Oct. 31, 1939. C. D. WEST 2,178,058

SPEEDOMETER CABLE LUBRICATION TOOL

Filed Dec. 6, 1938

Fig. 1.

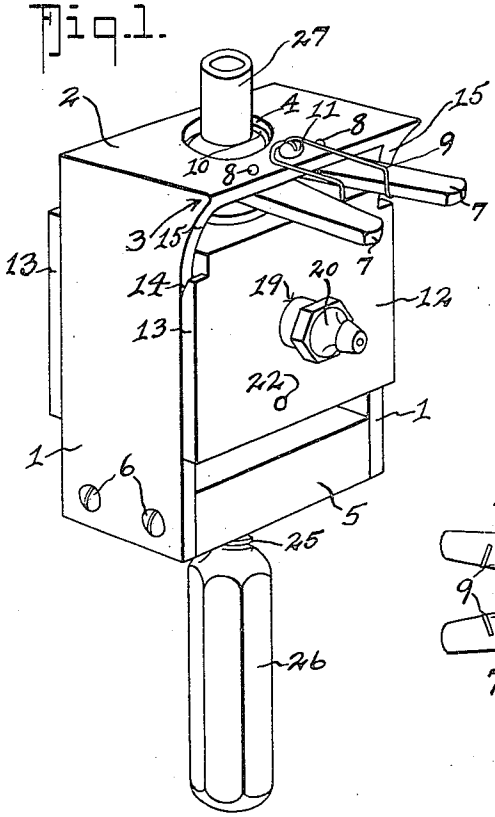


Fig. 2.

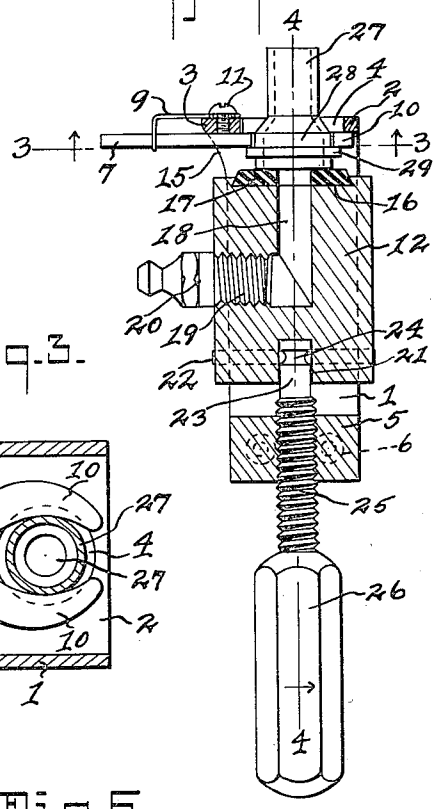


Fig. 3.

Fig. 4.

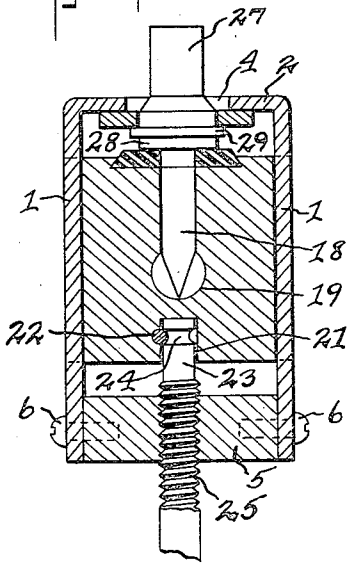


Fig. 5.

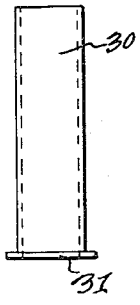
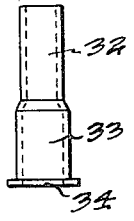


Fig. 6.



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SPEEDOMETER CABLE LUBRICATION TOOL

Charles D. West, Tampa, Fla.

Application December 6, 1938, Serial No. 244,262

4 Claims. (Cl. 184—1)

My invention relates to a tool whose purpose is to facilitate the lubricating of speedometer cables of various sizes, from a minimum to a maximum.

Primarily the invention has for an object to provide a simple, handy tool, by means of which an "Alemite" fitting may be brought into grease-tight connection with the nipple at the end of the speedometer cable.

Again, it is an object to provide a tool whereby the cable can be supplied with lubricant without removing the cable from the machine on which it is used, by simply disconnecting one end of the same and forcing lubricant through the tool via the "Alemite" fitting with the usual grease gun.

Other objects will in part be obvious and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends the invention still further resides in the novel details of construction, combination and arrangement of parts, all of which will be first fully described in the following detailed description, and then be particularly pointed out in the appended claims, reference being had to the accompanying drawing, in which—

Fig. 1 is a perspective view of my tool connected to a speedometer cable end nipple.

Fig. 2 is a central vertical section of the tool.

Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

Fig. 4 is a vertical section (parts being broken away) on the line 4—4 of Fig. 2.

Fig. 5 and Fig. 6, respectively, are elevations of other forms and sizes of speedometer cable nipples than that shown in Figs. 1 to 4 inclusive.

In the drawing, in which like numbers of reference indicate like parts in all the figures, 1 represents the sides of a frame which are joined at the top by a top plate 2 (which is preferably formed integral with the sides 1) and which are joined at the bottom to a base block 5. The sides are preferably of less width than the width of the top, whereby an overhanging portion 3 is provided, the sides' edges 1 adjacent thereto being curved as at 15. The sides 1 are secured to the base block 5 by screws 6.

The top plate 2 has a hole 4 large enough to permit passage of the largest flange of the largest size nipple to be served with grease.

Mounted on pivots 8 (formed by rivets passing through the top plate 2) are clamps comprising levers 7 pivoted at 8 and having jaws 10 and finger pieces 7, the jaws being continuously pressed toward their gripping positions by a spring 9 mounted at 11 on the top plate 2.

Mounted to slide vertically in the frame 1, 2, 5 is a block 12 having flanges 13 to overlie the front and back edges of the sides (see Fig. 1), the front flanges 13 being curved at the top, as at 14, to register with the curves 15 when opposite thereto. The upper face of the slide block 12 has a recess 16 to receive a washer 17 of leather, or any other suitable material. The washer has a center hole which registers with a vertical bore 18 that in turn registers with a forwardly directed threaded bore 19 into which an "Alemite" or other suitable fitting, to receive a grease gun, is screwed tightly.

The block 12 has a recess 21 in its bottom into which the cylindrical end 23 of a tightening screw projects. This screw 25 at its cylindrical end has an annular groove 24 in which a pin 22, carried by block 12, lies to keep the screw end 23 swivelly secured to block 12. The screw 25 is provided with a handle portion 26 of angular cross section for the reception of a wrench when necessary.

Speedometer cables are usually made in the three sizes illustrated in the drawing. The nipple 27 shown in Figs. 1 to 4, inclusive, has a head 28 with an annular flange 29; nipple 30, shown in Fig. 5, is a straight one with a flange 31 at the extreme end; the nipple shown in Fig. 6 is of two diameters 32 and 33 and has an end flange 34. The relative sizes and shapes of the nipples are as shown in Figs. 4, 5 and 6.

In using the invention, the speedometer cable is disconnected at one end, say from the speedometer, and the nipple end passed through the hole 4 until the nipple's flange lies below the jaws 10 (the jaws being separated by squeezing finger pieces 7—7 together), and the jaws are then permitted to grasp the nipple above the flange. Next, the screw 25 is turned in to raise the washer against the end of the nipple and sufficient pressure is applied to effect a fluid-tight joint between the nipple and block 12. Upon applying a grease gun to fitting 20, grease may be forced under pressure through 20, 18, 17 into nipple 27, and the speedometer cable filled with the lubricant desired. It should of course be remembered that "Alemite" fitting 20 contains a back check valve of some sort.

After the cable has been filled, one slacks off screw 25, pinches 7—7 together and withdraws the tool from the nipple on the speedometer cable.

While I have shown the preferred embodiment of the invention, it will be obvious that changes

in the form, shape and details of construction of my tool may be made without departing from the spirit of the invention and the appended claims.

From the foregoing description, taken in connection with the accompanying drawing, it is thought that the complete construction, operation and advantages of the invention will be clear to those skilled in the art.

What I claim is:

1. A tool for the purposes described, comprising a frame composed of sides, a base and a top plate, the latter having a hole through which the flanged end of a speedometer cable nipple may be passed, a pair of clamping members pivotally mounted on the under side of said top plate and having clamping jaws in part passing under said hole to grip the shank of the nipple at a place between its flange and said top plate, a sliding block mounted in said frame and having a bore one end of which terminates at the top of said block in line with the axis of said hole and the other end of which terminates at the front face of said block, a lubricator fitting secured to the block at the front face terminal of said bore, means carried by the top of said block to effect a seal between the block and the nipple end adjacent thereto, and means cooperating with said frame and said block for moving said block to press said seal against the nipple end and effect a fluid-tight connection between the nipple and the block, said seal having a passage from said bore to said nipple.

2. In a tool of the character described, a frame comprising a base block and a body composed of a top plate and side plates, means securing the free ends of said side plates to said base block, a slide block located within the compass of the frame and flanged to be retained in the frame for movement parallel to said side plates, said top plate having a hole of a diameter to permit passage of the largest sized speedometer cable nipple desired to be greased, means carried by said top plate to hold the nipple in place, said slide block having a passage from its top face to one of its other faces, a lubricator fitting secured to said other face to communicate with said passage, a washer counter-sunk into the top face of said slide block and having a hole registering with said passage and with said top plate hole, and a screw threaded through said base block and swivelly connected to said slide block for purposes described.

3. A tool for use in lubricating speedometer cables, comprising means to receive the end nipple of a cable, a lubricator fitting, a slide block carrying said fitting and having a duct communicating with said fitting at one end and having its other end positioned to be connected with said nipple, and means to effect connection between the nipple and said slide block duct.

4. A tool for use in lubricating speedometer cables, comprising means to receive the end nipple of a cable, a lubricator fitting, a slide block carrying said fitting and having a duct communicating with said fitting at one end and having its other end positioned to be connected with said nipple, means to effect connection between the nipple and said slide block duct, said last named means including nipple-holding spring loaded jaws, and a pressure applying clamp-screw cooperating with said jaws for pressuring said slide block into engagement with the nipple.

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