Nov. 25, 1924. 1,516,695

S. ATKINSON

SECTIONAL MOTOR RADIATOR

Filed July 7, 1924

Fig. 1.

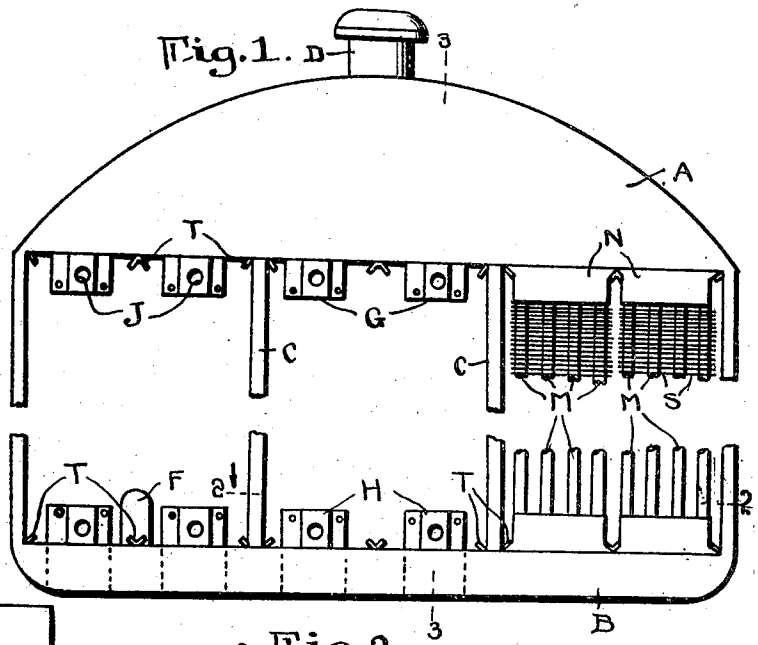


Fig. 3.

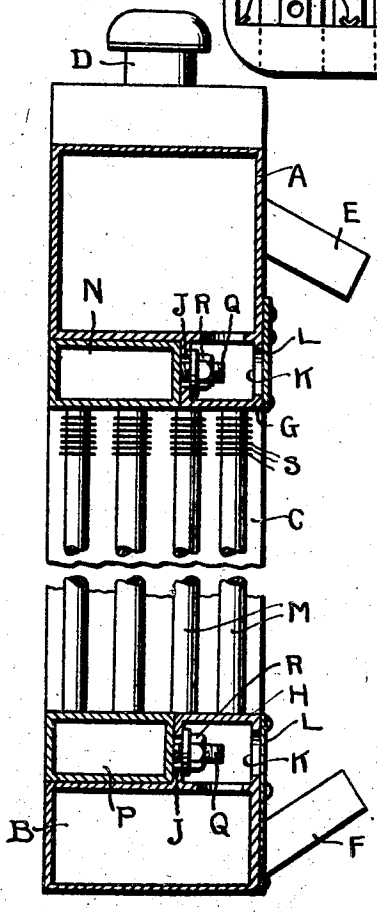


Fig. 2.

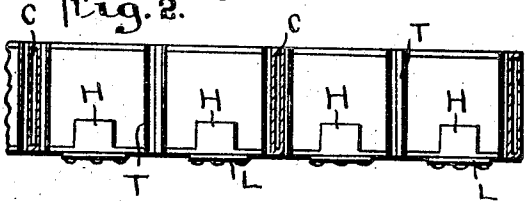
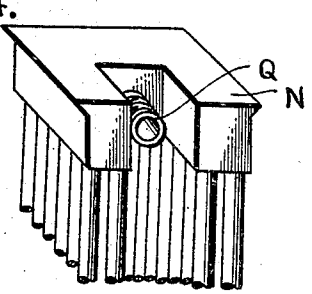


Fig. 4.



S. Atkinson
INVENTOR.

BY Marbaix Clark

ATTORNEYS.

Patented Nov. 25, 1924. 1,516,695

UNITED STATES PATENT OFFICE.

SYDNEY ATKINSON, OF AYR, QUEENSLAND, AUSTRALIA.

SECTIONAL MOTOR RADIATOR.

Application filed July 7, 1924. Serial No. 724,743.

To all whom it may concern:

Be it known that I, SYDNEY ATKINSON, subject of the King of Great Britain, residing at Ayr, Queensland, Australia, have invented certain new and useful Improvements in Sectional Motor Radiators, of which the following is a specification.

This invention relates to improvements in radiators for motor and other vehicles and is also applicable for use in other cases where motors are employed, the object being to improve the construction of the radiator so that it may be readily taken apart for repairing and cleaning.

In carrying out my invention I divide the water tubes into sectional groups, the top and bottom of the tubes being connected to upper and lower headers, which in turn are secured to the head and base tanks of the radiator. The fins are also divided into sectional groups corresponding to the tube sections.

In order that the invention may be better understood I will now describe the same with the aid of the accompanying drawings, in which:

Figure 1 is a broken front elevation of a radiator, parts being removed.

Fig. 2 is a horizontal sectional view of the same taken on the line 2—2 of Fig. 1 and with the tube sections removed.

Fig. 3 is a vertical sectional view taken on line 3—3 of Fig. 1, and with the tube sections in place.

Fig. 4 is a perspective view of the upper end portion of one tube section.

The head and base tanks A and B of the radiator are somewhat similar to those at present in use, being connected together by the hollow stay tubes or spacing members C. The head or upper tank A is provided with a filling plug D and a nipple E. The lower tank B has a nipple F, and these nipples are to be connected to the motor in the usual manner.

Junction boxes G and H are formed on or connected respectively to the bottom and top of the head and base tanks A, B. The junction boxes G and H are formed with holes J in front and with openings K in the rear, the latter being fitted with removable cover plates L.

The vertical tubes M are divided into sectional groups, the tubes in each group being connected to the top and bottom headers N and P. These headers are formed so as to fit neatly against the junction boxes G and H and are each provided with a threaded nipple Q, which will project through one of the holes J in the junction boxes G, H. The headers N and P are secured to the junction boxes by means of nipples Q and nuts R, suitable packing being used to make a water-tight joint.

The usual fins S are arranged on the tubes M of each group. Guides T are provided between the headers N and P to hold them in place.

It will be seen from the foregoing description that my improved radiator may be readily put together or dismantled for cleaning purposes. To dismantle a section, the cover plates L of that section are removed and the nuts R (being thus exposed) may be unscrewed, thus releasing the nipples Q of that section, and allowing that particular section to be slid forwardly out of the body of the radiator. Should any tube M become damaged when the car is in an out-of-the-way place, the particular group or section containing this tube, can easily be cut out of the system, and its holes J may be plugged by means of bolts or nuts and the like.

What is claimed and desired to be secured by Letters Patent is:

In a motor vehicle radiator, upper and lower tanks, spacing members rigidly connecting said tanks together, the lower surface of the upper tank and the upper surface of the lower tank being imperforate, spaced boxes projecting downwardly from the rear portion of the bottom of the upper tank and communicating with the interior of the upper tank, spaced boxes projecting upwardly from the rear portion of the top of the lower tank, each of said boxes having apertures in their front and rear walls, guides projecting from the bottom of the upper tank and the top of the lower tank, lower headers slidably mounted on the top of the lower tank between the guides of the latter and each provided at its rear end with a recess to receive one of said boxes on the lower tank, a nipple on each of said headers projecting through the aperture in the front wall of the box with which it is associated, a nut surrounding each nipple for securing the headers to the lower boxes, upper headers slid-

ably mounted between the upper guides and each having a recess at its rear end to receive one of the upper boxes, nipples on the upper headers projecting through the apertures in the front walls of the upper boxes, nuts engaging said nipples for locking the upper headers to the upper boxes, tubes placing said headers in communication, and removable plates closing the apertures in the rear walls of the boxes.

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

SYDNEY ATKINSON.

Witnesses:

GEORGE SUTHERS.

JOHN REGINALD HALLORAN WALKER.