March 10, 1925. 1,529,518

J. R. VOELLER

CYLINDER HEAD GRIP

Filed July 23, 1924

Fig. 1.

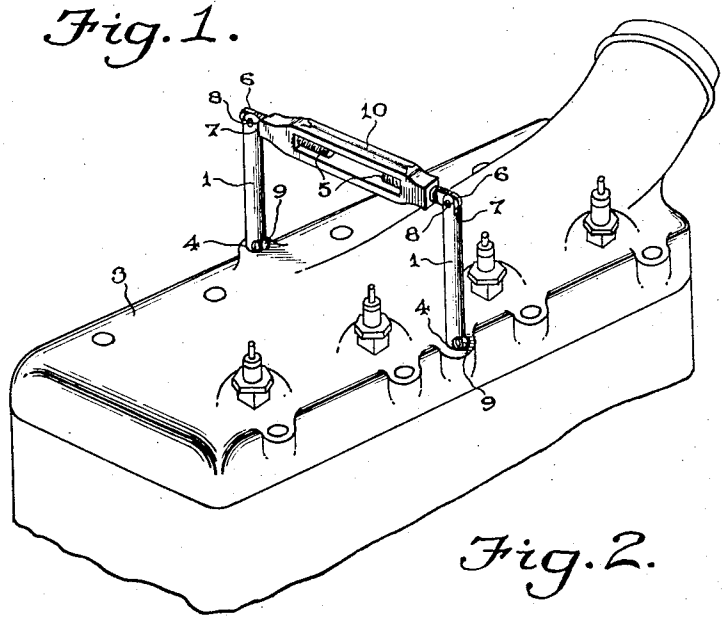
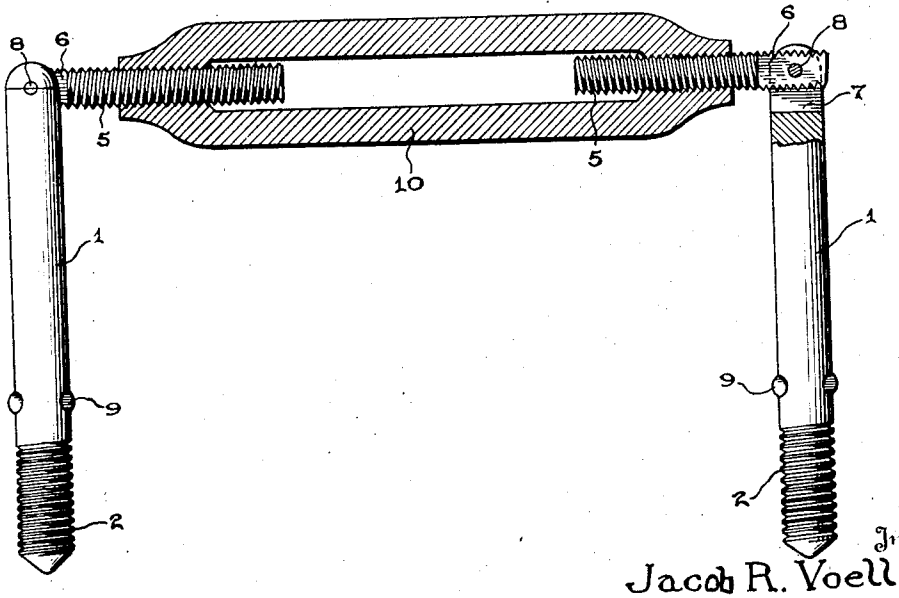


Fig. 2.



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UNITED STATES PATENT OFFICE.

JACOB R. VOELLER, OF KANSAS CITY, KANSAS.

CYLINDER-HEAD GRIP.

Application filed July 23, 1924. Serial No. 727,844.

To all whom it may concern:

Be it known that JACOB R. VOELLER, a citizen of the United States of America, residing at Kansas City, in the county of Wyandotte and State of Kansas, has invented new and useful Improvements in Cylinder-Head Grips, of which the following is a specification.

The purpose of the invention is to provide a tool primarily for the use of the automobile mechanic, so that he may be enabled to quickly remove the cylinder head of an engine without trouble and without the likelihood of being burned, even though the head may be hot at the time such removal is desired.

A further purpose is to so simplify the construction of a tool of this character that the gripping operation may be readily effected with one hand by the manipulation of the necessary adjustment.

With these objects in view, the invention consists in the construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawings without defining the limits of the invention.

In the drawings:

Figure 1 is a perspective view illustrating portions of a vehicle motor and the cylinder head therefor with the tool in use for the removal of the head.

Figure 2 is an enlarged perspective view of the tool per se.

The gripping elements consist of stems 1 which, at their free ends, are roughened, as indicated at 2, to provide friction elements that may effect a positive grip in the bolt holes of the engine head 3, as indicated at 4 in Figure 1 of the drawings. Preferably the roughening of the stems constitutes providing the latter with a shallow coarse thread, although knurling or other means of roughening may be employed. The stems are provided at the ends remote from the extremities 2 with reversely threaded shanks 5, the shanks being pivotally connected to the stems by diametrically reducing the former to provide ears 6 engaged in slots 7 in the ends of the stems, pivotal connection between the stems and the shanks being provided by transverse pins 8 spanning the slots and engaging the ears 6.

The stems are made of a diameter sufficiently below the diameter of the bolt holes of the engine head to permit their free entrance into said bolt holes and above the roughened portion are provided with stop ears 9 to limit their depth of penetration into the holes, and in order that they may effect a firm grip on the head, it is necessary that they be given a slight angular disposition with respect to the head and to accomplish this the stems 5 are connected by a turnbuckle 10 which may be readily turned by hand, as indicated in Figure 1 of the drawings. Rotation of the turn-buckle may be made to draw the shanks toward each other or force them away from each other and whichever operation is resorted to the desired angular disposition of the stems is effected to bring them into locking or non-releasing engagement with the bolt holes of the head. The latter may then be readily removed, the device as a whole being used as a carrying member with the turn-buckle operating as a handle.

The invention having been described, what is claimed as new and useful is:

1. A tool having stems for insertion in the bolt holes of a cylinder head, and a combined handle and adjusting member connecting said stems for deflecting them laterally out of alignment with said bolt holes to effect a gripping operation on the head.

2. A tool having stems provided with roughened free extremities for insertion in the bolt holes of a cylinder head, and a turnbuckle operatively connecting the stems at the ends remote from the roughened extremities.

3. A tool having stems provided with roughened free extremities, reversely threaded shanks pivotally connected to the stems at the ends remote from said roughened extremities, and a turn-buckle connecting said shanks, the stems being provided with stop ears adjacent said roughened extremities to limit the depth of penetration of the latter into the bolt holes of a cylinder head.

In testimony whereof he affixes his signature.

JACOB R. VOELLER.