

No. 656,614.

Patented Aug. 21, 1900.

J. E. DARBY & C. A. BAKER.
FIXTURE FOR SHADE ROLLERS.

(Application filed May 28, 1900.)

(No Model.)

Fig. 1.

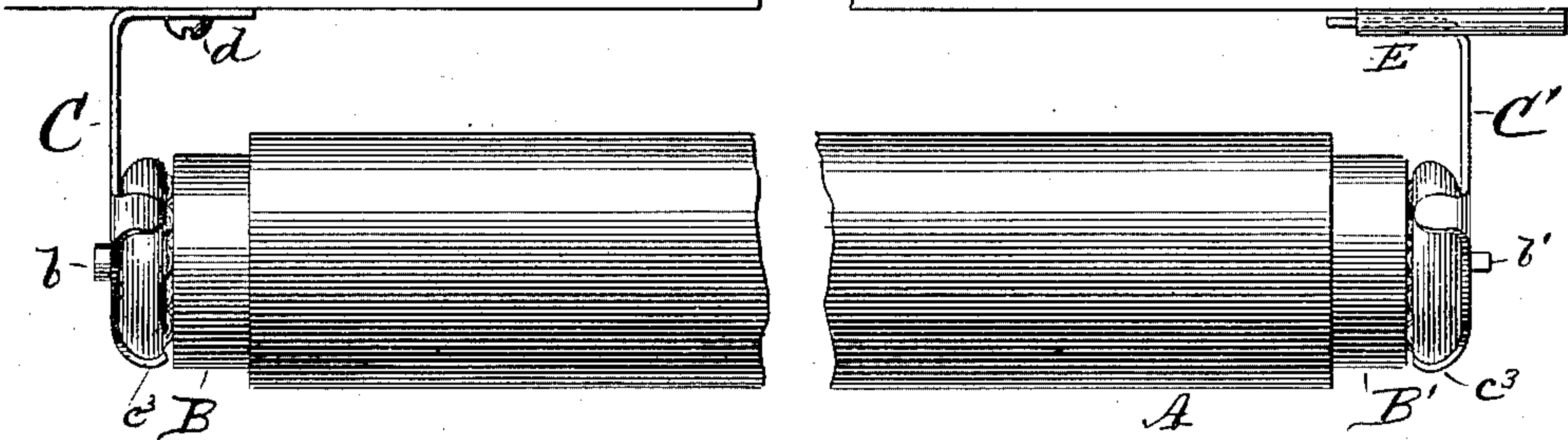


Fig. 2.

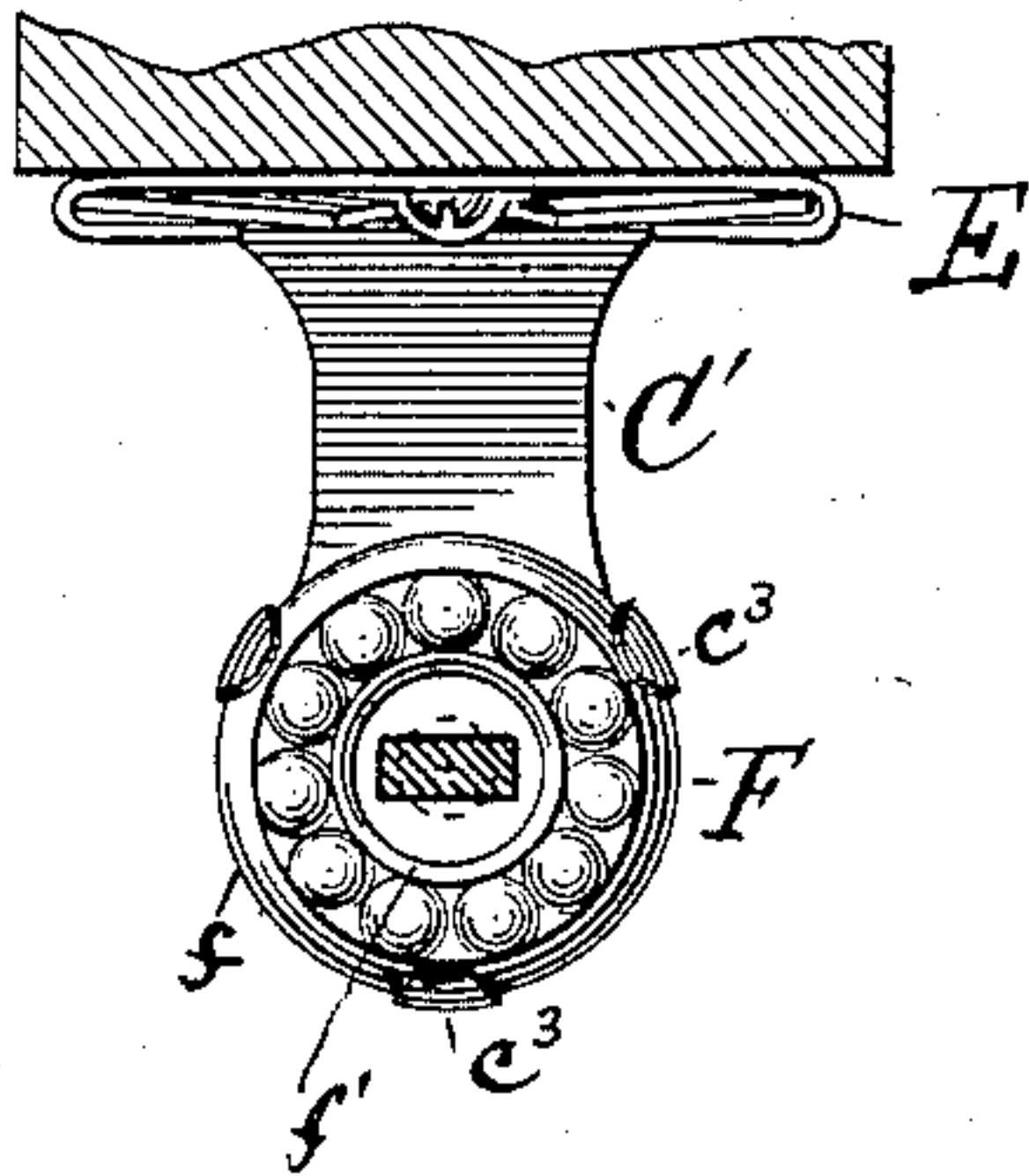


Fig. 3.

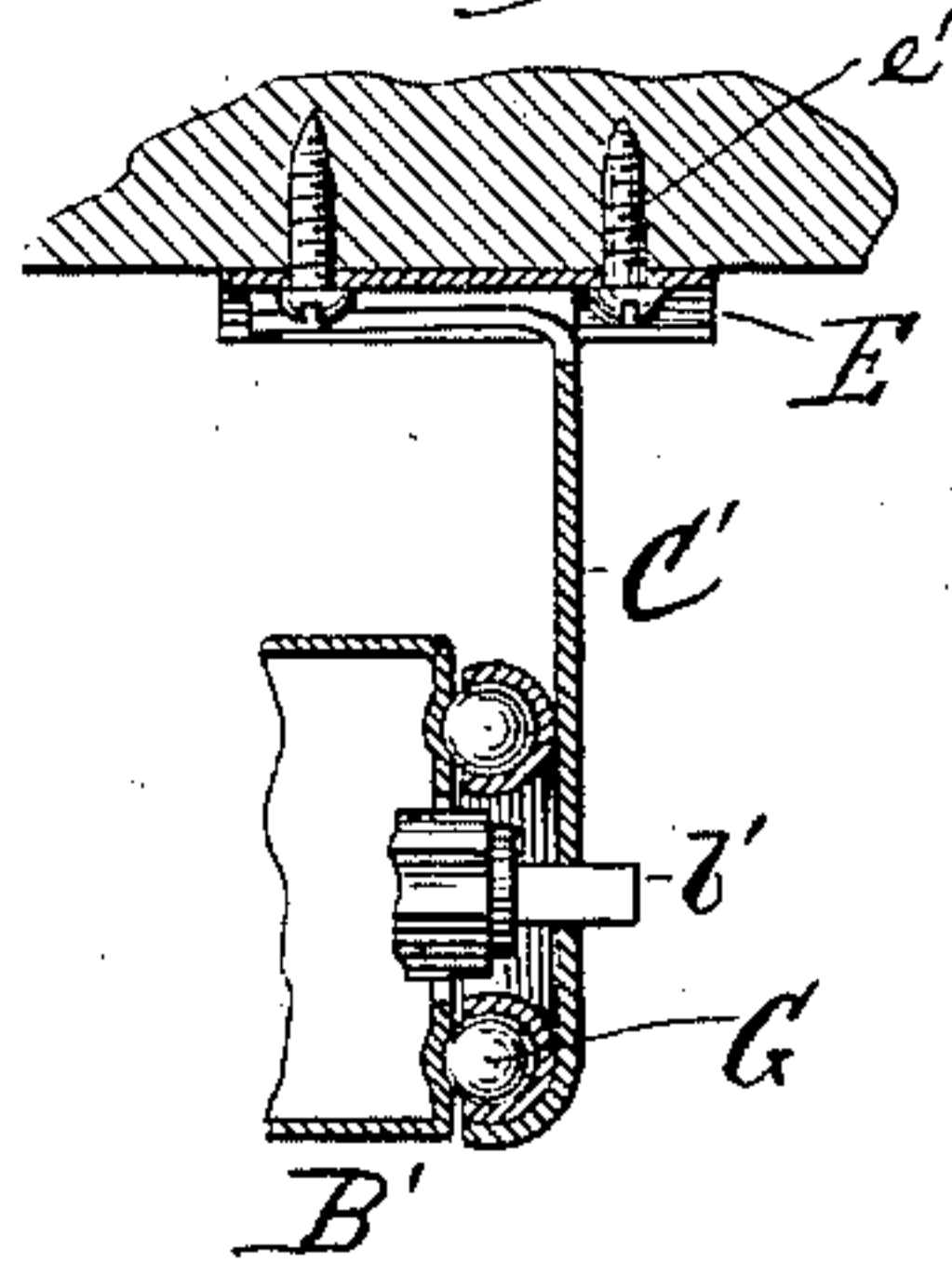


Fig. 4.

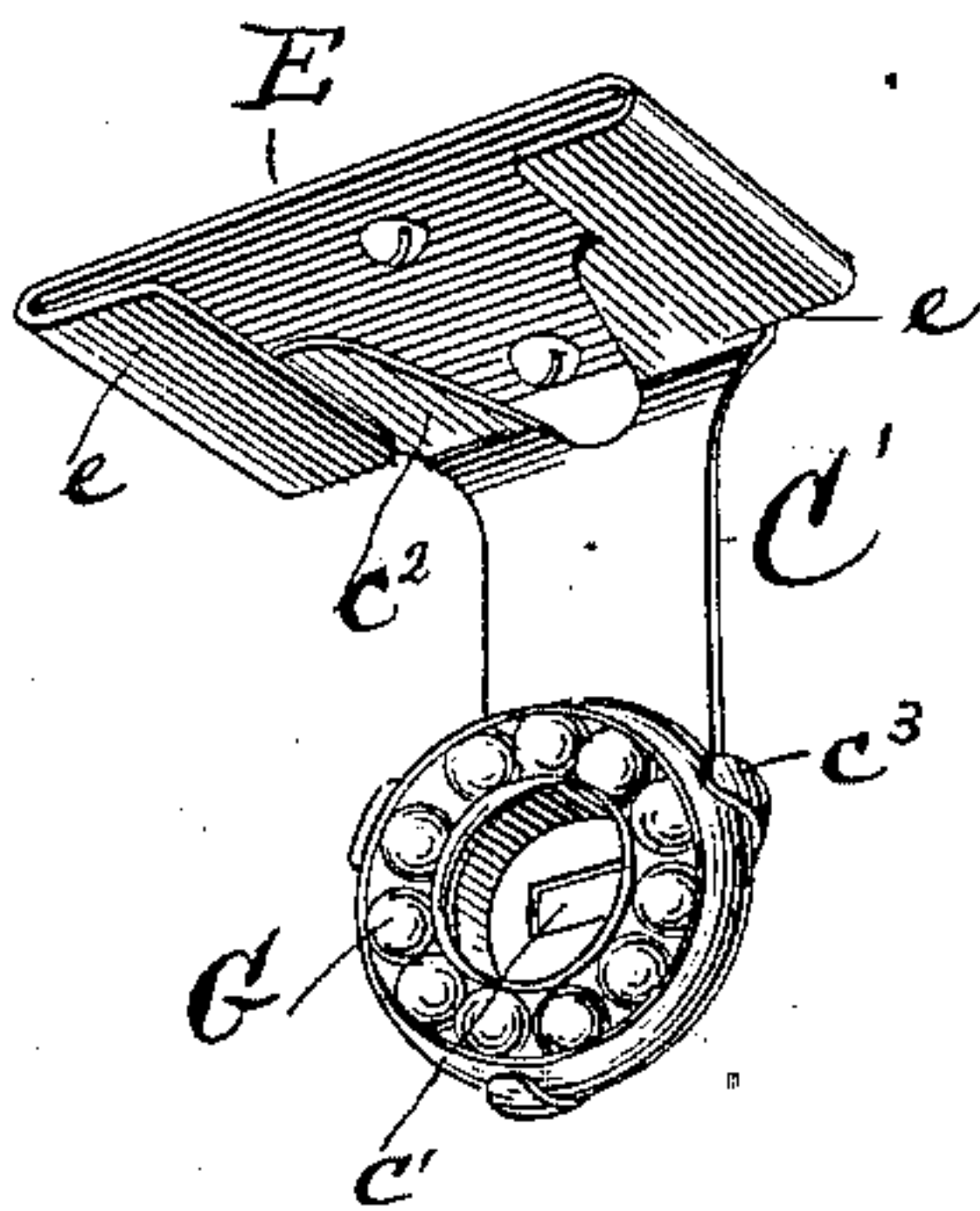
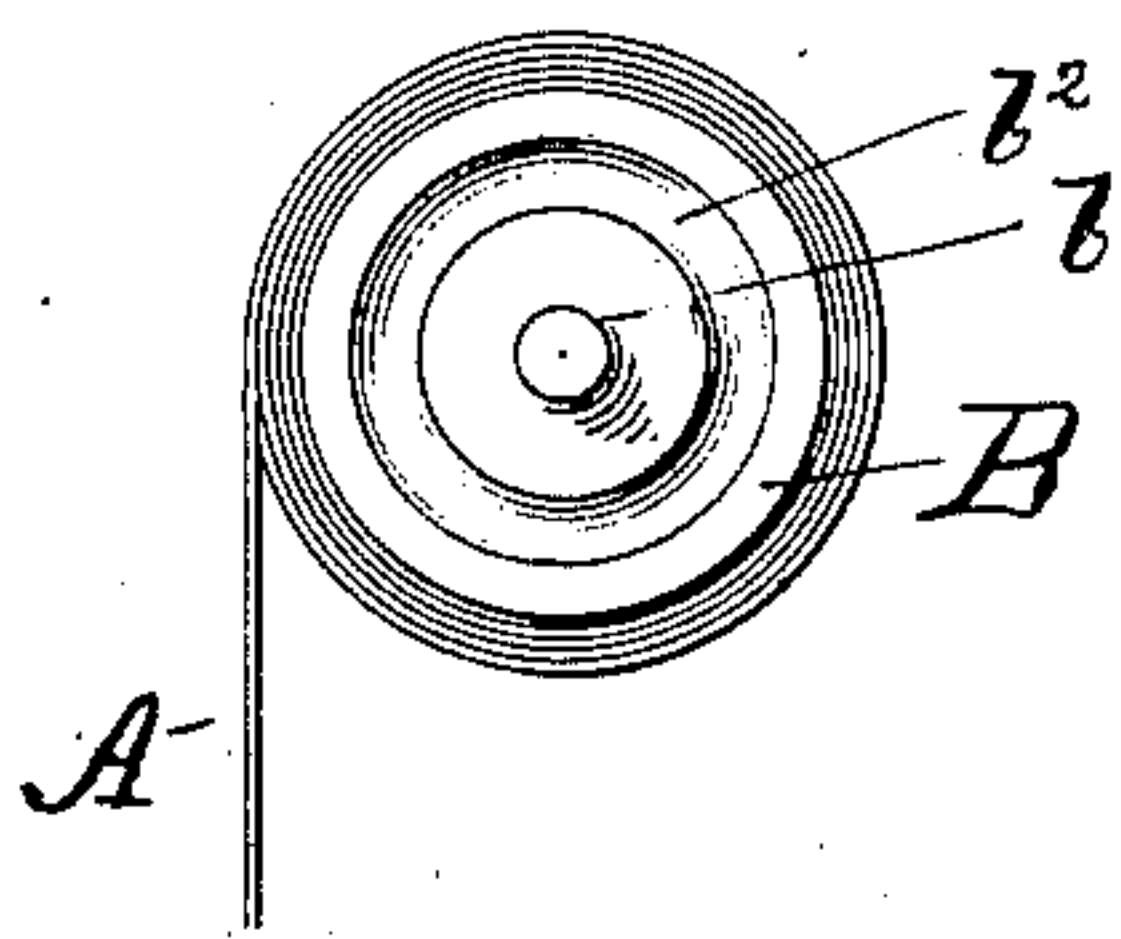


Fig. 5.



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FIXTURE FOR SHADE-ROLLERS.

SPECIFICATION forming part of Letters Patent No. 656,614, dated August 21, 1900.

Application filed May 26, 1900. Serial No. 18,029. (No model.)

To all whom it may concern:

Be it known that we, JAMES E. DARBY and CHARLES A. BAKER, residents of Waukesha, in the county of Waukesha, State of Wisconsin, have invented certain new and useful Improvements in Fixtures for Shade-Rollers, of which the following is a full, clear, and exact description.

The main object of this invention is to provide a ball-bearing fixture for shade-rollers so that a more easy movement of the roller may be had and so that the cloth-carrying capacity of the roller-spring may be increased.

A further object of the invention is to provide an improved adjustable bracket or bearing-plate for one end of the shade-roller.

The invention consists in the features of novelty hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the claims at the end of this specification.

Figure 1 is a plan view of the shade-roller embodying our invention. Fig. 2 is a view in elevation of the bearing-plate shown at the right-hand side of Fig. 1, the bar at the end of the roller being shown in section. Fig. 3 is a view in central vertical section through Fig. 2. Fig. 4 is a perspective view of the fixture for supporting one end of the roller. Fig. 5 is an end view of the bearing-cap at one end of the roller.

The roller whereon the shade A is mounted may be of any usual or suitable construction and will be provided with the usual winding-spring; but as this spring forms no part of the present invention it has not been illustrated and need not be described. The ends of the roller are provided with metal caps B and B', and centrally from the cap B projects the short rod or stem *b*, that enters a bearing-hole in the adjacent bracket C. Through the cap B' at the opposite end of the roller projects the flat lug or extension *b'*, adapted to fit a corresponding square opening *c'* in the adjacent bracket C', it being understood that with this extension *b'* the spring in the interior of the roller will be connected.

The brackets C C' are preferably formed with the angular feet or extensions *c*², whereby the brackets are held in position for use. The bracket C at one end of the roller may be directly attached by screws *d* to the win-

dow-casing; but the bracket at the opposite end is held in place by means of a bearing-plate E, that is provided with reverted flanges *e*, adapted to engage the feet or extensions *c*² of the bracket C', as clearly shown in Figs. 1 to 4 of the drawings. It will be observed that the feet or extensions *c*² of the bracket C' are bowed or inclined to the plane of the bearing-plate E, (see Fig. 2,) so that the frictional contact between the parts will be sufficient to hold the bracket in any of its adjusted positions. The bearing-plate E is conveniently attached to the window-casing by suitable screws *e'*. Each of the brackets C and C' is shown as provided with inwardly-bent arms *c*³, that engage and retain in position a ball-bearing plate or cage F. This plate or cage F is preferably formed from sheet metal and of annular shape, the inner edges of the plate or cage being formed with inwardly and outwardly turned flanges *f f'*, adapted to retain the balls G in position for use, as clearly shown in Figs. 2, 3, and 4 of the drawings. The outer end of each of the caps B and B' is shown as formed with an annular groove *b*², forming a track for the bearing-balls G.

In placing the parts together for use the bracket C will be fixed at the desired position upon the window-casing and the bearing-plate E will be correspondingly located adjacent the opposite end of the roller. The feet *c*² of the bracket C' will then be slipped partially within the flanges *e* of the bearing-plate E. The stem *b* of the roller-cap B will then be placed in position in the bracket C and the bracket-plate C' will be slipped inwardly until the extension *b'* of the cap B' sets within the opening *c'* of the bracket C'. The bracket C' will be adjusted so as to secure a snug but easy bearing of the balls G against the caps B B' at the ends of the roller. By thus providing the ball-bearings at the ends of the roller it will be found that the shade A may be raised and lowered with the least possible friction, and by thus removing friction from the ends of the roller we have found in practice that the carrying or winding capacity of the spring within the roller is very materially increased. The adjustable bracket C' and the bearing-plate E enable the fixtures to be readily set in position, as the adjustment of

the bracket C avoids the necessity for any accurate setting of the bearing-plate E.

It is manifest that the precise details of construction above set out may be varied
5 within wide limits without departing from the spirit of the invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

10 1. A fixture for shade-rollers, comprising a cap for the end of the roller, a bracket for said end, bearing-balls interposed between said cap and said bracket, and means for retaining said balls in position upon one of said
15 parts.

2. A fixture for shade-rollers, comprising a cap for the end of the roller, a bracket for said end, bearing-balls interposed between said cap and said bracket, and a plate having
20 flanges for retaining said bearing-balls in position upon one of said parts.

3. A fixture for shade-rollers, comprising a cap for the end of the roller, a bracket for said end, bearing-balls interposed between
25 said cap and said bracket, and an intermediate annular ball-holding plate or cage provided with flanges for retaining the balls in position.

4. A fixture for shade-rollers, comprising
30 a cap for the end of the roller, a bracket for said end, bearing-balls interposed between said cap and said bracket, and a ball-holding plate or cage connected to said bracket and provided with oppositely-disposed flanges
35 for retaining the balls in position.

5. A fixture for shade-rollers, comprising a cap for the end of the roller, a bracket for

said end, bearing-balls interposed between said cap and said bracket, said bracket being provided with inwardly-turned flanges
40 and a ball-holding plate or cage having an annular channel engaged by the flanges of the bracket.

6. A fixture for shade-rollers, comprising a cap for the end of the roller, a bracket for
45 said end, bearing-balls between said cap and said bracket, said cap and said bracket being provided one with means for retaining the balls in position thereon and the other with an annular grooved track whereon said balls
50 will bear.

7. A fixture for shade-rollers, comprising a cap for the end of the roller, a bracket for said end, bearing-balls interposed between said cap and said bracket, means for retain-
55 ing said balls in position in one of said parts, said bracket having its inner end bent at substantially right angles to the body of the bracket and a flanged bearing-plate adapted to sustain said bracket, whereby the bearing
60 of the balls may be readily adjusted.

8. A fixture for shade-rollers, comprising a cap for the end of the roller, a bracket for said end, bearing-balls interposed between said cap and said bracket, means for retain-
65 ing said balls in position in one of said parts, said bracket being adjustably supported, whereby the pressure upon the bearing-balls may be varied.

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