July 12, 1932. A. J. WEATHERHEAD, JR 1,867,292

CONTROLLING DEVICE

Filed May 1, 1930 2 Sheets-Sheet 1

FIG. 1

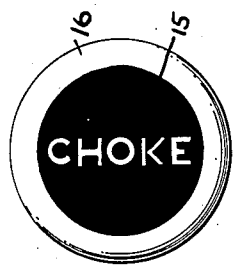


FIG. 3

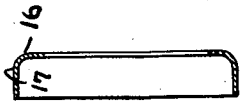


FIG. 4



FIG. 2

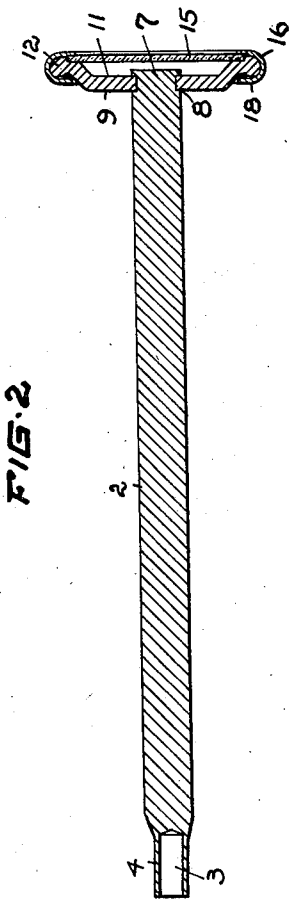


FIG. 5

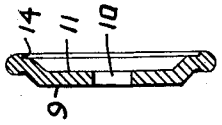


FIG. 6

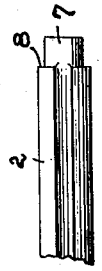


FIG. 7



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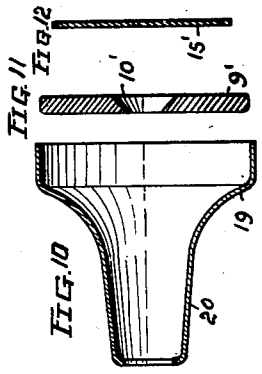
Fisher, Moser & Moore.

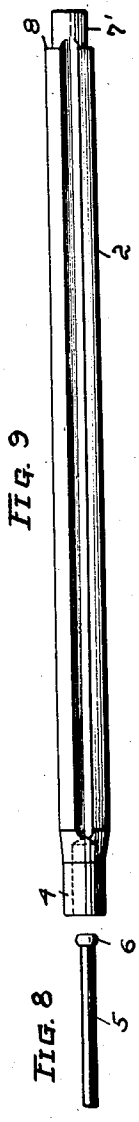
ATTORNEY

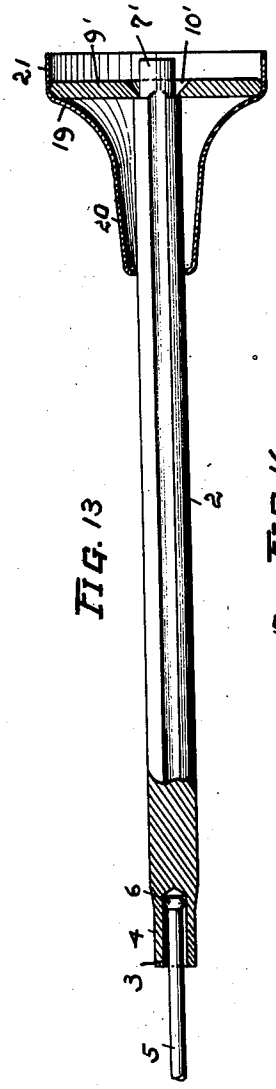
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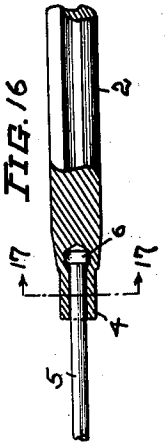
CONTROLLING DEVICE

Filed May 1, 1930 2 Sheets-Sheet 2

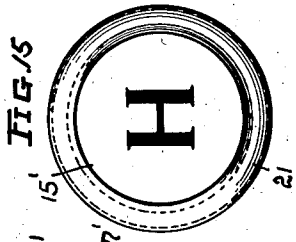


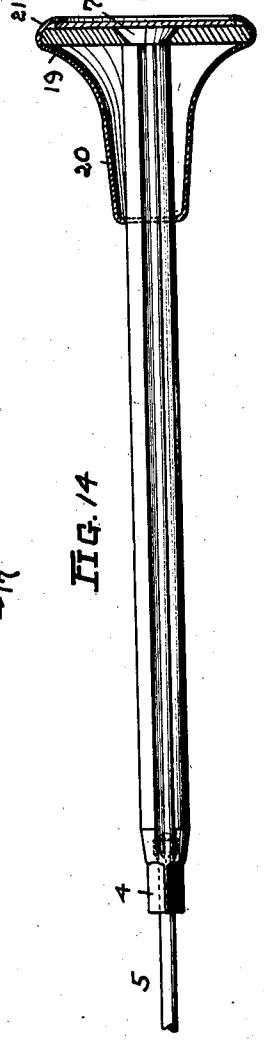












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ATTORNEYS.

Patented July 12, 1932

1,867,292

UNITED STATES PATENT OFFICE

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CONTROLLING DEVICE

Application filed May 1, 1930. Serial No. 448,885.

The present invention relates to manually controllable means, and more particularly push and pull devices which are mounted in exposed position on the dash or instrument board in an automobile, such for example, as a choke controlling device or other appliance in the car. Inasmuch as a number of such controlling devices are commonly used, it is the practice to provide one or more of them with some means of identification. The object of this invention is to provide a controlling device of simple structure and one which may be produced at a low cost, while having in mind also to provide a strong and durable device of ornamental appearance, which will withstand wear and constant usage for a long period of time and still retain its original finished appearance.

In the accompanying drawings, Fig. 1 is a front view of a controlling device constructed according to my invention, and Fig. 2 is a sectional view lengthwise thereof. Figs. 3, 4, and 5 are sectional views of the separate parts which form the handle, but separated from each other, and Figs. 6 and 7 are side and sectional views of the fluted stem or rod to which the handle parts are affixed. Figs. 8 to 17, inclusive, sheet 2, are modifications of the invention, Figs. 8 and 9, showing side views of the controlling wire and rod separated, and Figs. 10, 11, and 12, being sectional views of the separate parts, which provide an indexing handle when these parts are affixed to the controlling rod. Fig. 13 is a side elevation and sectional view of the separate pieces shown in Figs. 8 to 12, inclusive, partly assembled. Fig. 14 is a side elevation and sectional view corresponding to Fig. 13, but showing all the parts united together, and Fig. 15 is a front view thereof. Fig. 16 is a side view, partly in section, of one end of the controlling rod and the wire extension affixed thereto, and Fig. 17 is a cross sectional view of the same parts on line 17—17 of Fig. 16.

Now, referring to sheet 1 of the drawings, the controlling device delineated therein comprises a solid rod 2 of small diameter and of any suitable length, which in practice is mounted to slide in a suitable support or mounting, not shown. Preferably, this rod is fluted longitudinally on opposite sides thereof and the mounting provided with a correspondingly-shaped opening through which the rod is free to pass but restrained from rotation therein. One end of the rod is reduced in diameter and provided with a short axial bore 3, that is, a short axial bore 3 is drilled a predetermined distance into the reduced end 4 of the rod within which bore a controlling wire 5 having a rounded enlargement 6 at its end, may be introduced, see Figs. 13, 16, and 17.

When these parts are so assembled, the relatively thin surrounding wall of the reduced portion 4 of the rod is contracted for a part of its length, either to fix the wire tightly to the rod, or loosely in swiveled connection therewith. The metal surrounding the base portion of the bore is not compressed or contracted so that the enlargement 6 on the wire may be free to turn within the base cavity of the bore, but cannot be withdrawn therefrom. The opposite or front end 7 of rod 2 is also reduced in diameter for a short portion of its length, see Figs. 2 and 6, which provides an annular shoulder or seat 8 on the rod. A metal disk 9 having a central opening 10 of substantially the same diameter as reduced end 7 of the rod, is adapted to sleeve over said end in an abutting position against shoulder 8, and firmly united to the rod by upsetting end 7, substantially as shown in Fig. 2. Disk 9 is shown in this figure, and Fig. 5, as dished or recessed centrally and also provided with an offset rounded peripheral flange 12 having a shallow annular recessed seat 14 in its front face bordering the central deeper recess 11. The border recess 14 lies in a plane sufficiently apart from the bottom of main recess 11 to permit a thin indexing plate or disk 15 to be seated therein without necessarily engaging the opposite end 7 of rod 2. Preferably, the indexing plate 15 is a thin sheet of metal having a finished front surface inscribed or provided with indexing letters or indexing characters, and in some instances is finished or enameled in black or in colors, and in other instances it is highly polished and pro-

vided with contrasting letters or indexing characters. In either case the indexing plate is produced as a separate piece or part, and is of a thickness adapted to rest within the border recess 14 in disk 9 with the front face of the plate flush or substantially flush with the front face of the flange or rim portion 12 of disk 9. When plate 15 is seated within the border recess a flanged ring 16 of thin plated metal, or a metal having inherent properties adapted to be highly finished and non-corrodible is sleeved over the flange or rim 12 in overlapping relation with the border edge of plate 15. The right-angular rearwardly extending flange 17 of ring 16 extends beyond the flange or rim 12 of disk 9 when said ring is sleeved over the disk, so that it may be bent inwardly and clamped tightly around the round rim 12. The inwardly bent part 18 of flange 17 then occupies the offset space annularly at the rear of disk 9 and rearwardly of the offset rim 12. Preferably the rear face of the central dished portion of disk 9 lies in a slightly different plane than the bent flange portion 18 of the clamping ring 16 so that the finger gripping peripheral edge of such assembled parts is in advance of the central hub-like portion of disk 9.

I show a modified form of the invention on sheet 2 of the drawings, in that in this instance I provide a flat metal disk 9′ having a flared central opening 10′ which is adapted to receive reduced end 7′ of rod 2, and in which said end may be upset flush or substantially flush with the front face of disk 9′ to permit a thin index plate 15′ to be seated thereagainst. The means for clamping index plate 15′ upon disk 9′ consists in this form of the device of a thin metal shell 19 having a reduced and elongated hub portion 20 which is open at its base to permit it to be sleeved over rod 2. Shell 19 flares outwardly to provide a seat or backing portion for the peripheral edge portion of disk 9′, and an annular forwardly extending flange 21 on the shell serves to clamp index plate 15′ upon disk 9′ and to unite the shell firmly to the disk when flange 21 is bent inwardly around the front edge of disk 9′ and in overlapping relation with the edge of plate 15′.

What I claim, is:

1. A controlling device, comprising a rod, a disk riveted to one end of said rod, an index plate covering the riveted union between said parts, and means for clamping the peripheral border edges of said disk and plate together.

2. A controlling device, comprising a rod having a reduced end, a perforated disk sleeved over and united to said reduced end, an indicating plate mounted at the front of said disk, and a finishing border piece encircling the peripheral edges of said disk and plate.

3. A controlling device, comprising a rod, having a dished disk fixed to said rod, an indicating member at the front of said disk, and a clamping ring securing said member to said disk.

4. A controlling device, comprising a rod, a recessed and flanged disk riveted to one end of said rod, a finishing plate seated within the recessed portion of said disk in front of the riveted union, and means fastening said plate to the rim of said disk.

5. A controlling device, comprising a rod having a reduced extension, a dished disk having a shallow border recess and affixed at its center to said extension, an indicating plate seated within said recess, and a clamping ring encircling the rim of said disk and overlapping the border portion of said plate.

6. A controlling device comprising a rod, a hollow shell sleeved on said rod, a disc mounted on said rod and an index plate engaging with said disc and said shell and being supported thereby.

7. A controlling device comprising a rod, a hollow shell sleeve on said rod, a disc mounted on said rod and engaging with said shell, and an indicia bearing member mounted on said disc and supported thereby and being secured to said disc by engagement with said shell.

8. A controlling device comprising a rod, a shell sleeved on said rod, a disc fixed rigidly to one end of said rod and engaging with said shell, an index plate supported by said disc and means engaging the peripheral edge of said disc for affixing said plate to said disc and to said shell.

9. In a controlling device, the combination of a rod, a disk like part centrally apertured and affixed to the end of the rod, an index plate part overlying the end of the rod and spaced therefrom, means engaging said index plate and having a peripheral portion engaging and crimped over the periphery of said disk part to unite said parts, one of said parts being dished concavely with respect to the other to afford space between the end of the rod and the index plate part at the point of closest association therebetween.

10. A controlling device comprising a rod, a disc part centrally apertured and affixed to the end of the rod, an indicia bearing member mounted on said disc and supported thereby, said disc part being dished concavely with respect to the indicia bearing member to afford space between the end of the rod and the indicia bearing member at the point of closest association between the rod and the indicia bearing member.

11. A controlling device comprising, in combination, a rod, a disc fixed rigidly to one end of said rod, an index plate overlying the end of said rod and disc and supported by said disc, and means comprising a shell engaging said plate adjacent the respective peripheries of the disc and index plate and ta-

pering therefrom with reduced diameter to a point of engagement with said rod longitudinally spaced from the end thereof.

12. A controlling device comprising a rod, a hollow metal shell tapering toward one end and flared at the other end sleeved on said rod, a disk mounted on said rod at the flared end of said shell, and an index plate engaged with said disk and said shell and being supported thereby.

13. A control handle comprising a rod, a tapered shell mounted on said rod having its smaller end embracing said rod at a point behind the end thereof and having its open end spaced from and encompassing the end of said rod, a disk mounted on said rod and engaging with said shell at the open end, and an indicia bearing member mounted on said disk and supported thereby and being secured to said disk by engagement with said shell.

14. A controlling device comprising a rod, a disc mounted on the end thereof, a shell sleeved on the rod and having a portion engaging said disc, an indicia bearing member engaging with the disc and means securing the disc engaging end of the shell to said disc and securing said indicia bearing member to said disc.

15. In a controlling device, the combination of a disc, a rod extending normal to the disc and secured at its end to the disc in the center of the disc, an index plate lying adjacent the disc on the side opposite the rod and having its periphery adjacent the periphery of the disc and means including a hollow shell-like part tapering from the periphery of said disc to annular contact with said rod at a point spaced from said disc and including an annular ring-like part disposed adjacent the peripheries of said disc and plate and having an inturned edge holding said plate in fixed relation to said disc.

16. In a controlling device, the combination of a disc, a rod extending normal to the disc and secured at its end to the disc in the center of the disc, an index plate lying adjacent the disc on the side opposite the rod and having its periphery adjacent the periphery of the disc, and means adjacent the peripheries of the disc and the plate for holding said plate in fixed relation to said disc, said means comprising an annular ring having at least one inturned edge engaging the plate.

In testimony whereof I affix my signature.

ALBERT J. WEATHERHEAD, JR.