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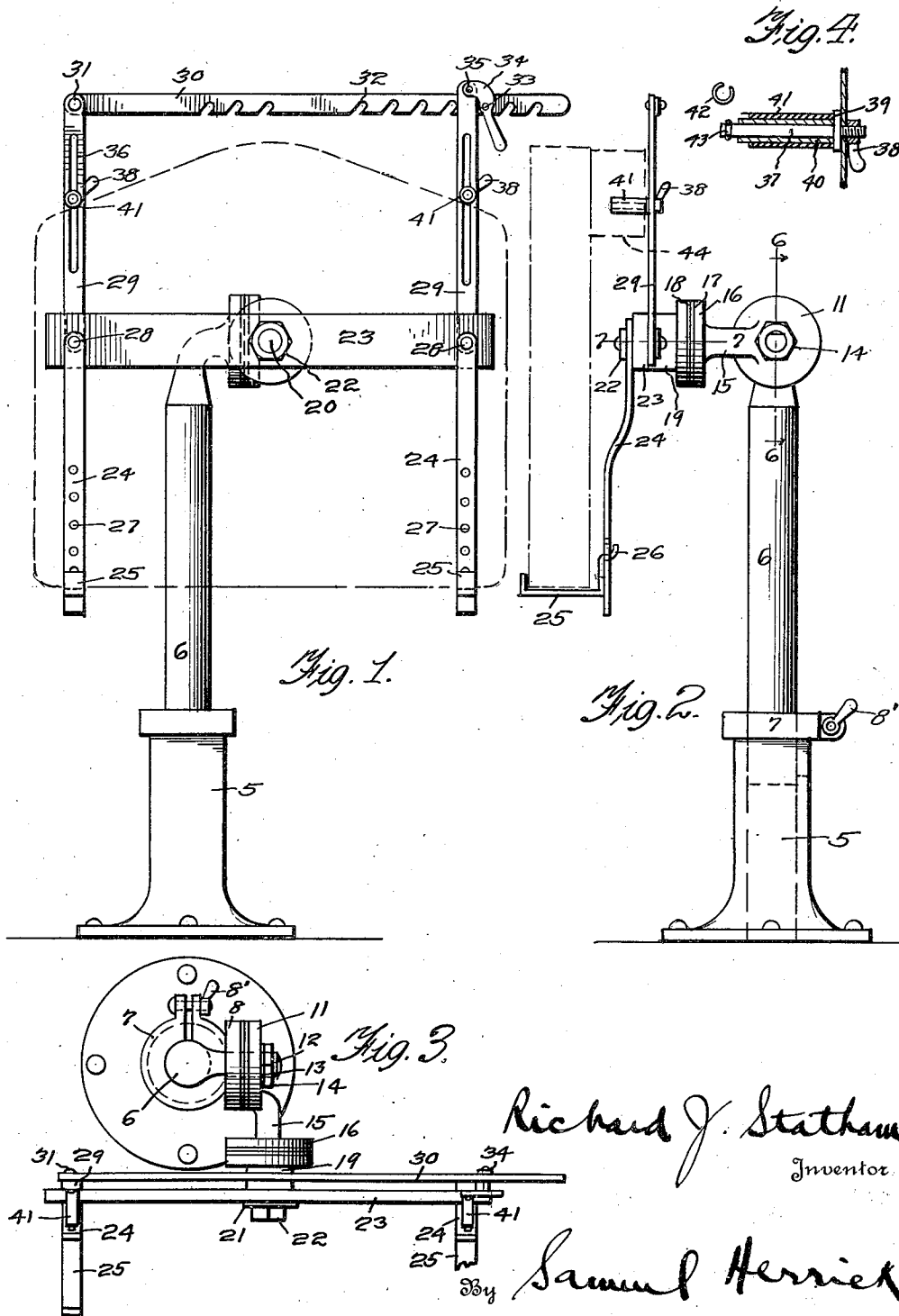
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R. J. STATHAM

RADIATOR SUPPORTING STAND

Filed Feb. 25, 1922

3 Sheets-Sheet 1



Nov. 13, 1923.

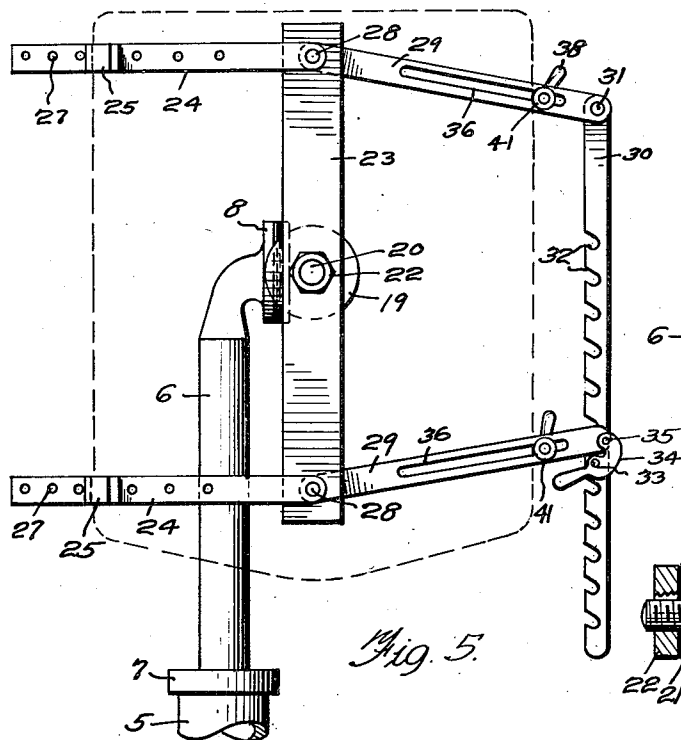
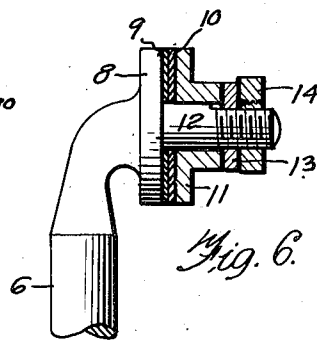
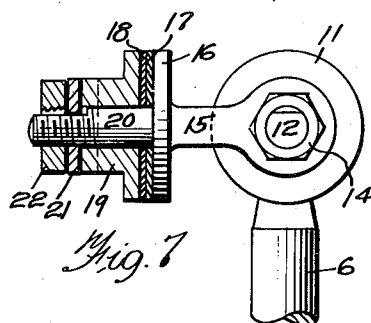
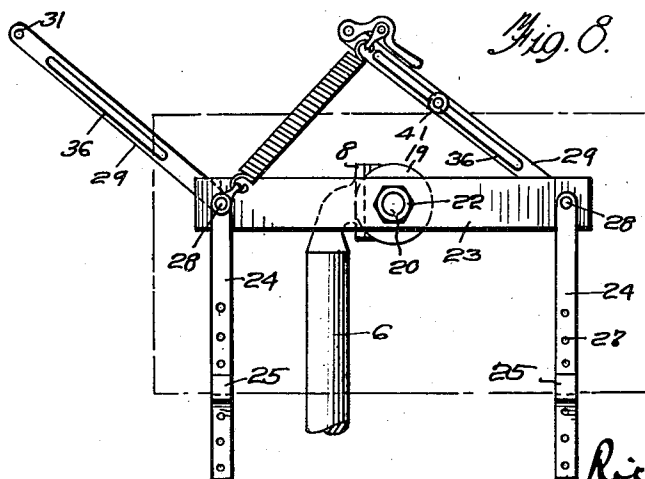
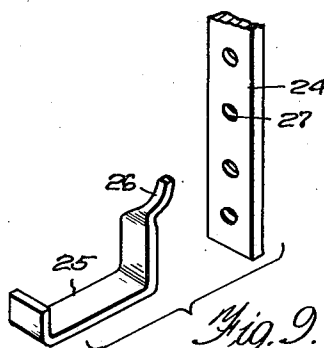
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R. J. STATHAM

RADIATOR SUPPORTING STAND

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3 Sheets-Sheet 2



Inventor
Richard J. Statham,
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Nov. 13, 1923.

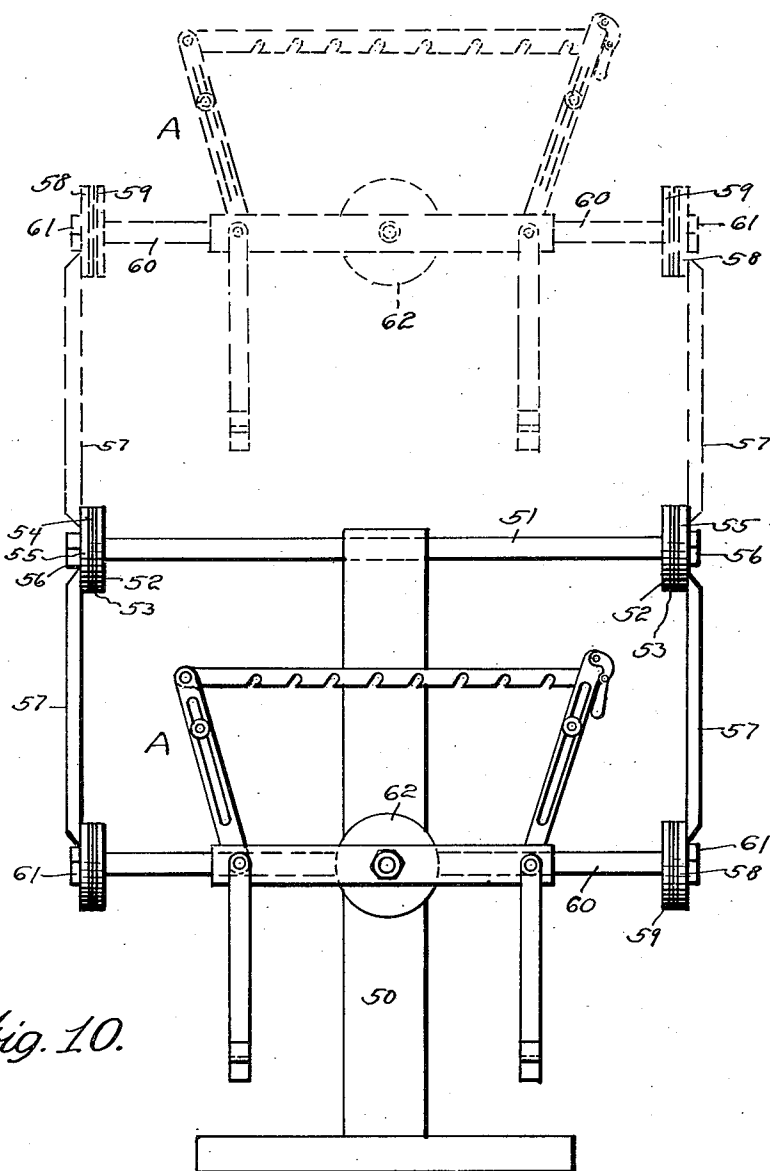
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R. J. STATHAM

RADIATOR SUPPORTING STAND

Filed Feb. 25, 1922

3 Sheets-Sheet 3



Richard J. Statham, ^{Inventor}
By Samuel Herrick, _{Attorney}

UNITED STATES PATENT OFFICE.

RICHARD J. STATHAM, OF GLENDIVE, MONTANA.

RADIATOR-SUPPORTING STAND.

Application filed February 25, 1922. Serial No. 539,288.

To all whom it may concern:

Be it known that I, RICHARD J. STATHAM, a citizen of the United States, residing at Glendive, in the county of Dawson and State of Montana, have invented certain new and useful Improvements in Radiator-Supporting Stands, of which the following is a specification.

This invention relates to a radiator supporting stand and it has for its object to provide an improved device of this character adapted to receive automobile radiators of varying sizes and to securely hold said radiators while permitting them to be swung to varying positions of adjustment so that a mechanic in soldering or repairing the radiator can, with ease, reach any part of the same.

Further objects and advantages of the invention will be set forth in the detailed description which follows.

In the accompanying drawing:

Fig. 1 is a front elevation of a radiator stand constructed in accordance with the invention;

Fig. 2 is a side elevation thereof;

Fig. 3 is a plan view thereof;

Fig. 4 is a detail sectional view of one of the adjustable radiator engaging rollers hereinafter described;

Fig. 5 is a front elevation of the radiator stand showing the elements of the same engaged with the sides of a radiator instead of with the top and bottom thereof as in Fig. 1;

Fig. 6 is a detail sectional view upon line 6—6 of Fig. 2;

Fig. 7 is a detail sectional view upon line 7—7 of Fig. 2 with certain of the parts omitted.

Fig. 8 is a front elevation illustrating a modified form of the invention wherein the gripping of the parts to be supported is accomplished by means of a spring;

Fig. 9 is a detail perspective view illustrating the manner of engagement of one of the stirrups with the bar by which it is carried;

Fig. 10 is a detail front elevation of a modified form of the invention adapted to support heavy radiators.

The radiator supporting stand comprises a tubular supporting base 5 in which a standard 6 is vertically adjustable by means of a clamping collar 7 and a tightening handle 8 of a usual and well known construction. At its upper end the standard 6 is bent substantially at right angles and is provided with a fixed collar 8 having a facing of leather, indicated at 9, which co-acts with a corresponding facing of leather 10 carried by a disc 11. The disc 11 is mounted to turn with respect to the collar 8 upon a stub shaft 12. A washer 13 and clamping nut 14 provide means for adjusting the tension between the disc 11 and the collar 8. The disc 11 has fixed thereto a laterally extending arm 15 which carries a fixed collar 16 having a facing 17 of leather which co-acts with a corresponding facing of leather 18 upon a disc 19. The disc 19 is mounted to rotate with respect to the collar 16 upon a stub shaft 20. A washer 21 and a nut 22 provide means for binding the disc 19 frictionally against the collar 16. The friction disc 19 carries a cross-bar 23 and from the preceding description it will be seen that this cross-bar will turn bodily about the stub shaft 20 as an axis and that this cross-bar along with the stub shaft 20 and the parts associated therewith will swing bodily about the stub shaft 12. In other words the structure described provides a universal mounting for the cross-bar so that the cross-bar may be swung bodily in a vertical plane and in an arcuate path about the shaft 12 and at the same time may be turned bodily about the shaft 20. A pair of depending stirrup bars 24 carry stirrups 25. These stirrups are provided with hook-like projections 26, see Fig. 9, which are adapted to engage in any one of the series of openings 27 formed in the lower ends of the stirrup bars. The stirrup bars are pivotally connected at 28 to the outer ends of the cross-bar 23. Clamping bars 29 are pivotally connected to the rear sides of the outer ends of the cross-bar 23 and a locking bar 30 is pivoted at 31 to the upper end of one of these clamping bars. The locking bar 30 is provided with a plurality of notches

32 in its inner edge in which a stud or pin 33 carried by a past center locking lever 34 is adapted to engage. The past center locking lever 34 is pivoted at 35 to the upper end of the other clamping bar 29. The clamping bars are slotted at 36. Stub shafts 37, see Fig. 4, are adjustable longitudinally of the clamping bars 36 by means of clamping nuts 38. The shafts 37 are provided with collars 39 which are drawn forcibly against the clamping bars 36 under the action of the clamping nuts 38 so that these shafts may be bound in the position to which they are adjusted. These shafts carry rollers 40 and these rollers, in turn, are preferably provided with protective rubber covering sections 41. The rollers 40 may be held upon the shafts 37 in any desired manner, though split rings 42 engageable in a circumferential groove 43 of these shafts are preferred.

In use the lower part of the radiator is seated upon the stirrups 25 and the clamping bars 36 are forced toward each other to cause the rubber covered rollers to engage the inclined upper faces of the tank portion of the radiator, indicated at 44 in Fig. 2. The clamping bars are held in the position to which they are moved by the locking lever 34 and the locking bar 30. When clamped by these elements, the radiator may be swung from a vertical to a horizontal position by swinging it about the axis constituted by stub shaft 12 and the radiator may be swung to inverted position or to any position intermediate of upright and inverted position by swinging it about the axis constituted by the shaft 20. Thus it will be seen that means are provided for quickly swinging a radiator to that position at which the mechanic may best have access to the part to be repaired. Furthermore it will be seen that radiators of varying sizes may be accommodated by shifting the stirrups up or down upon the bars 24. The structure is such as to hold the radiator without marring or injuring the same and the device will greatly facilitate the repair and inspection of radiators. In the form of the invention illustrated in Fig. 10 the structures for gripping the radiator are substantially the same as those heretofore described. However in this case the structure comprises a supporting standard 50 carrying a fixed horizontal shaft 51 at its upper end. This shaft, in turn, carries the fixed disc 52 faced with leather at 53 and co-operating with corresponding leather faces 54 upon the inner faces of discs 55. The discs 55 may be bound in any adjusted position by nuts 56 and these discs carry rigid arms 57 which swing bodily about the axis constituted by the shaft 51. The arms 57 carry discs 58 at their free ends which coast with discs 59 upon a transverse block 60. Nuts

61 bind the discs 58, 59 against movement with respect to each other after the radiator has been brought to the desired position of adjustment. The block 60 supports the radiator carrying structure, indicated as a whole at 61, the radiator engaging structure being supported from the block 60 by a pivotal friction joint 62 in the same manner that the radiator engaging structure of Figs. 1 and 2 is supported from the bar 23.

Thus it will be seen that the radiator may be raised and lowered by swinging the block 60 bodily about the shaft 51 and that after being adjusted to the desired height in this manner, the radiator may be tilted to varying angles by turning the block 60 and the discs 59 with respect to the discs 58.

It is to be understood that the invention is not limited to the precise construction set forth but that it includes within its purview whatever changes fairly come within either the terms or the spirit of the appended claims.

Having described my invention what I claim is:

1. The combination with a supporting stand, a horizontal shaft at the upper end of said supporting stand, a second horizontal shaft at right angles to the first named horizontal shaft and swinging about said first named horizontal shaft, means for frictionally binding the last named shaft in varying positions of adjustment with respect to the first named shaft, a cross bar carried by the last named shaft, means for frictionally binding the cross-bar in varying positions of adjustment about the last named shaft, stirrup carrying bars carried by said cross-bar, clamping bars pivotally connected to said cross-bar and means for exerting a drawing action upon said clamping bars toward each other, said clamping bars carrying radiator engaging elements.

2. A structure as recited in claim 1 wherein the means for drawing the clamping bars toward each other comprises a locking bar pivoted to one of the clamping bars, an over-center lever carried by the other of said clamping bars, and interengaging elements upon the over-center lever and the locking bar.

3. A structure as recited in claim 1 wherein the radiator clamping elements comprise rubber covered rollers, adapted to have rolling engagement with the material of the radiator under the movement of said clamping bars toward each other.

4. A structure as recited in claim 1 wherein the radiator clamping elements comprise stub shafts longitudinally adjustable in slots in the clamping bar, rollers upon said stub shafts and rubber coverings for said rollers.

5. A device of the character described comprising a supporting standard, a fixed

shaft at the top of said standard, swinging
arms extending at right angles to said shaft,
means for binding said arms in varying po-
sitions of adjustment, a block mounted in
5 the outer end of said arm for turning move-
ment therein and a radiator supporting
structure carried by said block.

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

RICHARD J. STATHAM.

Witnesses:

RAYMOND HILDEBRAND,
ETHEL WALKER.