

(No Model.)

S. HARTSHORN.
SPRING SHADE ROLLER.

No. 335,449.

Patented Feb. 2, 1886.

Fig. 1.

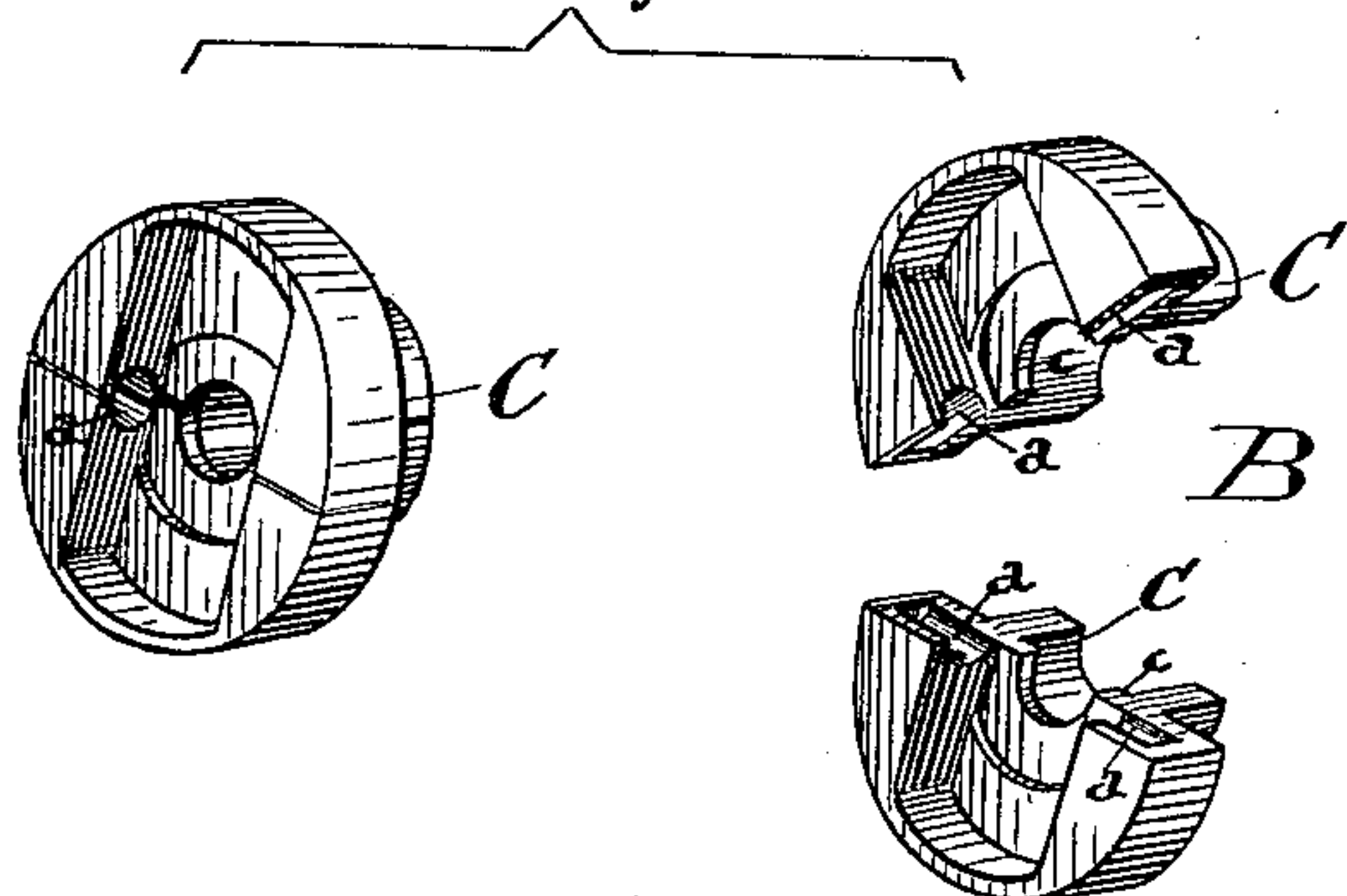


Fig. 2.

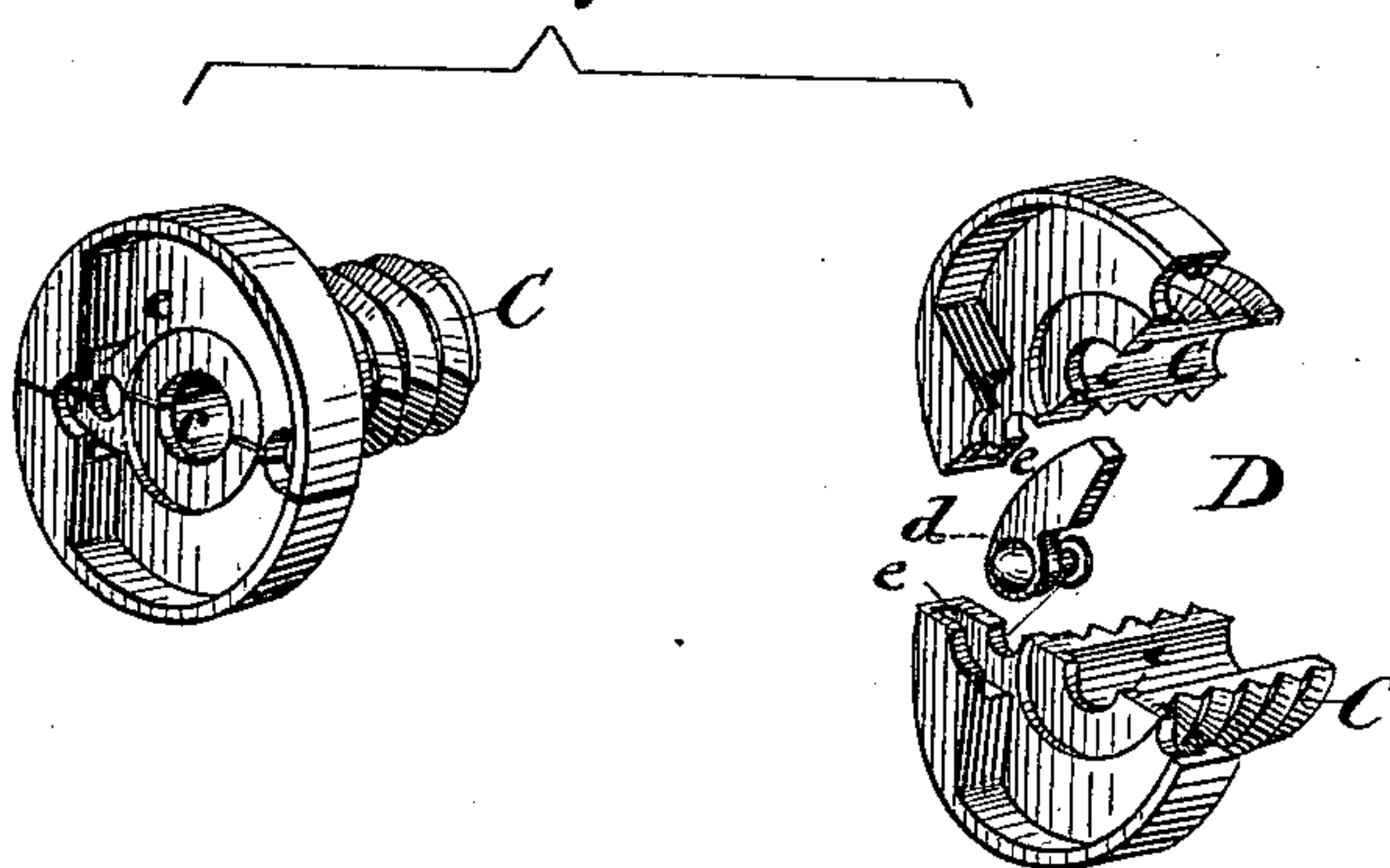


Fig. 3.

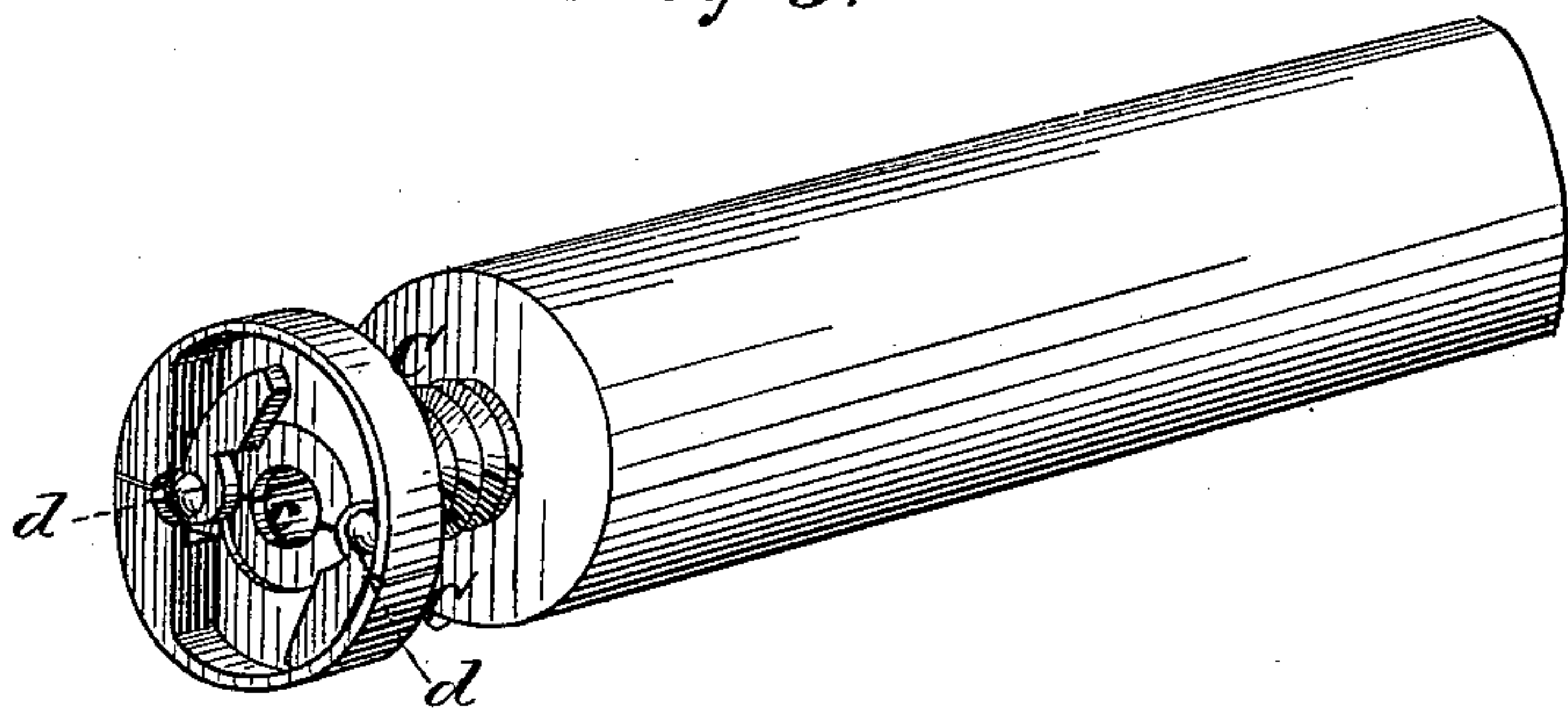
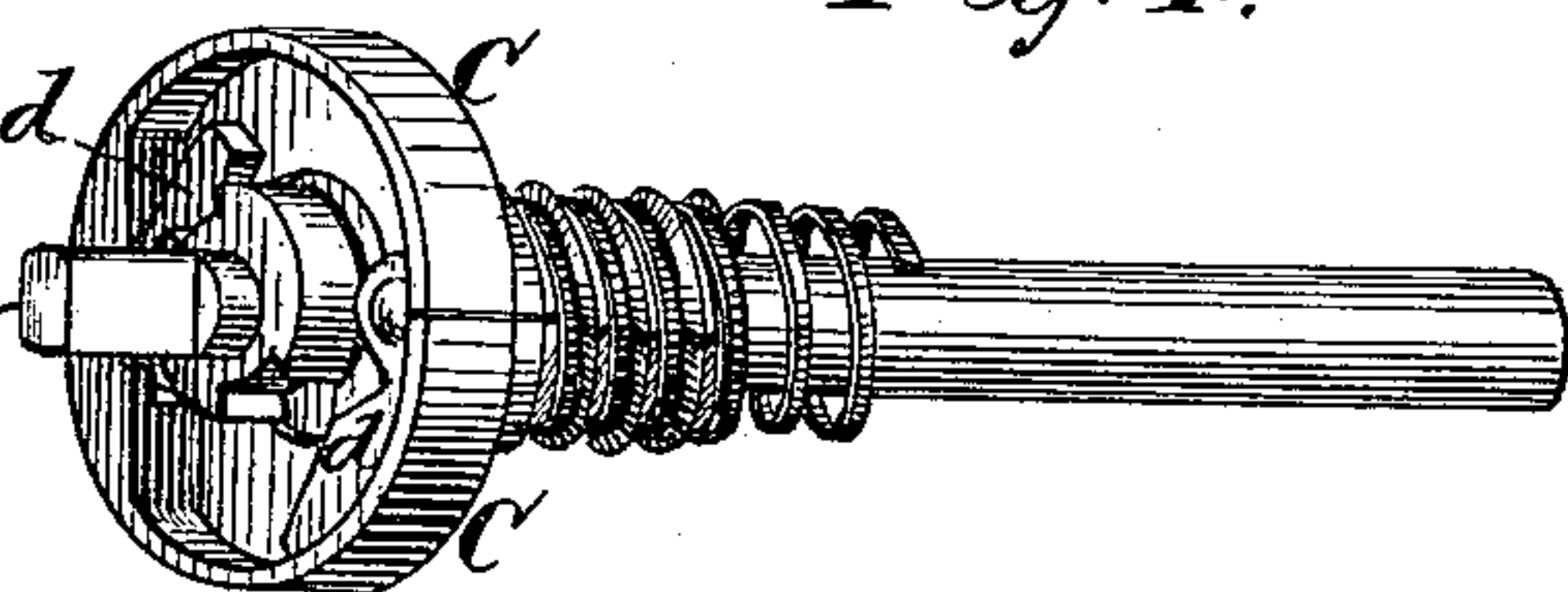


Fig. 4.



WITNESSES

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SPRING SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 335,449, dated February 2, 1886.

Application filed July 16, 1885. Serial No. 171,817. (No model.)

To all whom it may concern:

Be it known that I, STEWART HARTSHORN, residing in Millburn, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Spring Shade-Rollers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to the end plate or cup which is attached to the end of the roller, and on which the pawls or their equivalents are usually mounted, and has for its object a more perfect and cheap method of constructing such end plate or cup.

In the drawings, in which like letters indicate like parts, Figure 1 is a view of an end plate complete and in sections when adapted to be used with loose or sliding pawls. Fig. 2 is a view of an end plate complete and in sections when adapted to be used with pivoted pawls, and showing a screw-thread collar on its inner face for securing it to the roller. Fig. 3 is a view of an end plate put together and partially screwed into the roller. Fig. 4 is a view of the end plate, spindle, and spring when connected together.

My improvement consists in forming or casting the end plate or cup in separate pieces or sections, and at the same time, or by the same operation, forming therein all required recesses and orifices for holding the pawls, and all projections for securing the plate, so that when the separate parts of the plate are put together they will form the complete plate or cup, perfect in all its parts, and fitted to receive the pawls and spindle.

On the end plates or cups used with shade-rollers it is often desirable to construct projections on the face, or to form recesses or holes in the plate, for the purpose of mounting the pawls, or for securing the various mechanisms used on the roller. Frequently such projections or such recesses or holes cannot be cast on the face of the plate or in the same when the plate is made in one piece, but have to be drilled or shaped after the plate is formed. This is always an expensive operation, requiring time and labor to properly prepare the plate so that the various mechanisms can be connected with it. By casting or forming the plate in separate sections or pieces, however,

so that they can be easily removed from the molds or dies, it is possible to cast all the required projections, recesses, and orifices with the plate, so that when the pieces are put together the plate will be ready for use without further preparation. It will be evident that the pieces or sections may be of any shape found desirable, and of any convenient number, to adapt the plate for use on any variety of roller.

In the drawings, Fig. 1 shows a plate arranged to be used with loose or sliding pawls, which are held or confined in chambers or recesses. By forming the plate in two sections, as shown at B, Fig. 1, the recesses *a a*, with their outer ends closed, so as to retain the pawls therein, may be cast with the separate parts of the plate, so that when the pieces are put together the channel or chamber will be formed ready for use, and all drilling or preparing of the same after casting is avoided. Any other form of chamber may be as readily cast as the one shown in the drawings.

In Fig. 2 the plate is adapted to be used with pivoted pawls, and by casting the plate in two sections, as shown at D, the holes for the rivets by which the pawls are mounted, as also recesses *e* for the pivoted ends of the pawls, may be readily cast with the plate without interfering with any projections which may be on either face of the plate, and, moreover, as will be understood from the drawings at *d*, the pawls may be mounted as the parts or sections are put together without riveting in the ordinary way. By thus casting the plate in sections it is also possible to form the central hole, through which the shaft or spindle extends, complete without subsequent reaming, and, if desired, provide a shoulder, *e*, on the inner face, and have it as perfect as when made in the ordinary manner.

The various pieces or sections may be connected together to form the complete end plate, and may all be mounted on the roller in any manner found convenient, and, if desired, the plate may be connected with the spindle before it is secured to the roller. It is not necessary, however, to connect and hold the sections of the plate together before the latter is mounted on the roller, as, if the parts are placed in position on the end of the roller in the usual manner and covered by the ordi-

nary shell or end cap, they will be securely held together and attached to the roller. To cause the pieces to fit and lock together, projections or spurs may be formed on one piece and corresponding depressions or cavities on the other. To further hold the sections together independent of the shell, a ring or collar (shown at C, Fig. 1) may be formed on the inner face of the plate of the same diameter as the bore of the roller. This collar, fitting closely against the walls of the cavity or bore of the roller, will securely hold the several sections of the plate together. When this collar C is provided with screw-threads, as shown in Figs. 2 and 3, adapted to screw into the bore for the purpose of attaching the end plate to the roller, as described in my patent of June 16, 1885, and numbered 320,247, my improved method of constructing the plate enables me to cast the screw-threads on the collar when the plate is cast. It is difficult and expensive to form the thread on the collar when the plate is made or cast in a single piece; but by making the plate in separate sections or pieces the screw-thread or its equivalent can be readily cast on the collar, no difficulty being experienced in such case in removing the threaded collar from the molds or dies, and the plate is as cheaply and easily constructed as when made without the screw-thread. When the several parts of the plate are put together and the screw-collar is screwed into the base of the roller, as shown in Fig. 3, the sections will be held firmly and securely together without other mode of fastening.

The method of connecting the spring with the end plate by means of the threads on the collar, described and shown in my patent above mentioned, forms a ready means of holding the parts or sections of the plate together around the shaft or spindle before they are connected with the roller. As will be understood from Fig. 4, the outer end of the

spring, the inner end of which is attached to the spindle, is coiled around the collar of the end plate, and by its tension serves to hold these several sections or parts securely together. The sections of the end plate are thus not only securely held together before being mounted on the roller, and the end plate rendered as perfect as when cast or made in one piece, but the spring, spindle, and end plate may be all connected together ready to be secured to the roller, the same as when the end plate is made in one piece in the usual manner.

By my improved method of constructing the end plate or cup by casting it in sections, I am enabled to cast the plate with all the required projections, chambers, or holes ready for use without further drilling or preparing the plate, and am also able to cast the screw-threads on the collar, as required by my patent of June 16, 1885, and numbered 320,247, at the same time that the plate is cast.

What I claim is—

1. In spring shade-rollers, an end plate or disk cast in two or more sections or parts, and having cast therein recesses or orifices for attaching and securing the pawls, substantially as and for the purposes set forth.

2. In spring shade-rollers, an end plate or disk cast in two or more sections or parts, and having cast therein recesses for holding loose pawls, substantially as and for the purposes set forth.

3. In spring shade-rollers, an end plate or disk cast in two or more sections or parts, and having cast therein recesses or orifices for attaching the pawls, and a collar for entering the bore of the roller, substantially as and for the purposes set forth.

Dated this 14th day of July, 1885.

STEWART HARTSHORN.

Witnesses:

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