

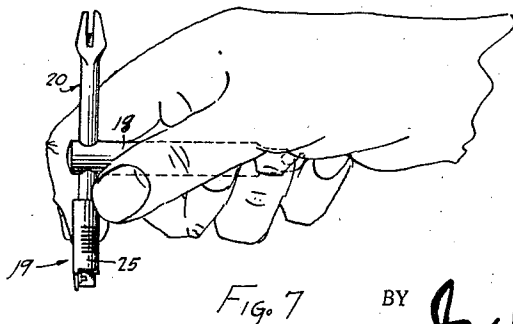
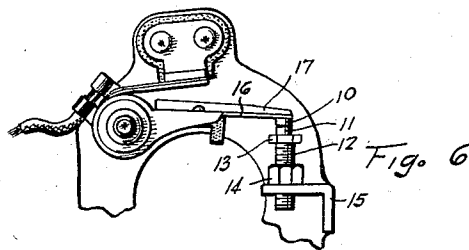
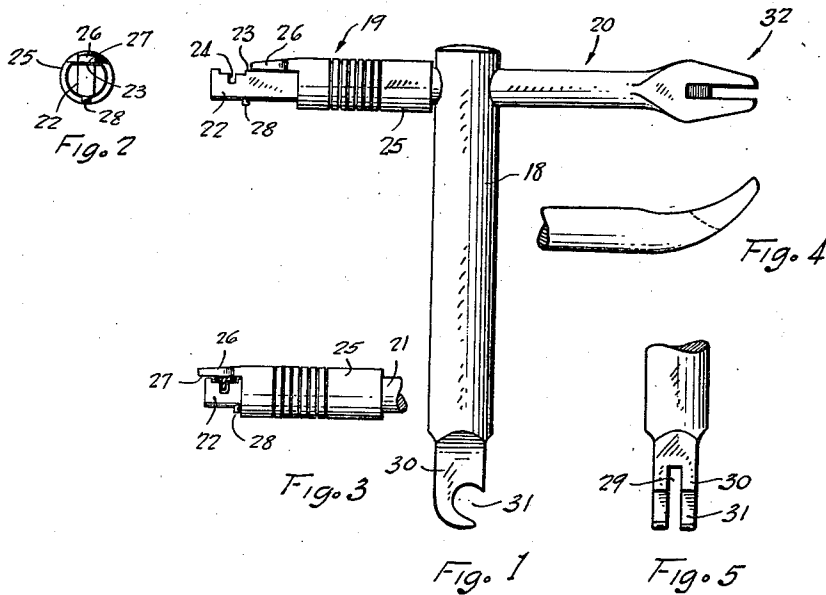
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2,283,789

DISTRIBUTOR ADJUSTING TOOL

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DISTRIBUTOR ADJUSTING TOOL

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2 Claims. (Cl. 81—15)

This invention has to do with a tool designed for the adjusting of distributors and is concerned primarily with a tool intended for aligning distributor points.

It is now generally accepted in the automotive art that the best results are obtained from a distributor when the points thereof meet in full face to face engagement. The adjustment of the points to obtain this relationship at the time of original installation and at intervals during service usage, therefore, is an important factor, and the present invention is concerned with the provision of an improved tool for carrying out this adjustment.

Ordinarily a distributor includes one point that is movable under the influence of certain operating mechanism, this point generally being carried at the extremity of a breaker arm that is structurally characterized by the presence of a rib extending down the back thereof to provide a cross section in the form of a T.

An important object of the present invention is the provision of a tool designed to engage this breaker arm carrying the movable distributor point so that it may be bent in any direction to adjust the relative position of the point carried thereby with respect to the other point. In carrying out this object the invention contemplates forming the tool with a recess corresponding in shape to the cross section of the breaker arm, the recess being intended to have the breaker arm snugly fitted therein.

More in detail the invention has in view, as an object, the provision of a tool including a section formed with a T shaped recess designed to receive a portion of the breaker arm having a T shaped cross section. Another object of the invention is the provision of means on said sections for maintaining the breaker arm assembled in the recess.

In carrying out this objective in a practical embodiment the invention has in view the provision of an arrangement in which the section that is formed with the T shaped recess has movably mounted thereon a follower including a tongue that is adapted to extend over the breaker arm after it has been positioned in the recess. Suitable means for limiting movement of this follower on the section and to prevent rotation of the follower on the section are also provided.

When a distributor point is to be adjusted it is necessary to set up torsional stresses on the breaker arm so as to either twist this arm or bend the same in a required direction. Accord-

ingly it becomes important to provide a tool which will not only grip the breaker arm in the required manner, but is also readily adapted to being manipulated so as to give the required twisting or bending effects.

Another important object of the invention, therefore, is the provision of a tool which includes means for gripping a breaker arm of a distributor, as aforesaid, and which is peculiarly designed to render easy the manipulation of the same as it is grasped by the operator. This object is achieved by providing a tool of T formation with one end of the cross arm of the T constituting the section having the T shaped recess therein, and carrying the follower, as aforesaid. The other end of this cross arm will bear against a portion of the operator's hand as he grasps the stem of the T so as to facilitate the setting up of twisting and bending stresses in the breaker arm.

To the end of convenience the extremities of the stem and the upwardly extending cross arm may also take the form of tool parts designed for use in conjunction with a distributor.

Various other more detailed objects and advantages of the invention will in part become apparent, and in part be hereinafter stated, as the description of the invention proceeds.

The invention, therefore, comprises a distributor adjusting tool of T formation including a cross arm and a stem. One part of the cross arm is formed at its extremity with a T shaped recess designed to receive a breaker arm of a distributor having a T shaped cross section. This part of the cross arm also carries a follower that is nonrotatably mounted thereon, and which carries a tongue adapted to extend over the breaker arm of the distributor when it is received in the recess to maintain the breaker arm in that position. The extremities of the other end of the cross arm and the stem may take the form of tool parts.

For a full and more complete understanding of the invention reference may be had to the following description and accompanying drawing, wherein—

Figure 1 is a view in elevation of a tool made in accordance with the precepts of this invention,

Figure 2 is an end elevational showing of one end of the cross arm,

Figure 3 is a detailed showing of the cross arm part carrying the follower when the latter is positioned over a breaker arm of a distributor,

Figure 4 is a fragmentary showing of one end

of the cross arm taken on a plane normal to the showing of Figure 1.

Figure 5 is another fragmentary showing of the lower end of the stem taken on a plane normal to the showing of Figure 1.

Figure 6 is a fragmentary view developing parts of a distributor including the breaker arms carrying the points, and

Figure 7 is a side view showing the manner in which the tool may be grasped by a user of the same.

Referring now to the drawing, wherein like reference characters denote corresponding parts, and first more particularly to Figures 6 and 7, a distributor is shown as including a movable point 10 and a stationary point 11. The stationary point 11 is carried at the extremity of a stationary breaker arm 12 that is exteriorly threaded and which carries a head 13 and nut 14. This stationary breaker arm 12 ordinarily is screwed into an arm support shown at 15 that is a part of the distributor framework.

The movable point 10 is carried at the extremity of a movable breaker arm 16 which is of a generally T shaped cross section including a rib 17 extending down the back thereof.

It is obvious that if the movable point 10 is to be adjusted so as to vary the angular disposition of its face it is necessary to either bend or twist the breaker arm 16. The tool which is intended to be provided for this purpose by this invention is shown in Figure 1 as being generally of a T formation that is defined by a stem 18 and a cross arm defined by the parts 19 and 20. The part 19 of the cross arm for the main part is of cylindrical formation, as shown at 21 in Figure 3. However, adjacent its extremity it is flattened out into a flat bar formation designated 22.

The upper edge of this bar formation 22 is flat, as shown at 23, the flat surface being defined by a plane that is below the uppermost point of the cylindrical part 21. A T shaped recess 24 is formed in the bar with the cross of the T lying in the flat face 23.

A cylindrical follower 25 has a bore receiving the cylindrical part 21 of the cross arm part 19. This follower 25 carries, at its outer free extremity, a tongue 26 that has a bottom surface 27 that is offset with respect to the bore of the follower and which is adapted to slide over the flat face 23. Thus when the follower is in the position shown in Figure 3 the tongue 26 closes the outer part of the recess 24.

The follower 25 is slidable on the cross arm part 19 and in nonrotatable relationship with respect thereto, because of the engagement of the flat faces 23 and 27. Sliding movement is limited at one end by the stem 18, and at the other end by a stub pin 28 extending from the lower part of the bar 22.

When the tool is to be used to twist or bend the movable breaker arm 16 it is positioned so that the recess 24 receives the breaker arm 16, the rib 17 fitting in the innermost part of the recess. When this relationship is attained the follower 25 is slid downwardly so that the face 27 of the tongue 26 closes the recess to maintain

the breaker arm 16 assembled therein. The normal manner of holding the tool to accomplish this is for the operator to hold the stem 18 in the palm of his hand and grip the same in the obvious way, as brought out in Figure 7. In this position the cross arm part 20 will bear against the operator's forefinger. Thus pressure may be readily applied to this cross arm to cause a twisting of the breaker arm, if this movement is necessary to accomplish the required adjustment.

Thus the particular T formation of the tool as an entirety cooperates with the structural arrangement provided for the breaker arm of T shaped cross section, to facilitate adjustment of the point carried thereby.

To the end of convenience the lower end of the stem 18 may take the bifurcated form shown in Figures 1 and 5, this structure being intended to grip the stationary breaker arm 12 carrying the stationary point 11.

It is notable that when this stationary breaker arm 12 is so gripped the recess 29 that is defined by the side parts 30 receives the arm support 15, while the recesses 31 formed in the side parts 30 accommodate the nut 14. In this position it is evident that lateral stresses may be set up on the stem 18 to cause a bending of the stationary breaker arm 12 and thus adjust the face of the point 11 carried thereby.

The end of the stem section 20 may also be of the bifurcated construction shown generally at 32 to render the same adaptable for use about the distributor.

While a preferred specific embodiment of the invention is hereinbefore set forth it is to be clearly understood that the invention is not to be limited to the exact construction illustrated and described because various modifications of these details may be provided in putting the invention into practice within the purview of the appended claims.

I claim:

1. A distributor adjusting tool of the character described comprising a member having a flat face and formed with a T shaped recess opening into the flat face, the cross of the T lying in the flat face, and a follower movable on said member and carrying a tongue adapted to extend over said recess to close the same, said tongue having a face in engagement with the said flat face of the member, said engaging faces preventing rotation of the follower with respect to the said member.

2. A distributor adjusting tool of the character described comprising a stem, and a cross arm carried by the stem, said stem and cross arm cooperating to define a T, one end of said cross arm having a flat face and being formed with a T shaped recess opening into said flat face with the cross of the T lying in the flat face, said T-shaped recess being adapted to receive the breaker arm of a distributor, and a follower carried by said cross arm and having a tongue adapted to extend over said recess to close the same.

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