Feb. 12, 1946. R. E. PLUMLEY 2,394,562

BRAKE SHOE TOOL

Filed July 28, 1943

Fig. 1.

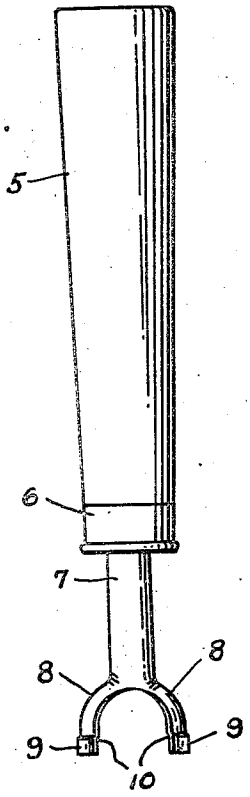


Fig. 3.

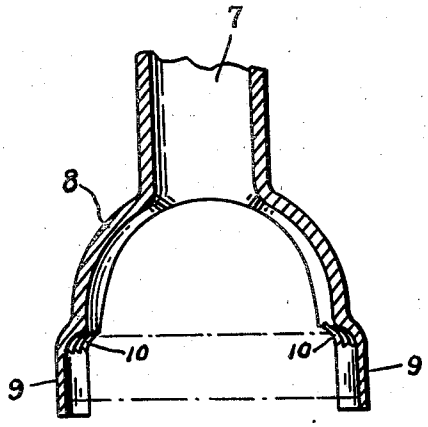


Fig. 2

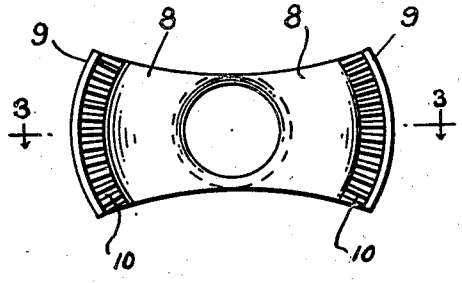
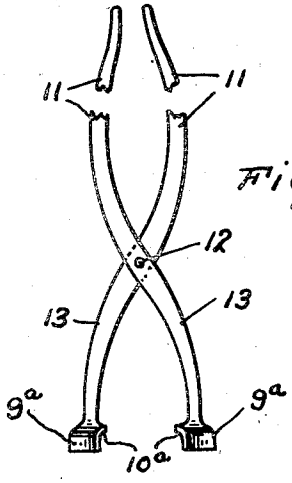


Fig. 4.



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BRAKE SHOE TOOL

Rochelle E. Plumley, Everett, Wash.

Application July 28, 1943, Serial No. 496,469

1 Claim. (Cl. 29—226)

The present invention relates to automotive equipment and accessories, and more particularly to implements and tools of the type primarily adapted for repair and reconditioning shop work, the same having more particular reference to a simple and novel tool expressly designed and adapted for applying and removing a so-called brake shoe hold-down spring cup.

The particular tools herein disclosed, described and claimed are most useful on "General Motors" cars and light trucks, said tools being useful on certain types of Chrysler, Hudson and other types of brake drum constructions. Those familiar with brake drums employed on cars of the makes mentioned are aware that the segmental or arcuate brake shoe is held down, that is, in the drum, by way of a stud, the stud surrounded by a coil spring, the coiled spring is pressed beneath a T-shaped head on the outer end of the stud, and there is a slotted cup, a rather small cup, to compress the spring and to engage beneath the head on the stem.

It is also a matter of common knowledge that much time and patience is utilized in what could be made a simple operation were it not for the fact that proper tools are not available for the desired purposes. With this in mind, I have evolved and produced an unusually simple and efficient tool, this designed to fulfill the requirements of the user with expediency and facility.

In carrying out the principles of the invention, I achieve my aims through the medium of two styles or forms of tools, one being in the general nature of a socket wrench, and the other in the form of pliers. However, the principal novelty resides in the designing and construction and arrangement of the cup-accommodating and embracing jaws.

Other features and advantages of the invention will become more readily apparent from the following description and the accompanying illustrative drawing.

In the drawing, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is an elevational view of the socket wrench-type tool as constructed in accordance with the specific principles of the instant invention.

Figure 2 is a bottom plan view on an exaggerated scale.

Figure 3 is a section on the plane of the line 3—3 of Figure 1 looking in the direction of the arrows.

Figure 4 is a modification, this being in elevation, of the pliers-type tool.

As above indicated, the invention is disclosed in two distinct embodiments. However, the fundamental principles of the main features, that is, the jaws for directly engaging the cup, are the same. It is advisable, however, to describe the socket wrench-type shown in Figures 1 to 3, inclusive. In Figure 1, the tool is about full size, that is, the preferred size for convenient use. It comprises a suitable handle or hand grip 5 with a ferrule 6 and a shank 7 axially attached thereto. The shank may be of tubular form. At its work-engaging end, the shank is bifurcated and the furcations 8 are diametrically opposite to one another. These furcations are in effect adapter limbs and are suitably arched longitudinally and transversely to accommodate the spring retention cup (not shown). The limbs terminate in relatively thin and somewhat flexible spring jaws 9. These are also diametrically opposite to one another and are of approximate quadrant formation. The jaws are offset with respect to the terminal ends of the limbs 8 and at the junctural point I provide anti-slipping teeth 10.

As before stated, the brake shoe assembling and pivoting pin in the brake drum structure pierces the central portion of the brake shoe and is of T-shaped form. The rectangular head on the outer end serves as a detent for the surrounding coil spring. The shallow cup has its central portion depressed and provided with a transverse, substantially rectangular slot which forms a sort of a keyway. Thus, the head on the pin is a key and the slot in the cup is a keyway and turning the slot on the cup at right angles to the head on the pin, the spring (not shown) is held down to assemble the brake shoe. It is evident, therefore, that the cup fits in the jaws, as shown in dotted lines in Figure 3. The jaws 9 embrace the peripheral or rim portion of the cup and the teeth 10 grip the cup. This makes it possible to handle the cup with comparative ease either putting it in place or removing it as the case may be.

In Figure 4, the pliers-type, the handle 11, are pivoted together, as at 12, in intersecting relation, and the shank portion 13 is provided with the jaws 9a having teeth 10a. The operation here is the same as already described.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawing will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty suffi-

cient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

What I claim is:

A tool for applying or removing a brake shoe spring hold-down cup, comprising two diametrically opposed furcations arched outwardly and longitudinally, said furcations terminating at corresponding ends in spring jaws of arcuate form, said jaws being offset outwardly relative to the furcations and connected to the latter by outwardly inclined arcuate shoulder portions having transverse teeth on their inner surfaces for gripping the margin of the cup at the top of the latter, said jaws being sufficiently thin to pass conveniently between the cup and the edge of the brake shoe and being adapted to yieldingly grip said cup.

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