Dec. 30, 1924. 1,521,524

S. L. FULLER

PICK-UP TONGS

Filed Aug. 17, 1922

Fig. 1.

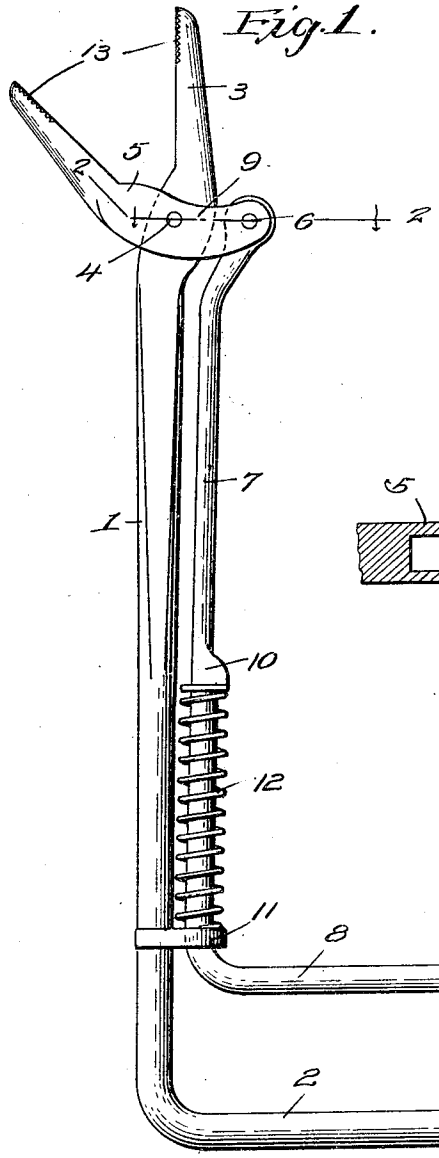
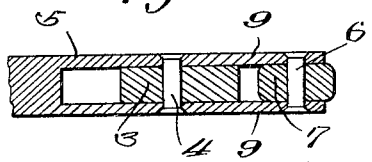


Fig. 2.



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Patented Dec. 30, 1924. 1,521,524

UNITED STATES PATENT OFFICE.

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PICK-UP TONGS.

Application filed August 17, 1922. Serial No. 582,519.

To all whom it may concern:

Be it known that I, SIDNEY L. FULLER, a citizen of the United States, residing at Lansing, in the county of Mower and State of Minnesota, have invented certain new and useful Improvements in Pick-Up Tongs, of which the following is a specification.

This invention has reference to pick-up tongs and its object is to provide an extremely simple and yet very sturdy instrument particularly for use in connection with an automobile, whereby small articles like nuts or bolts or the like may be recovered from the inner recesses of an automobile without the necessity of dismantling the vehicle.

In repairing automobiles, the operator sometimes drops a nut or a bolt or a screw into the crank case or some other part of the vehicle and it becomes impossible to recover the lost article unless the vehicle be dismantled or more properly the engine of the vehicle is dismantled to recover the lost article, the dismantling operation becoming necessary because the presence of the lost article is dangerous or disastrous so far as the vehicle is concerned.

Sometimes workmen's tools are dropped into the inside of the vehicle, especially in the crank case and it is the usual custom among workers to fasten a piece of cord to a tool so that should it be dropped in the crank case it may be easily recovered.

In accordance with the invention, there is provided a tong-like instrument with a long nose, narrow pair of jaws, with an extended handle whereby the jaws may be brought together or separated and be introduced into the crank case through the usual cover opening permitting access to the lost part where such access would ordinarily be out of the question.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, with the understanding that the invention is not confined to any strict conformity to the showing of the drawing, but may be changed and modified so long as such changes and modifications mark no material departure from the salient features of the invention.

In the drawing:—

Figure 1 is a face view of a pair of pick-up tongs embodying the invention.

Figure 2 is a section view taken upon the line 2—2 of Figure 1.

Referring to the drawing, there is shown an elongated shank 1, terminating at one end in a right angular extension 2, to provide a hand grip, and at the opposite end in a stationary jaw member 3.

A shiftable jaw 5 is provided, having a forwardly curved bifurcated shank portion 9, the furcations of which shank extend one on either side of the enlarged angularly disposed portion 4′ of the elongated shank member 1, and are pivotally secured thereto by means of the pin 4. The stationary jaw member 3 extends forwardly from the said angularly disposed enlarged portion 4′, and the working surface thereof is parallel with the rear side of the shank 1. The ends of the furcations of the shank 9, straddling the enlarged portion 4′, extend beyond the back of the enlarged portion 4′ as clearly shown in Fig. 1 of the drawing. Positioned at the back of the shank 1, is a reciprocating actuating rod 7 of less length than the shank 1 and having its forward end formed at an angle parallel with the angle of the enlarged portion 4′, and the terminus of this angled end of the reciprocating rod 7 is pivotally secured between the ends of the furcations of the shank 9 by a pivot pin 6, as clearly shown in Figs. 1 and 2 of the drawing. The other end or free end of the reciprocating rod is bent at right angles, as at 8, and is in parallel spaced relation to the handle 2 at its under side, to provide a rest member coacting with the member 2 for actuating the rod 7 and the pivoted jaw 5, to bring the inner face 13 against the working face or stationary jaw 3.

Each of the jaw members 3 and 5 is relatively narrow as clearly shown in Figure 1 and tapers toward the outer end. This design allows for the insertion of the jaws of the tongs into relatively small spaces as the purpose for which these tongs are constructed makes it necessary that the jaws of the tongs be of such size as to allow their insertion into small spaces.

Adjacent to the hand hold 8, the handle portion 7 is formed with an enlargement 10 between which and a guide member 11 fixed to the handle 1 in spaced relation to the abutment 10, is a spring 12 capable of compression when the jaws 3 and 5 are brought into operative relation, the action of the spring 12 under ordinary conditions

being to separate the jaws, while pressure upon the hand holds 2 and 8 will bring the jaws into engagement, at the same time compressing the spring 12.

The jaws 3 and 5 are matching jaws and of long tapering contour so that they may be introduced into a very narrow space, the nose ends 13 of these jaws being roughened to form gripping ends permitting the jaws to engage small articles without slipping.

By making the jaws 3 and 5 each relatively flat and long, that is tapering, and the members 1 and 7, rod-shaped, the tongs are made narrow but of extremely sturdy construction so that the tongs may be introduced into the very restricted portions of a crank case or other such part of an automobile engine permitting the recovery of lost articles which may find their way into such case and have heretofore necessitated the taking down of the engine for their recovery.

The jaws 3 and 5 when close together are substantially parallel one with the other and occupy no materially greater space than is represented by the thickness of the jaws and of the handle carrying them, whereby when the jaws are close together, the cross section of the two jaws is only substantially that of the two handles, while the nose ends of the jaws are of so little cross section that they do not interfere with the introduction of the tongs into any of the extremely restricted cavities in the crank case of the engine.

What is claimed is:—

1. An automobile repair tong comprising, a substantially elongated shank having one end formed at right angles to provide a handle and the other end having an enlarged obtuse angularly disposed portion terminating in a forwardly extending relatively narrow tapering integral solid jaw extending in a plane parallel to the plane of the shank, the working face of said jaw being in lengthwise alinement with the inner side of said shank, a relatively narrow tapering shiftable solid jaw member having projecting from its inner end an integral curved bifurcated shank straddling said angularly disposed portion and pivotally connected thereto centrally thereof, the ends of the furcations of said curved shank extending beyond the angularly disposed portion and the integral jaw, a reciprocable actuating rod parallel with and of less length than said shank, having its forward end formed at an angle parallel with the angle of said enlarged portion, the terminus of said forward end being pivotally secured between the ends of said furcations, said reciprocable rod having its free end bent at right angles to extend parallel to and spaced from said handle, and means for normally retaining said jaw in open position.

2. An automobile repair tong comprising, a substantially elongated shank having one end formed at right angles to provide a handle and the other end having an enlarged obtuse angularly disposed portion terminating in a forwardly extending relatively narrow tapering integral solid jaw extending in a plane parallel to the plane of the shank, the working face of said jaw being in lengthwise alinement with the inner side of said shank, a relatively narrow tapering shiftable solid jaw member having projecting from its inner end an integral curved bifurcated shank straddling said angularly disposed portion and pivotally connected thereto centrally thereof, the ends of the furcations of said curved shank extending beyond the angularly disposed portion and the integral jaw, a reciprocable actuating rod parallel with and of less length than said shank, having its forward end formed at an angle parallel with the angle of said enlarged portion, the terminus of said forward end being pivotally secured between the ends of said furcations, said reciprocable rod having its free end bent at right angles to extend parallel to and spaced from said handle, a guide for said actuating rod carried upon the elongated shank, an abutment formed integrally with said actuating rod and forwardly of said guide, and an expansible spring between and engaging said guide and abutment and surrounding said rod, normally tending to force the rod forward to keep the shiftable jaw out of engagement with the stationary jaw.

In testimony whereof, I affix my signature hereto.

SIDNEY L. FULLER.