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MAP ROLLING AND REVERSING DEVICE.

APPLICATION FILED AUG. 26, 1910. RENEWED OCT. 11, 1913.

1,081,644. Patented Dec. 16, 1913.

Fig. 1.

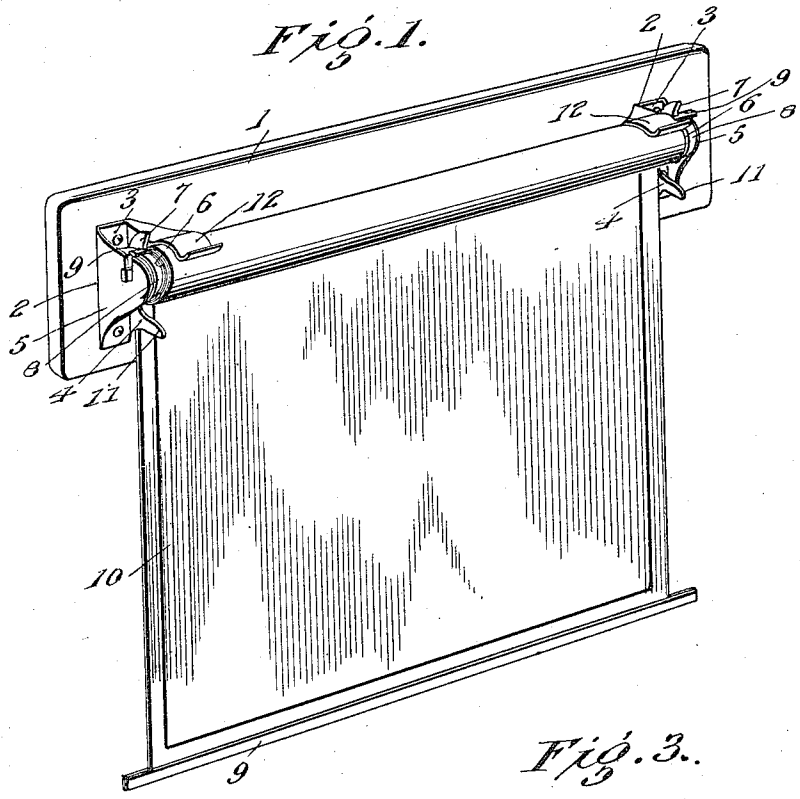


Fig. 3.

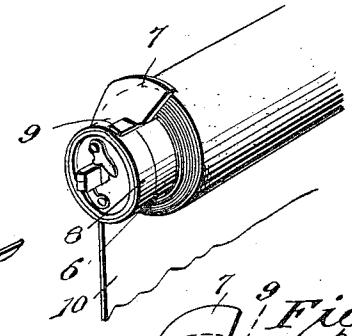


Fig. 2.

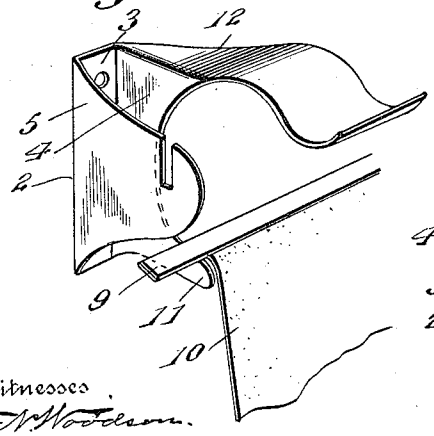
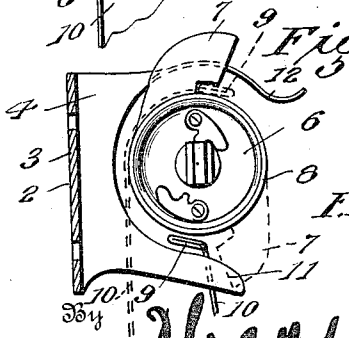


Fig. 4.



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MAP ROLLING AND REVERSING DEVICE.

1,081,644. Specification of Letters Patent. Patented Dec. 16, 1913.

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To all whom it may concern:

Be it known that I, FRANK E. WILSON, citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Map Rolling and Reversing Devices, of which the following is a specification.

This invention comprehends certain new and useful improvements in maps and shades and fixtures and rollers therefor whereby the map or shade can be maintained in properly rolled up condition until desired for use or inspection, and the invention has for its primary object a simple, durable and efficient construction of device of this character by the use of which the map or shade is entirely free and easily detachable from the roller, and is capable of being easily attached thereto when required.

The invention also has for its object an improved shade or map roller provided with an improved construction and arrangement of means for detachably connecting the flexible map or shade thereto.

A further object of the invention is an apparatus of this character in which means are provided for attaching the map or shade to the roller without freeing or detaching the roller from the fixture, and means whereby it is impossible for the map or shade to become detached from the roller either in the unwinding or the winding operation.

The invention also has for its object an improved construction of map or shade provided, preferably at both top and bottom edges with metal bindings which project beyond the side edges of the main or body portion of the strip or sheet so as to form engaging devices for the cams with which the roller is provided, the bindings serving effectually to prevent the map or shade from becoming detached from the roller. And a still further object of the invention is to generally improve this class of devices and to render them more useful and more commercially desirable.

With these and other objects in view, the invention consists in certain constructions, arrangements, and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a map or shade holder constructed in accordance with my invention. Fig. 2 is a perspective view of one of the fixtures or brackets and a fragment of the shade or map arranged in juxtaposition thereto. Fig. 3 is a fragmentary perspective view of the roller with the map or shade partially rolled up on the same, and Fig. 4 is an end view of the roller and a transverse sectional view through one of the brackets.

Corresponding and like parts are referred to in the following description and indicated in all of the views of the drawing by the same reference characters.

The present embodiment of my invention is shown as a map rolling and reversing device, but it is to be understood that this is merely selected for the purpose of illustration and that the device is equally applicable for use with shades, as indicated at the outset of the specification.

In the present instance the device includes a supporting board 1 to which the fixtures 2 are secured as by screws or similar fastening devices, but of course it is to be understood that this board is not an essential part of the invention and is dispensed with when the device is used for shades, in which latter event the fixtures will be secured to the window or window frame in the usual manner. Preferably each fixture is constructed of a single piece of sheet metal, stamped and bent to the required shape, and each embodies a base portion 3 through which the screws or similar fastening devices pass, and inner and outer members 4 and 5, the inner members constituting guards as will be hereinafter more specifically set forth, while the outer members 5 are formed with the usual openings to receive the gudgeons of the spring-rotated roller 6. The members 4 and 5 extend parallel to each other and in spaced relation, as clearly illustrated in the drawing.

The roller 6 is provided at each end with a retaining device, preferably in the form of a lug or hook 7, the same in the present instance projecting perpendicularly from the roller and forming parts of end bands or collars 8. These lugs or hooks 7 are so located that they work, in the rotation of

the roller, in the spaces between the inner and the outer members of the fixtures or brackets, and preferably close to the adjacent faces of the innermost members 4. They are designed for engagement by the extended ends of preferably metal binding strips 9 that are clenched upon or otherwise secured to the top and bottom edges of the map 10, as shown. It is to be understood, however, that my invention is not limited to binding strips such as are illustrated in the accompanying drawing; but that other strips may be employed, if desired. For instance, when the device is used for a shade, the lowermost binding strip may be in the form of the ordinary wooden strip which is mounted within a hem or casing formed on the lower edge of the shade.

The binding strip 9 at one end of the map is passed into engagement with the slots or recesses formed in the lugs 7 and upon the releasing of the roller which is of course under spring tension, said binding strip will be passed rearwardly and upwardly around the fixtures and roller and the map or the like will be wound up on the latter.

In order to stop the map when fully wound up and to avoid the liability of permitting the roller to rotate too far in the rewinding operation, which would manifestly affect the tension of the spring, the innermost members 4 of the fixtures are provided with forwardly projecting stop fingers 11 which extend partially around the roller as shown and underneath the same and are designed to be engaged by the laterally extended ends of the lowermost binding strip 9 when the map is fully rewound. These inner members 4, as is evident, constitute side guides which tend to engage the side edges of the map and prevent the same from skewing to one side or the other, the map being thereby maintained at all times in proper condition. Furthermore, to prevent the map from leaving the roller in the reversing operation, the inner members 4 are extended laterally at their upper edges as indicated at 12 to form overhanging guards which project over and somewhat in front of the roller, the said guards being preferably curved downwardly and thence upwardly at their extremities, as clearly illustrated in the drawing.

From the foregoing description in connection with the accompanying drawing, the operation and application of my improved device will be apparent. In the practical use of the device, it is not necessary to remove the roller from the fixtures or brackets in order to secure the map or the like to the roller; but it is only necessary to insert the top binding strip 9 between the roller and the stop fingers 11 of the fixtures, and to then, with the fingers of the operator, induce rotation in the roller in the direction impelled by the tension of the spring until the retaining devices or hooks 7 engage the laterally projected ends of said binding strip. To detach the map from the roller it is only necessary to pull the map down as far as it will go and to then with the fingers of the operator continue to rotate the roller in the same direction until the map falls out.

Having thus described the invention what is claimed as new is—

1. The combination with a map or shade having a binding strip mounted thereon and projecting beyond the side edges thereof, of a bracket having a laterally extending support for engagement with the binding strip, a roller journaled in said bracket, and means carried by the roller and adapted to engage and clamp the binding strip on said roller when the latter is rotated.

2. The combination with a map or shade having a binding strip secured to each end thereof and projecting beyond the side edges of said map or shade, of a bracket having a laterally extending finger forming a support for the upper binding strip, a roller journaled in said bracket, and a hook carried by the roller and adapted to engage and clamp the upper binding strip on said roller when the latter is rotated, said finger by engagement with said binding strip also forming a stop for limiting the winding movement of the shade or map on the roller.

3. The combination with a map or shade having a binding strip mounted thereon and projecting beyond the side edges thereof, of a bracket having a laterally extending finger forming a support for engagement with said binding strip, a roller journaled in the bracket, and a lug secured to one end of the roller and having a recess formed therein adapted to receive the binding strip when said roller is rotated.

4. The combination with a shade or map having a binding strip secured to each end thereof and projecting laterally beyond the adjacent longitudinal edges thereof, of a bracket having a laterally extending stop finger adapted to form a support for the extended end of one of the binding strips, a roller journaled in the bracket, and means carried by said roller and adapted to engage and clamp the extended end of the upper binding strip on the roller when the latter is rotated.

5. The combination with a shade or map having oppositely disposed binding strips projecting laterally from the opposite longitudinal edges thereof, of a bracket having a laterally projecting finger, the upper face of which is adapted to support one of the binding strips, a roller journaled in the bracket, and a hook mounted on said roller and adapted to engage the extended end of the binding strip and clamp said strip on

the roller when the latter is rotated, the lower face of said finger, by contact with the extended end of the lower binding strip, serving to limit the winding movement of the shade or map.

6. The combination with a shade or map having oppositely disposed binding strips projecting laterally beyond the adjacent longitudinal edges thereof, of a bracket including co-acting members spaced apart to form a guiding recess, there being a finger projecting laterally from one of the members and adapted to form a support for the upper binding strip, a roller journaled in the bracket, and a gripping device mounted for rotation with said roller within the recess and adapted to engage the extended end of the upper binding strip for clamping said strip on the roller when the latter is rotated.

7. The combination with a shade or map having upper and lower binding strips extending laterally beyond the adjacent longitudinal edges thereof, of a bracket including co-acting members spaced apart to form an intermediate guiding recess, one of said members being formed with a bearing and the other with a laterally extending finger adapted to support the extended end of the upper binding strip and a guard overhanging said finger, a roller engaging the bearing, and a gripping device mounted on the roller at said recess and adapted to engage the extended end of the upper binding strip and clamp said strip to the roller when the latter is rotated, the free end of the guard being deflected upwardly and spaced from the finger to permit the ready insertion and removal of said roller.

8. The combination with a shade or map having upper and lower binding strips projecting laterally from the adjacent longitudinal edges thereof, of a bracket, a roller mounted on the bracket, said bracket being provided with a laterally extending finger and an overhanging guard spaced from said finger to permit the insertion and removal of the roller, said finger forming a support for the extended end of the upper binding strip, and a gripping device mounted on the roller and adapted to engage and hold the strip on said roller when the latter is rotated in one direction.

9. The combination with a shade or map having upper and lower binding strips projecting laterally from the adjacent longitudinal edges thereof, of a bracket, a spring actuated roller mounted on the bracket, said bracket being provided with an overhanging guard adapted to bear against the shade or map, and a laterally extending finger spaced from the guard to permit the insertion and removal of the roller, the upper face of the finger forming a support for the extended end of the upper binding strip, and a lug mounted on the roller and adapted to bear against the adjacent edge of the guard, said lug being provided with a recess arranged to receive the extended end of the upper binding strip when the roller is rotated, the lower face of the finger, by engagement with the extended end of the lower binding strip, serving to limit the winding movement of the shade or map.

In testimony whereof, I affix my signature in presence of two witnesses.

FRANK E. WILSON. [L. S.]

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."