F. G. ATTWASSER.

AUTOMOBILE TOOL.

APPLICATION FILED MAY 9, 1916.

1,208,449. Patented Dec. 12, 1916.

Fig. 1.

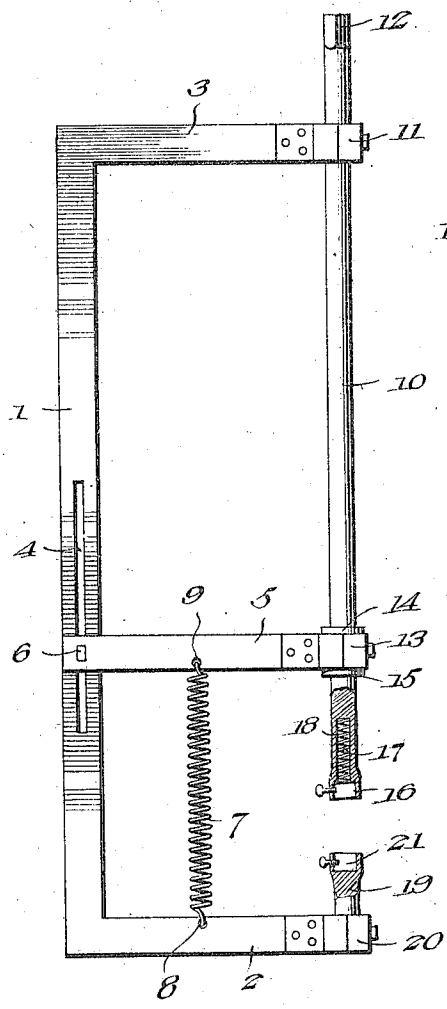


Fig. 2.

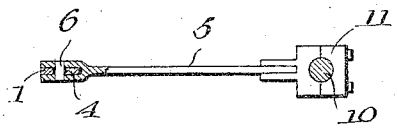
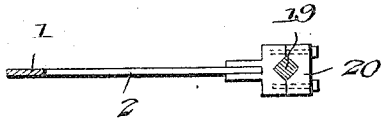


Fig. 3.



Inventor

F. G. Attwasser,

Witnesses

Hugh H. Alt

J. W. Garner

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

FREDERICK GEORGE ATTWASSER, OF SACO, MONTANA.

AUTOMOBILE-TOOL.

1,208,449. Specification of Letters Patent. Patented Dec. 12, 1916.

Application filed May 9, 1916. Serial No. 96,385.

To all whom it may concern:

Be it known that I, FREDERICK GEORGE ATTWASSER, a citizen of the United States, residing at Saco, in the county of Valley and State of Montana, have invented new and useful Improvements in Automobile-Tools, of which the following is a specification.

This invention is an improved tool especially adapted for use on a Ford automobile for removing the engine from the crank case without taking the crank case out of the frame and also without the necessity of removing the radiator.

The object of the invention is to provide an improved tool of this character which may be used by one man and by means of which the engine can be readily removed.

The invention consists in the features of construction, combination, and arrangement of devices, hereinafter fully described and claimed.

In the accompanying drawings: Figure 1 is an elevation of a tool constructed and arranged in accordance with my invention. Figs. 2 and 3 are detail sectional views of the same.

The frame of my improved tool comprises a vertical standard 1, a fixed lower arm 2, and a fixed upper arm 3. The standard 1 has a vertical slot 4. An arm 5 is arranged for vertical movement and is provided with a pin 6 which is arranged to work freely in the slot 4. A spring 7 is provided which has its ends connected to the lower fixed arm 2 and the movable arm 5, as at 8, 9, said spring serving to draw the arm 5 downwardly.

A shaft 10 is slidably mounted in a bearing 11, near the outer end of the arm 3 and is provided at its upper end with a squared portion 12, adapted to be engaged by a wrench to permit the shaft to be revolved. The shaft is also mounted in a bearing 13 with which the arm 5 is provided. Upper and lower collars 14, 15 are secured on said shaft above and below said arm 5 to cause the said shaft to move vertically with said arm 5, while permitting the shaft to be freely revolved as will be understood. The lower end of the shaft has a socket 16 adapted to fit on a nut and a spring 17 is arranged in a bore 18 in said shaft.

A fixed shaft 19 has its lower end secured in a bearing 20 near the outer end of the arm 2. Said fixed shaft is in line with the revoluble and vertically movable shaft 10 and is provided in a socket 21 at its upper end for the reception of a nut. The space between the lower stub shaft 19 and the shaft 10 is for the crank case. The sockets 21, 16, may be readily engaged with the heads and nuts of the bolts and by turning the shaft 10, the nuts may be screwed or unscrewed as will be readily understood.

Having described the invention, what is claimed is:

The herein described tool comprising a frame having fixed arms at its ends, an arm slidably connected to the frame and arranged for movement longitudinally thereof, a spring to move the said movable arm toward one of the fixed arms, a stub shaft on said fixed arm and having a nut receiving socket, a shaft mounted in bearings in said movable arm and the other fixed arm for rotation, and also connected to said movable arm for movement therewith, said shaft being arranged in line with the said stub shaft and being adapted to be rotated by a wrench or the like, said shaft also having a nut receiving socket in its end which is opposed to the stub shaft and being further provided in said end with a bore and with a spring in said bore.

In testimony whereof I affix my signature.

FREDERICK GEORGE ATTWASSER.

Witnesses:

PAUL EDW. SKJERSETH,

JOS. H. DYCTTOWICZ.