W. A. ERKENBRACK.

HEATING COIL FOR CARBURETERS.

APPLICATION FILED JULY 11, 1913.

1,081,729. Patented Dec. 16, 1913.

Fig. 1.

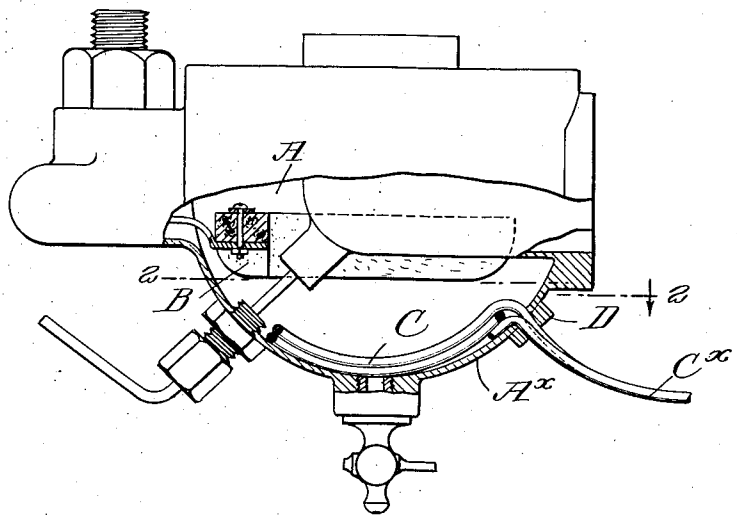


Fig. 2.

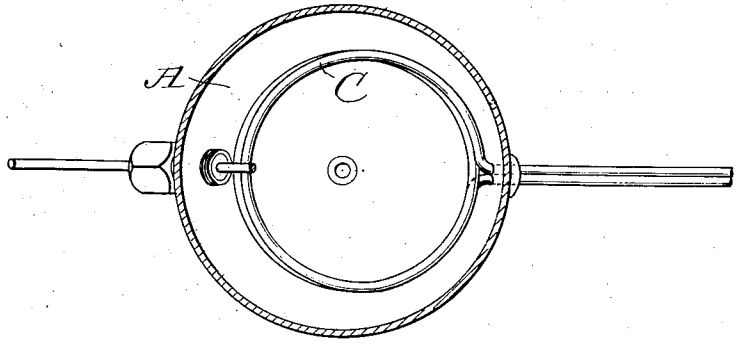
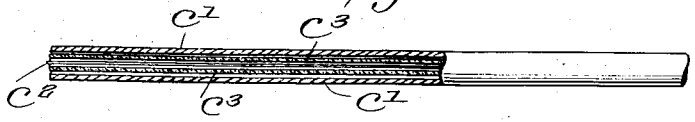


Fig. 3.



WITNESSES

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HEATING-COIL FOR CARBURETERS.

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To all whom it may concern:

Be it known that I, WALTER A. ERKENBRACK, a citizen of the United States, and a resident of Webster, in the county of Day and State of South Dakota, have made certain new and useful Improvements in Heating-Coils for Carbureters, of which the following is a specification.

My invention relates to improvements in heating devices for carbureters, and it consists in the combinations, constructions, and arrangements herein described and claimed.

An object of my invention is to provide a coil which may be applied to any suitable carbureter for heating fluid fuel preparatory to its use.

A further object of my invention is to provide a device by means of which the heavier fuels such as kerosene may be raised to such a temperature as to readily form an explosive mixture with the air thereby rendering the starting of an internal combustion engine less difficult than where such a heating device is not used.

A further object of my invention is to provide a novel form of attachment of the type described which is readily applied and is relatively cheap.

Other objects and advantages will appear in the following specification and the novel features of the device will be particularly pointed out in the appended claim.

My invention is illustrated in the accompanying drawings forming part of this application in which—

Figure 1 is a section through a carbureter with my heating coil applied thereto, Fig. 2 is a section along the line 2—2 of Fig. 1, and Fig. 3 is a detail view showing the manner in which the heating coil is made.

In carrying out my invention I make use of any suitable carbureter.

In Fig. 1 the float chamber is denoted by the reference character A. This contains the float B. In the space between the bottom A^x of the float chamber and the float B I arrange a heating coil such as that shown at C. This coil is made preferably in the form shown in Fig. 3. The tube preferably consists of some soft metal such as copper or brass having an outside casing c'. Within this casing is the heating element c^2 which may be of German silver wire or of any other suitable resistance material for producing heat when subjected to an electric current. Around the resistance wire 2 is a covering of insulating material c^3 which may be mica or other insulation. In the drawing I have shown the tube C as being coiled on the bottom A^x of the float chamber A of the carbureter and having its ends C^x extending through an opening in the side of the float chamber, the tube being secured in place by solder D or in any other suitable manner.

From the foregoing description of the various parts of the device the operation thereof may be readily understood.

In starting an engine in cold weather considerable difficulty is sometimes experienced in getting the fuel to vaporize properly. When, however, a device with the heating attachment described is used current is sent through the heating element. The latter heats the liquid in the float chamber to a sufficient point to cause it to vaporize very readily. Thus an explosive mixture is easily obtained even from a heavy fuel, which does not readily volatilize. The immediate starting of the engine is then secured.

The device is especially adapted to be used in cold weather when the difficulties of starting internal combustion engines increase in proportion to the decrease in temperature. The current through the coil C may be regulated by any suitable means not shown.

I claim;

The combination with a carbureter having a float chamber and a float, of an electric heating coil disposed on the bottom of the float chamber underneath the float, the ends of said coil extending through the walls of the float chamber, and means for sealing the ends of the coil in the walls.

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Witnesses:
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