July 27, 1926. 1,594,153

E. CLEMENS

KNOB OR GRIP

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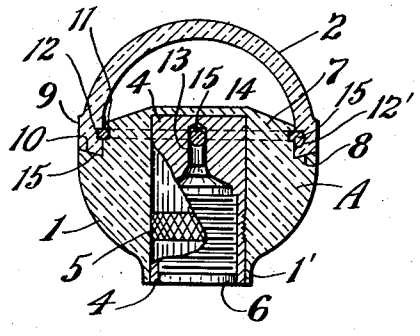


Fig. 2

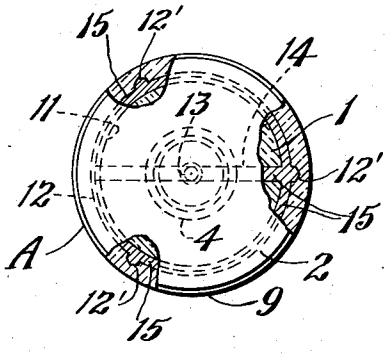


Fig. 3

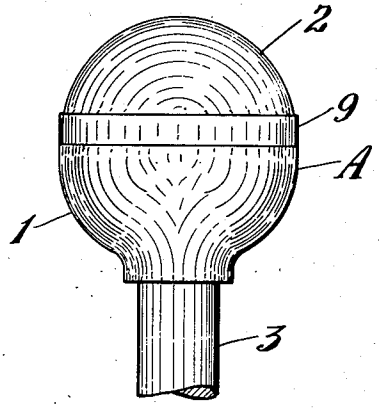


Fig. 1

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UNITED STATES PATENT OFFICE.

EMANUEL CLEMENS, OF EAST ORANGE, NEW JERSEY.

KNOB OR GRIP.

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My invention relates to knobs or grips, and while more particularly directed to an improved type of knob or grip for the levers of automobile gear-shifts, my invention is capable of general application and may be embodied in door-knobs, and grips for the handle-bars of bicycles, and for many other handles where a firm hold is desirable.

One of the objects of my invention is to provide an improved knob or grip affording an easy, firm and agreeable hold and also possessing a pleasing and attractive appearance.

Another object of my invention is to provide a sectional grip of this character, preferably comprising an inner or base section provided with means for securing the grip to a handle or the like and an outer or cap section formed of a material capable of being made up in any desired color or various combinations of colors, and embodying a novel and improved construction for rigidly holding the sections together and effectively preventing any relative movement or displacement thereof.

With the foregoing objects in view, my improved grip, generally described, preferably consists of an inner solid section which may be conveniently formed of a suitable moldable material such as bakelite, having firmly secured therein means such as a threaded socket for attaching the grip to a handle, and an outer hollow cap section preferably formed of a solid casein product such as synthetic horn, the said sections being effectively held together by means disposed interiorly of the outer surface of the grip.

My invention also resides in various other features, details of construction and arrangement of parts which will be hereinafter more fully described and claimed.

In order that my invention may be more clearly understood, attention is directed to the drawing accompanying and forming a part of this specification, and in which:—

Figure 1 is a view in elevation of a grip in accordance with my invention applied to the lever of an automobile gear shift;

Fig. 2 is a central vertical sectional view, partly in elevation, of the grip shown in Fig. 1; and

Fig. 3 is a plan view, partly in section, of the grip shown in Figs. 1 and 2.

Referring to the drawing, the grip A shown is substantially spherical in form, and comprises an inner or base section 1, preferably formed of a moldable material, such as bakelite or hard rubber, but preferably the former, and an outer or cap section 2, formed of a solid casein product such as synthetic horn, which is also known by the trade names "galalith" and "eronoid". The inner section 1 is provided with suitable means for attaching the grip to the handle or lever 3 of an automobile gear shift, this means as shown consisting of a metallic socket member 4 embedded and firmly secured within the section as by being molded therein, the outer surface of said member preferably being provided with a knurled portion 5 so that this member will be more firmly held in place.

The sections 1 and 2 of the grip A are each substantially semi-spherical; the lower or base section 1 preferably being solid and the upper or cap section 2 preferably being hollow. In this connection it may be noted that where the section 2 is formed of "galalith" or a like solid casein product, it is expedient that the same be made hollow as it is extremely difficult to produce this material otherwise than in the form of comparatively thin slabs or sheets, and it is preferably from such a slab or sheet that the said section is molded or otherwise pressed to shape. Moreover, the production of the section 2 in the hollow form shown results in a substantial saving in the amount of "galalith" or the like which it is necessary to employ. The socket member 4 is secured within the section 1 coaxially thereof and is formed with a threaded socket or recess 6 enabling the grip A to be screwed onto the threaded end of the lever or handle 3. The section 1 has a lower cylindrical extension 1′ surrounding the lower end portion of the socket member 4, which construction permits the employment of a longer socket member without necessitating any material increase in the size of the grip or in the amount of the moldable material therein.

The base section 1 of the grip also has an upper cylindrical extension 7 and a flat annular upper surface portion 8 surrounding said extension and intercepting the outer surface of the section, the said surface portion inclining upwardly away from the extension 7 at an acute angle to the outer cylindrical surface thereof. The cap section 2 is formed with a short cylindrical lower end portion 9, preferably slightly thicker

than the body of the cap section, having its end surface 10 inclined in conformity with the inclination of the upper annular surface portion 8 of the base section 1, the construction and arrangement being such that when the grip is assembled by applying the cap section 2 to the base section 1, the said cylindrical end portion 9 takes over the extension 7 of the base section and closely engages the outer cylindrical surface thereof and the said end surface 10 seats closely against the annular surface portion 8 of section 2, as shown in Fig. 2.

The sections 1 and 2 of the grip are rigidly secured together so as to effectually prevent any relative movement or displacement thereof pererably by means disposed wholly within the grip, in a manner which will now be described. The extension 7 of the base section 1 is provided in its outer cylindrical wall wth an annular groove or recess 11 which is preferably rectangular in cross-section and the inner wall of the cap section 2 is provided adjacent its lower end with a similar annular groove 12, the arrangement being such that when the sections 1 and 2 are assembled as shown said grooves 11 and 12 register to form a closed annular chamber or passageway lying wholly within the grip and having its top and bottom walls in planes substantially at right angles to the axes of the grip and socket member 4. The socket member 4 is provided within its upper portion with an axial reduced cylindrical passageway 13 communicating at its lower end with the threaded socket or recess 6 and adjacent its upper end with a cylindrical passageway 14 extending transversely thereof. The passageway 14 extends through the upper cylindrical extension 7 of base section 1 and socket member 4 and communicates at its ends with the annular groove 11 at diametrically opposite points of the latter. The enclosed annular passageway formed by the registering grooves 11 and 12 and the transversely extending passageway 14 are filled with a body of solid material 15 coacting with the side walls of grooves 11 and 12 to rigidly secure the sections 1 and 2 together. The material 15 is preferably one that will flow when sufficiently heated and harden upon cooling, such as a readily fusible metal; and after the sections 1 and 2 have been assembled, as shown, this material when in a molten state is forced through the passageways 13 and 14 into the passageway formed by the registering grooves 11 and 12 in any suitable manner as by means of a pressure device having a nozzle adapted to be inserted into the socket 6 and held against the tapered seat formed in the bottom of the latter about the lower end of passageway 13, and such material is then allowed to cool and harden. The cap section 2 is preferably provided at the bottom of groove 12 with a plurality of spaced indentations or recesses 12′ which also become filled with the material 15 to thereby more effectively and firmly secure the sections 1 and 2 together.

With the construction and arrangement described it will be apparent that it is practically impossible for the sections 1 and 2 of the grip to be separated or for any relative movement thereof to take place by reason of forces exerted thereon which tend to pull them apart. Devices having the form of the hollow cap section 2 or a similar form and made of "galalith" or a like solid casein product tend when subjected to heat, to become distorted and to spread or flatten out. With the construction described, however, any such tendency of the cap section 2 is overcome, for it will be apparent that for the lower end portion of section 2 to move outwardly with respect to the cylindrical extension 7 such end portion must first move upwardly away from the annular inclined seat 8, and any such upward movement is prevented by the body of material 15 and the coacting walls of the passageway formed by the registering grooves 11 and 12. Accordingly, I am able to form the cap section 2 of a solid casein product such as "galalith" and thus obtain the desirable advantages accompanying the use of this material such as very attractive color effects, the appearance and feel of ivory, etc.

While I have described a preferred embodiment of my invention, it is to be understood that the same is subject to various changes and modifications without departure from the spirit of the invention and the scope of the appended claims.

Having now described my invention, what I claim as new and desire to protect by Letters Patent is as follows:

1. A sectional grip comprising a base section, a cap section formed of a solid casein product, each of said sections being a gripping section having an outer surface constituting a part of the outer hand-engaging surface of the grip, and means for rigidly securing said sections together, said means being disposed wholly within the outer surface of the grip.

2. A sectional grip comprising a base section, a hollow cap section formed of a solid casein product, and means securing said sections together and preventing distortion of the cap section.

3. A sectional grip comprising a base section, a cap section, said sections being provided with registering cut-away portions, and means disposed in said cut-away portions securing said sections together.

4. A grip comprising a base section formed of moldable material and having handle attaching means molded therein, a cap section, said sections being provided

with registering cut-away portions, and means for securing said sections together comprising a body of fusible material disposed in said cut-away portions.

5. A grip comprising a solid base section of moldable material having handle attaching means imbedded therein, a hollow cap section formed of a solid casein product applied to said base section, said sections being provided with registering grooves, and means for securing said sections together comprising a body of fusible material disposed in said grooves.

6. A grip comprising a substantially semi-spherical base section having handle attaching means secured thereto and provided with an upstanding cylindrical extension, a hollow substantially semi-spherical cap section applied to said base section and taking over said cylindrical extension, said cylindrical extension and the said cap section being provided with registering annular grooves, and means for securing said sections together comprising a body of fusible material disposed in said grooves.

7. A sectional grip comprising a base section, a cap section, said sections being provided with registering cut-away portions forming a chamber wholly within the grip, and hardened material disposed in said chamber securing said sections together, the grip being provided with a passageway communicating with said chamber and through which said material when in softened condition may be forced from without the grip into such chamber.

8. A sectional grip comprising a base section provided with a socketed handle attaching member, a cap section, said sections being provided with registering cut-away portions forming a chamber wholly within the grip, and hardened material disposed in said chamber securing said sections together, the grip being provided with a passageway communicating with said chamber and with the socket in the handle attaching member and through which said material when in softened condition is adapted to be forced.

9. A grip comprising a base section provided with an upper cylindrical extension and with an annular upper surface surrounding said extension and inclined at an acute angle to the cylindrical wall of such extension, a cap section having a lower annular end portion taking over said extension, said end portion being provided with an annular end surface conforming to and seated against the said inclined annular surface of the base section, said extension and end portion having registering recesses forming a chamber disposed wholly within the grip, and means disposed in said chamber securing said sections together.

10. A grip comprising a base section provided with an upper cylindrical extension and with an annular upper surface surrounding said extension and inclined at an acute angle to the cylindrical wall of such extension, a cap section having a lower annular end portion taking over said extension, said end portion being provided with an annular end surface conforming to and seated against the said inclined annular surface of the base section, said extension and end portion having registering annular recesses forming an annular chamber disposed within the grip and hardened material disposed in said chamber securing said sections together, the grip being provided with a passageway communicating with said chamber through which said material when in softened condition is adapted to be forced from without the grip into such chamber.

This specification signed this 3rd day of October, 1925.

EMANUEL CLEMENS.