Nov. 28, 1944. H. F. GEORGE 2,363,665

SCREW CAP

Filed March 8, 1943

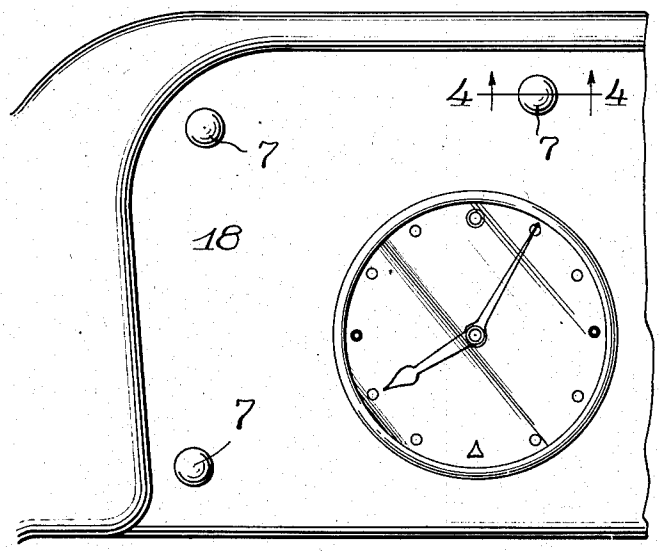


Fig. 1.

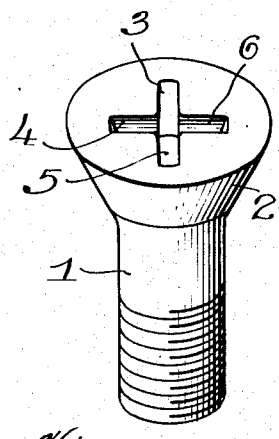
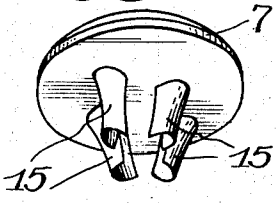


Fig. 2.

Fig. 3.



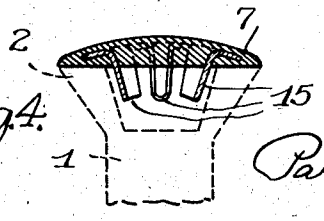


Fig. 4.

INVENTOR.
Harry F. George
BY
Parkinson & Lane
Attys

Witness:
Chas. X. Hursh

Patented Nov. 28, 1944

2,363,665

UNITED STATES PATENT OFFICE

2,363,665

SCREW CAP

Harry F. George, Chicago, Ill.

Application March 8, 1943, Serial No. 478,345

5 Claims. (Cl. 85—55)

This invention relates to a screw cap, and more particularly to a screw cap serving as a cover or cap to be applied to the top of the screw to hide the metal thereof and to preferably blend, or have an ornamental effect, with the material which the screw secures in place.

My invention is particularly applicable, although not limited thereto, to the type of screw called a "Phillips screw," which at its head is formed with a plurality of intersecting depressions adapted to receive a similarly shaped operating end of a screw driver which may be operated in a brace, or not, as desired. In automobiles, airplanes, and many other jobs a sheet or strip of facing material is applied to a backing to give to the same an ornamental and pleasing finish. The facing material may be of wood, plastics, metal or other construction and is more ornamental in appearance than the backing which may also be of any desired material. The facing material is secured to the backing at suitably spaced distances by the screws referred to herein. Without my invention the metal of the grooved ends of the screws would be visible, and detract from the appearance of the otherwise ornamental covering material which is secured in place by the screws. However, by the application to the grooved ends of the screws, of my novel caps forming the subject-matter of the present invention, the otherwise exposed ends of the metal screws are covered up and concealed from view by an ornamental cap which may be made to fit in with any desired color or other ornamentation scheme.

The screw caps of this invention may be made of plastic, wood, metal or other desired material which may be of any ornamental finish desired or thus constructed throughout. While not limited thereto, my invention is especially adapted to screw caps made of plastics, which are readily made in various colors and ornamental effects, and which screw caps may be removed from the screws when it is desired to remove the screws by unscrewing the same.

Other objects, advantages and capabilities will later more fully appear.

My invention further resides in the combination, construction and arrangement of parts illustrated in the accompanying drawing, and while I have shown therein preferred embodiments I wish it understood that the same are susceptible of modification and change without departing from the spirit of my invention.

In the drawing:

Fig. 1 is a fragmentary front elevation of an instrument board of an automobile to which has been applied an ornamental covering secured in place by screws having my novel screw caps fixed thereto.

Fig. 2 is a perspective view of a screw adapted to have my screw caps applied to cover the grooved end thereof.

Fig. 3 is an enlarged perspective view of one form of screw cap embodying my invention.

Fig. 4 is a transverse section on the line 4—4 of Fig. 1 on a median plane of the screw cap of Fig. 3, and fragmentarily showing an adjacent portion of a screw in dotted lines.

Referring more in detail to the drawing, one form of screw adapted to have my screw cap applied thereto, is shown in Fig. 2, and comprises the body portion 1 having a head 2 formed with the intersecting grooves 3, 4, 5 and 6 for receiving a similarly shaped operating end of a screw driver. This type of screw is generally referred to as a "Phillips screw," but it is to be understood that while my invention is especially adapted thereto, it is also applicable to other kinds of screws having other forms of grooves, the only restriction being that the grooves be of sufficient depth and shape to receive and hold the projections on my caps or covers.

The screw caps described will preferably be made of plastic material, although not necessarily limited thereto. Any suitable plastic may be used, either of the thermoplastic or thermosetting type. Some of the many kinds of plastics, which are referred to merely as being illustrative and not as limiting the invention, may be mentioned as thermoplastic resins, thermosetting resins, phenol-formaldehyde, phenol-furfural, synthetic resins, Bakelite, natural resins such as lignin, vinsol and the like, and others of a similar nature, urea-formaldehyde, phenolic resins, vinyl resins, and other resins and plastic material obtainable on the market under various trade-names. Wood, metal, composition material, or other materials may be used if desired.

In the form of my invention shown in Figs. 3 and 4, I have provided a cap head 7 of plastic or other desired material, and having embedded in or otherwise secured thereto, projections 15, which are preferably formed of resilient metal or other suitable material with spaced apart resilient sides capable of being squeezed toward each other when the projections are forced into the grooves of the screw head. When thus forced into the grooves the material of the projections will be sufficiently distorted as to grip the walls of the grooves and hold the cap in place, removable or

not, as desired. If it is desired that the caps be not removable, this can be effected by providing interlocking burrs or ears on the projection 15 and recesses in the groove walls, or vice versa.

The cap heads may be colored, as desired, to match or blend with the covering surface being secured in place, or plastic or other material that is inherently of the desired color effect may be used.

My improved caps 7 are applied to cover the grooved head 2 of screws 1 which are screwed into threaded openings in a suitable supporting backing to hold in place the sheet of facing material 18, the screw head being tapered and fitting against correspondingly tapered sides in holes in the facing material. The facing material may be spaced from the supporting backing or not as desired. Fig. 1 shows a face view of the facing material as applied to the instrument board of an automobile. Such facing material may be applied to any construction desired.

Having described my invention, I claim:

1. A cap adapted to cover the grooved head end of a screw holding in place a facing material, a plurality of fastening elements embedded in the cap and projecting therefrom, each of the fastening elements being formed of resilient material U-shaped in cross-section, the projecting portions of the fastening elements being of a size and shape with relation to the grooves in the screw head that when pushed into the grooves they will engage the groove walls to hold the cap in place on the screw and cover the screw head.

2. A cap adapted to cover the grooved head end of a screw holding in place a facing material, a plurality of fastening elements embedded in the cap and projecting therefrom, each of the fastening elements being formed of resilient material U-shaped in cross-section, the projecting portions of the fastening elements being of a size and shape with relation to the grooves in the screw head that when pushed into the grooves they will engage the groove walls to hold the cap in place on the screw and cover the screw head, the projections being inclined inwardly toward their free ends.

3. In a cap adapted to cover the grooved head end of a screw holding in place a facing material, a cap head, a plurality of fastening elements embedded in the cap head and projecting therefrom, each of the fastening elements being formed of resilient material closed at one longitudinal edge and open at its other longitudinal edge and forming spaced apart resilient sides that normally stand a greater distance apart than the thickness of a groove in the screw head, the projecting portions of the fastening elements being of a size and shape with relation to the grooves that when pushed into the grooves they will engage the groove walls to hold the cap in place on the screw and cover the screw head.

4. In a cap adapted to cover the grooved head end of a screw, a cap head, a plurality of fastening elements each having a deformed end rigidly embedded in the material of the cap head, the fastening elements each projecting longitudinally out from the inner face of the cap head and being formed with spaced apart resilient side walls closed along one edge and open at the other, the sides of the projecting portions of the fastening elements along the open edge standing a greater distance apart than the thickness of a groove in the screw, whereby when pushed into the grooves the sides will be depressed to grip the groove sides and hold the cap in position to cover the screw head.

5. In a cap adapted to cover the grooved head end of a screw, a cap head comprising plastic material, a fastening element having an irregular shaped end embedded in said plastic material, the fastening element projecting longitudinally out from the inner face of the cap head and being formed with spaced apart resilient side walls closed together at one edge and open at the other to form a hollow interior open at one side only, the free edges of the side walls standing a greater distance apart than the thickness of the groove in the screw head end, whereby when pushed into the groove said free edges will be forced toward each other to grip the groove sides and hold the cap in position to cover the screw head.

HARRY F. GEORGE.