March 17, 1953 E. R. THOMAS 2,631,468

AUTOMOBILE HORN RING PRESS BUTTON

Filed March 3, 1952

Fig. 1

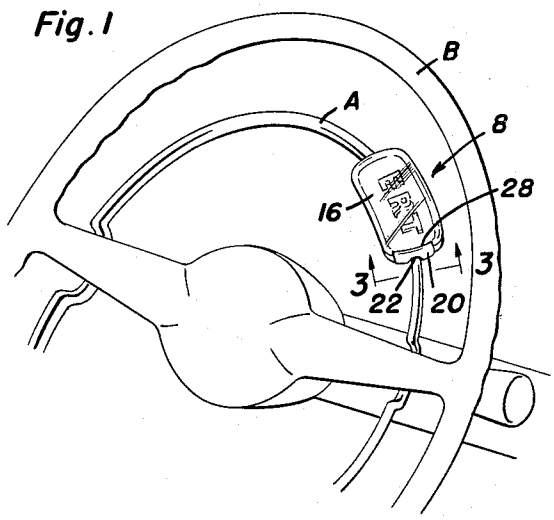


Fig. 2

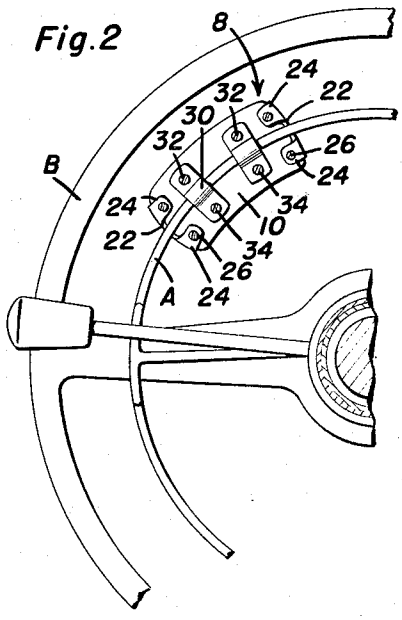


Fig. 3

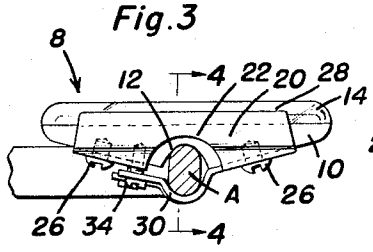


Fig. 4

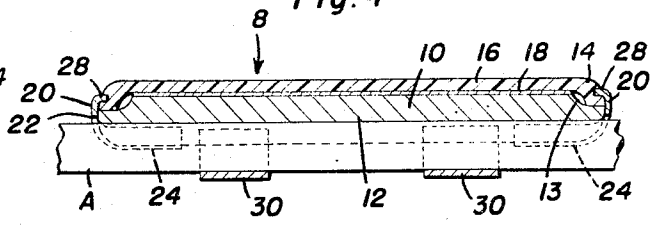


Fig. 5

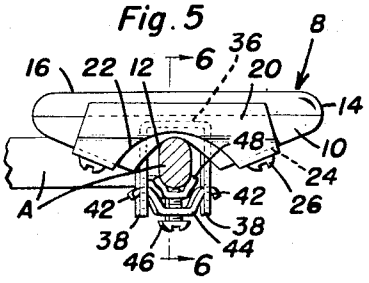
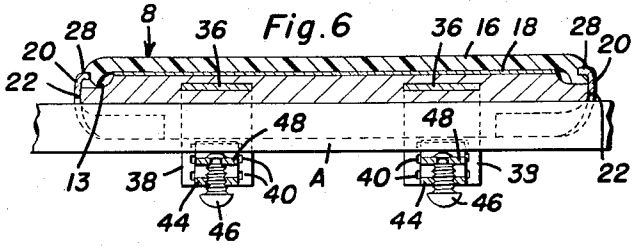


Fig. 6



Ernest R. Thomas
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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AUTOMOBILE HORN RING PRESS BUTTON

Ernest R. Thomas, San Francisco, Calif.

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6 Claims. (Cl. 74—484)

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The present invention relates to improved ways and means whereby a horn blowing ring, such as is operably mounted on an automobile steering wheel, may be conveniently and reliably actuated and has reference more specifically stated, to a press-button which is adapted to accommodate and be actuated by the thumb of one hand of the driver.

Since it is not always convenient, while driving, to safely operate a horn ring on the spur of the moment it is customary to lift one hand off of the steering wheel to conveniently reach and depress the ring. It is safer, at least for most drivers, to keep both hands on the wheel at all times during the course of driving. Therefore, there has existed a need for a suitable trip for the ring which is capable of being operated by the thumb of one hand without having to lift the hand off of the steering wheel. It is the obvious object of the instant invention, therefore, to bring this desire to a point of fruition and, as herein disclosed, this is accomplished through the medium of a simple and practical thumb-button which is attached to the horn ring.

More specifically, it is an objective to provide a relatively large button which is of sufficient areal extent to reside within easy-to-reach range of the operating thumb, said button being further suitable in that it is detachable and also adjustable, the latter provision making it possible to locate the button at a point of vantage, that is, within operating range of the place on the steering wheel where the particular driver customarily takes hold of the steering wheel during the course of normal straight-away driving.

A further object of the invention has to do with a horn ring press-button which is characterized by a base and means for separably and adjustably clamping the same on the ring, said base being provided with a facing member or plate which is removably clasped atop the base, said facing plate being constructed to harmonize with both the horn ring and steering wheel in respect to color schemes and materials used.

It is also within the purview of the inventive concept to provide a base of light weight economical material, simple means for clamping the same on the horn ring, said base having clasps for holding the cover or face plate in position and the latter, if desired, being of transparent plastics appropriately covered and serving to hold an escutcheon plate or an insignia plate on the base between the latter and the facing plate.

Other objects, features and advantages will

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become more readily apparent from the following description and the accompanying sheet of illustrated drawings.

In the accompanying sheet of drawings wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a perspective view of a steering wheel, horn ring, fragmentarily shown, and the improved press-button in an attached ready-to-use position;

Figure 2 is a bottom plan view, fragmentarily shown, and partly in section;

Figure 3 is an enlarged fragmentary section on the line 3—3 of Figure 1 looking in the direction of the arrows;

Figure 4 is a view taken on the longitudinal line 4—4 of Figure 3 looking in the direction of the arrows;

Figure 5 is a view similar to Figure 3 but showing a modification in the means for removably and adjustably clamping the press button on the horn ring; and,

Figure 6 is lengthwise section corresponding to Figure 4 but taken on the plane of the line 6—6 of Figure 5, looking in the direction of the arrows.

The only differences, structurally speaking, between the form of the invention seen in Figure 1 to 4 inclusive on the one hand and Figures 5 and 6 on the other hand, appertain to one form of attaching, clamping and adjusting means (Figures 1–4 inclusive) and a basically similar but specifically different form of attaching, adjusting and clamping means (Figures 5 and 6). This means, therefore, that all of the major parts throughout all figures are of common construction and therefore the same reference numerals are employed to denote like parts in all of these views. To this end the novel and improved press-button is denoted in the sense that it is a unitary device by the numeral 8. Broadly this is characterized by base means which rests atop the horn ring A to assume a satisfactory position in relation to said ring A and the surrounding rim B of the steering wheel. The base has to be of economical material and light in weight and shiftable so that it may assume and remain in whatever position the user prefers it. The base is here shown as generally rectangular in plan and is denoted by the numeral 10. It is provided with a longitudinal groove 12 which partly seats the horn ring in the manner best shown in Figures 3 to 6 inclusive. The upper major surface of the base is substantially flat and the peripheral or marginal portion is re-

lieved or otherwise cut away to form a ledge 13 for the downwardly deflected rim portion 14 of the readily applicable and removable cover 16. This cover preferably takes the form of a facing plate in that it is either formed into an ornament itself or is used in connection with a complemental ornament. For example the face plate may be of commercial plastics and of a grade and color so that it harmonizes and is therefore suitably conformable with the finish on the horn ring and also the finish on the steering wheel rim. In the specific version shown in the drawing the facing plate is of clear plastics and serves to lid over and hold in place an escutcheon plate 18. The latter rests atop the base and is suitably ornamented or may be merely formed with a crest, an emblem or the owner's insignia. It is within the purview of the invention to use interchangeable escutcheon plates and facing plates and to standardize the base for particular make of horn ring thus making it possible to economically vary and interchange the parts to cope with varying requirements of individuals and automobile sales agencies, etc. In any event the downturned lip portion of the cover plate is provided with keeper grooves to accommodate resilient clasps. Each clasp is of suitable spring metal and is denoted by the numeral 20 and is suitably shaped, has a notch 22 to clear the ring A and has inturned attaching ears or lugs 24—24 held in place by fastening screws 26. The lateral keeper 28 as best shown in Figure 4, for example, fits into the keeper groove to hold the cover removably in place. The springiness of the metal makes it possible, using a screwdriver, to pry the keeper 28 out of the keeper groove and in this manner to readily apply and remove or change the facing plate without too much trouble.

The attaching, adjusting and clamping means revealed in the Figures 1 to 4 comprises simple suitably bent embracing clips 30 riveted in place at 32, the other ends of the clips being fastened by screws or the like 34.

The alternative fastening means in Figure 6 comprises a pair of clamping clips. Each clip is U-shaped and inverted and is denoted by the numeral 36 and is embedded in the base with depending arms 38 having slots 40—40 to receive the end hooks 42—42 on the stirrup 44 carrying a setscrew 46 having a swiveled clamp 48 engaging the ring A.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in the shape, size and arrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

Having described the invention, what is claimed as new is:

1. In combination, a spoke-equipped steering wheel embodying an endless rim, an endless horn operating ring substantially coplanar with and mounted within the marginal limits of said rim and spaced radially inward of said rim but in close proximity to the latter, a thumb-button resting atop said ring, and means adjustably and detachably mounting said thumb-button on said ring, a portion of said thumb-button being situated in the space between said rim and ring and being conveniently accessible for operation by way of a thumb of an adjacent hand without lifting the hand from the rim, said thumb-button being circumferentially adjustable on said ring whereby it may be conveniently situated wherever necessary or desired for safe and reliable operational use.

2. In combination, a spoke-equipped steering wheel embodying an endless rim, an endless horn operating ring substantially coplanar with and mounted within the marginal limits of said rim and spaced radially inward of said rim but in close proximity to the latter, a thumb-button resting atop said ring, and means adjustably and detachably mounting said thumb-button on said ring, a portion of said thumb-button being situated in the space between said rim and ring and being conveniently accessible for operation by way of a thumb of an adjacent hand without lifting the hand from the rim, said thumb-button being circumferentially adjustable on said ring whereby it may be conveniently situated wherever necessary or desired for safe and reliable operational use, said thumb-button embodying a base which is centrally grooved, said ring fitting into said groove, an escutcheon member seated atop said base, and a transparent face plate covering said escutcheon member and reremovably fastened to said base and serving as a retainer for the escutcheon member.

3. For use on a horn operating ring of the type mounted on a vehicle steering wheel, a manually depressible thumb-button for depressing and operating said ring, said thumb-button comprising a base adapted to be perched atop said ring, attachment means carried by the underside of said base whereby the latter may be detachably and adjustably mounted on said ring, a facing plate superimposed atop said base, and resilient clasp means fastened on marginal edge portions of said base and releasably engageable with adjacent marginal edge portion of said facing plate whereby to retain the facing plate removably on the base.

4. The structure defined in claim 3, wherein said facing plate is transparent, and an ornament interposed and clamped between said base and facing plate.

5. The structure defined in claim 3, wherein said attachment means comprises a plurality of clamping clips fastened to the bottom of said base and bent between their ends and shaped to securely embrace said ring.

6. The structure defined in claim 3, wherein said attachment means comprises at least one inverted U-shaped clip having a bight portion embedded in said base and having limbs depending below said base to straddle said ring, a stirrup adjustably mounted between said limbs, and a setscrew carried by said stirrup and having a swivelly attached clamping yoke to receive and clampingly engage said ring.

ERNEST R. THOMAS.

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