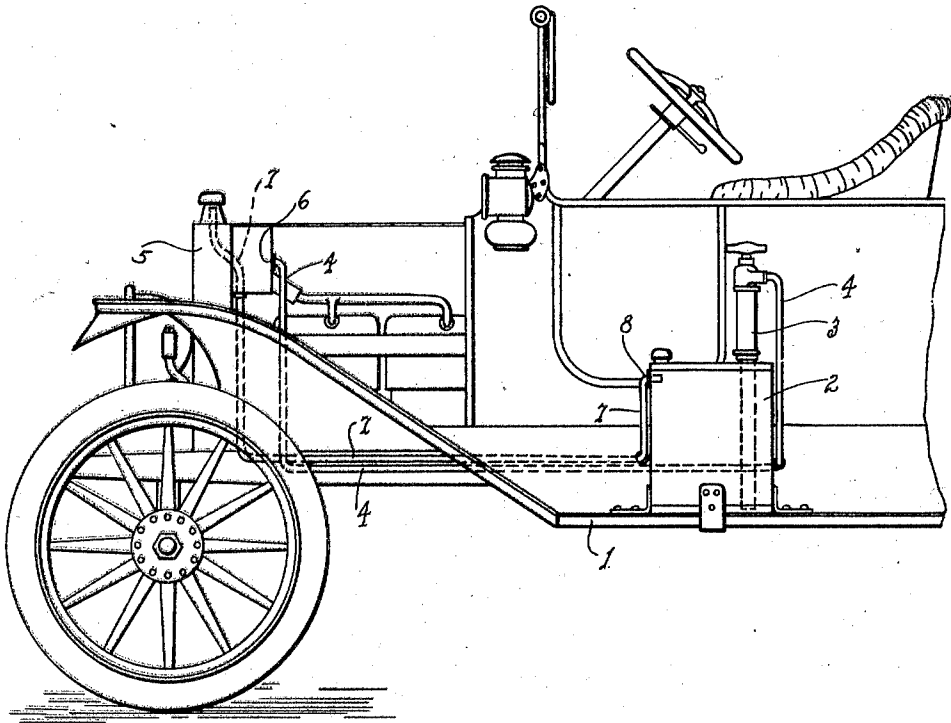


R. A. DRAIS.
DEVICE FOR COOLING ENGINES.
APPLICATION FILED AUG. 29, 1918.

1,275,876.

Patented Aug. 13, 1918.



WITNESS

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DEVICE FOR COOLING ENGINES.

1,275,876.

Specification of Letters Patent.

Patented Aug. 13, 1918.

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To all whom it may concern:

Be it known that I, ROBERT A. DRAIS, a citizen of the United States, residing at Halleck, in the county of San Bernardino, State of California, have invented certain new and useful Improvements in Devices for Cooling Engines; and I do declare the following to be a clear, full, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in a device for cooling engines and is more particularly adapted to be used in connection with engines which are inclined to over-heat and consequently necessitate a frequent filling of the radiator connected therewith. This device may be mounted in the position most accessible to the driver of the vehicle and will receive the hot water from the radiator and inject a quantity of cold water in its place. It is not necessary to use the device continuously, but only at such times as the engine becomes over-heated when the device may then be brought into action, and due to the fact that the hot water in the tank of the device has had a chance to become cooled, a quantity of cold water may then be quickly pumped into the hot radiator. This improvement may be used in connection with the radiator without making any changes in any previous cooling system that may have been in use.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects, I accomplish by means of such structure and relative arrangement of the parts as will fully appear by a perusal of the following specification and claims.

The figure of the drawings is a side elevation of an automobile showing the device as applied thereto.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 designates the footboard of the automobile upon which I have mounted a rectangular liquid containing receptacle 2 having a hand operated pump 3 of any ordinary construction placed thereon. Running from the pump 3, I have provided a pipe 4 which leads downwardly toward the lower

frame member of the vehicle and forwardly and upwardly toward the radiator 5 to the back of which it is connected, as at 6.

Instead of the overflow pipe commonly found, I have substituted in its place a pipe 7 leading downwardly and out of the back of the radiator to the tank 2 into which it empties, as at 8.

When it is desired to add cold water or a new supply of water to the radiator, the hand pump 3 will be operated by the driver of the vehicle whereupon cold water will be pumped from the bottom of the tank 2 through the pipe 4 and into the radiator. As the natural action of cold water is to go always toward the bottom, a continuous operation of the pump 3 will force a new supply of cold water into the radiator and the over-supply of hot water will then be discharged through the overflow pipe 7 back into the top of the tank 2.

By means of this construction, it is readily seen that a supply of cold water will be always ready for the radiator as well as any water that may be needed due to the loss caused by evaporation. The fact that the water will have a chance to stand in the tank 2 for a period of time between each operation of the device will give it a sufficient time to become cool due to the action of the air while the vehicle is moving.

From the foregoing description it will readily be seen that I have produced such a device as substantially fulfils the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice, such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention as defined by the appended claims.

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

1. The combination with a motor vehicle having a radiator, of an independent receptacle, a pump operable to discharge from the bottom of said receptacle, a pipe connected with the pump and leading to and being connected with the radiator, another pipe leading from the radiator and discharging into the top of the receptacle whereby, with the action of the pump, water from the receptacle may be pumped from

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the bottom thereof into the radiator and from the radiator into the top of the receptacle, as described.

2. The combination with a motor vehicle having a radiator, of an independent receptacle, a hand pump operable from a point at or near the seat of the vehicle and arranged to discharge material from the bottom of the receptacle, a pipe leading from the pump and being connected with the radiator, and a pipe leading from the radiator and discharging into the upper part of the receptacle, as described.

3. In combination with the circulation system for internal combustion engines, including a radiator, of an independent receptacle, a pump, operable independently of

the engine to discharge from the bottom of said receptacle, a pipe connected with the pump and leading to and being connected with the circulation system, an overflow pipe leading from the radiator and discharging into the upper portion of the receptacle whereby water from the receptacle may be pumped from the bottom thereof into the circulation system and flow from the top of the radiator into the top of the receptacle.

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

ROBERT A. DRAIS.

Witnesses:

FLOYD M. BLANCHARES,
STEPHEN N. BLEWETT.