No. 628,869.

Patented July 11, 1899.

H. C. SWAN.

SPRING COUPLING.

(Application filed Mar. 20, 1899.)

(No Model.)

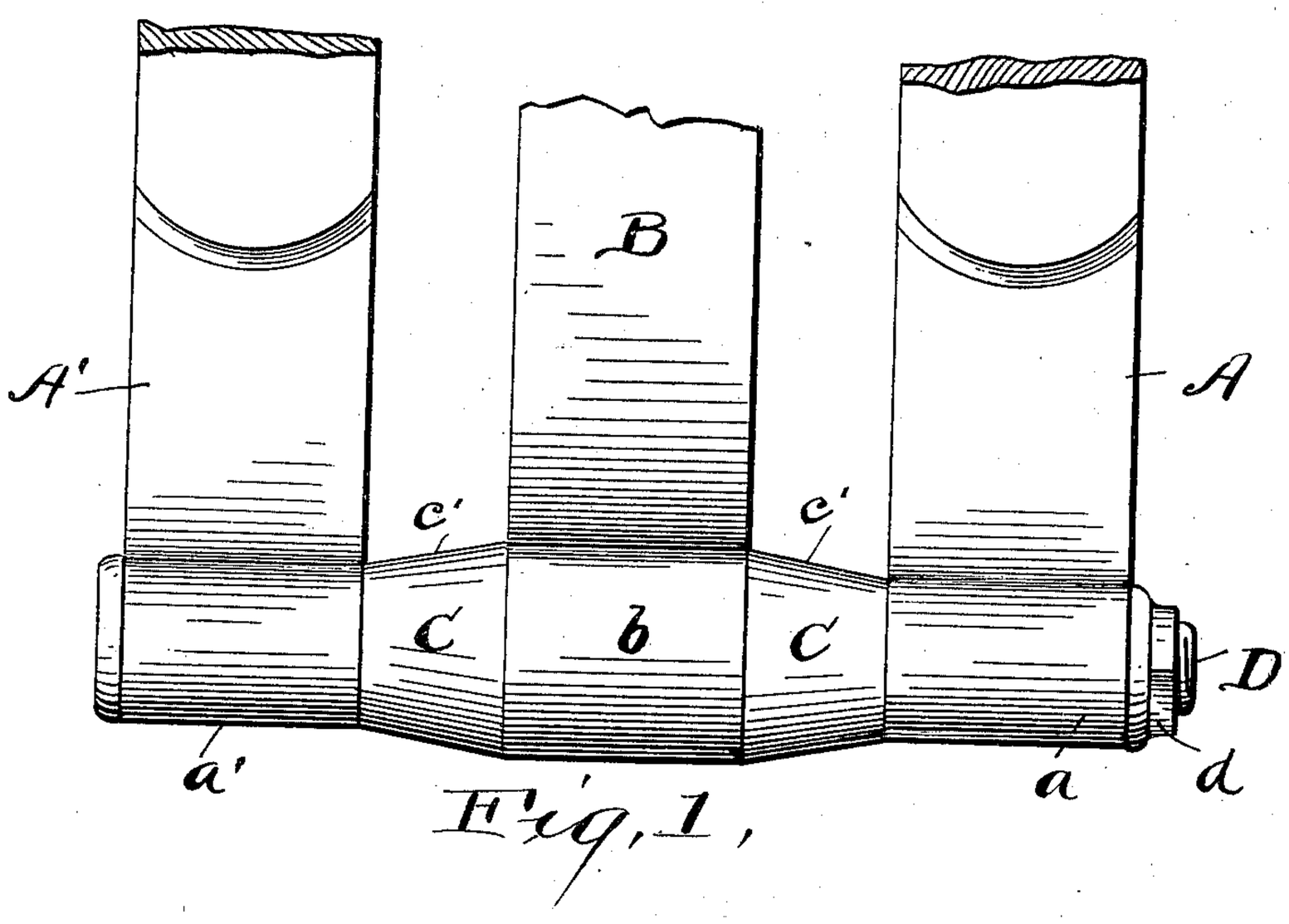

Fig. 1.

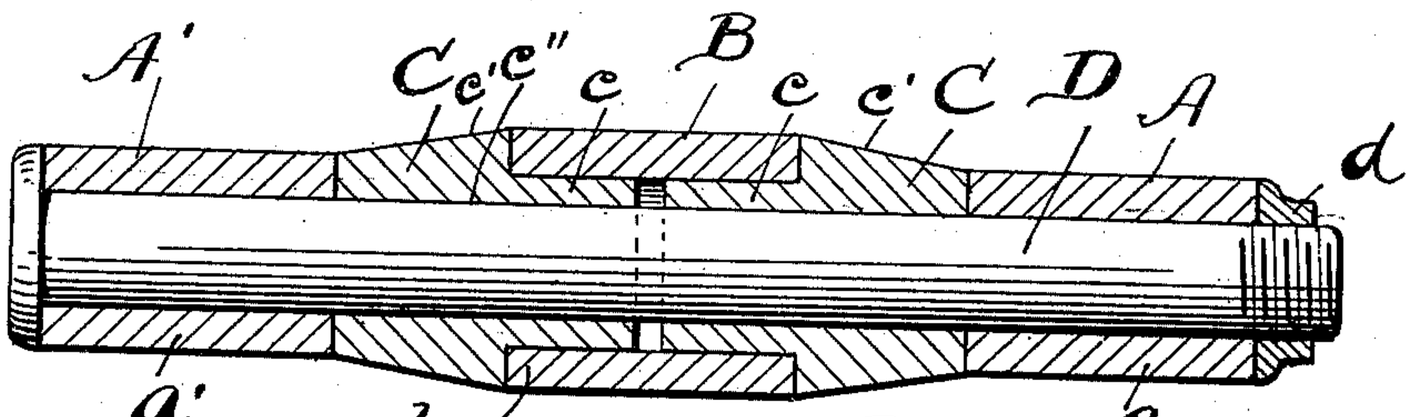

Fig. 2.

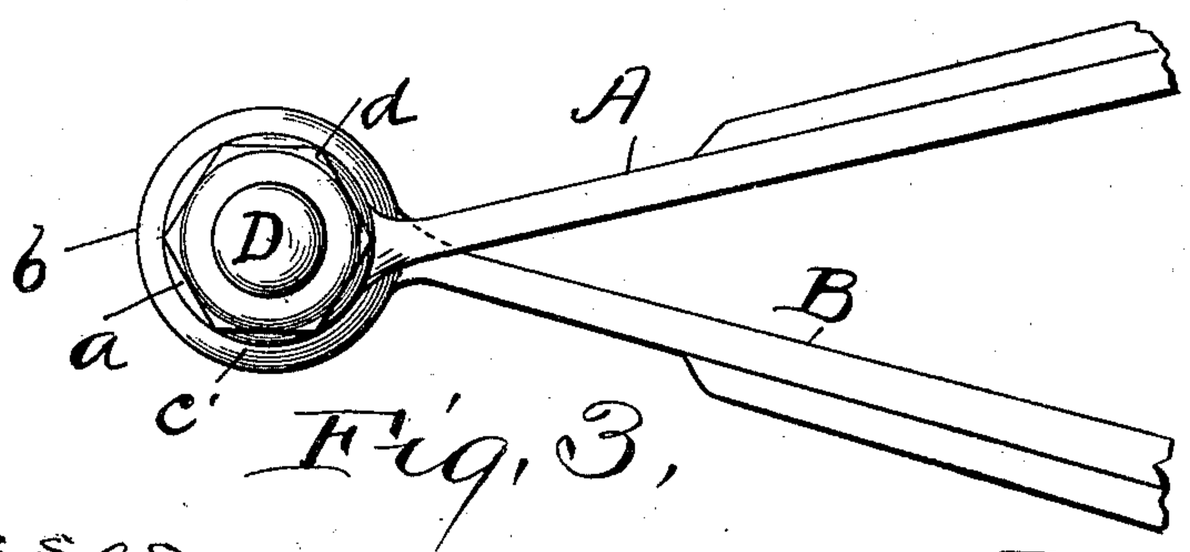

Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY C. SWAN, OF OSHKOSH, WISCONSIN.

SPRING-COUPLING.

SPECIFICATION forming part of Letters Patent No. 628,869, dated July 11, 1899.

Application filed March 20, 1899. Serial No. 709,810. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. SWAN, a citizen of the United States of America, residing at Oshkosh, Winnebago county, State of Wisconsin, have invented certain new and useful Improvements in Spring-Couplings, of which the following is a specification in such full, clear, and exact terms as to enable any person skilled in the art to which it appertains to make, construct, and use the same.

My invention relates to an improvement in couplings for springs, and relates particularly to means for coupling elliptical springs consisting of three sections secured at their ends in a relatively horizontal position to each other.

The object of my invention is to provide a coupling of sufficient strength that will consist of a relatively small number of parts and that will not become loose and rattle as a result of continuous use and wear.

In the accompanying drawings, Figure I represents a top plan view of my improved spring-coupling; Fig. II, a side elevation in section, and Fig. III an end view of the same.

The spring consists of the sections A A′, that form the upper half, and the section B, that forms the lower half of the spring. The ends of the upper sections are provided with eyes *a a′* of the same or approximately the same diameter. The lower section is provided with the eye *b* of larger diameter and is arranged in the center between the upper sections. Collars C are interposed between the sections and are formed with integral bushings *c*, adapted to be inserted in the eye of the center section. Said collars are inclined or beveled, as at *c′*, so that their outer edges will be approximately flush with the outer spring-sections and their inner edges flush, or approximately so, with the center section. A bolt D, provided with a nut *d*, passes through the eyes of the spring sections and bores *c″*, formed through the collars and bushings and provides a bearing for the outer spring-sections and the collars.

When the parts are assembled, the bushings on the collars are inserted in the eye of the central spring-section and provide the bearings therefor. The bolt is inserted and the parts are held against displacement and suitably adjusted by means of the nut. The collars are of any suitable width to properly separate the spring-sections.

The outer sections have a bearing directly upon the bolt, whereas the sole bearing for the central section is provided by the bushings formed on the collars. The weight of the vehicle produces a constant pressure upon these bushings and holds them in contact with the bolt, thereby preventing the looseness and rattling that occurs when the collars are formed without the bushings and merely interposed between the spring-sections. Any looseness caused by wear of the edges of the parts can be easily taken up by tightening the nut. No fixtures or parts to be used in connection with the outer sections of the spring are necessary and the cost of the coupling is correspondingly reduced. As the eye on the central section is formed larger than the eyes on the outer sections in order to admit the bushings, the coupling has an appearance of being thicker, and consequently stronger in its central portion, thereby giving the coupling a neat and workmanlike finish. The parts can be assembled easily and quickly without reheating the springs or in any way adding to the parts or changing same after they have been constructed.

What I claim is—

1. In a spring-coupling, the combination with a spring consisting of three sections, each having an eye through its end, the eye of the center section being of larger diameter than the eyes of the outer sections, a bolt passing through said eyes, and collars on said bolt interposed between said spring-sections and provided with integral bushings adapted to be inserted in the eye of the center section, substantially as described.

2. In a spring-coupling, the combination with a spring consisting of three sections, each having an eye formed therein, the eye of the center section being of larger diameter than the eyes of the outer sections, of collars interposed between said sections and provided with integral bushings adapted to be inserted in the eye formed in the center section, and means for holding the parts against displacement, substantially as described.

3. In a spring-coupling, the combination

with a spring consisting of three sections, two of said sections being provided with eyes of the same diameter and the center section being provided with an eye of large diameter, and a bolt passing through said eyes, of two collars on said bolt interposed between said spring-sections, said collars being reversely beveled and provided with correspondingly-shaped bushings adapted to fit into the eye of the center section, substantially as described.

In testimony whereof I sign this application, in the presence of two witnesses, this 16th day of March, 1899.

HENRY C. SWAN.

Witnesses:
J. T. WILLMOTT,
C. I. HENDERSON.