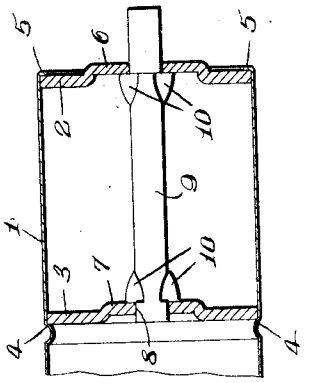
R. T. AXE.

WINDING ROLLER.

APPLICATION FILED JULY 2, 1912.

1,049,036.

Patented Dec. 31, 1912.



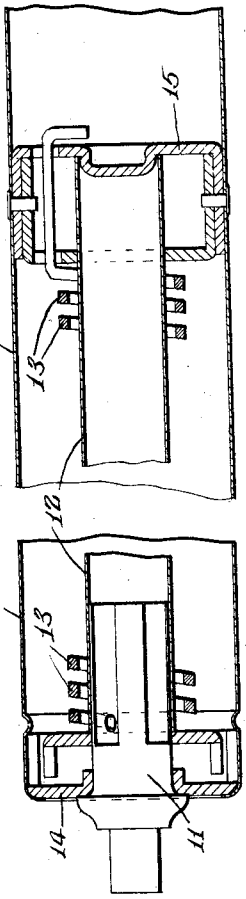




Fig-1-


Fig-3-

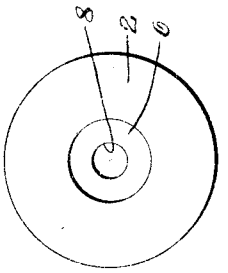



Fig-2-

WITNESSES:

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# UNITED STATES PATENT OFFICE.

ROY T. AXE, OF SYRACUSE, NEW YORK, ASSIGNOR TO OLIVER M. EDWARDS, OF SYRACUSE, NEW YORK.

## WINDING-ROLLER.

1,049,036. Specification of Letters Patent. **Patented Dec. 31, 1912.**

Original application filed May 25, 1911, Serial No. 629,299. Divided and this application filed July 2, 1912. Serial No. 707,158.

*To all whom it may concern:*

Be it known that I, ROY T. AXE, of Syracuse, in the county of Onondaga and State of New York, a citizen of the United States, have invented a new and useful Winding-Roller, of which the following is a specification.

My invention relates to a winding or spring roller for raising windows, curtains, etc., and has for its object particularly simple and efficient means for supporting the fixed axle of the roller; and the invention consists in the combinations and constructions hereinafter set forth and claimed.

In describing this invention reference is had to the accompanying drawing in which like characters designate corresponding parts in all the views.

Figure 1 is a longitudinal sectional view, partly broken away, of a roller embodying my invention. Fig. 2 is a face view of one of the heads. Fig. 3 is an end elevation of the axle.

1 is the body of the roller, the same being a sheet metal shell rolled cylindrical in form.

2 and 3 are heads located within one end portion of the shell 1, the head 2 being located at the extreme end of the shell 1, and the head 3 being spaced apart from the head 2 and abutting against an internal shoulder or corrugation 4 with which the shell 1 is provided. The head 2 is held from displacement outwardly by the inturned margin 5 at one end of the shell 1, said margin 5 engaging the outer face of the head 2. The heads 2 and 3 are formed with axial offset bosses or hubs 6, 7 which are formed with central openings as 8.

9 is the fixed axle or trunnion of the roller, said axle extending through the openings 8 of the heads 2, 3 and the portion thereof interposed between said heads 2, 3 having means associated therewith for engaging the heads 2, 3 and holding the same engaged respectively with the corrugation 4 and inturned margin 5, said means being shown as integral peripheral shoulders 10 engaging opposing surfaces of the bosses 6, 7. The boss 6 of the outer head 2 is arranged to project outwardly beyond the end face of the shell 1 in order to engage a surface receiving the end thrust of the roller in one direction.

11 and 12 are sections of the axle which is acted upon by the spring 13 of the roller, this axle being journaled in a head 14 and in an anchor 15 located within the shell 1, one end of the spring 13 being connected to the anchor 15 and the other end to the axle sections 11 and 12.

The constructions and arrangements of the parts 11 to 15 inclusive form no part of this invention but constitute the subject matter of my pending application Sr. No. 629,299, filed May 25, 1911, of which application this is a division.

What I claim is:

1. A winding roller comprising a metallic shell, heads located in one end portion of the shell and being spaced apart therein, the heads being formed of sheet metal and having axial openings, and an axle extending through said openings and being secured to said heads, substantially as and for the purpose described.

2. A winding roller comprising a metallic shell, heads located in one end portion of the shell and being spaced apart therein, the heads being formed of sheet metal and having axial openings, and an axle extending through said openings and having peripheral shoulders for engaging opposing faces of the heads, substantially as and for the purpose specified.

3. A winding roller comprising a metallic shell, heads located in one end portion of the shell and being spaced apart therein, the heads being formed of sheet metal and having axial offset bosses formed with central openings, and an axle extending through said openings and being secured to said heads, substantially as and for the purpose set forth.

4. A winding roller comprising a metallic shell, heads located in one end portion of the shell, and being spaced apart therein the heads being formed of sheet metal and having axial offset bosses formed with central openings, and an axle extending through said openings and being secured to said heads, the axle having integral peripheral shoulders for engaging opposing faces of the offset bosses, substantially as and for the purpose described.

5. A winding roller comprising a metallic shell having an internal shoulder spaced apart from one end thereof, metallic heads

located within the contiguous end portion of the shell, the inner head abutting against said shoulder and the outer head being located near the end of the shell, and the margin of the shell at such end being turned inwardly on the outer face of said outer head, and an axle supported by said heads and having means associated therewith for holding the heads engaged respectively with said shoulder and inturned margin, substantially as and for the purpose specified.

6. A winding roller comprising a metallic shell having an internal shoulder spaced apart from one end thereof, metallic heads located within the contiguous end portion of the shell, the inner head abutting against said shoulder and the outer head being located near the end of the shell, and the margin of the shell at such end being turned inwardly on the outer face of said outer head, and an axle supported by said heads and having peripheral shoulders engaging opposing faces of the heads, substantially as and for the purpose set forth.

7. A winding roller comprising a metallic shell having an internal shoulder spaced apart from one end thereof, sheet metal heads located within the contiguous end portion of the shell, the inner head abutting against said shoulder, and the outer head being located near the end of the shell and the margin of the shell at such end being turned inwardly on the outer face of the outer head, and the heads being formed with axial offset bosses having central openings, and an axle extending through said openings and having peripheral shoulders arranged to engage the opposing faces of said offset bosses, substantially as and for the purpose described.

In testimony whereof, I have hereunto signed my name in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, and State of New York, this 27th day of June, 1912.

ROY T. AXE.

Witnesses:
S. DAVIS,
L. M. DAVIS.