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VALVE EXTRACTOR

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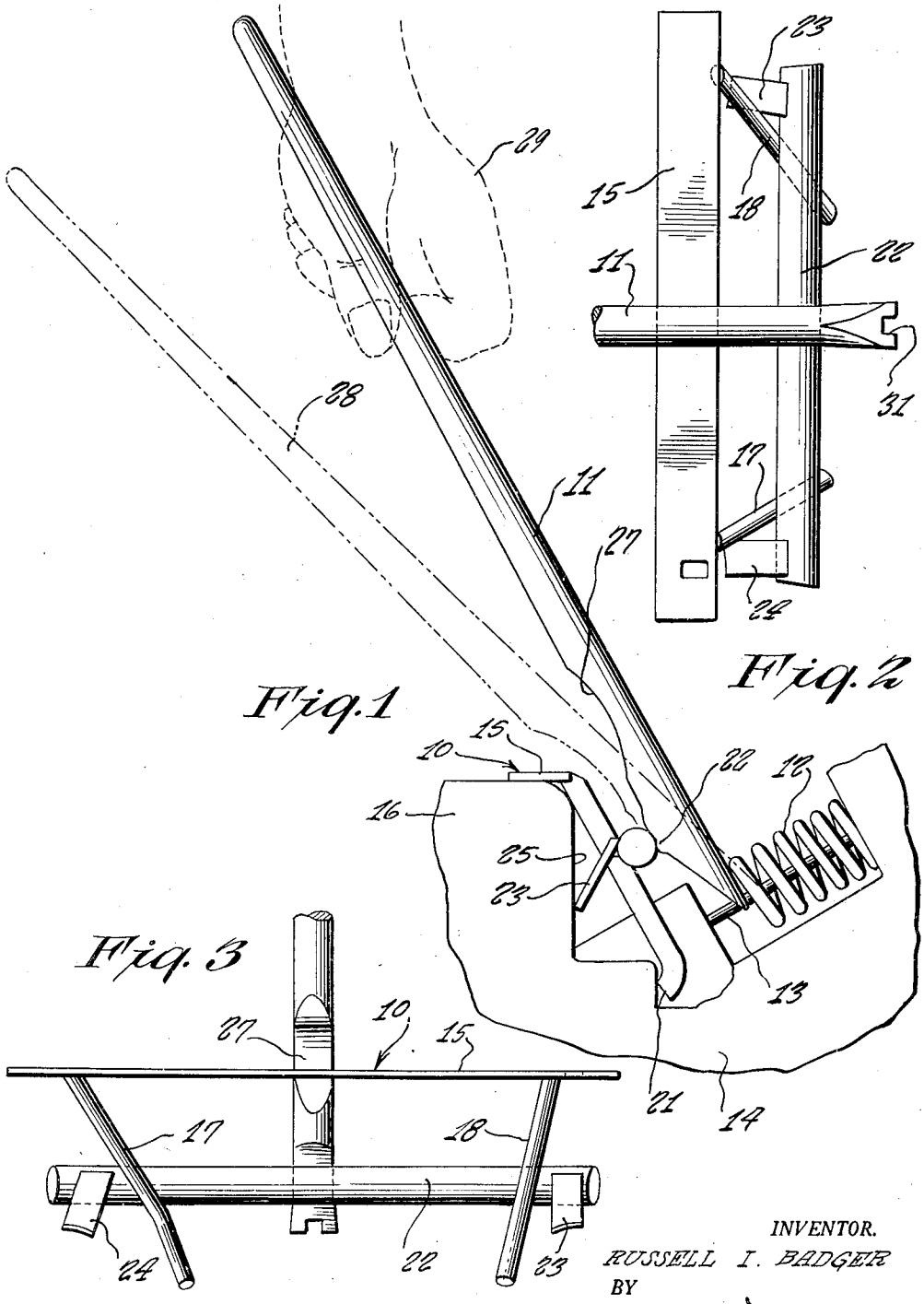


Fig. 1

Fig. 2

Fig. 3

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VALVE EXTRACTOR

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2 Claims. (Cl. 29—283)

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This invention relates to valve extractors.

It is an object of the present invention to provide a valve extractor which has a member formed to fit adjacent to the valves of an internal combustion engine and to rest flatly and securely on a manifold so as to locate the fulcrum at a convenient location such that upon a bar being operated upon the same a frozen valve can be broken away by hand and without requiring a hammering operation upon the bar and whereby destruction to manifold and valves is eliminated.

Other objects of the present invention are to provide a fulcrum device for a valve lifting tool which is of simple construction, easy to insert in the space adjacent the valves, inexpensive to manufacture, sturdy and rigid, convenient to use and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is a side elevational view of the fulcrum device disposed upon an engine and of the bar tool pivoted upon the fulcrum device and engaging with a valve spring.

Fig. 2 is a top plan view of the fulcrum device.

Fig. 3 is a rear elevational view of the fulcrum device.

Referring now to the figures, 10 represents a fulcrum formed according to the present invention and 11 represents a lifting bar adapted to be extended under a valve spring 12 surrounding a valve stem 13 slidable in an engine housing 14.

The fulcrum device comprises a transversely extending plate 15 adapted to rest upon a manifold formation 16 and to which are connected downwardly inclined rods 17 and 18 adapted to bear at their lower ends against the engine 14 well within the space containing the valve as at 21

Extending between the rods 17 and 18 and weldingly secured thereto is a rod 22 of substantially the same length as the plate 15 but of larger diameter than the rods 17. On this rod the bar 11 will rest when the lever action is effected.

To supply other engagement portions for the fulcrum device, straps or plates 23 and 24 extend inwardly for engagement with a vertical wall 25 of the engine 14.

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With the fulcrum device in place as shown in Fig. 1, the bar is extended downwardly over the heavy rod 22 so that its seat 26 receives the top face of the rod. The bar 11 is relieved at 27 to give further pivoting movement of the bar 11. The bar can be pivoted downwardly as indicated with dot and dash lines 28 by hand 29 whereby to lift the spring 12 and permit the release of a plate or the insertion of a plate over the valve stem and its connection therewith. The bar 11 is preferably notched at 31 to receive the valve stem.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

Having thus set forth and disclosed the nature of my invention, what is claimed is:

1. A fulcrum device for valve lifting bars comprising a top plate adapted to rest upon a manifold of an engine, rods extending from the bottom of the plate downwardly and laterally spaced from one another and their ends adapted to engage with portions of an engine adjacent to the valves therewithin, a transversely extending rod secured between the downwardly extending rods and providing a surface on which a lifting bar may pivot.

2. A fulcrum device for valve lifting bars comprising a top plate adapted to rest upon a manifold of an engine, rods extending from the bottom of the plate downwardly and laterally spaced from one another and their ends adapted to engage with portions of an engine adjacent to the valves therewithin, a transversely extending rod secured between the downwardly extending rods and providing a surface on which a lifting bar may pivot, and plates extending respectively from the opposite ends of the transversely extending rod and adapted to engage with a vertical wall of the engine to give added support to the transverse rod should the downwardly extending rods fail to engage with an engine surface.

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No references cited.