

W. H. McGAFFEY.
 COMBINED AUTOMOBILE AND HYDROPLANE.
 APPLICATION FILED SEPT. 7, 1912.

1,059,482.

Patented Apr. 22, 1913.

3 SHEETS-SHEET 1.

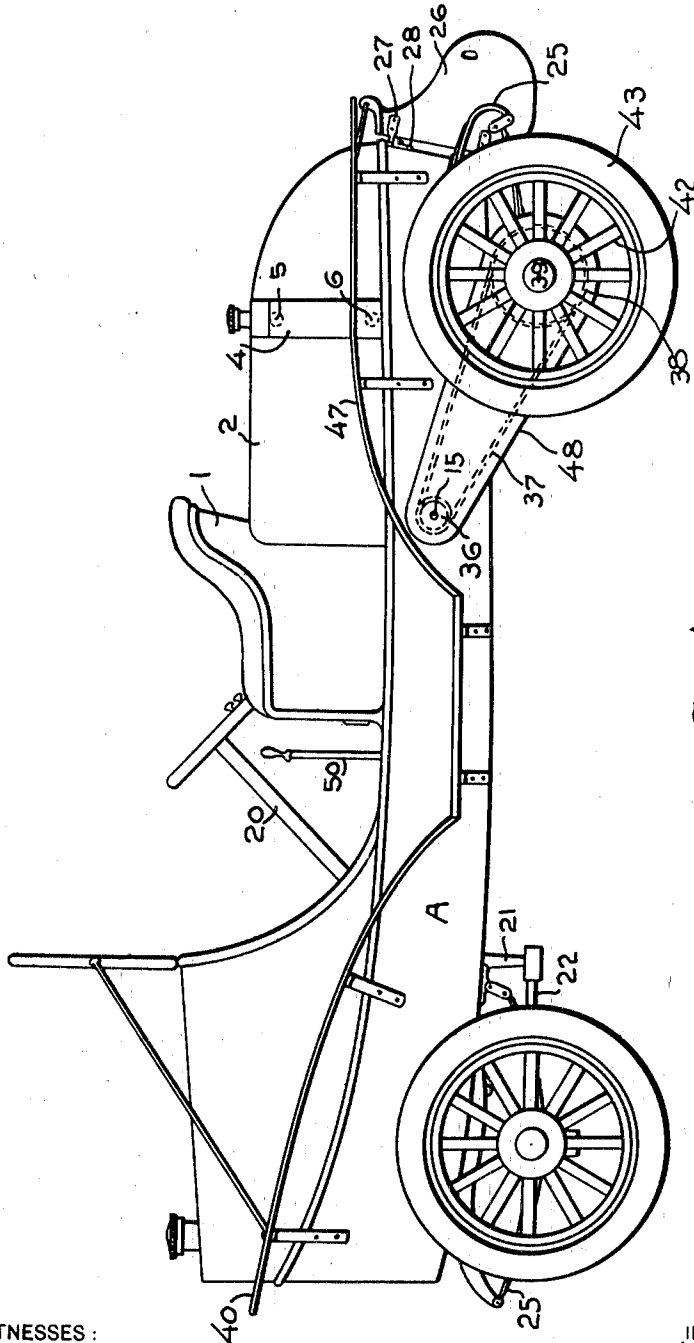


Fig. 1

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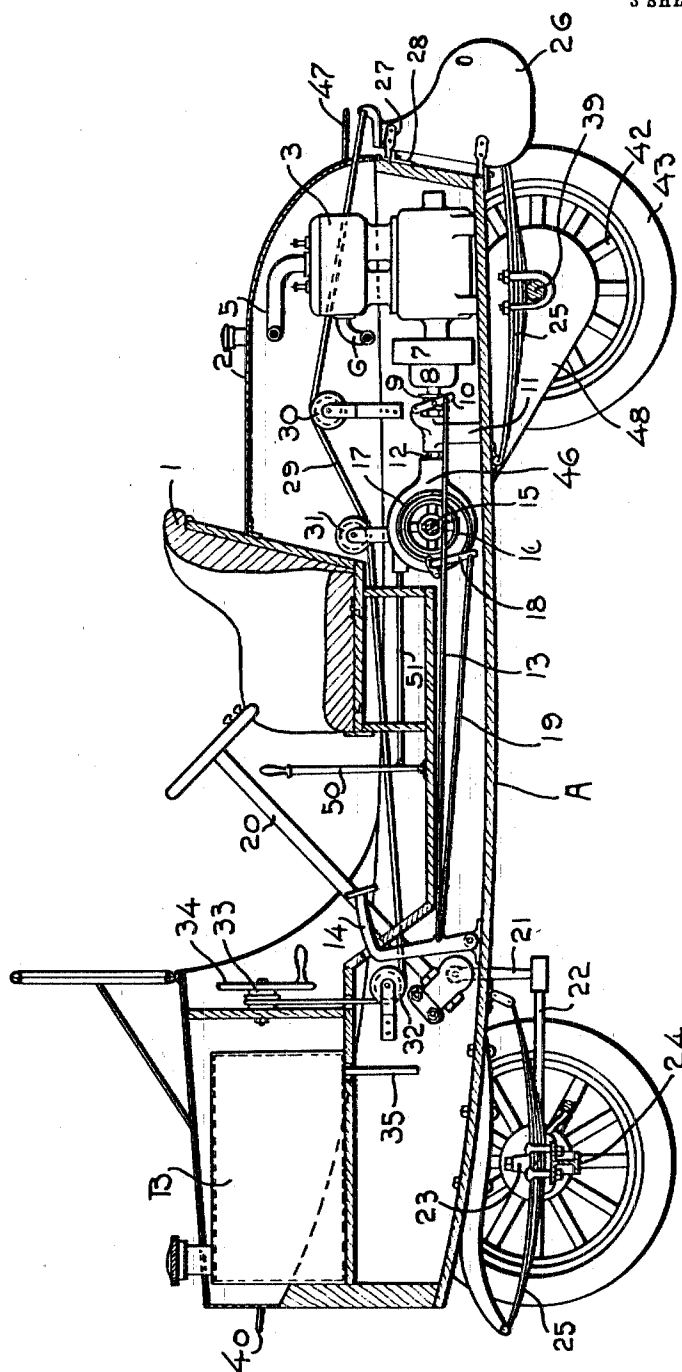


Fig. 2

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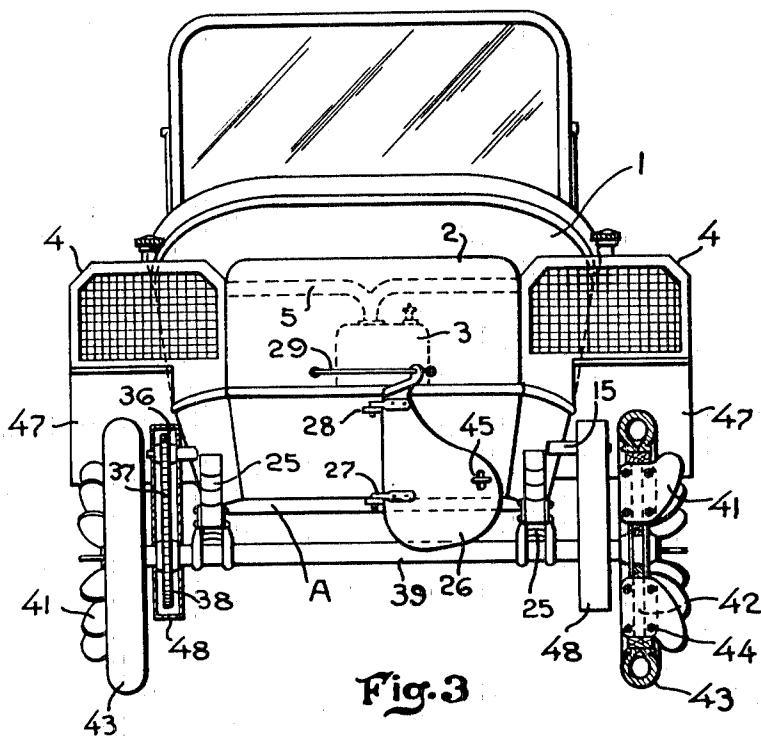


Fig. 3

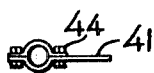


Fig. 4

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UNITED STATES PATENT OFFICE.

WILLIAM H. McGAFFEY, OF DETROIT, MICHIGAN.

COMBINED AUTOMOBILE AND HYDROPLANE.

1,059,482.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed September 7, 1912. Serial No. 719,079.

To all whom it may concern:

Be it known that I, WILLIAM H. McGAFFEY, a subject of the King of Great Britain, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Combined Automobiles and Hydroplanes, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to a combined boat and automobile. It is designed to speed through the water in much the fashion of a hydroplane by reason of the location of the heavy engine parts at the rear of the machine and the design of the fenders so as to act as lifting planes in the way that the plane of a hydroplane does. Another feature of this invention is the use of removable paddles that can be clamped to the spokes when it is desired to take a marine trip and which can be removed when it is desired to use the machine only on land. The steering of the machine when in the water is effected by a rudder that is designed to be securely fastened out of the way when the machine is run on land.

In the drawings:—Figure 1, is a side elevation of the machine. Fig. 2, is a longitudinal section showing the operating parts in elevation. Fig. 3, is a rear elevation of the machine. Fig. 4, is a detail of one of the paddles.

The body A of the machine is designed to go through the water with a minimum of resistance and its similarity to a boat design may be observed by referring to Fig. 2. The body at the rear of the seat 1 is quite commodious and forms an engine containing chamber 2. At the rearmost part of this chamber, the engine 3 is located. This engine has a water cooling system through which the water circulates from the radiators 4 by way of the pipes 5 and 6 to and from the engine jacket. Radiators 4 are located at each side of the chamber 2 and at the rear of the machine above and on the inside of the rear mud guards 47. The engine shaft carries a fly wheel 7 in connection with which works a clutch 8 of a conventional form and which is not shown in

detail. Connected with this clutch is a collar 9 and a clutch throw-out arm 10 which engages with the collar 9. This clutch throw-out arm is pivoted to the bracket 11 which is also a bearing of the drive shaft 12. The clutch throw-out arm 10 is connected by the reach-rod 13 with the pedal 14. The drive shaft 12 has a beveled gear connection (not shown in detail) with the jack shaft 15, which carries a brake drum 16 with which the brake band 17 can be caused to frictionally engage by the movement of the brake lever 18, which is connected by the reach rod 19 with the pedal 14. This mechanism serves as a clutch and a brake control of the driving element.

Steering on land is performed by the steering post 20 that connects by conventional form of worm and segment (not shown in detail) with the arm 21 that operates the drag link 22 which is connected with the front pair of wheels that are supported on the knuckles 23 and the front axle 24. Suitable semi-elliptical springs 25 yieldingly support the body upon the wheel axles. The rudder 26 is swingingly supported by the pins 27 engaging in holes in the brackets 28. A cord 29 passes over the sheave 30 under the sheave 31 and across the sheave 32 to the windlass 33 on the dash of the car. The return of the cord by sheaves to the rudder is not shown in Fig. 2 as it is cut away by the section line. This windlass is operated by a hand-wheel 34 so that by turning the same, the rudder may be turned either way.

A gasoline tank is located in the front of the vehicle in position normally occupied by the hood that contains the engine. This gasoline tank is lettered B and a conduit leads therefrom to the carbureter, (not shown). The jack shaft 15 carries a sprocket wheel 36 over which runs a chain 37 that connects with the sprocket wheel 38 on the rear axle 39.

48 is a casing which incloses the sprocket wheels and chain.

The fender 40 is designed so that it would serve to cause the front of the body to rise out of the water when the machine is used for a marine trip. It will be noticed that this fender is somewhat higher than would ordinarily be the case. The proper positioning of the fender to secure hydroplane effects is a matter of calculation easy for

any engineer, as it depends upon the weight of the vehicle parts and the distribution of the load.

41 are detachable paddles that may be
5 clamped to the spokes 42 of the rear wheels
43 by reason of their being made in two
parts that are placed one at each side of
the spoke and drawn together by the bolts
44. Differential gearing and planetary
10 transmission is contained in housing 46 and
is of conventional type.

50 is the gear changing lever and 51 is
the gear shifting rod that is connected to
the gear changing mechanism (not shown)
15 contained in the case 46.

When the rudder 26 is not required for
use, it may be secured in the position shown
in Fig. 3 by the turn-button 45, inserted
through a slot for that purpose, and turned

so as to hold it to the rear of the machine 20
out of the way.

What I claim is:—

A combined automobile and boat, having
in combination, a body shaped for travel
through the water, running gear supporting 25
the same, driving mechanism contained in
the body at the rear of the machine and
connected with the running gear, and fen-
ders arranged so that when the vehicle is in
the water, the same act to lift the forward 30
part out of the water, substantially as de-
scribed.

In testimony whereof, I sign this speci-
fication in the presence of two witnesses.

WILLIAM H. MCGAFFEY.

Witnesses:

VIRGINIA C. SPRATT,
AGNES M. HIPKINS.