R. W. HARRIS.

AUTOMOBILE ATTACHMENT.

APPLICATION FILED JULY 25, 1919.

Patented Apr. 20, 1920.

1,337,555.

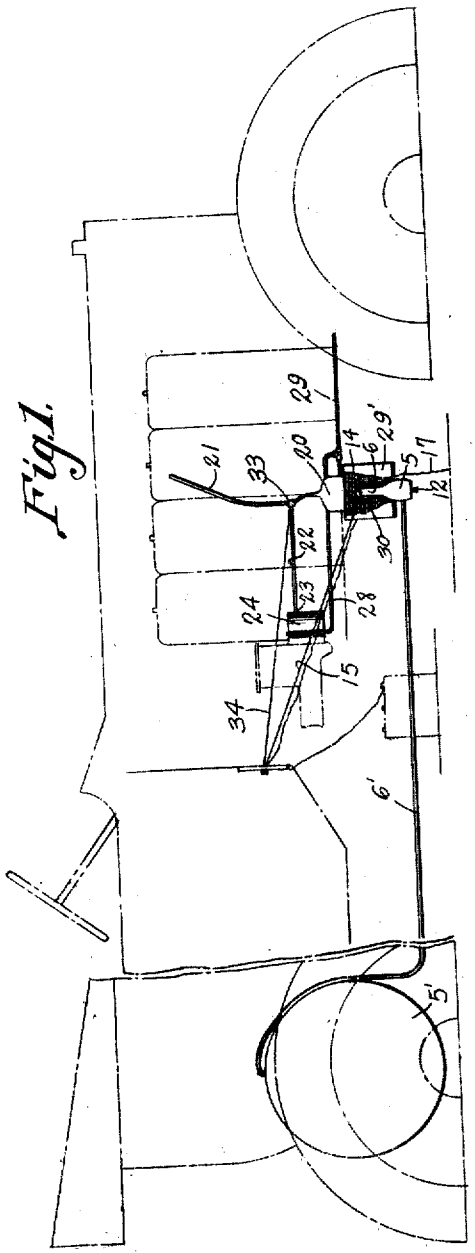

Fig. 1.

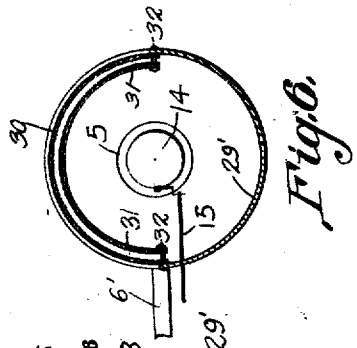

Fig. 6.

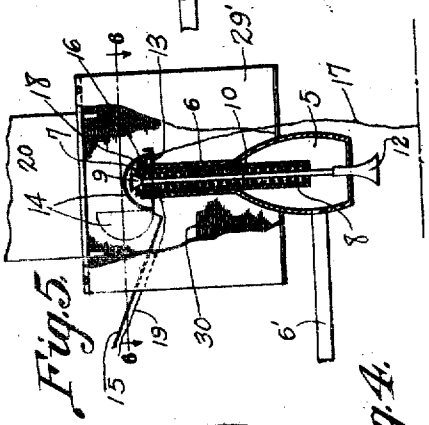

Fig. 5.

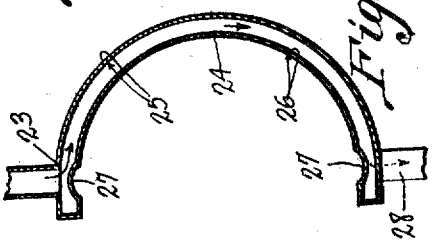

Fig. 4.

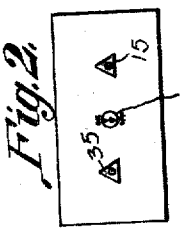

Fig. 2.

Fig. 3.

Witness

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UNITED STATES PATENT OFFICE.

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AUTOMOBILE ATTACHMENT.

1,337,555. Specification of Letters Patent. Patented Apr. 20, 1920.

Application filed July 25, 1919. Serial No. 313,270.

To all whom it may concern:

Be it known that I, RALPH W. HARRIS, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented a new and useful Automobile Attachment, of which the following is a specification.

This invention relates to new and useful improvements in heating devices used in combination with automobiles.

The primary object of the present invention is to provide a device of this kind which will maintain the water of the cooling system of an automobile at a predetermined temperature to prevent freezing.

A further object of the invention is to provide auxiliary heating means in connection with the carbureter in order that the fuel passing through the carbureter will be efficiently vaporized, thereby producing an exceedingly rich gas, to facilitate the starting of the engine, in cold weather.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed without departing from the spirit of the invention.

Referring now to the drawing:—

Figure 1 illustrates a side elevational view of an engine with my invention attached thereto.

Fig. 2 is a side elevational view of the same.

Fig. 3 is a top plan view of the same.

Fig. 4 is a sectional view of the water jacket used in connection with the carbureter.

Fig. 5 is a view partly in section, of the lamp construction, and;

Fig. 6 is a sectional view taken on line 6—6 of Fig. 5.

Referring to the drawing in detail, the reference character 5 designates a fuel chamber having the upper end thereof formed into a substantially tubular neck portion 6 the upper end thereof terminating at a point below the upper end of the burner proper 7 mounted in said tubular neck 6.

The burner includes the perforated tubular member 8 which houses the wick 9 preferably formed of asbestos, the central portion of the wick being provided with a vertical air channel 10 extending through the bottom of the fuel chamber 5, and is in the form of a tube, the lower end thereof having connection with a funnel shaped member 12, for creating a draft through the burner.

Hingedly connected to the upper end of the burner 8, by means of the ring 13 which embraces the upper end of the burner 8, is the cap 14 which is constructed to fit over the upper end of the burner 8 for cutting off the supply of air thereto, and consequently extinguishing the flame thereof.

As shown, the cap 14 is connected with the rod 15, at one end thereof, the opposite end of said rod extending to a convenient point on the dashboard of the automobile to which the invention is applied, to enable the cap to be moved to cover or uncover the burner, at the will of the operator.

Carried by the outer wall of the burner 8 is the sparker point 16, which is in circuit with the storage batteries of the car, through the conductor 17, and coöperates with the sparker point 18, which is also in circuit with the storage battery, for causing a spark resulting in the igniting of the burner 8. Spark point 18, supported by the burner 8, is located in such position with relation to contact point 16 that a spark is made between said points, when the circuit between the conductors of the points 16 and 18 is completed by actuating a suitable switch supported on the dashboard of the automobile 1.

The fuel chamber 5 of the burner has communication with a suitable fuel tank 5′, through the pipe 6′, the fuel housed by said tank 5′ being under pressure thereby insuring a constant feed of fuel to the fuel chamber 5.

Disposed above the burner 8, is the relatively small boiler 20, which is in communication with the water jacket of the cooling system, through pipe 21 the water jacket of course being in communication with the radiator of the automobile through suitable pipes not shown.

A branch pipe 22 has communication with said pipe 21, at one end thereof, the opposite end of said pipe 22 being positioned in the opening 23 of the water jacket 24, which as shown comprises outer and inner spaced

walls 25 and 26, semi-circular in form, to embrace the ordinary carbureter now in use, the inner wall 25 having suitable depressions 27 for preventing displacement of the water jacket, due to the engagement with the lugs, not shown, on the carbureter.

Adjacent the lower end of the water jacket 24 and in communication therewith, is a pipe 28 which extends to a point adjacent the boiler, and has connection with the feed pipe 29 of the water system now in use. While I have shown the water jacket as a jacket to be attached to a carbureter, it is to be understood that the jacket may be formed integral with a carbureter in casting the same with equally as good results. From the foregoing it will be seen that water in the boiler 20 is heated by the burner 8, with the result that a circulation of the water is set up in pipes 21, 22, through the water jacket 24, and back through pipe 28.

It follows that heat from the water jacket is taken up by the carbureter, thereby aiding to a degree, in the carbureting process of the liquid passing into the same.

During cold weather, it may be found practical to have the burner 8 lighted at all times, and in order to prevent the draft of air from the fan of the cooling fan, not shown, from extinguishing the flame, I have provided the semi-circular guard 29 which is secured to the base of the boiler 20 and depends from the forward portion thereof, the lower end of said guard 29 terminating at a point above the bottom of the fuel chamber 5.

The rear guard includes screens 30 and 31 of preferably fine mesh, which have their forward edges secured to the guard 29 by means of the bolts 32, and as more clearly shown by Fig. 6, these screens are disposed in spaced relation with each other, and provide an efficient guard for guarding the flame of the burner against oil or gasolene, which might fall thereon during the running of the machine.

It may be the will of the operator to heat the carbureter only, and therefore I have provided a two-way valve 33 positioned at the point of intersection of the pipe 22 and pipe 21, with the result that the openings of said valve may be brought in communication with the boiler 20 and pipe 22, by turning the valve a suitable distance.

Pipe 21 may be brought into communication with the boiler 20 by moving the valve in the reverse direction. As shown, the valve 33 has connection with the operating rod 34, the operating end 35 thereof extending through the dashboard of the automobile in order that the same may be conveniently operated.

I claim—

1. In combination with a carbureter and water cooling system of an internal combustion engine, a boiler adapted to receive water from the cooling system, a jacket positioned on the carbureter and adapted to heat the carbureter, said jacket being in communication with the boiler, a burner disposed under the boiler, a circular guard depending from the lower edge of the boiler, said guard adapted to substantially house the burner.

2. In combination with a carbureter and water cooling system of an internal combustion engine, a heating apparatus including a boiler in communication with the cooling system, and adapted to receive water therefrom, a lamp disposed under the boiler, said lamp including a circular front wall, and a circular perforated rear wall, a burner forming a part of the lamp, a cap for the burner, and electric means operated by the movement of the cap for lighting the burner.

3. In combination with a carbureter and water cooling system of an internal combustion engine, a boiler in communication with the cooling system, a jacket including spaced walls, one of the walls of said jacket having depressions for providing means to secure the same to a carbureter, said jacket being in communication with the boiler to receive fluid therefrom, a lamp disposed under the boiler, and means for controlling the lamp.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

RALPH W. HARRIS.

Witnesses:
JESSIE W. BARTHOLOMEW,
VERONICA STARE.