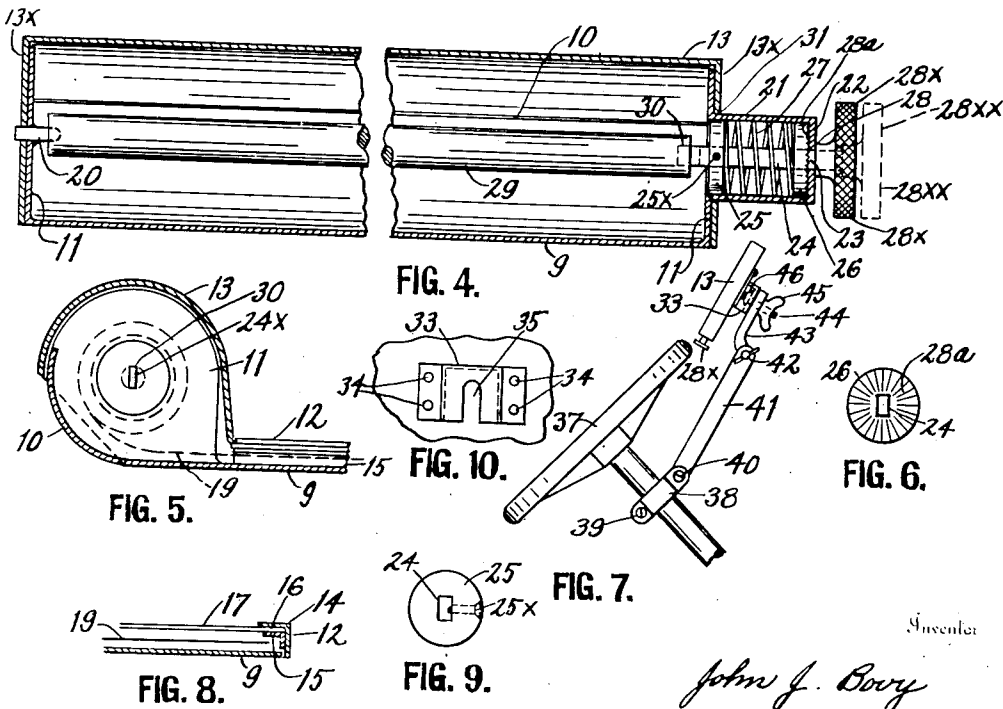
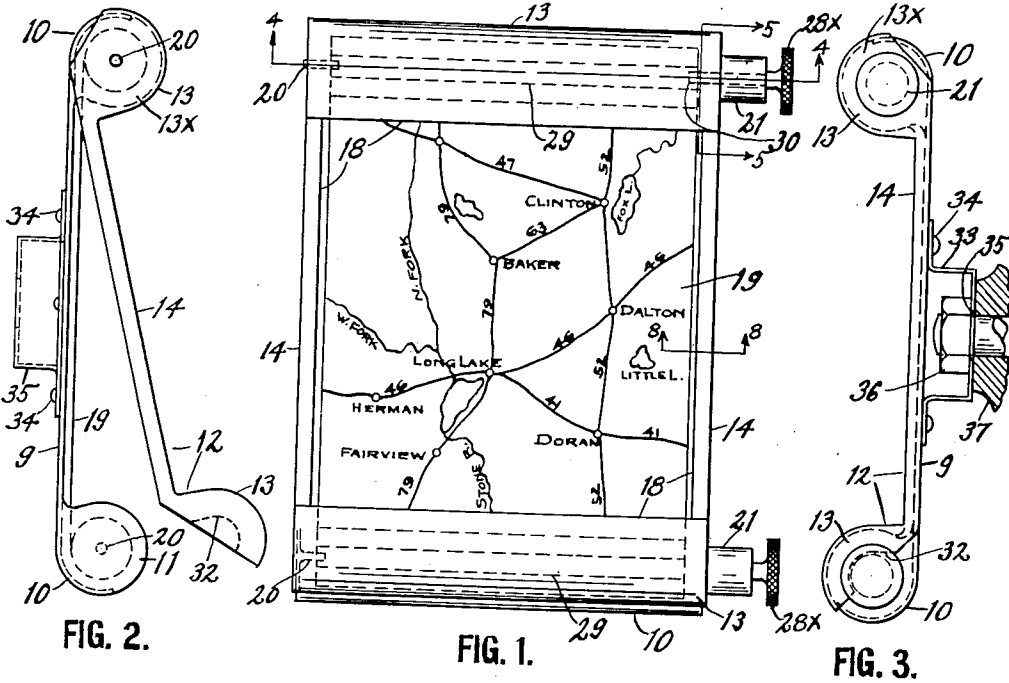


1,396,553.

Patented Nov. 8, 1921.



Inventor

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# UNITED STATES PATENT OFFICE.

JOHN J. BOVY, OF RED WING, MINNESOTA.

MAP-HOLDER.

1,396,553.

Specification of Letters Patent.

Patented Nov. 8, 1921.

Application filed February 21, 1921. Serial No. 446,561.

*To all whom it may concern:*

Be it known that I, JOHN J. BOVY, a citizen of the United States, residing at Red Wing, in the county of Goodhue and State of Minnesota, have invented a new and useful Map-Holder, of which the following is a specification.

My invention relates to map holders or reels particularly adapted to be used on automobiles and other vehicles in general using public highways or even on motor boats and flying machines of all kinds.

The object is to provide a simple, durable, convenient and efficient device which is adapted to be securely mounted in a convenient place in front of the driver. A further object is to provide means which eliminate the use of large and unwieldy road maps in automobiles when touring throughout comparatively large districts or from State to State.

These objects I accomplish by the device illustrated in the accompanying drawing, in which:

Figure 1 is a front or face view of the device exposing a portion of a map held in it.

Fig. 2 is a left hand side elevation of Fig. 1 showing the device partly opened.

Fig. 3 is a right hand side elevation of Fig. 1.

Fig. 4 is an enlarged sectional detail on line 4—4 of Fig. 1.

Fig. 5 is an enlarged section on line 5—5 of Fig. 1.

Fig. 6 is a detail view of disk 26 in Fig. 4.

Fig. 7 is a side elevation of a portion of a steering column of a car with a modified means for holding my map holder on it.

Fig. 8 is an enlarged section as on line 8—8 of Fig. 1.

Fig. 9 is a detail view of collar 25.

Fig. 10 is an elevation of central part of the back of the frame.

Referring to the drawing by reference numerals, the main body portion or frame of the device is composed of two members, namely a flat rectangular bottom plate 9 with semi-cylindrical ends 10 closed by round end plates 11, and a cover plate 12 with semi-cylindrical end portions 13 closed by end walls 13\* which overlap partly the outer sides of the end plates 11. Said cover plate, between the cylinders, is composed of two angle-shaped parallel members 14 inside of which are soldered or otherwise secured to the inside, a smaller angle 15 spaced

slightly below one flange of angle 14 leaving a space 16 between the two for insertion of glass, mica, celluloid or other transparent sheet or plate 17. Said glass extends from one cylinder to the other forming a sight 60 through which a road map 19 can be read.

The cylindrical end portions of the device form oppositely arranged magazines in either of which the map is rolled up on a roller 29 and can be unwound therefrom and wound upon the other roller by turning the latter, the map thereby exposed between the rollers and under glass 17 to the view of the driver, and said moving of the map is accomplished by the following structure.

Each cylinder has a stationary central stud 20 at one end and the other end is formed with a cylindrical extension 21 with end wall 22 and a hole 23 to receive a spring actuated stem 24 which is flattened as at 24\* in Fig. 5. Within the cylinder 21 are two collars 25 and 26, the inner collar 25, secured to stem 24 with a screw 25\* and collar 26 is slidable on said stem and between the two collars is a compression coil spring 27 which tends to push the pin inwardly until stopped by shoulder 28 of head 28\* on the outer end of the stem.

The inner side of end wall 22 and outer side of washer 26 may have small radial grooves 28<sup>a</sup> and head 28\* of pin 24 has its edges knurled as shown in Figs. 1 and 4. Between the inner end of stem 24 and stud 20 opposite therefrom I insert a roller 29, this being accomplished by pulling out head 28\* about to position 28\*\* while inserting roller and then allowing spring 27 to push pin 24 back into a hole 30 (see Figs. 4 and 5) corresponding in shape to the flattened end of the stem 24. The spring pressure on collar 26 against end wall 22 and the corrugations 28<sup>a</sup> of said parts causes the rollers to be held against accidental turning, and the map to be held taut between the rollers when the ends of the map have been secured to the rollers in any suitable manner, (not shown). The roller device in two opposite ends of the frame being counterparts I need not fully describe both.

As best shown in Figs. 2 and 4, one of the cylinders has its pin 20 projecting out through end wall 13\*, and at the other end the wall 13\* has a hole 31 to receive cylinder 21 thus making one of the end cylinders a hinge member. The other cylinder is notched out as at 32 (see Fig. 2) to fit cyl-

inder 21 but permits that end of cover plate to be swung out (see Fig. 2) and leaves the rollers accessible for attaching or removing a map. In the closed position the frame members are held by frictional engagement since they are resilient at the parts marked 12 in Fig. 2.

For holding my device in a convenient place near the driver I provide a sheet metal bracket 33 secured as at 34 to the under side of lower plate 9. Said bracket has a notch 35 for the steering shaft so that it may be slipped between cap-nut 36 and steering wheel hub 37 and secured by said nut 36 as in Fig. 3. Where construction of the wheel does not permit this mounting I provide a clamp 38 (see Fig. 7), clamped on the steering column by a screw 39 and having another clamping screw 40 for holding at any desired angle an arm 41, the latter having an extension 43 held by a clamping screw 42 and which forms a second joint on the arm. Said extension 43 carries a bolt 44 with a thumb-nut 45 adapted to secure the bolt with its head 46 fitting into bracket 33 to hold the latter firmly. It is readily seen that by manipulation of screws 40 and 42 the map holder can be placed in almost any desired location near the hand wheel 37.

From the above description the operation of the device is understood but it may be added that for convenience of the drivers the device or the maps may be made to expose only one township or county at a time and printing adjoining counties or districts in rotation or numerically on a roll and all the counties of a State on each roll. Also it is a mere matter of choice to so turn device or the map in it that the map may be read from left to right or upward and downward.

What I claim is:

1. In a device of the class described, a frame composed of a flat body with two cylindrical magazines, one at each of two

opposite ends thereof, a roller mounted within each magazine and adapted to engage opposite ends of a map, means for rotating the rollers to wind the map upon them; said flat frame having a space exposing a portion of the map between the two magazines; said frame comprising a back section and a front section hinged together at one of the magazines and partly overlapping each other, one of said magazines having its overlapping portions pivotally connected in concentric position to the roller therein to form the said hinge for the two frame sections.

2. A map holder comprising two spaced cylindrical magazines and a frame with transparent plate between said magazines for reading the map, each of said cylinders having a stationary journal stud in one end and a spring-pressed rotatable slidable winding stem journaled in the other end, a roller having one end journaled on the fixed stud and the other end detachably engaged for rotation by the rotatable stem and having means for holding a map detachably to the roller, and means preventing accidental rotation of the rollers; said winding stem having its inner end polygonal to fit a polygonal cavity in the adjacent end of the map roller, a collar fixed on the stem, a compression coil spring on the stem and pressing on the collar toward the roller, a slidable but not rotatable collar at the other end of the spring, the bearing for the stem having a reduced portion for the outer end of the stem and the stem having a winding head outside said reduced portion.

3. The structure specified in claim 2, said reduced portion and the adjacent collar having their adjacent faces roughened to increase the friction by which the roller is held in any desired rotated position.

In testimony whereof I affix my signature.  
JOHN J. BOVY.