

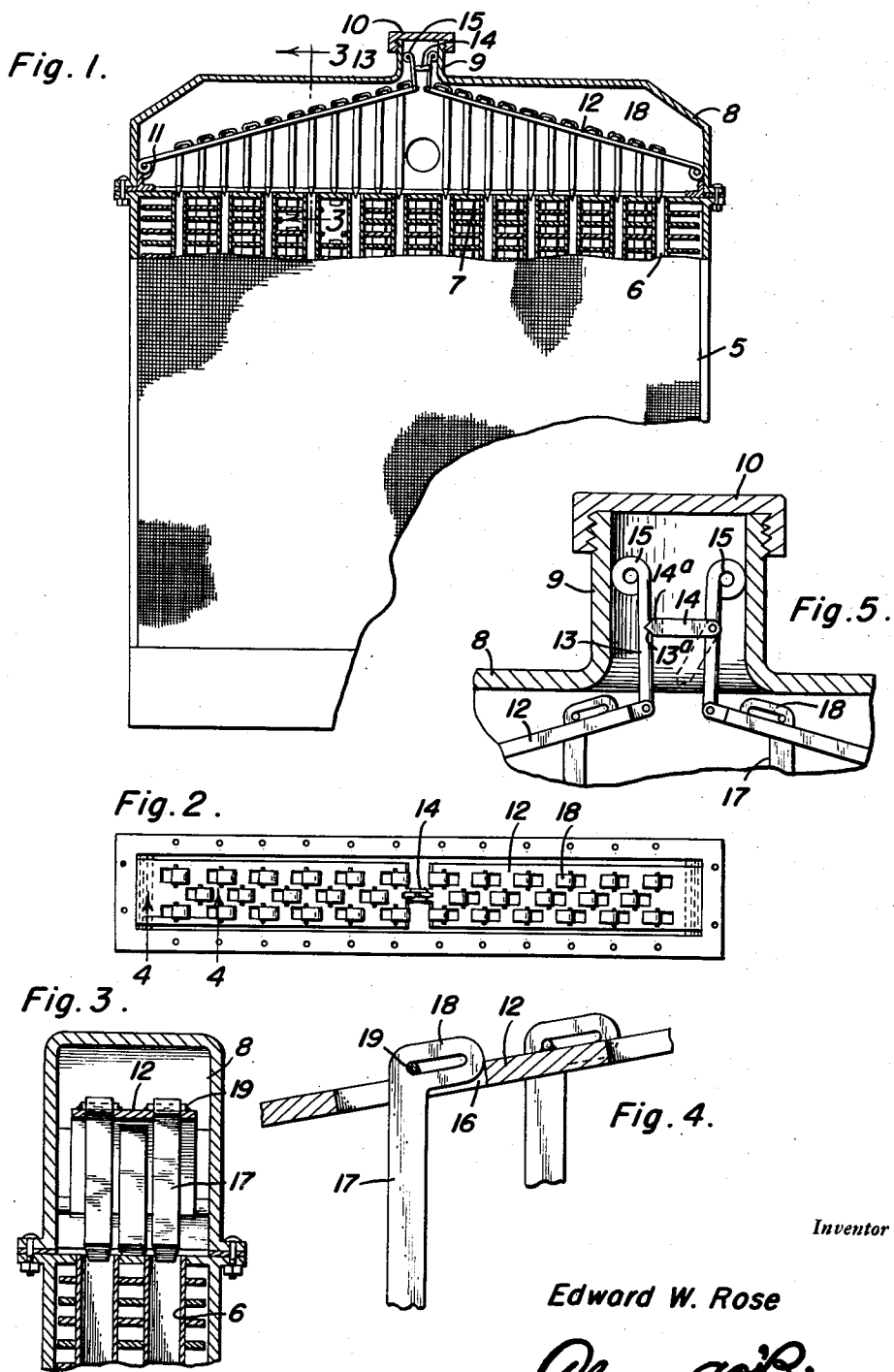
July 1, 1952

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2,601,972

CLEANING ATTACHMENT FOR ENGINE RADIATORS

Filed Oct. 28, 1949



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UNITED STATES PATENT OFFICE

2,601,972

CLEANING ATTACHMENT FOR ENGINE
RADIATORSEdward W. Rose, Bradenton, Fla., assignor of
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Application October 28, 1949, Serial No. 124,099

3 Claims. (Cl. 257—129)

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The present invention relates to new and useful improvements in radiators for motor vehicles and more particularly to means for cleaning the tubes of the radiator to prevent clogging thereof.

An important object of the invention is to provide a plurality of cleaning rods mounted in the header of the radiator shell and accessible by removing the cap of the radiator for periodically moving the rod upwardly and downwardly in the upper ends of the radiator tubes to clean the tubes and prevent the accumulation of rust, sediment or other foreign substances therein.

A further object of the invention is to mount a group of the cleaning rods on levers to simultaneously clean a group of the radiator tubes.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a front elevational view of a radiator with parts broken away and shown in section and showing the cleaning rods positioned in the header of the radiator;

Figure 2 is a top plan view with the header removed;

Figure 3 is an enlarged fragmentary sectional view taken on a line 3—3 of Figure 1;

Figure 4 is an enlarged fragmentary sectional view taken on a line 4—4 of Figure 2 and showing the self-adjusting connection for the upper ends of the cleaning rod to center the same in the tubes; and,

Figure 5 is an enlarged vertical sectional view showing the catch for holding the levers in a raised position.

Referring now to the drawing in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention the numeral 5 designates generally a conventional type of radiator for the engine of a motor vehicle and including the vertical water circulation tubes 6 connected at their upper ends to a header plate 7 and over which is secured a header 8 provided with a filler neck 9 to which a cap 10 is secured.

Brackets 11 are suitably secured to the headed plate 7 adjacent the side edges thereof and to which a pair of levers 12 are pivotally attached

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and with the free ends of the levers inclined upwardly toward the center of the header 8 and provided with upstanding rods 13 projecting upwardly in the neck 9. A catch 14 is pivoted at one end to one of the rods 13 and is formed with a tapered free end 14a engaged in a notch 13a of the other rod to hold the levers 12 in a raised position. Eyes 15 are formed at the upper ends of rods 13.

The levers 12 are of sheet metal construction and provided with a plurality of slots 16 through which cleaning rods 17 project in a position immediately above the tubes 6. The upper ends of rods 17 are formed with upwardly inclined slotted heads 18 sliding on pins 19 suitably secured to plate 7 adjacent slots 16.

In the operation of the device, catch 14 holds rods 13 upwardly in neck 9 of the radiator and with the levers 12 and cleaning rods 17 raised to permit free circulation of water through the tubes 6 of the radiator.

When it is desired to clean the tubes, cap 10 is removed and a suitable tool engaged with eyes 15 and catch 14 then released from rods 13, whereupon the levers 12 and cleaning rods 17 may be raised and lowered to clean tubes 6. After the cleaning of the tubes, catch 14 is again moved into position to lock rods 13 and levers 12 in their raised position, as shown by full lines in Figure 5.

Having described the invention, what is claimed as new is:

1. In a radiator including vertical water circulation tubes and a head over the upper ends of the tubes, tube cleaning means in the head and comprising a lever pivotally mounted in the head for downward movement, and having slots therein, pivot pins carried by the lever adjacent the slots, and rods extending downwardly at the underside of the lever for downward movement in the upper ends of the tubes upon downward movement of said lever and having inclined slots at their upper ends slidably engaged with said pins for self-centering movement of the rods in the tubes upon a downward movement of the rods in the tubes.

2. In a radiator including vertical water circulating tubes and a water containing header over the upper ends of the tubes having a central filler neck, tube cleaning means comprising a pair of levers extending toward each other from opposite sides of the header with remote ends pivoted to opposite sides of the header and free ends confronting beneath said neck, said levers being swingable upwardly and downwardly into and from upwardly inclined positions, tube clean-

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ing rods depending below said levers, operating connections between the levers and said rods for moving said rods downwardly into the upper ends of the tubes upon swinging of said levers downwardly, a pair of upstanding lever operating rods on the free ends thereof for moving said levers manually upwardly and downwardly, said operating rods extending into said neck in the upwardly inclined position of said levers, and releasable catch means connecting said operating rods together in said neck to hold said levers in upwardly inclined position.

3. The combination according to claim 2, said operating connections pivotally and slidably connecting the tube cleaning rods to said levers for

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self centering of the tube cleaning rods in said tubes during their downward movement into the upper ends of said tubes.

EDWARD W. ROSE.

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