Feb. 16, 1937. W. WHITE 2,070,635

ELECTRIC GASOLINE HEATER

Filed Sept. 3, 1935

Fig. 1

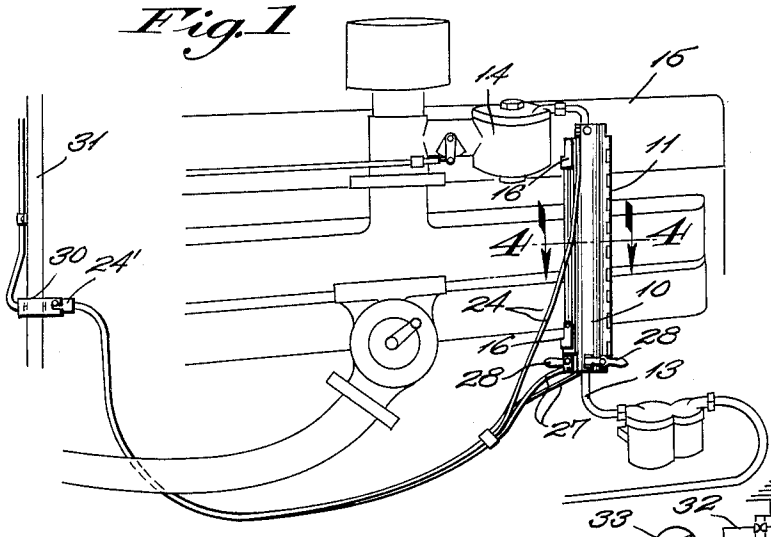


Fig. 7.

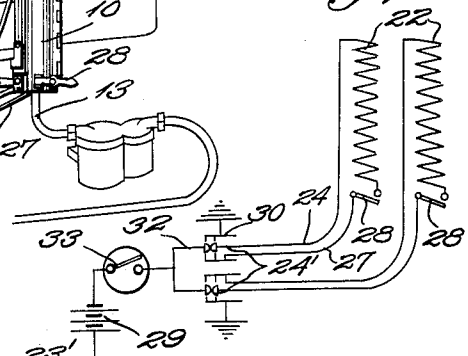


Fig. 2.

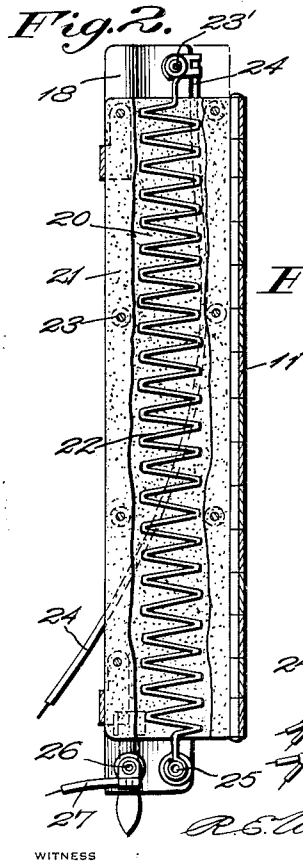


Fig. 3.

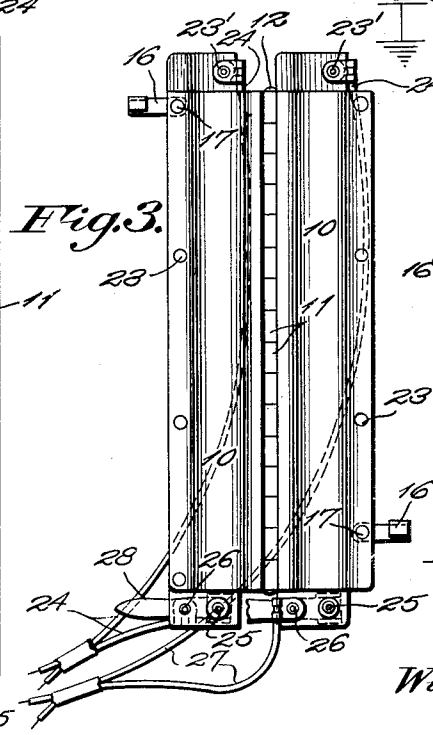


Fig. 4.

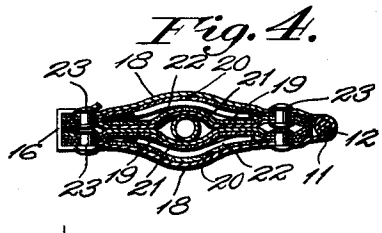


Fig. 5.

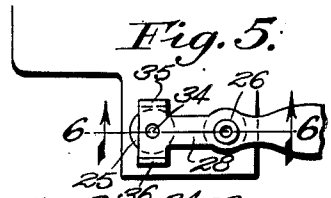
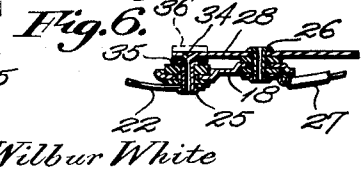


Fig. 6.



Wilbur White

INVENTOR

BY Victor J. Evans & Co.

ATTORNEY

R. E. Wise.

WITNESS

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UNITED STATES PATENT OFFICE

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ELECTRIC GASOLINE HEATER

Wilbur White, Salamanca, N. Y.

Application September 3, 1935, Serial No. 38,998

1 Claim. (Cl. 219—38)

This invention relates to electric heaters for gasoline or other pipes for internal combustion motors.

An object of the invention is to provide a heater comprising sections hinged together and adapted to be clamped into intimate contact with the pipe to be heated so that metal to metal contact will be effected and thus heating of the contents of the pipe will be accelerated with minimum expenditure of current.

A further object is to provide an electric heater in which the sections are provided with respective heating coils each of which is controlled by a novel manually operable switch on the associated section to permit either one or both of the heating sections to be used.

A further object is to provide an electric heating device of this character which will be formed of a few strong, durable and inexpensive parts, which will be easy to manufacture, and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming part of this specification,

Figure 1 is a perspective view of an electric heater constructed in accordance with the invention in applied position for heating the gasoline supply pipe of an internal combustion engine.

Figure 2 is an elevation of one of the sections looking from the inside of the heater and having the metal lining removed and a portion of the asbestos sheet broken away to expose the heating element and insulation.

Figure 3 is a front elevation of the heater with the sections rocked open and showing the switches of both sections closed.

Figure 4 is an enlarged cross sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a detail front elevation of one of the switches.

Figure 6 is a cross sectional view taken on the line 6—6 of Figure 5.

Figure 7 is a diagrammatic view of the electric wiring of the heater.

Referring now to the drawing in which like characters of reference designate similar parts in the various views, the heater is shown to comprise two similar mating sections 10 having hinge eyes 11 on the rear longitudinal edges through which a hinge pintle 12 is passed to hingedly connect the sections together so that they may be easily removed or applied to embrace the gasoline supply pipe 13 in advance of its connection to the carburetor 14 of an internal combustion engine 15. The sections are provided with hooks 16 each of which is pivoted on one of the sections as shown at 17 and is adapted to clamp over the edge of the mating section and hold the sections clamped together about the pipe.

Each section comprises an outer metal casing 18, an inner metal lining 19, opposed asbestos insulating sheets 20 and 21, carried by the casing and the lining, and a heating coil 22 confined in the space between the asbestos sheets. The assembled casing, lining, asbestos sheets, and heating coil are clamped together as a rigid unit by rivets 23 or other suitable connects, as best shown in Figure 4.

One end of the heating coil 22 is connected to a terminal 23 which is carried by and insulated from the upper end of the metal casing. A conductor wire 24 connects the terminal with a double pole plug connector 24'. The lower end of the heating coil 22 is connected to a terminal contact 25. A terminal 26 is spaced from the contact 25 and is connected by a conductor wire 27 to the plug connector. A switch 28, best shown in Figure 6, is pivotally connected to the contact 26 and is adapted to be swung into engagement with the terminal contact 25 to electrically connect the contact to the terminal contact to conduct the current from the battery 29, or other source of electrical energy, to flow though the heating coil.

The wiring diagram as is shown in Figure 7 wherein the plug connector 24' of each section is plugged into a bayonet slot socket 30 on the dash 31 or other part of the vehicle, one side of the socket being grounded and the center contact being connected by a conductor wire 32 with a switch 33 which may be the ignition switch for the motor.

Preferably each switch 28 is formed at the free end with a depression 34 which springs into the terminal contact 25 to prevent accidental dislodgement of the switch, and one edge of the switch is bent downward as shown at 35 to provide a stop for engagement with the contact terminal 25 and limit closing movement of the switch, while the opposite end is bent upward as shown at 36 to form a guide to permit the switch to ride up on the terminal until the de-

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pression 34 lodges in the contact as best shown in Figure 6.

In operation the switches may be selectively closed to connect either or both of the heating coils 22 with the source of electricity so that the heating action of the device may be regulated in accordance with the severity of the weather to quickly heat the fuel in the gas line and promote easy starting of the motor in winter. Moreover the metal linings of the mating sections are disposed in intimate contact with the gas pipe 31 so that the latter will be heated quicker than is the case with the usual heaters for heating an air space between the sections and the pipe.

From the above description it is thought that the construction and operation of the invention will be fully understood without further explanation.

What is claimed is:

An electric heater for internal combustion engine fuel pipes comprising mating metallic sections, an asbestos lining for the sections, means for clamping the sections around the pipe to be heated, a heating coil in each section insulated from the section, a conductor wire secured to one end of the coil and secured to one end of the section, the other end of the section having an extension, a pair of spaced switch contacts secured to and insulated from the extension, a conductor wire connected to one of said spaced contacts, a conductor wire secured to the other of said spaced contacts and connected to said heating coil, and a switch pivoted on the first named one of the pair of spaced contacts and adapted to bridge the contacts for controlling the coil energizing circuit, said switch having a depression in the free end adapted to spring over and engage one of the pair of spaced contacts with snap action so as not to be accidentally dislodged by vibration.

WILBUR WHITE.

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