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SECTIONAL RADIATOR

Filed Sept. 17, 1926

Fig. 1.

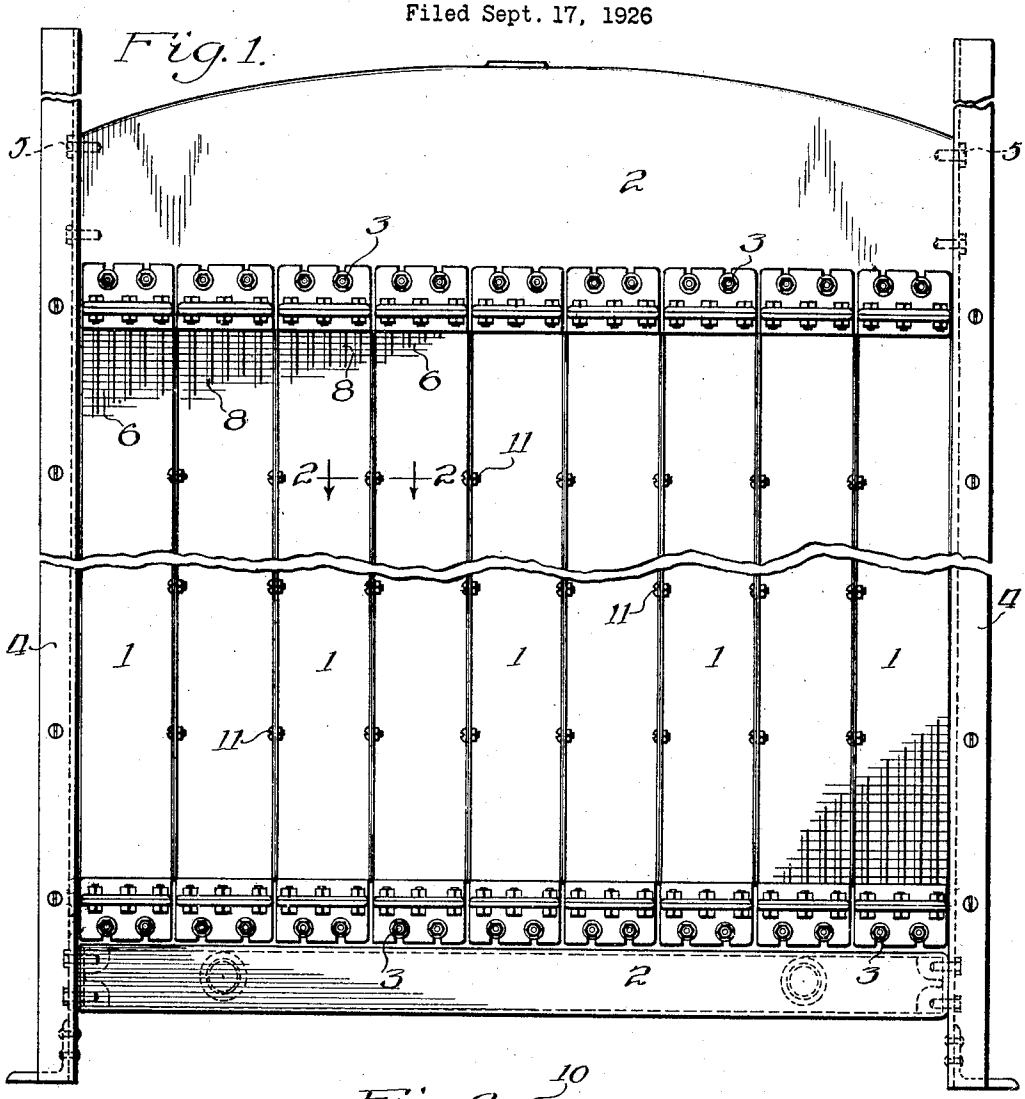
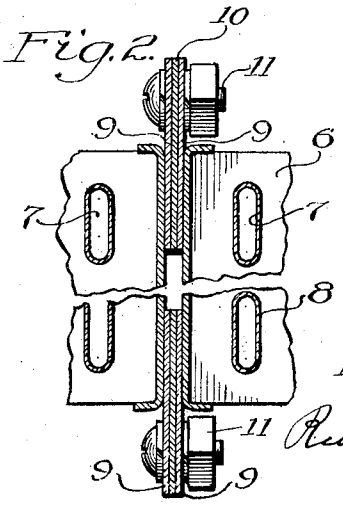


Fig. 2.



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UNITED STATES PATENT OFFICE.

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SECTIONAL RADIATOR.

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This invention relates to sectional radiators for internal combustion engines, and more especially to such radiators particularly adapted for use with heavy duty motor trucks, tractors and power units or plants.

Considerable racking and shock is imparted to the radiator core structure during the travel of the vehicle over uneven surfaces or vibration and other shocks in vehicles or power plants, and the strains occasioned thereby tend to weaken the joints, thereby eventually causing leakage.

Because of the character of the work required of such trucks, tractors and plants and the strains and shocks to which they are subjected, experience has demonstrated that sectional radiators are the most economic type, because of the ease with which they may be repaired without serious interference with normal operation. But sectional radiators, made up of long narrow core units, are particularly liable to injury from such service strains and vibration because of the weight of the water contained therein and the fact that the effect of vibration is somewhat proportioned to the length as compared with the transverse dimensions of such a unit.

The main object of this invention is to provide improved means for detachably securing the several radiator core sections to each other in such manner that each one will be braced by the others without conflicting with ready replacement or repair of any unit.

A specific embodiment of the invention is illustrated in the accompanying drawings, in which:

Figure 1 is a front elevation, with distance breaks to reduce the height of the view.

Figure 2 is a sectional detail taken on line 2—2 of Figure 1.

In the construction shown, the radiator comprises a plurality of parallel vertically disposed radiator core sections 1, detachably connected at their upper and lower ends to the headers 2 as by the bolts 3. The headers may be secured to the radiator frame 4 in any suitable manner as by the bolts 5.

The radiator core structure may be of any usual form or type. In the form shown, each core section comprises a plurality of horizontally disposed fins 6 having apertures 7 through which the vertically disposed water tubes pass.

Each of the radiator core sections has a plurality of outwardly projecting lugs or flanges 9 affixed to its opposite sides and apertured for bolts. The flanges of one core section register with the flanges of each adjacent core section. A yielding spacing member or packing 10 adapted to minimize the transmission of vibration from one section to the next is preferably interposed between the registering flanges. Threaded bolts 11 passing through the alined apertures in the registering flanges together with their nuts and spring lock washers serve to detachably secure the several core sections to each other.

The radiator frame 4 may be secured to the floor of the building or chassis of the vehicle or frame of the power plant, in any well known manner, as will be understood.

Although but one specific form is herein shown and described, it will be understood that details thereof may be altered or omitted without departing from the spirit of the invention defined by the following claims.

I claim:

1. A sectional radiator comprising headers, a plurality of independent and not directly communicating radiator core sections detachably secured to the headers, each core section having flanges adjacent to its sides and registering with the flanges of adjacent core sections, and means for detachably securing the registering flanges together for connecting the sections at points between the headers.

2. A radiator comprising a pair of mutually spaced headers in combination with a closely set series of directly connected interchangeable oblong core sections which are functionally independent of one another and which are connected at their ends to said headers wherewith they directly communicate and manually operable means to detachably secure said sections directly to one another and to said headers, said sections having lengthwise outstanding side flanges to receive those said means which secure the sections directly to one another.

3. In a radiator of the character described a series of oblong and interchangeably related core sections disposed side by side, said

sections being mutually independent functionally and all having mutually abutting edge flanges disposed transversely of the general plane of the core section assembly and longitudinally distributed manually operable means to releasably clamp adjacent pairs of said flanges together, and a pair of headers to which said sections are each detachably connected at their ends for communication therewith.

Signed at Racine this 25th day of August 1926.

FRED M. YOUNG.