No. 627,733. Patented June 27, 1899.

E. F. HARTSHORN.

SHADE ROLLER.

(Application filed Nov. 17, 1893.)

(No Model.)

Fig. 1.

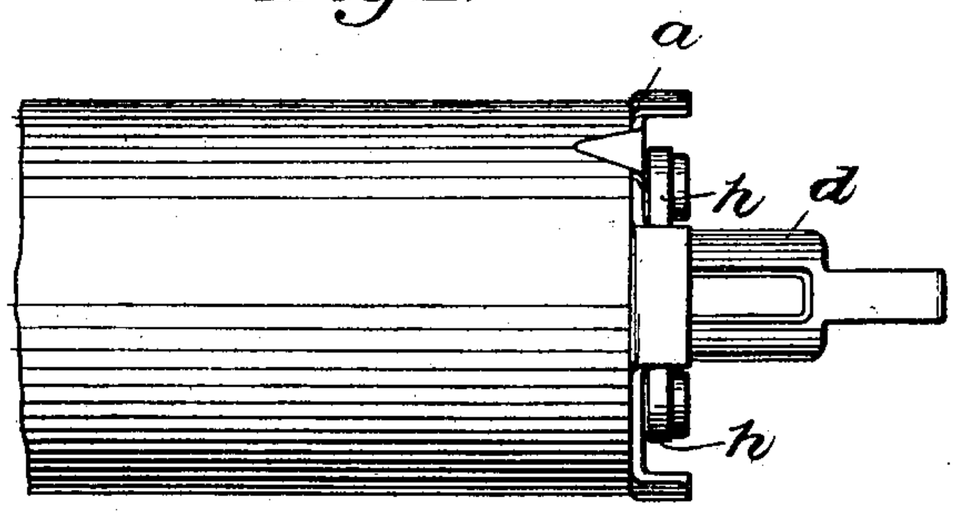


Fig. 2,

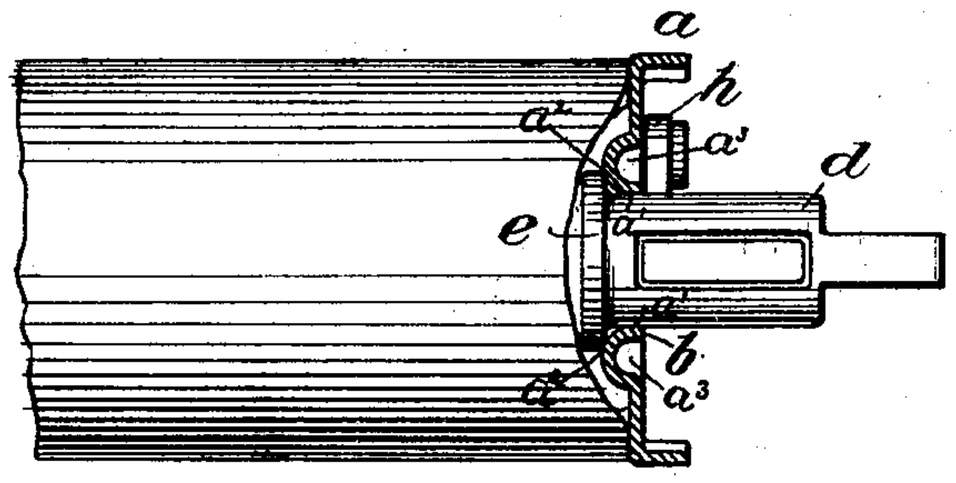


Fig. 4,

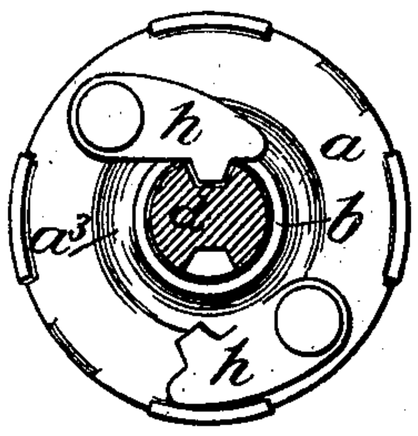
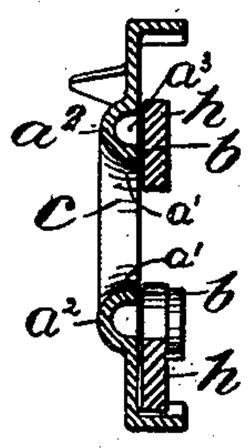


Fig. 3,



Witnesses:-

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UNITED STATES PATENT OFFICE.

EDMUND F. HARTSHORN, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE STEWART HARTSHORN COMPANY, OF NEW JERSEY.

SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 627,733, dated June 27, 1899.

Application filed November 17, 1893. Serial No. 491,195. (No model.)

To all whom it may concern:

Be it known that I, EDMUND F. HARTSHORN, of Newark, Essex county, and State of New Jersey, have invented a new and useful Improvement in Shade-Rollers, of which the following is a specification.

My improvement relates to the "cup" secured to the end of the roller, through which the spindle projects and which forms the bearing for one end of the roller as it revolves around the spindle.

In the accompanying drawings, illustrating my improvement, Figure 1 is a side view of a roller with the cup in position on the latter. Fig. 2 is the same as Fig. 1, with the cup and part of the roller in section. Fig. 3 is a sectional side view of the cup detached, and Fig. 4 is a front view of the cup.

The cup *a* in my improvement is stamped up from thin metal; and my invention consists in forming the cup when stamped up in such a manner that it will afford a perfect and smooth bearing on the spindle.

In constructing the cup in the process of stamping up from metal the central hole *c*, through which the spindle projects, is cut out from the metal, leaving a rough edge *b*, and in all forms of these cups heretofore used on rollers the spindle has rested on this rough edge, which has thus formed the bearing-surface for the roller, resulting in the wearing of the parts and in an imperfect and noisy operation of the roller. I have found that it is possible in stamping up the cup to turn the rough edge *b* of the central hole to one side of the face or plane of the cup in such a manner that the spindle will rest against the smooth surface a' of the metal. As will be seen from Fig. 2, the spindle is in contact with the cup at two points—at a', where the cup rests on the circumference of the spur *d*, and at a^2, where the shoulder *e* presses against the back of the cup. Therefore in turning the edge *b* of the central hole in order that the smooth-finished surface a^2 of the cup will come in contact with the shoulder *e* it is necessary that the edge be turned outward or toward the front face of the cup when the latter is in position on the rollers, and, moreover, in order that the edge *b* shall not touch, and thus interfere with the operation of the pawls *h*, pivoted on the front of the cup, the edge must not project beyond the face of the latter, as will be understood from Figs. 2 and 3.

The pointed spurs *i*, shown as projecting from one side of the journal-bearing, may engage with the rollers to serve in securing the bearing to the roller; but the same is not absolutely essential, as any other suitable means may be employed for securing the bearing to its support.

In constructing my cup I bend back the metal around the central hole, so as to form a rounded projection a^2 and a corresponding recess a^3 in the front of the cup, and then carry out the edge *b* in such a manner that the smooth surface a' will be presented against the spindle, while on account of the back projection a^2 the edge will not come beyond the front face of the cup, and therefore will not interfere with the pawls. Furthermore, by carrying back the projection a^2 some distance I am enabled to form a long bearing a' on the spindle, and thus insure a more steady and perfect revolution of the roller.

By the form of construction above described I am enabled to produce a cheap shade-roller cup and yet one that will insure a perfect and noiseless operation of the roller and that will prevent wear of the engaging parts.

It will be observed that by forming the bearing, as described, by pressing a portion of the metal to one side of the face and then in the opposite direction a smooth hole is formed for the journal to pass through, and a concavo-convexo bead or protuberance is made which forms a bearing-surface for a part of the roller and also makes the metal bearing-plate stronger than it would otherwise be. It is also obvious that these advantages are gained, and the construction is the same whether the metal bearing be for the stationary pintle of the roller, as illustrated in Fig. 2 of the drawings, or be the bearing for the other end of the roller, which is formed by the bracket that receives the pintle which revolves with the roller, as is well understood in the art.

I claim—

A bearing for the journal of a shade-roller formed of metal adapted to be struck up into

shape, said bearing being formed with a journal-opening and having the metal around the opening struck up or pressed to one side of the face of the bearing into a concavo-convexo-shaped bead or protuberance, the portion of said bead immediately around the journal-opening constituting a flange extending from the bead toward the opposite face of the bearing to form a smooth bore for the journal, the edge of said flange being in a vertical plane to the bore and on the opposite face of the bearing to the bead or protuberance, substantially as described.

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Witnesses:
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