May 29, 1923. 1,457,026

W. A. HANSES

MAP CASE

Filed Jan. 27, 1922

Fig. 1.

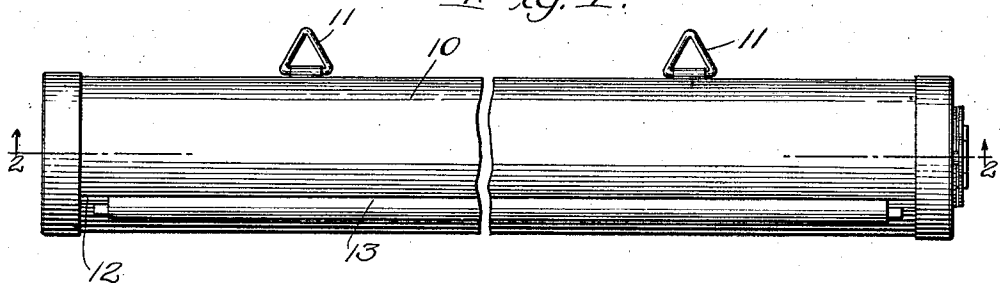


Fig. 2.

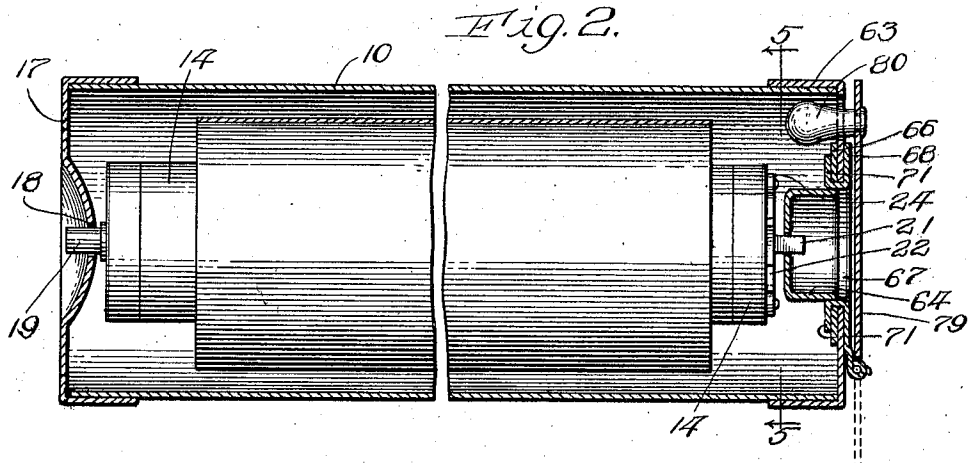


Fig. 5.

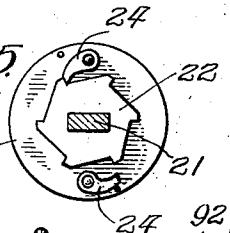


Fig. 4.

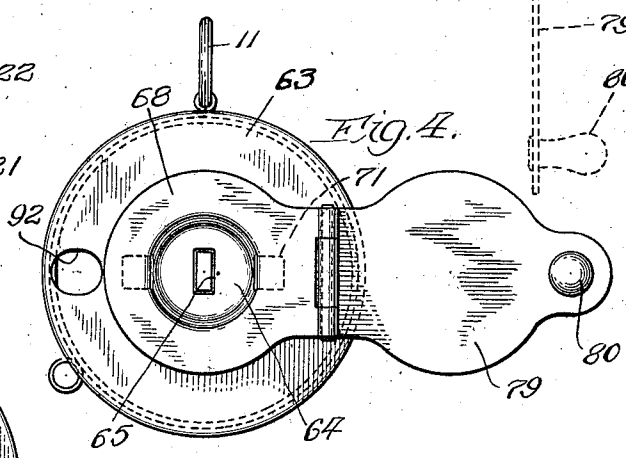
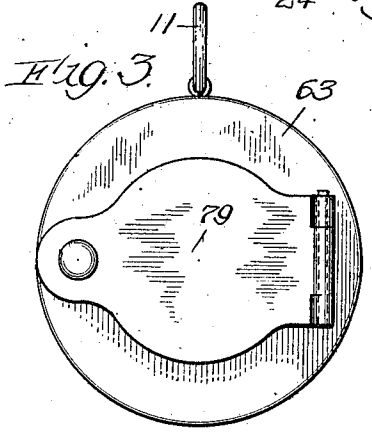


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM A. HANSES, OF CHICAGO, ILLINOIS, ASSIGNOR TO RAND, McNALLY & CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

MAP CASE.

Application filed January 27, 1922. Serial No. 532,102.

To all whom it may concern:

Be it known that I, WILLIAM A. HANSES, a citizen of the United States, residing at 536 South Clark Street, Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Map Cases, of which the following is a specification.

This invention relates to improvements in map cases; and more especially to a case especially adapted for holding the ordinary form of spring roller upon which a map is wound. My improved case is so constructed that the spring tension in the spring roller can be easily and quickly changed, without removing the roller from the case. Other features and advantages of my invention will appear more fully as I proceed with my specification.

In that form of device embodying the features of my invention shown in the accompanying drawings, Figure 1 is a view in front elevation of my improved map case, Fig. 2 is a view taken as indicated by the line 2 of Fig. 1, Fig. 3 is a view of the case in end elevation, showing the end having the spring-adjusting mechanism, Fig. 4 is a view similar to Fig. 3 showing the parts in an altered position, and Fig. 5 is a view taken as indicated by the line 5—5 of Fig. 2.

As shown in the drawings, 10 indicates a cylindrical casing provided with hooks 11 for supporting the same. The casing is provided with a longitudinal slot 12, through which the map 13 moves as it is wound upon and unwound from the roller 14 supported within the casing. The casing 10 is provided at one end with a cap 17, provided with a centrally arranged hole adapted to support the fixed pin 19 in the end of the roller 14.

The roller 14 is of the ordinary spring type such as is used for window shades, maps and the like; and is provided at one end with the ordinary pivot pin 19 and at the other end with a flattened pin 21, which is attached to the usual rod within the roller 14 carrying a spiral spring. Attached to the pin 21 and lying next to the end of the roller 14 is the ordinary toothed wheel 22. Mounted on the end of the roller 14 are the ordinary pivoted pawls 24, adapted to engage with the teeth on the wheel in the usual manner. The construction and operation of the roller itself form no part of the present invention except in combination with other parts, as such rollers are old in the art. In the operation and use of such rollers in connection with maps or shades, the pin corresponding to 19, which is stationary with respect to the roller, is rotatably supported, and the flattened pin corresponding to 21 is held fixed. Rotation of the roller 14 to unwind the map serves to wind up the spring within the roller, so that when the map is released, this spring will turn the roller to rewind the map unless held by one of the pawls 24. In order to disengage the pawls 24, the map is given a slight downward pull to cause rotation of the roller 14 to cause the pawls 24 to move outwardly by centrifugal force, whereupon the spring turns the roller to wind up the map in the usual manner. In the operation of such rollers the tension of the spring within the roller is adjusted by rotating the flattened pin 21 until the desired tension is obtained. This necessitates removal of the roller from its supports. By the use of my improved case, the tension of the spring in the roller may be changed at will without removing the same from the case.

I will now describe in detail the particular construction, by means of which this is accomplished. The end of the casing 10 is provided with a cap 63 having a centrally arranged hole. Centrally arranged with respect to this hole is an inwardly projecting cup-shaped rotatable member 64, provided with a centrally arranged slot 65, adapted to accommodate the flattened pin 21 on the end of the roller 14. This cup-shaped member 64 is provided with a circular flange 66 lying inside of the cap 63 and surrounding the centrally located hole therein. On the outside of the cap 63 is located a ring 68, provided with an inwardly turned flange 67. The flange 67 is provided with two outwardly extending tongues 71, extending through slots in the cup-shaped member 64 and bent outwardly against the flange 66 in order to hold the cup-shaped member and ring 68 to the cap 63. The parts are arranged loosely enough, so that the ring 68 and the cup-shaped member 64 are free to rotate in the cap 63.

The ring 68 is also provided with a hinged cover-plate 79, provided with a small handle 80. When this cover-plate is open, it serves as a crank to rotate the cup-shaped member 64. The handle 80 furnishes a grip. The

cap 63 is provided near its periphery with a small hole 92 adapted to accommodate the handle 80, when the cover-plate 79 is folded against the end, as shown in Fig. 2. The entry of the handle 80 in the hole 92, also serves to lock the cup-shaped member 64 against rotation in the cap 63.

The operation of the device is as follows. The roller with the map on it is inserted in the case through either one of the ends by removing one of the caps. The cap is then put in place. The caps 17 and 63 fit tightly enough on the ends of the casing 10, so that they will not rotate after once put in place. After the caps are in place, and the pin 19 in the hole 18, and the pin 21 in the slot 65, the member 64 is rotated by means of the handle 80 to give the spring inside of the roller the desired tension. For example, if the map is unwound, and the spring is too loosely adjusted to wind it up, the cup-shaped member 64 may be rotated to turn the flattened pin 21 to increase the tension on the spring within the roller, as desired. The turning of the cup shaped member 64 as described will, the map being unwound, result in winding up the map without using the spring, thereby leaving it in its condition of tension with the map unwound. A subsequent unwinding of the map will therefore result in tightening of the spring. If the map is wound up when the spring is tightened the stick 13 being in contact with the slot 12 will prevent motion of the map and the spring will be tightened in an obvious manner. When the proper tension is obtained, the cover 79 is folded over and the handle 80 inserted in the hole 92 to hold the flattened pin 21 in position. In like manner, if it is desired to loosen the spring tension, the cup-shaped member may be rotated to unwind the map from the roller, to release some of the tension on the spring.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as possible in view of the prior art.

What I claim as new and desire to secure by Letters Patent, is:

1. In combination with a spring roller, a support comprising a frame, means on the frame for rotatably supporting the pivot pin of the roller which moves with the roller, adjustable means on the frame for supporting the spring holding pin of the roller, and means whereby said last named means may be rotated in either direction for tension adjustment of the spring of the roller.

2. In combination with a spring roller, a support comprising a frame, means on the frame for rotatably supporting the pivot pin of the roller which moves with the roller, adjustable means on the frame for supporting the spring holding pin of the roller, means whereby said last named means may be rotated in either direction for tension adjustment of the spring of the roller, and means for locking said rotatable means in position.

3. In combination with a spring roller, a case therefor, a cap upon each end of the case, means upon one of said caps for pivotally supporting the pivot pin of the roller which moves with the roller, means rotatably mounted upon the other cap for supporting the spring holding pin of the roller, and means whereby said last named means may be rotated in either direction for tension adjustment of the roller.

4. In combination with a spring roller, a support comprising a frame, means on the frame for rotatably supporting the pivot pin of the roller which moves with the roller, adjustable means on the frame for supporting the spring holding pin of the roller, means whereby said last named means may be rotated for adjustment of the spring of the roller, and a handle hinged upon said adjusting means having a projection serving as a crank handle when open and as a locking means when closed.

Witness my hand and seal this 23rd day of January, 1922.

WILLIAM A. HANSES. [L. S.]