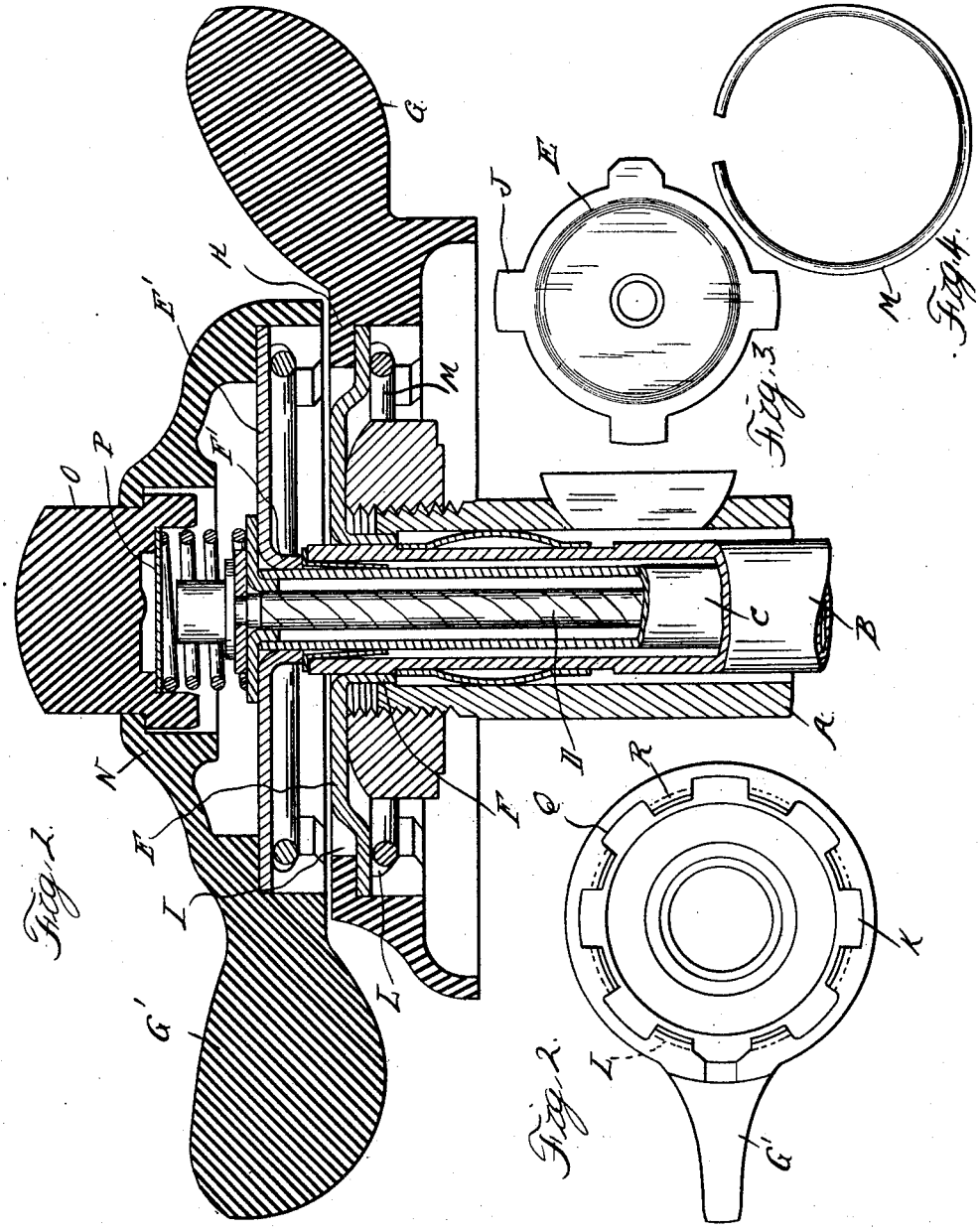
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ENGINE CONTROL MECHANISM FOR STEERING GEARS

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ENGINE CONTROL MECHANISM FOR STEERING GEARS

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The invention relates to engine control mechanisms of the type mounted on the steering wheels of motor vehicles and usually providing independent control for the throttle and spark advance. Where the operating handles are arranged above the steering wheel, the connection between the same and the mechanism within the hood is by means of tubular rods concentrically arranged and passing through the steering column. Usually metallic handles or operating levers are attached to the upper ends of the tubes but these are objectionable because of their quick tarnishing characteristics. For this and other reasons it is desirable to substitute other materials such for instance as bakelite or other molded products. However, such materials have not the same mechanical strength as metal and are not as well adapted for connection with the tubular rods.

It is the object of the invention to obtain a construction in which a strong coupling connection is made between the tubular rods and the operating handles and one which permits of quick assembly and detachment. To this end the invention consists in the construction as hereinafter set forth.

In the drawings:

Figure 1 is an enlarged cross section through the upper end of the steering column of a motor vehicle showing the improved control mechanism mounted thereon.

Figure 2 is a bottom plan view of one of the control handles detached.

Figure 3 is a plan view of the disk or head for the tubular rod to which the handle is secured.

Figure 4 is a plan view of the snap ring for attaching and detaching the handle from the head.

A is the steering stem and B and C two concentrically arranged tubular rods passing through said stem. D is a conduit for the electrical conductor from the horn button passing through the inner tube C, these parts being of the usual construction.

To the upper ends of the rods B and C are attached respectively heads E and E′ preferably metallic disks having hub portions F, F′ for engagement with said tubes B and C. These disks or heads are non-rotatably secured to the tubes in any suitable manner such as pressing or welding and when the parts are assembled are in superposed relation. G and G′ are handles or operating levers for the respective tubes B and C and are of the following construction. The handle G is formed integral with an annulus H provided at its under side with an enlarged recess I for receiving the peripheral portion of the disk E. The latter as shown in Figure 3 is formed with a plurality of spaced projections J distributed about the periphery thereof and adapted to register with the corresponding recess K in the annulus H. Thus when the disk or head is engaged with the annulus it is rotatably coupled thereto. To retain such engagement the portions of the annulus intermediate the recess K are formed with an under-cut groove L and a resilient split ring M is adapted to be sprung into engagement with said groove beneath the head E. The groove L is so located and is so fashioned that the ring M entering the same will wedge upward against the disk E thereby firmly clamping the latter to the annulus and the handle G.

The handle G′ is of similar construction with the exception that it is provided with a portion N forming a cap over the disk E′ and centrally provided with an annular seat for the horn button O. This button may be of any suitable construction adapted to operate a switch P for closing the electrical circuit for the horn.

With the construction as described, in assembling the parts the tube B may first be inserted through the steering stem until its head or disk E is properly positioned after which the handle G may be engaged therewith and locked by the spring ring M. In the same manner the tube C may be inserted and the handle G′ attached thereto. On account of the comparatively large diameter of the heads or disks E, E′ the pressure of the lugs or projections J on the walls of the recesses K is not excessive and is well within the strength of the material of which the handles are made.

For convenience in molding the under-cut

groove which receives the spring ring, the portions intermediate the recesses K are cut away at Q to leave comparatively narrow portions R which are grooved.

What I claim as my invention is:

1. The combination with a steering stem and a control rod passing therethrough, of a disk head secured to the upper end of said rod, an operating member recessed to receive said disk and a snap ring for locking said disk in said recess.

2. The combination with a steering stem and a control rod passing therethrough, of disk head secured to the upper end of said rod, an operating member recessed to non-rotatively receive said disk, and a snap ring for engaging an under-cut bearing in said recessed member to lock said head in engagement therewith.

3. The combination with a steering stem and a control rod passing therethrough, of a disk secured to the upper end of said rod and provided with one or more radially projecting lugs, an operating member recessed to receive said disk and projecting lug and provided with a groove in the wall of the recess, and a snap ring for engaging said groove to lock the disk to said operating member.

4. The combination with a steering stem, of a plurality of concentrically arranged control rods passing therethrough, of enlarged heads secured to the upper ends of said control rods in superposed relation, operating handles recessed to receive the respective heads and means for retaining said heads in engagement with said recesses.

5. The combination with a steering stem and a control rod passing therethrough, of a substantially circular thin disk head rigidly secured to the upper end of said rod, an operating member recessed to receive said disk bearing thereon around the peripheral portion thereof and quick attachment means for securing said member to said disk.

6. The combination with a steering stem and a control rod passing therethrough, of a disk head secured to the upper end of said rod, an operating member recessed to non-rotatably receive said disk and provided with an annular undercut bearing with an inclined face and a snap ring for engaging the inclined face of said undercut bearing to wedge and retain said disk in tight engagement with said operating member.

7. The combination with a steering stem and a control rod passing therethrough, of a substantially circular thin disk head longitudinally secured to the upper end of said control rod for enlarging the diameter thereof, an operating handle recessed to receive said enlarged head and bearing thereon around the peripheral portion thereof, and means for locking said head in said recess.

In testimony whereof I affix my signature.

HENRY MARLES.