

No. 656,288.

Patented Aug. 21, 1900.

E. F. HARTSHORN.
SPRING SHADE ROLLER.

(Application filed July 18, 1899.)

(No Model.)

Fig. 1

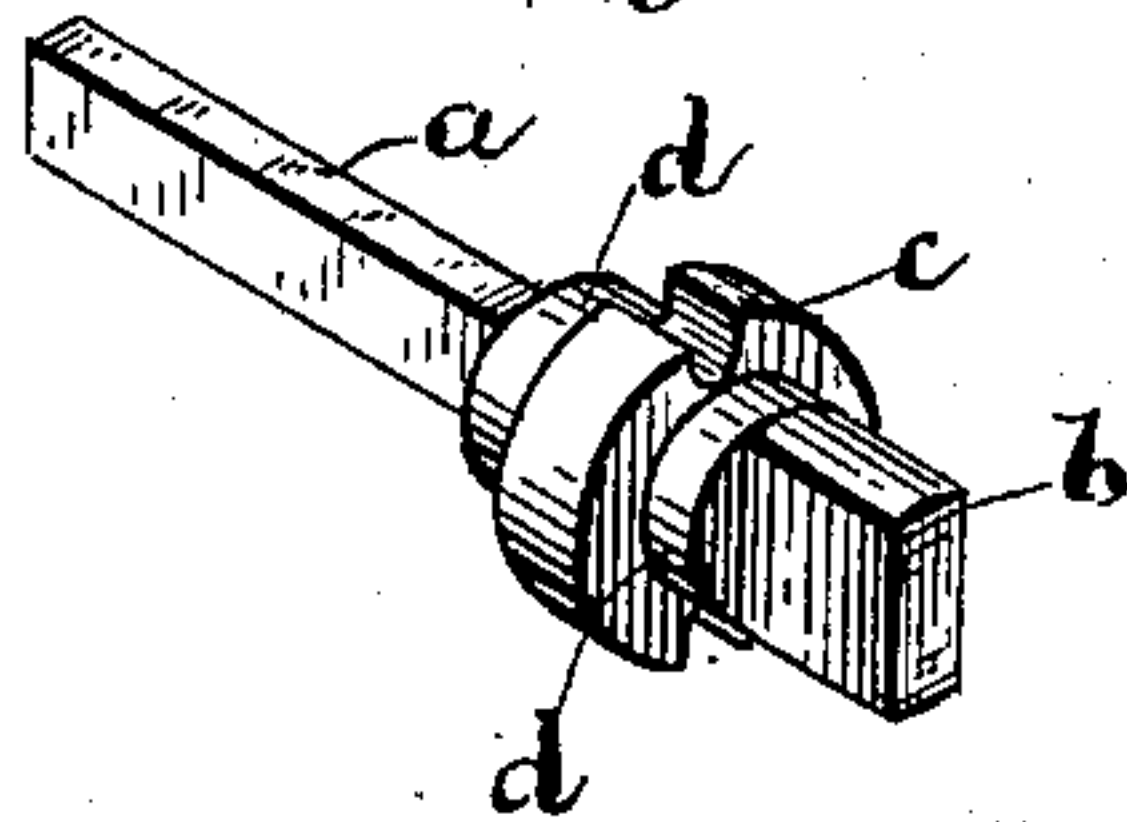


Fig. 2

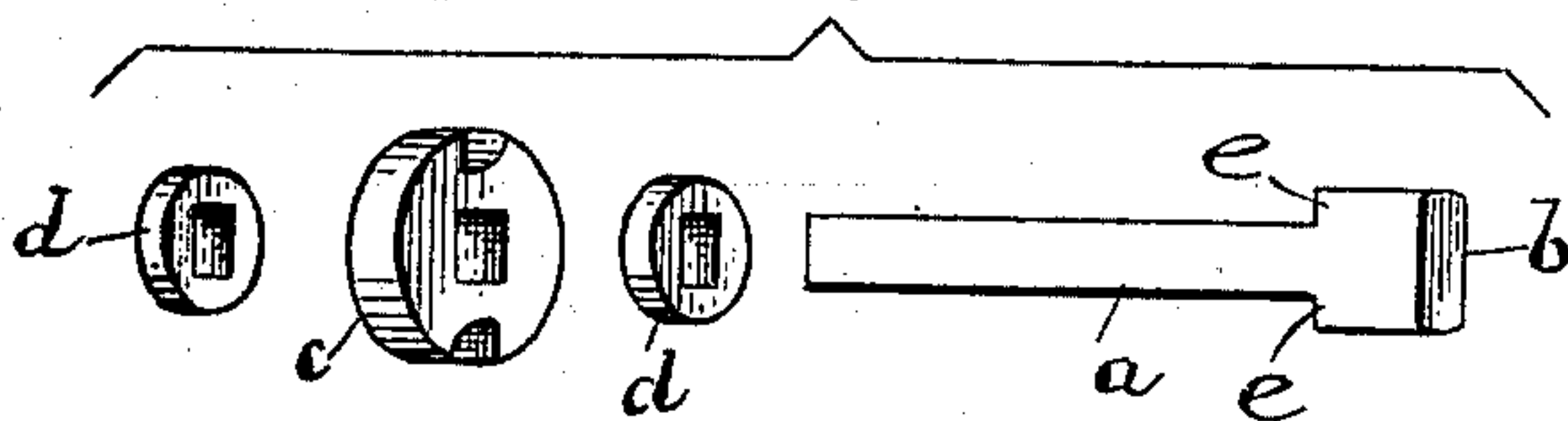
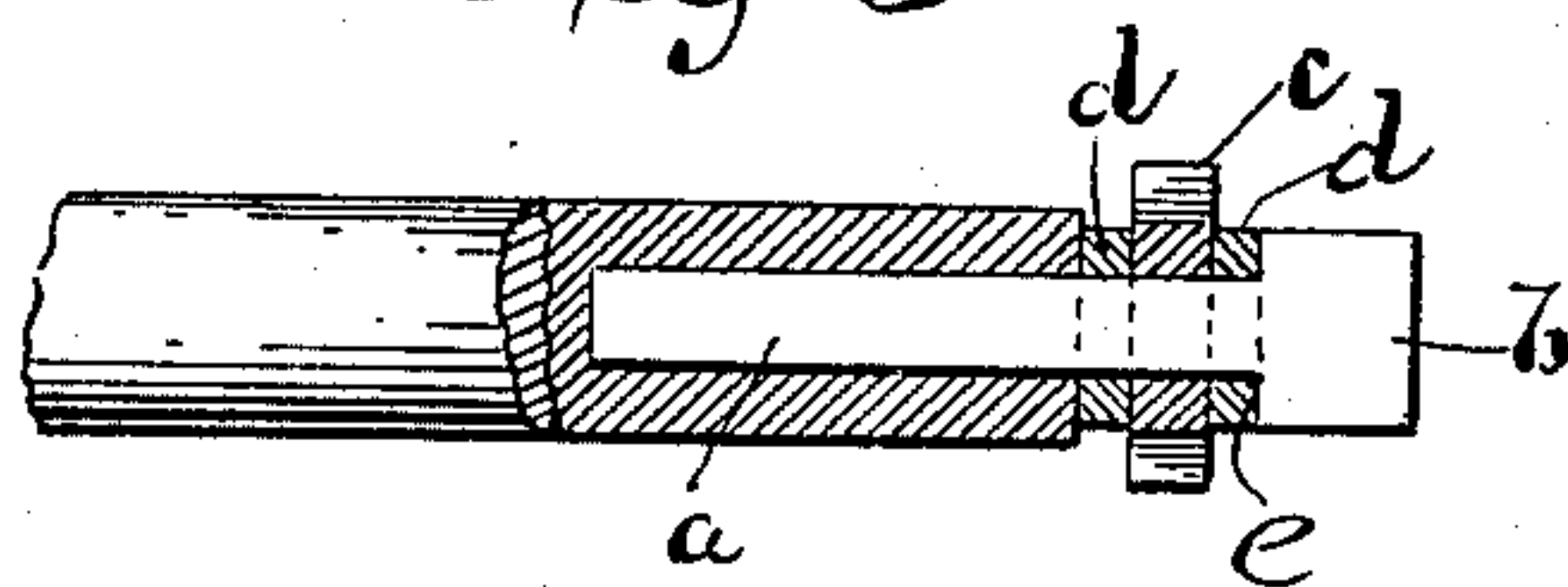


Fig. 3



Witnesses.

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UNITED STATES PATENT OFFICE.

EDMUND F. HARTSHORN, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE
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SPRING SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 656,288, dated August 21, 1900.

Application filed July 18, 1899. Serial No. 724,227. (No model.)

To all whom it may concern:

Be it known that I, EDMUND F. HARTSHORN, a citizen of the United States of America, and a resident of Newark, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Spring Shade-Rollers, of which the following is a specification.

This improvement relates to the metallic piece termed a "spear" secured to the outer end of the spindle within the roller, by which the latter is mounted in the bracket, and which forms the journal on which that end of the roller revolves; and the improvement consists in a novel method of constructing the spear by which it can be more cheaply and perfectly made.

In the accompanying drawings, forming part of this specification, Figure 1 is a view of the complete spear, showing the parts assembled. Fig. 2 is a detached view of the separate parts forming the spear, and Fig. 3 is a view of the spear in position in the end of the spindle.

As shown in the drawings, the spear *a* is provided with a flat outer end *b*, adapted to fit in the bracket and by which the spindle is held stationary as the roller revolves around it, and contains, moreover, the ratchet-hub *c*, with which the pawls in the roller engage in the usual and well-known manner.

To insure the correct and perfect working of the roller, it is necessary that the parts of the spear be accurately constructed and that the edges of the ratchet-hub be sharply made in order that their engagement with the pawls be exact and true. Heretofore this form of spear has been cast in one piece from suitable metal. Such construction is costly, and with it it is difficult to form the parts accurately, so as to obtain a perfect working of the roller. In my improvement I propose to form the spear by stamping it up from suitable metal in separate sections or pieces and uniting these to form the complete spear. In this improved construction the spear is formed of the separate sections shown in Fig. 2, stamped up from suitable metal, consist-

ing of the main piece *a*, which is inserted in the end of the spindle, and the ratchet-hub *c* and washers *d*, mounted on the part *a*, as shown. The piece *a* has at one end a square flat head, the outer edge *b* of which is adapted to engage with the notched window-bracket and the inner side of which is provided with the square shoulders *e* next to the shank, against which the washer *d* rests and by which the washer and ratchet-hub are held in place on the end of the spindle. The shank of the piece *a*, by which the spear is secured to the spindle, is made rectangular in cross-section, so that when inserted in the end of the spindle the spear cannot turn in the latter, and for a like reason the central holes in the ratchet-hub and in the washer are also rectangular, whereby these parts cannot turn on the shank, but are firmly and securely held in position. When the parts are put together and the piece *a* inserted in the end of the spindle with the washer resting against the square shoulder *e*, by reason of the bearing against this shoulder, in connection with the engagement of the rectangular-shaped shank with the rectangular holes in the washer and hub, the parts are securely held together, and no separate or additional fastening is necessary to secure them.

What I claim is—

In a spring shade-roller, a spear, stamped up from metal, consisting of the piece *a* having a shank rectangular in cross-section, wherewith the spear engages with the spindle and with the ratchet-hub and washer, and a flattened outer end, provided with the inner shoulders *e* and edge *b*, adapted to engage with the bracket; the ratchet-hub *c*; and the washer *d*, the hub and washer having central holes rectangular in shape to engage with the shank of the piece *a*, whereby the parts are connected together, substantially as described.

EDMUND F. HARTSHORN.

Witnesses:

FRED S. KEMPER,
C. E. ANDERSON.