

No. 879,829.

PATENTED FEB. 18, 1908.

O. ROSE.

ARBOR.

APPLICATION FILED SEPT. 26, 1907.

Fig. 1.

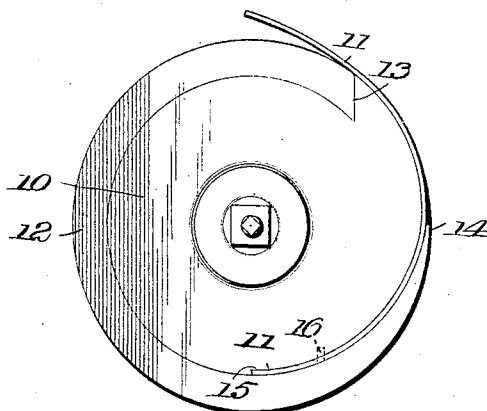


Fig. 2.

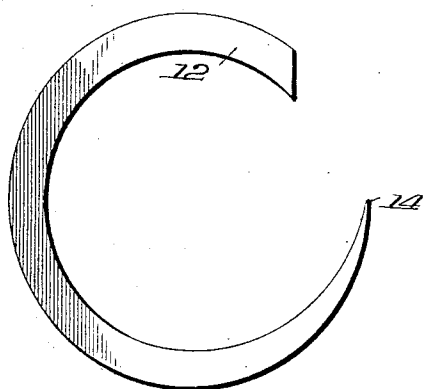


Fig. 3.

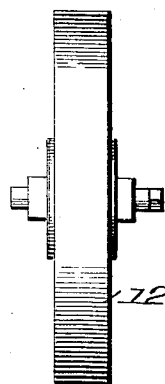
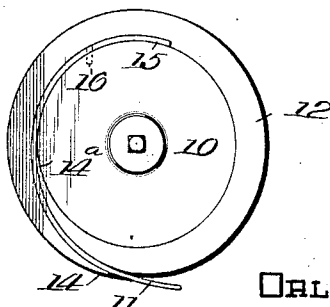


Fig. 4.



WITNESSES

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ARBOR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ORLANDO ROSE, a citizen of the United States, residing at Crown Point, in the county of Lake and State of Indiana, have invented a new and useful Improvement in Arbors, of which the following is a specification.

This invention relates particularly to arbors for the main springs of watches, clocks, and all other kinds of machines that use a spiral spring for power, and has for its object to provide improved means for fastening the spring to the arbor, said means including a novel form of collet which can be easily placed or removed and which will securely hold the end of the spring without bending or distorting the same, and the collet furthermore maintains or does not destroy the true circular shape of the surface upon which the spring is wound, so that there is nothing to make a lump or kink in the spring.

The invention is illustrated in the accompanying drawings, in which

Figure 1 is a plan view of the device, complete. Fig. 2 is a plan of the collet, removed from the arbor. Fig. 3 is an edge view. Fig. 4 is a plan of a modification.

Referring more specifically to the drawings, 10 indicates the barrel- or main-spring-arbor to which the inner end of the spring 11 is connected. The collet is indicated at 12.

The periphery of the arbor is reduced or cut away to form a step or notch as at 13, preferably slightly undercut, to receive the butt or wide end of the collet, which extends thence around the periphery of the arbor and tapers gradually to a thin edge or point as at 14. In the form shown in Fig. 1 the collet does not extend completely around the arbor, but it is within the scope of the invention to extend it fully around, so that the ends lap, as shown in Fig. 4, although in this instance, however, both ends of the collet are tapered to a point, as indicated at 14 and 14^a, the practical result being the same.

Under the outer or pointed end of the collet the arbor is notched or recessed as indicated at 15, to receive the end of the spring under the collet, the depth of the depression being equal to the thickness of the spring. A pin 16, is provided in this recess,

and engages in a hole in the end of the spring and so prevents the same from pulling out.

The surface of the recess in the arbor, against which the end of the spring is set, forms a segment of a spiral which merges into the periphery of the collet, which is shaped to form a true circle concentric with the center of the arbor, as shown.

The construction allows the spring to be quickly and easily attached. After the spring is hooked on the pin 16 the collet 12 is placed over the arbor, being retained thereon by its own elasticity, and forms a complete circle, and also prevents the spring from slipping off or becoming detached. The spring may be quickly removed by slipping the collet off and detaching the spring end from the pin. When the spring is wound there is no distortion or undue bending thereof and no lumps or kinks. No screws or other fastening devices are necessary, and the simplicity of the construction is obvious.

I claim

1. The combination, with an arbor and spring, of a collet which is applied around the periphery of the arbor, the end of the spring being held between the arbor and collet and extending out between the separated ends of the collet.

2. The combination with an arbor having a recess in the periphery thereof, of a spring the end of which is attached to the arbor in said recess, and a collet which extends around the arbor and outside of said end, to hold the same in place.

3. The combination of an arbor having a recess therein the inner surface of which forms a curve which merges into the circumference of the arbor, a spring the end of which fits in said recess, and a collet which extends around the periphery of the arbor and overlies the end of the spring, and is tapered at the end to form a circle at the outer edge concentric with the axis of the arbor.

4. The combination of an arbor having a recess in its periphery, a spring the end of which extends into said recess and is attached to the arbor therein, and a collet tapered to form a circle at its periphery, extending around the arbor and overlapping

the end of the spring and having detached ends between which the spring passes.

5 5. The combination of an arbor having a reduced portion or notch in its periphery, and also having a recess provided with a pin, a spring the end of which extends into said recess and engages the pin, and a collet one end of which is set in said notch and the

other end of which overlaps the end of the spring, the collet being tapered at the end to form a circular winding surface. 10

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Witnesses:

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