F. H. TREGO.

HYDROCARBON MOTOR.

APPLICATION FILED APR. 14, 1913.

1,132,048.

Patented Mar. 16, 1915.

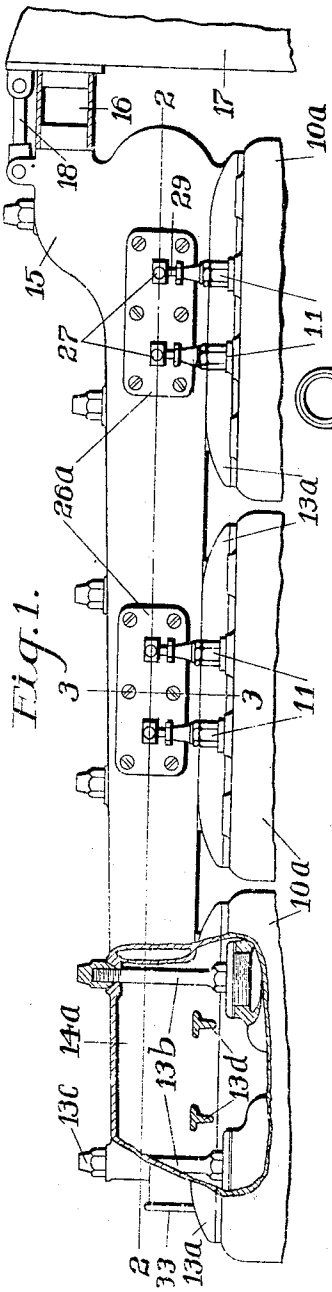


Fig. 1.

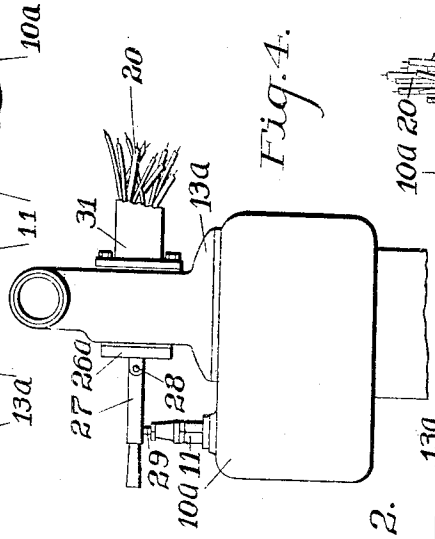


Fig. 4.

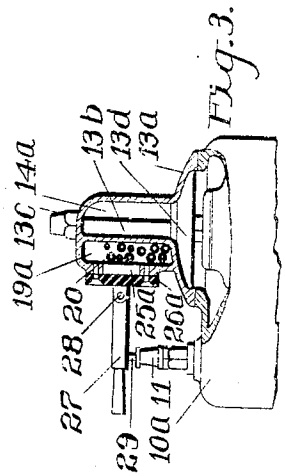


Fig. 3.

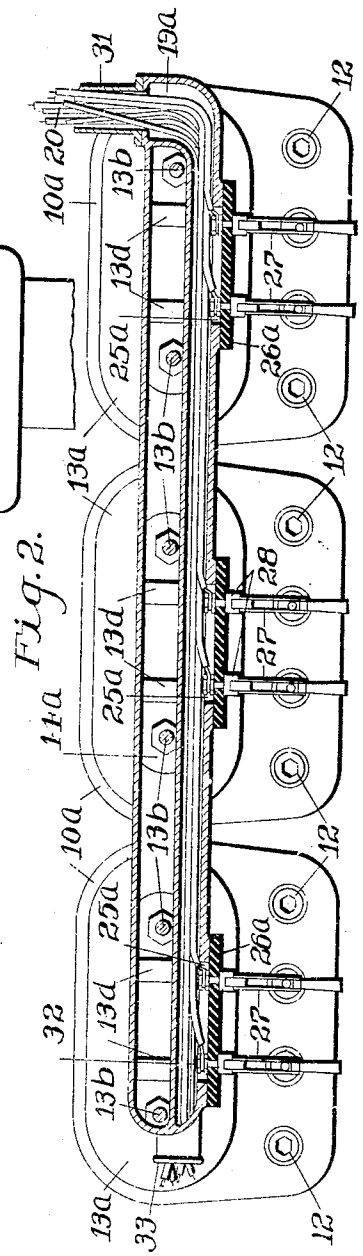


Fig. 2.

WITNESSES:

Milo L. Bailey,

LeRoy J. Williams

INVENTOR;

Frank H. Trego,

by Milton Tibbetts,

Attorney.

UNITED STATES PATENT OFFICE.

FRANK H. TREGO, OF DETROIT, MICHIGAN, ASSIGNOR TO PACKARD MOTOR CAR COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

HYDROCARBON-MOTOR.

1,132,048. Specification of Letters Patent. Patented Mar. 16, 1915.

Original application filed December 14, 1912, Serial No. 736,751. Divided and this application filed April 14, 1913. Serial No. 761,030.

To all whom it may concern:

Be it known that I, FRANK H. TREGO, a citizen of the United States, and resident of Detroit, Wayne county, State of Michigan, have invented certain new and useful Improvements in Hydrocarbon-Motors, of which the following is a specification.

This application is a division of my copending application, Serial No. 736,751, filed December 14, 1912.

This invention relates to hydrocarbon motors, and particularly to the water outlet conduit for the cylinders and the housing and supports for the ignition wires and switches.

Heretofore it has been customary to support the ignition wires of a hydrocarbon motor in tubes or other housing arranged along the tops of the cylinders. In the present invention this housing is combined with the water outlet cover for the cylinders and is cast integral with said cover.

One of the objects of the invention is the provision of a housing for the ignition wires, which is formed as an integral part of the water outlet or conduit for the cylinders and arranged at one side of said conduit.

Another object of the invention is to construct a cover for the water chambers of a hydrocarbon motor with a water conduit and a housing for the ignition wires arranged side by side with the securing means for the cover passing through the water conduit independently of the wire housing.

Other objects of the invention will appear from the following description, taken in connection with the drawings which form a part of this specification, and in which,

Figure 1 is a side elevation of the upper part of a hydrocarbon motor embodying this invention; Fig. 2 is a horizontal section approximately on the line 2—2 of Fig. 1; Fig. 3 is a transverse section approximately on the line 3—3 of Fig. 1; and Fig. 4 is a front end view of the motor.

The drawings show a six cylinder motor having three blocks of two cylinders each. These cylinders 10^a are, of course, provided with suitable inlet and exhaust valves, and spark plugs 11 are preferably arranged over the inlet valves. Plugs over the exhaust valves are shown at 12. The cylinder blocks are formed with suitable water jackets, and the castings are left with large openings at the top, which are closed by an elongated cover 13^a, which thereby forms an outlet conduit 14^a for the water in the cylinder jackets. This cover or conduit has a curved neck 15 at its front end, which is connected by a rubber hose 16 with a radiator 17, of any suitable construction. The radiator is shown as connected to the motor by a rod 18 for steadying it. The cover 13^a is secured to the cylinder castings by means of a series of bolts 13^b, two such bolts being provided for each cylinder casting. These bolts extend upwardly from the center of the cylinders through the water conduit 14^a and are provided with securing nuts 13^c.

Formed as an integral part of the cover 13^a and at one side of the water conduit, is a housing 19^a for the ignition wires 20. It will be seen that this housing 19^a is narrow, so that the wires rest against the walls of the housing and are thus supported. The forward end of the housing passes around the front end of the water conduit 14^a and connects with a tube 31, through which the wires 20 pass to the magneto or distributer. The rear end of the housing is open to permit some of the wires to pass out through that end to the switch connections.

The housing 19^a is provided along one of its sides with openings 25^a, which openings are closed by insulating blocks 26^a secured by screws or other means directly to the integral wall of the housing. These blocks 26^a support the switches 27, which are jointed, as shown at 28, and are so positioned that they may connect with the contact pieces 29 mounted on the spark plugs 11.

It will be understood that the ends of the wires 20 are led from the magneto, which is suitably mounted on the motor, through the tube 31 and into the housing 19^a, and such of the wires as convey current from the magneto distributer are connected to the switches 27 on the inside of the blocks 26^a, as shown at 32. The wires that run to the dash of the vehicle for connection to the coil and switch mechanism pass through the opening 33 at the rear end of the housing 19^a. The cover 13^a is preferably strengthened by integral cross ribs 13^d, as shown particularly in Figs. 1, 2 and 3.

It will be understood that the invention is not limited to the exact details of construction shown, as it will be apparent that changes may be made without departing from the spirit or scope of the invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a hydrocarbon motor, the combination with the cylinders thereof, of a water conduit secured to the cylinders, said conduit being formed along one of its sides with a housing for the motor ignition wires.

2. In a hydrocarbon motor, the combination with the cylinders thereof, of a cover for the water chambers of said cylinders forming a water conduit, and means formed integral with said cover for housing the ignition wires at one side of the water conduit.

3. In a hydrocarbon motor, the combination with the cylinders thereof, of a cover for the water chambers of said cylinders forming a water conduit, a housing formed integral with said cover and arranged at one side of the water conduit, and ignition wires for the motor within said housing.

4. In a hydrocarbon motor, the combination with the cylinders thereof, of a housing for the ignition wires mounted on said cylinders, said housing having an opening in one of its sides, an insulating block secured directly to an integral part of said housing and covering said opening, and ignition wires in said housing terminating at said blocks.

5. In a hydrocarbon motor, the combination with the cylinders thereof, of a housing for the ignition wires mounted on said cylinders, said housing having an opening in one of its sides, an insulating block secured directly to an integral part of said housing and covering said opening, ignition wires in said housing, a switch on the outside of said housing, and means on said block for supporting said switch thereon and for connecting the switch with one of said ignition wires.

6. In a hydrocarbon motor, the combination with the cylinders thereof, of a cover for the water chambers of said cylinders forming a water conduit, a housing for the ignition wires arranged at one side of said water conduit and formed as an integral part of said cover, and means passing through the water conduit and independent of said housing for securing the cover to the cylinders.

7. In a hydrocarbon motor, the combination with the cylinders thereof, of a cover for the water chambers of said cylinders forming a water conduit, a housing for the ignition wires arranged at one side of said water conduit and formed as an integral part of said cover, and a series of bolts passing through said water conduit for securing the cover to the cylinders.

In testimony whereof I affix my signature in the presence of two witnesses.

FRANK H. TREGO.

Witnesses:
WM. R. MCCULLA,
LE ROI J. WILLIAMS.