the city of New York, borough of the Bronx, in the county and State of New York, have invented a new and Improved Vaporizer-Heating Device, of which the following is a full, clear, and exact description.

The invention relates to a novel means for heating the vaporizers of heat engines using liquid fuels, particularly internal combustion engines, and oil fired steam engines.

In automobile practice it is a common disadvantage, particularly in cold weather, that in starting the engine the vaporizer cannot be made to work properly so that delay and inconvenience result.

My invention is especially suited to troubles of this sort, and provides a means by which the headlight or other lantern of the automobile may be utilized to heat the vaporizer, so that when starting the machine it is only necessary to light the lamp which will furnish the heat necessary for starting the operation of the vaporizer, and if desired this heat may be continued throughout the entire operation of the machine.

While the invention is especially adapted to use on internal combustion engine-driven automobiles, it may obviously be used on steam-driven automobiles and in other analogous arts.

The invention resides in certain special features of construction and combinations of parts which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings which illustrate as an example the preferred embodiment of my invention, in which drawings—

Figure 1 is a side elevation of the forward portion of an automobile, illustrating the bonnet of the machine and one of the lights in position at the side thereof, the view also showing by dotted lines the position of the engine and carbureter; Fig. 2 is a sectional view of the light showing the construction thereof which facilitates heating the air current which is drawn into the carbureter; Fig. 3 is a sectional view showing a modified arrangement in which the carbureter is attached to and forms a part of the lamp; and Fig. 4 is a view showing an arrangement by which the volatile oil employed as a fuel is heated instead of the air.

Referring especially to Fig. 1, it will be seen that this view shows by the broken lines 10 the internal combustion engine of the automobile, and by the broken lines 11 the carbureter thereof. These parts are covered by the bonnet 12 in the usual manner. 14 indicates one of the side lights of the machine which is mounted alongside of the bonnet as shown. Passing from the heater, which will be hereinafter fully set forth, is a pipe 15 which is preferably, though not necessarily, of flexible material, and which extends through an opening 16 in the bonnet of the machine, and is joined to the air inlet of the carbureter 11. It is clear from the foregoing that the lamp 14 may be made to perform the double function of illuminating the path of the vehicle and of heating the air as it is delievered to the carbureter. This preliminary heating of the air is especially useful in starting the engine although it may with advantage, especially when the atmosphere is humid, be carried on continuously during the operation of the engine.

Fig. 2 shows a sectional view of the lamp shown in Fig. 1. This lamp is provided with a burner, hood, reflector and lens which may be of the usual or any desired construction. Rising from an opening in the top of the hood of the lamp is a chimney tube 17 the top of which is closed by a plate 18 having downwardly overhanging edges 18ª. Just under said edges 18ª the chimney 17 is formed with outlet openings 17ª for the hot gases passing from the interior of the hood of the lamp. Below said openings the chimney tube 17 is provided exteriorly with an annular apron 19 spaced from the outer walls of the chimney. Within the chimney an air pipe 20 is coiled, as shown, the inlet end of this pipe passing through the walls of the chimney under the apron 19, and the outlet end passing through a coupling 21 which joins said tube with the tube 15, before described and shown in Fig. 1. In this manner the lamp while serving its usual function of illuminating the path of the vehicle heats the coil 20 and as the air is drawn through this coil the heat is taken up by the air which is thus carried to the carbureter in a heated state.

Fig. 3 shows an arrangement in which the carbureter is mounted directly on the lamp

14ª. In this view 22 indicates the float chamber of the carbureter, and 23 the vaporizer chamber, both of which parts are of the usual construction excepting that the vaporizer chamber is formed with a number of hot air passages 24, extending vertically through its side walls and opening at the top of the vaporizer chamber. Through these passages the heated gases from the lamp pass, and in this manner the entire body of the vaporizer chamber is heated, thus heating not only the air but the gasolene as it passes into the chamber and insuring the formation of a proper explosive mixture irrespective of the weather conditions.

If desired, fuel as contradistinguished from air may be heated preliminary to vaporization, and in Fig. 4 I have illustrated a means for attaining this result. In this view the chimney tube 17ᵇ of the lamp 14ᵇ is provided with a coiled pipe 25, one end of which communicates with the gasolene supply and the other end of which passes to the carbureter, thus heating the gasolene by the heat of the lamp. From the coil 25 the gasolene is led to the carbureter where it may be readily vaporized, as will be understood.

Having thus described the preferred form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a motor vehicle, an internal combustion engine, a body or casing inclosing the same, means outside of said casing for illuminating the path of the vehicle and also operating to generate waste heat, and means for forming an explosive charge and delivering the same to the engine, said last-mentioned means having a portion thereof heated by said illuminating means and utilizing said waste heat.

2. The combination with a vehicle, of a motor operated by a liquid or gaseous fuel, a lamp for illuminating the path of the vehicle and operating to generate waste heat, and means for imparting said waste heat to the fuel delivered to said engine.

3. A motor vehicle, having an internal combustion engine for propelling the same and using a liquid fuel, a hood or casing for said engine and normally concealing the same, a lamp for illuminating the pathway of the vehicle and disposed outside of and adjacent said hood or casing, and a conduit for delivering fuel to said engine, said conduit having a portion thereof heated by waste heat from said lamp without interfering with the illumination caused by the latter and said conduit extending through said hood or casing to said engine.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALDEN E. OSBORN.

Witnesses:
ISAAC B. OWENS,
JNO. M. RITTER.