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MAP HOLDER

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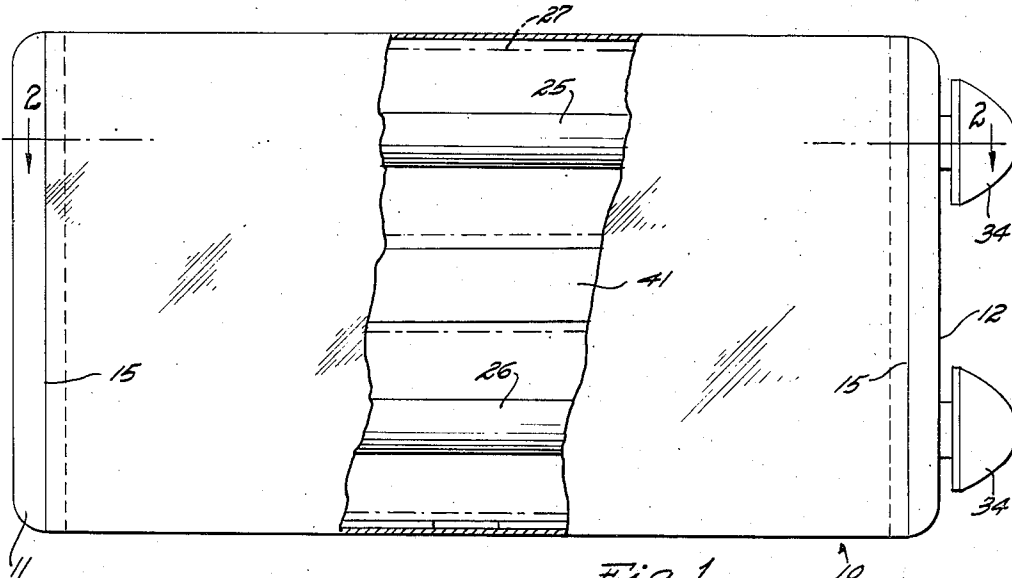


Fig. 1

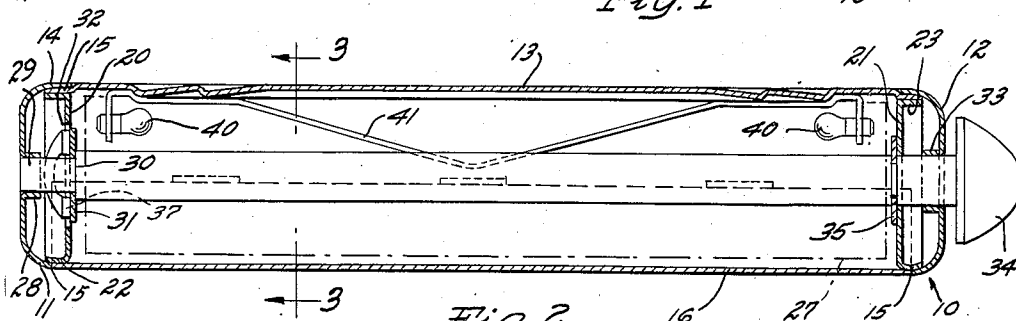


Fig. 2

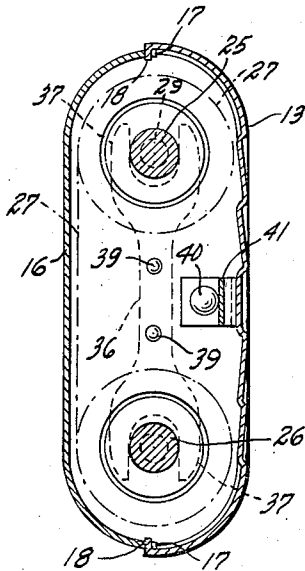


Fig. 3

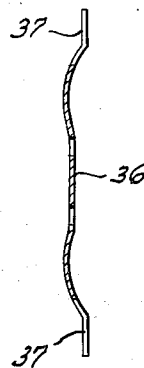


Fig. 4

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MAP HOLDER

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8 Claims. (Cl. 40—86)

This invention relates generally to casings and more particularly to map or chart holders.

It is an object of the present invention to provide a novel portable map holder or casing 5 which long maps may be compactly carried and of a character such that reference to the map will be easy and convenient.

More specifically it is an object of the invention to provide a map holder which is compact 10 and convenient for operators of conveyances.

A further object of the invention is to provide a map holder or casing of the above mentioned character which is simple in construction and inexpensive to manufacture.

Other objects of the invention will appear from the following description taken in connection with the single sheet of drawings in which—

Figure 1 is a front view of the map holder with parts broken away and in section;

20 Fig. 2 is a view of the holder in section, taken along the line 2—2 of Fig. 1;

Fig. 3 is a view in cross section of the holder taken along the line and in the direction of the arrows 3—3 of Fig. 2, and

25 Fig. 4 is a view in section of a part of the device.

Referring to the drawing by characters of reference, the device shown includes a hollow casing 10 which is preferably flat and of general 30 rectangular shape having spaced sheet metal end walls 11 and 12, and a sheet metal rear wall or back panel 13. The end walls 11, 12 are preferably hollow, each having a continuous intumed flange 14 in which opposite and inwardly offset 35 rear panel portions 15 are received or telescoped to provide a continuous or unbroken outer surface where the end and rear panels join or overlap. The end and rear walls or panels may be welded or otherwise suitably secured together. 40 Preferably, the top and bottom of the casing end walls 11, 12 are rounded and to conform in shape thereto, the rear panel 13 is also rounded along the top and bottom thereof but terminates at the top and bottom edges substantially 45 on the vertical center line of the casing.

The front of the casing has a substantially rectangular opening to give access to the interior thereof, which opening in height is defined by the top and bottom edges of the rear panel 13 and in width is defined by edges of the end wall flange portions 15. Thus, a large front opening is provided in the casing and this opening is normally closed by a removable closure member or cover panel 16 which is formed of a 55 transparent material, preferably a so-called non-

breakable material of any suitable type. For ease in attaching and/or detaching the cover panel 16 it is preferably of the so-called snap-on type and to this end, the cover is provided along its upper and lower edges with spaced notches 5 17 which receive spaced, complementary, intumed flanges 18 provided and spaced along the upper and lower edges of the rear panel 13. The transparent front panel 16 is formed with upper and lower rounded portions to conform 10 to the rounded upper and lower ends of the casing side walls and is flexible and made such that it must be flexed to position upper and lower edge portions thereof between the upper and lower portions of the rear wall whereby the cover 15 will be frictionally and detachably held in place by its inherent tension.

In the casing 10, a pair of abutment or spacer plates 20, 21 are provided, the plates 20, 21 20 being respectively disposed adjacent and parallel to the casing end walls 11, 12. These plates 20, 21 are provided respectively with outturned, continuous flanges 22, 23 which have an outer contour conforming to the shape of the casing, as seen in vertical cross section, Fig. 3, and these 25 flanges fit or telescope within the hollow end walls of the casing in abutting relation with the rear wall offset portions 15 and at the sides of the opening providing recessed, side seating surfaces for the cover 16. The spacer plates 30 20, 21 may be welded or be otherwise rigidly secured to the casing rear and end walls.

Mounted within the casing 10, and extending longitudinally thereof is a pair of spaced, parallel rollers 25, 26 on which a continuous map 35 or chart 27 may be wound, a portion of the map behind the casing opening, or the map portion stretched between the rollers being visible externally of the casing through the transparent cover 16. The end wall 11 is provided with a pair of inwardly directed hollow bosses 28 in 40 which corresponding end portions 29 of the rollers 25, 26 are rotatably supported, the end roller portions 29 being reduced in diameter providing on the rollers outwardly facing shoulders 30. 45 On each of the reduced roller portions 29 is an abutment member or washer 31 and in the spacer plate 20 a pair of vertically spaced apertures 32 are provided through which the roller reduced portions 29 extend, these apertures 32 being 50 slightly larger in diameter than the outer diameters of the washers 31.

In the other spacer member 21 is a pair of vertically spaced apertures through which the rollers 25, 26 respectively extend and project 55

externally of the casing 10 through hollow bosses 33 which are formed out of the casing end wall 12 and rotatably support the rollers. On and secured to their outer ends, each of the rollers 25, 26 is provided with a manually operable means, such as a knob 34, by means of which to turn the rollers conveniently. Adjacent and inwardly of the spacer plate 21, the rollers 25, 26 are each provided with an annular groove or recess to receive a split washer 35 which abuts the inner surface of the spacer plate 21, the outer diameter of the washers 35 being greater than the diameter of the apertures in the spacer plate 21.

Secured to the spacer plate 20 between the plate and the casing end wall 11 is a tensioned, yieldable member 36 arranged to urge the rollers 25, 26 to the right to maintain the washers 35 in abutment with the spacer plate 21, which plate acts as a stop to limit endwise movement of the rollers. This end thrust on the rollers provides sufficient frictional resistance to maintain the rolled map taut at all times, slight manual end pressure on one or the other of the rollers being required upon rotating either of the knobs 34.

For example, when it is desired to roll the map 27 onto the upper roller 25, the upper roller 25 is pushed slightly to the left, by means of its knob 34, thus overcoming the tension of member 36 on and freeing the upper roller, but the lower portion of the spring 36 continues to thrust the lower roller 26 endwise with the result that the lower roller resists free rotation. When either roller is manually operated, the other resists rotation whereby the map is tightly rolled on the driven roller and the map kept taut between the two rollers. Upon release of the knob of the drive roller the tensioned member 36 is free to act on the released or former drive roller, as well as the driven roller, thus holding the map taut while stationary.

Preferably, the yieldable member 36 is a strip of spring metal, formed, as shown in Fig. 4, having opposite bi-furcated ends, as at 37, to receive and clear the reduced roller end portions 29, the bi-furcated end of the spring extending through the apertures 32 in the spacer plate 20 and abutting the washers 31 urge the same against the shoulders 30 to urge the rollers to the right. The spring 26 may be secured intermediate its ends to the spacer plate 20 by rivets 39 or by any other suitable means.

In order that the map or chart, as the case may be, can be easily read at night a light source preferably a pair of electric light bulbs 40 are mounted in the casing 10 between the rollers 25, 26 and back of the map portion stretched between the rollers. In the present instance, the bulbs 40 are supported by a reflector member 41 which may be mounted within the casing in any suitable manner and arranged to reflect the light toward the casing opening.

It will be seen that by rotating one of the rollers in the proper direction that the map or chart may be wound thereon from the other of the rollers and vice versa so that any portion of the map may be brought into position behind the transparent cover 16, as desired. By removing the readily detachable snap-on cover 16, a portion of the map may be brought out of the casing through the front opening for any purpose, such as, for the purpose of making notations on the map, and when this is done any suitable support or table may be employed or the cover may be used to back up the map when

writing thereon. It will be noted that I have provided a casing which closely encases the rollers to provide a compact device which may be easily carried about and one which is particularly suitable for motorists. Furthermore, I have provided a hand map case having provisions for maintaining the map taut yet one in which a portion of, or the entire map may be readily and quickly removed from the casing upon removal of the readily detachable transparent cover. In addition, I have provided a hand map case which is not only compact and convenient to carry about, but one which is strong and also inexpensive to manufacture.

While I have shown and described my invention in detail it is to be understood that the same is to be limited only by the appended claims for many changes may be made without departing from the spirit and scope of the invention.

What I claim is:

1. In a device of the character described, a casing having an opening in a wall thereof, a removable wholly transparent flexible closure member closing said opening, a pair of rollers mounted in said casing for a map arranged to roll from one to the other of said rollers and visible in part externally of said casing, and means externally of said casing to rotate either of said rollers.

2. In a device of the character described, a casing having an opening in a wall thereof, a snap on wholly transparent closure member closing said opening, a pair of spaced parallel rollers mounted in said casing for a map arranged to roll onto one roller from the other and visible externally of said casing, and manually operable means externally of said casing for rotating either of said rollers.

3. In a device of the character described, a pair of spaced parallel rollers on which a map is arranged to be rolled from one roller onto the other roller, a casing closely fitting around said rollers and having an open front wall overlying a portion of the map, a wholly transparent and flexible closure member overlying and closing said opening, said closure member being flexed into place over the opening in the front wall and held under its tension to said casing and means externally of said casing to rotate either of said rollers.

4. In a device of the character described, a casing having an opening in a wall thereof, a pair of spaced parallel rollers mounted in said casing and on which a map is arranged to be rolled from one onto the other of said rollers past said opening, a snap-on transparent cover closing said opening and held under tension to said casing, and means externally of said casing to rotate said rollers.

5. In a device of the character described, a rectangular hollow casing having opposite end walls and a rear wall secured together, a spacer member mounted in said casing adjacent and in spaced relation to one of said end walls, said spacer member having an aperture to receive a roller extending therethrough longitudinally of said casing, and tensioned means secured to said spacer member between said spacer member and said end wall and projecting through said aperture and acting to move the roller longitudinally.

6. In a device of the character described, a hollow rectangular casing having end and rear walls and having an opening, a transparent closure member closing said opening, a pair of spaced plate members in said casing respectively posi-

tioned adjacent and spaced from said casing end walls, a pair of spaced parallel rollers in said casing and rotatably supported in said end walls, said rollers being arranged to move longitudinally

5 thereof, one of said plate members acting as a stop to limit longitudinal movement of said rollers, and a single tensioned leaf spring mounted on the other of said plate members and acting to hold both of said rollers against said other

10 plate member, and means for overcoming the tension on either of said rollers without affecting the tension on the other.

7. In a device of the character described, a substantially rectangular casing having end

15 walls, a plate member mounted in said casing in spaced relation to one of said casing end

walls, a pair of rollers mounted in said casing and extending through said plate member, and a leaf spring secured to said plate member and acting to urge said rollers longitudinally.

8. In a device of the character described, a substantially rectangular casing having end walls, a plate member mounted in said casing in spaced relation to one of said casing end walls, a pair of rollers mounted in said casing and extending through said plate member, a leaf spring having

10 its opposite ends bifurcated and respectively engaging said rollers to urge them longitudinally, and means securing said spring intermediate the ends thereof to said plate member.

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