

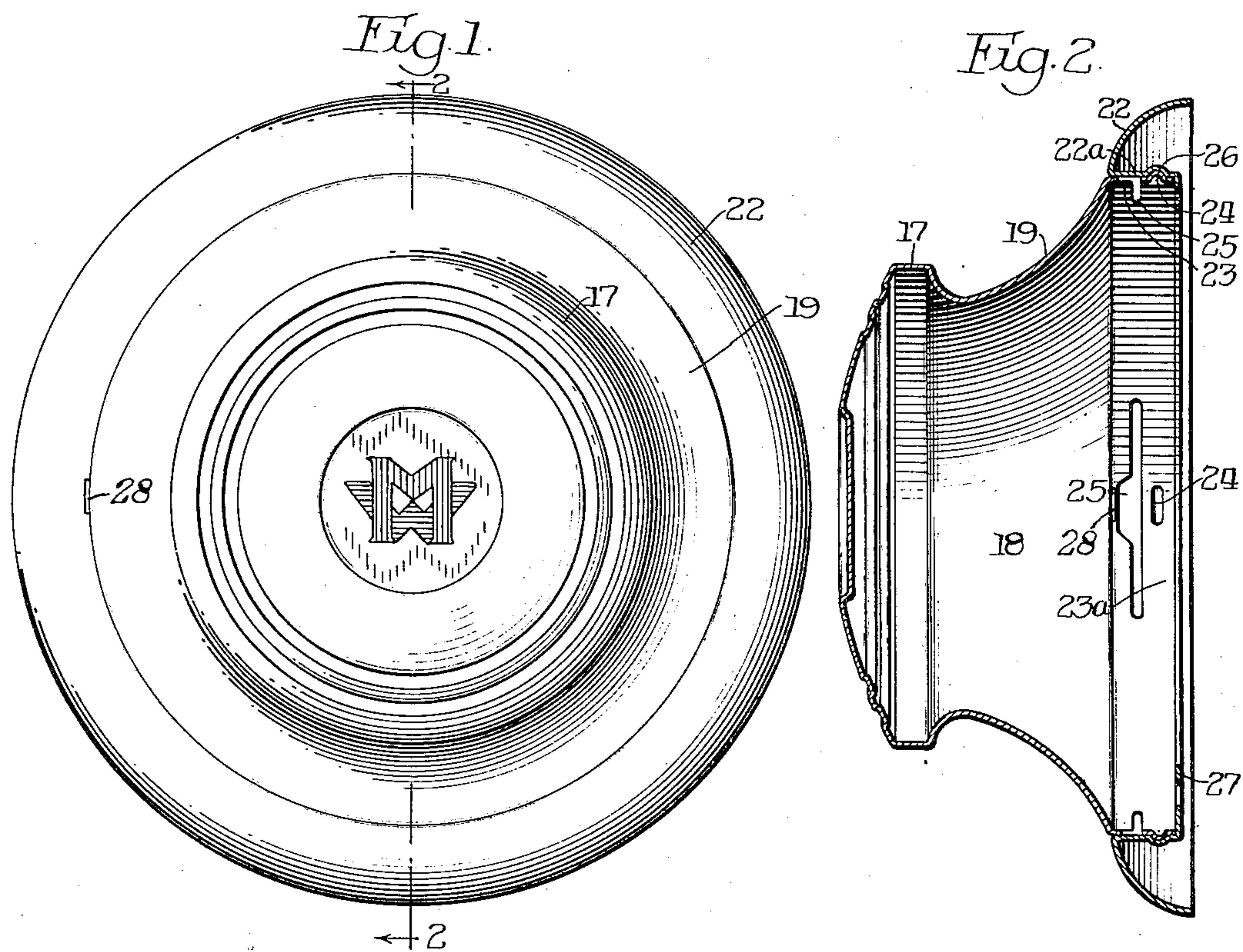
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WHEEL HUB CAP

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UNITED STATES PATENT OFFICE

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WHEEL HUB CAP

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The invention relates to cover caps as ordinarily associated with demountable wheels primarily for covering the axle end and secondarily for finishing or ornamental purposes.

The principal object of the invention is the simplification and cheapening of manufacture and enabling the employment of metals not adapted for use in the construction of other forms of cap.

A vehicle hub cap must be readily removable and replaceable; it is peculiarly subject to injury by reason of its exposed position and light construction. The popular type is large and protuberant, embodying graceful compound curves. These caps are usually formed either in one piece screwed upon the nave of the wheel, or in two parts, one hidden and permanently attached to the wheel and the other releasably connected to the first.

It therefore becomes important so as to design the cap as to enable the employment of stiff metal such as steel instead of the softer metals such as aluminum and brass, which by reason of their greater workability, have heretofore been employed necessarily in the manufacture of the present popular types of hub cap.

By my invention it is made possible to fabricate protuberant hub caps with a wide flaring base of any desired metal, accompanied by a materially reduced cost of manufacture, enhanced appearance, improved facility of replacement and increased efficiency.

In order that an understanding may be had of the present improvement over former hub caps, the invention is hereinafter described with reference to a preferred embodiment and by way of comparison with former structures. Likewise a preferred form of the invention is illustrated by way of example in the accompanying drawing, wherein

Fig. 1 is a front end view of a two-part hub cap embodying the invention; and

Fig. 2 is an axial section on the line 2—2 of Fig. 1.

It has been usual in the manufacture of hub caps of this type to provide an annular attaching member of pressed steel or the like adapted to be permanently secured to

the nave of a wheel in any suitable manner. Such ring member has been made with an upstanding cylindrical neck over which a cylindrical base of the cap proper is telescoped by means of its inturned lipped-over margin, a suitable releasable snap connection being provided between the cap and attaching ring, and the ring member being enveloped and hidden by the cap proper.

The requisite workability of the metal to produce a hub cap of this shape with necessary configuration of the inturned portion to permit ready functioning of the snap connection, forbids the employment of sheet steel and formation within a die but necessitates the employment of a soft metal which can be drawn and spun into the proper shape.

Moreover, the sheet of brass or other soft metal must be of a size sufficiently large to form the entire outer surface of the cap and also the inturned margin; whereas, according to my invention, a comparatively small sheet of the more expensive soft metal is required to form the central portion only of the cap, the outer marginal portion being constituted of the attaching ring which may be made of steel. The two surfaces of the cap proper and the attaching ring cooperate to form together a continuous unbroken surface over the total external face of the cap.

The cost of material is substantially reduced by reason of the reduced area of the more expensive metal; manufacture is simplified; and the labor cost is minimized. If desired, the construction of the cap proper in two parts makes it possible to produce the whole cap from steel by means of pressing operations whereas spun brass and other soft metals were only susceptible of employment in the former construction; thus not only reducing the cost but providing a hub cap of greater resistance to deformation.

Having reference now to Figs. 1 and 2, the head 17 and the body portion 18 presenting the downwardly concave surface 19 of the cap are shown as integral but the lower convex outer skirt portion 22 of the cap is not formed integral with the rest of the cap but is constituted of the outer face of an attaching ring. The wide base portion of the old form of cap

has been substituted by a cylindrical portion 23 which telescopes within the inner cylindrical wall 22^a of the ring and the two cylindrical portions are detachably connected by a snap mechanism comprising a button 24 carried by a spring portion 23^a of the cap base, the springiness being provided by slotting the cylindrical base portion as indicated at 25. This button 24 takes into a depression 26 in the ring portion 22 thus forming a detachable connection between the ring and cap proper whereas the ring is adapted to be permanently associated with the wheel by screws seated within the apertured ears 27.

It will thus be seen that the cap itself is of considerably less base diameter in the new form of construction wherein the attaching ring has itself an outer convex face 22 which serves as a continuation of the concave face 19 to present a continuous cap surface on a sweeping compound curve.

As will readily be appreciated by those skilled in the art of sheet metal working, the form of construction and detachable connection between the parts, illustrated in Fig. 2, lends itself to mechanical formation; and makes it practicable to employ steel in the construction of this hub cap whereas softer metals such as aluminum and brass are required to be employed in the old form of construction. Moreover, there is a saving of metal by disposing the attaching ring outside of rather than inside of the cap base and availing of the outer convex face 22 of the ring to complete the flare of the cap, the concave portion 19 of the cap and the convex portion 22 of the attaching ring supplementing each other to attain the same continuance sweeping compound curve for the outer face.

It will also be observed that in the old form of construction, the insertion of a tool between the ring and cap for the purpose of detaching the latter is very likely to mar the wheel body in the hub area, the entrance of the tool being closely adjacent and parallel to the wheel body; whereas in the new form of construction the tool is inserted between the cylindrical portions of the cap and ring in a direction normal to the wheel body, an inconspicuous slot 28 being provided for the purpose.

Thus is produced a duplicate of the former desirable hub cap design, so far as appearance is concerned, with a saving in metal and with a latitude in choice of metal not previously available. The cap may be made of much stiffer construction, steel being employed, and may be finished in desirable contrasting colors much more efficiently than previously. For instance, the convex portion 22 of the curved face may be plated or painted independently of the concave portion 19 and may be in contrasting colors without interference one with the other in the process of plating or painting by reason of their independence.

Other advantages of the new over the old will readily suggest themselves to those familiar with the art.

I claim:

1. A hub cap comprising separable elements, one of annular form adapted for permanent attachment to the wheel and another of cup-like form having its base telescoped within and detachably connected to the first, the first having an outer convex face and the second having an outer concave face, the outer faces of the two elements having when assembled a substantially continuous outer surface on a sweeping compound curve.

2. A hub cap comprising separable elements, one of annular form adapted for permanent attachment to the wheel and another of cup-like form having its base telescoped within and detachably connected to the first, the second element when viewed in axial section flaring along a concave curved line and terminating in a cylindrical base, the first element having an inner cylindrical wall and an outer convex face, the convex outer face of the first element and the concave outer face of the second element forming when assembled a substantially continuous surface on a sweeping compound curve.

3. A hub cap comprising separable elements, one of annular form adapted for permanent attachment to the wheel and another of cup-like form having its base telescoped within and detachably connected to the first, the second element when viewed in axial section flaring along a concave curved line and terminating in a cylindrical base, the first element viewed in axial section having an exterior convex face and an inner cylindrical wall, the cylindrical base of the second element adapted to be telescopically received within the cylindrical wall of the first element, an exteriorly releasable connection between the cylindrical portions of the two elements, the convex outer face of the first element and the concave outer face of the second element forming when assembled a substantially continuous surface on a sweeping compound curve.

In testimony whereof I have hereunto subscribed my name.

CHARLES R. STOUGH.