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M. F. STREBE ET AL
STAMPED SHEET METAL LEVER

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2 Sheets-Sheet 2

Fig. 7.

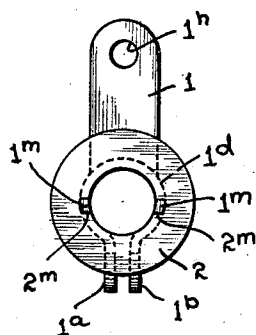


Fig. 8.

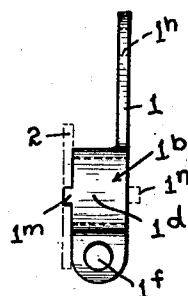


Fig. 9.

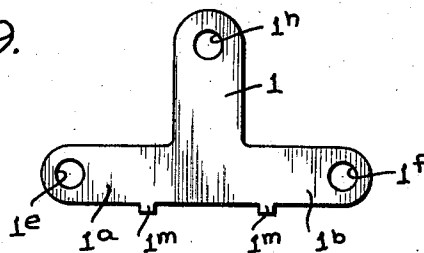
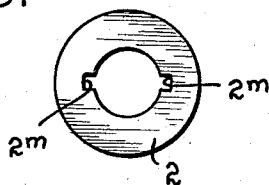


Fig. 10.



Inventors
Melville F. Strebe
Carroll K. Leuning and
Fred W. Zink
By
Alexander & Howell
Attorneys

UNITED STATES PATENT OFFICE

MELVILLE F. STREBE AND CARROLL K. LENNING, OF LA FAYETTE, INDIANA, AND
FRED W. ZINK, OF DETROIT, MICHIGAN, ASSIGNORS TO ROSS GEAR & TOOL COM-
PANY, OF LA FAYETTE, INDIANA, A CORPORATION OF INDIANA

STAMPED SHEET-METAL LEVER

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This invention is a novel improvement in sheet metal levers designed to be attached to rods or tubes for the purpose of actuating same or being actuated thereby; and particularly in levers which are usable in automobile control assemblies to enable the spark ignition, choke, etc. to be controlled from and through the steering post. The invention enables levers to be stamped out of sheet metal, and yet made efficient and provided with ample means for clamping same to a tube or rod, and in the accompanying drawings we have shown several forms of the levers, and methods of constructing same, and will explain the invention with reference to said drawings to enable others to adopt and use the invention; but it should be understood that the invention is not restricted to the specific forms illustrated as these can be varied within the scope of the invention according to the desired forms of the levers, and the purposes for which they are to be used. The essentials of the invention and novel features for which protection is desired are summarized in the claims.

In said drawings:

Fig. 1 is a top view of one form of sheet metal stamped lever.

Fig. 2 is a side view of Fig. 1, and

Fig. 3 is a plan view of the sheet metal blank from which the lever shown in Figs. 1 and 2 is formed.

Fig. 4 is a top view of a slight modification of the lever.

Fig. 5 is a side view of the lever shown in Fig. 4, and

Fig. 6 is a plan view of the sheet metal stamping from which the lever shown in Figs. 4 and 5 is formed.

Fig. 7 is a top view of such a lever provided with lugs for engagement of a washer shown applied thereto.

Fig. 8 is a side view of Fig. 7.

Fig. 9 is a plan view of the sheet metal blank from which the lever, Fig. 7 is made.

Fig. 10 is a view of a washer detached.

The levers are stamped from sheet metal. In forming the lever shown in Figs. 1 and 2 a T-shaped blank such as shown in Fig. 3 is first cut or stamped out of flat sheet metal.

Said blank has a shank portion 1 and outwardly projecting arms 1a and 1b extending from one end of the shank. The shank 1 is then bent at right angles to the arms, approximately along the dotted line 1c, Fig. 3, to bring the arms 1a, 1b into parallelism, and the opposite arms are curved adjacent the shank, as at 1d to embrace a rod or tube that can be inserted between them; and the arms extend beyond these curved parts forming ears which are provided with perforations 1e, 1f, for the passage of a fastening bolt B and nut N (indicated in dotted lines in Figs. 1 and 4) by which the lever can be securely clamped to a rod or tube. Preferably the outer end of the arm 1b is bent as shown in Fig. 1 forming a limit stop 1g to prevent excessive compression or distortion of the arms. The shank 1 is preferably perforated as at 1h for the attachment of a link or other device to operate the lever, or to be operated thereby, according to the connection in which the lever is used.

The lever shown in Figs. 4 and 5 is made in a similar manner from an approximately Y-shaped blank, which has a shank 1 and two spaced apart arms 1ax and 1bx these arms being parallel and connected with the shank by integral sections 1j and 1k. The arms 1ax and 1bx are bent approximately along the dotted lines 1kx and 1jx Fig. 6 at right angles to the shank 1, which brings these arms 1ax and 1bx into spaced apart parallelism, like the arms 1a—1b in Figs. 1 and 2.

Except for the differences noted the lever shown in Figs. 4 and 5 is otherwise constructed similar to Figs. 1 and 2, like parts being similarly lettered and the parts of the lever shown in Figs. 4 and 5 corresponding to the levers shown in Figs. 1 and 2 are similarly lettered, and as to these parts the description of one applies to both. In the construction shown in Figs. 7-10 the lever is constructed as shown in Figs. 1 and 2 but the lug 1g is omitted and the arms 1a and 1b may be provided on their edges with projecting lugs 1m which are adapted to engage notches 2m in washers 2 (which may be frictional washers, or any other type) which it may be desired

to mount upon the rods and have same fixedly attached to the levers under certain circumstances. If it is desired the lugs 1m may be formed on either edge of the arm or on both edges of the arm, as indicated at 1m (and 1n in dotted lines in Fig. 8).

If desired the inner surface of the curved portions 1d can be serrated or roughened as indicated at 1s in Figs. 1, 3, 4 and 6, to increase the binding effect of the arms on the rod or tube, but such levers can be tightly clamped to the rod or tube even without such serrations, but the latter can be easily formed in the arms in the operation of stamping the blank from the sheet metal, and are useful when the lever is to be applied to very hard and smooth finished rods or tubes.

It will be seen each of the levers is made by first stamping out of sheet metal a suitable blank, and then bending the blank so that the shank is at right angles to the arms. In each the shank forms the lever proper, and the two arms form a clamp member on the end of the lever by which it may be fastened to a rod or tube. Said arms are preferably perforated for the passage of an ordinary bolt by which the arms may be caused to rigidly clamp the tube or rod.

The length of the shanks can be readily varied according to the desired length of the actual operative portion of the lever, or the distance it is desired to have such lever project from the tube or rod. The length of the arms of the blank can be varied in accordance with the diameter of the rod or tube with which the lever is to be engaged. We do not consider our invention limited to any of the specific forms herein shown, as the levers may be varied in size, relative proportions of parts and appearance, within the scope of the invention.

We claim:—

1. A stamped sheet metal lever comprising a shank portion and opposite arms bent at right angles to the shank portion, said arms extending in line with the shank portion and beyond the adjacent end thereof and adapted to embrace a rod or tube, and provided with means to prevent excessive closure of the arms.

2. A stamped sheet metal lever comprising a shank portion, opposite spaced arms bent at right angles to the shank portion and extending beyond the adjacent end of the shank portion and curved adjacent the shank to embrace a rod or tube, said arms also having perforations for engagement of clamping devices and lugs to prevent excessive closure of the arms.

3. A stamped sheet metal lever comprising a shank portion and opposite arms bent at right angles to the shank portion and adapted to embrace a rod or tube, said arms being provided with lugs for engagement with a washer.

4. A stamped sheet metal lever comprising a shank portion and opposite spaced arms bent at right angles to the shank portion and curved to embrace a rod or tube, said arms being provided with lugs for engagement with a washer, and extending beyond their curved parts for engagement of clamping devices.

5. A stamped sheet metal lever comprising a shank portion and opposite arms bent at right angles to the shank portion and adapted to embrace a rod or tube, said arms being provided with lugs for engagement with a washer, and provided with means to prevent excessive closure of the arms.

M. F. STREBE.

CARROLL K. LENNING.

FRED W. ZINK.

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