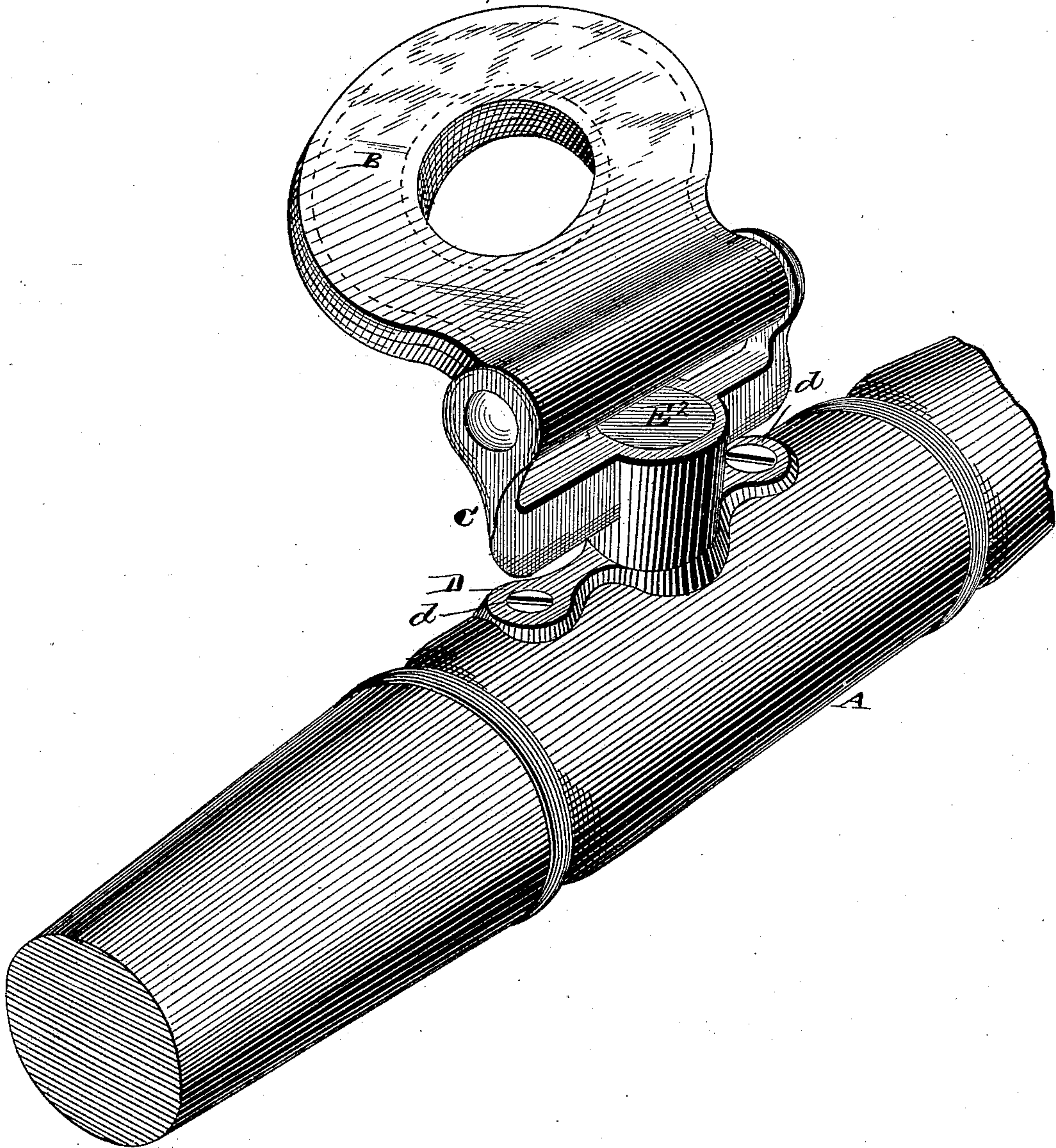


J. JACOBS.
Neck-Yoke Center-Swivel.

No. 225,059.

Patented Mar. 2, 1880.

Fig. 1.



WITNESSES
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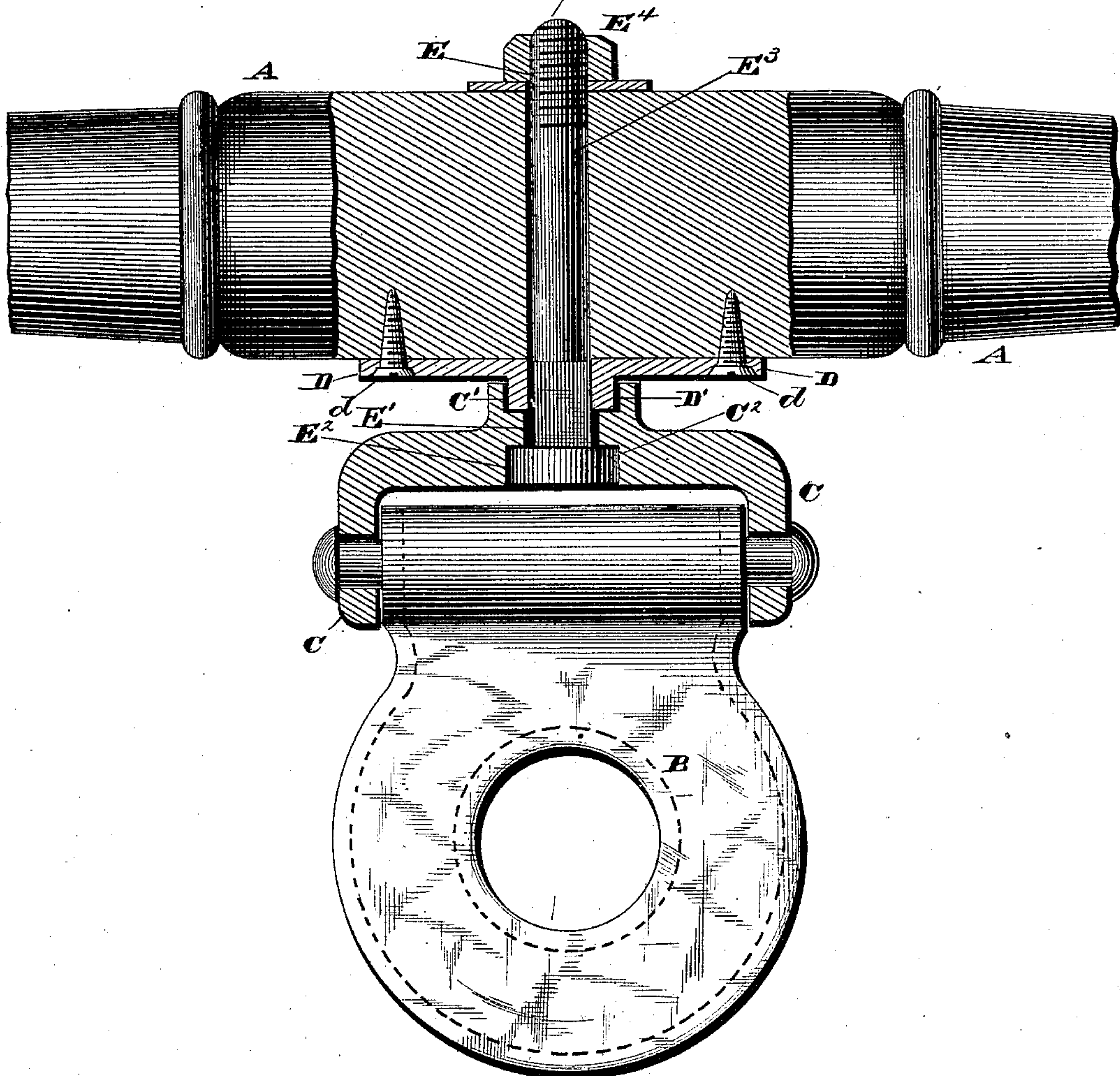
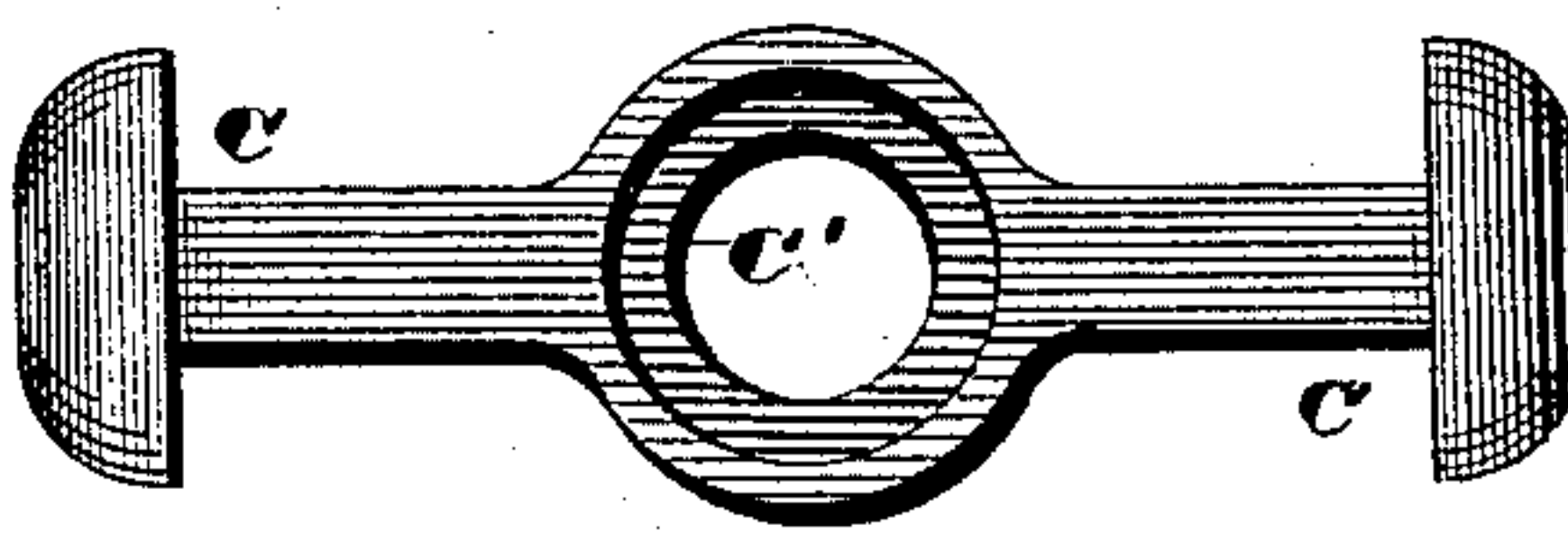
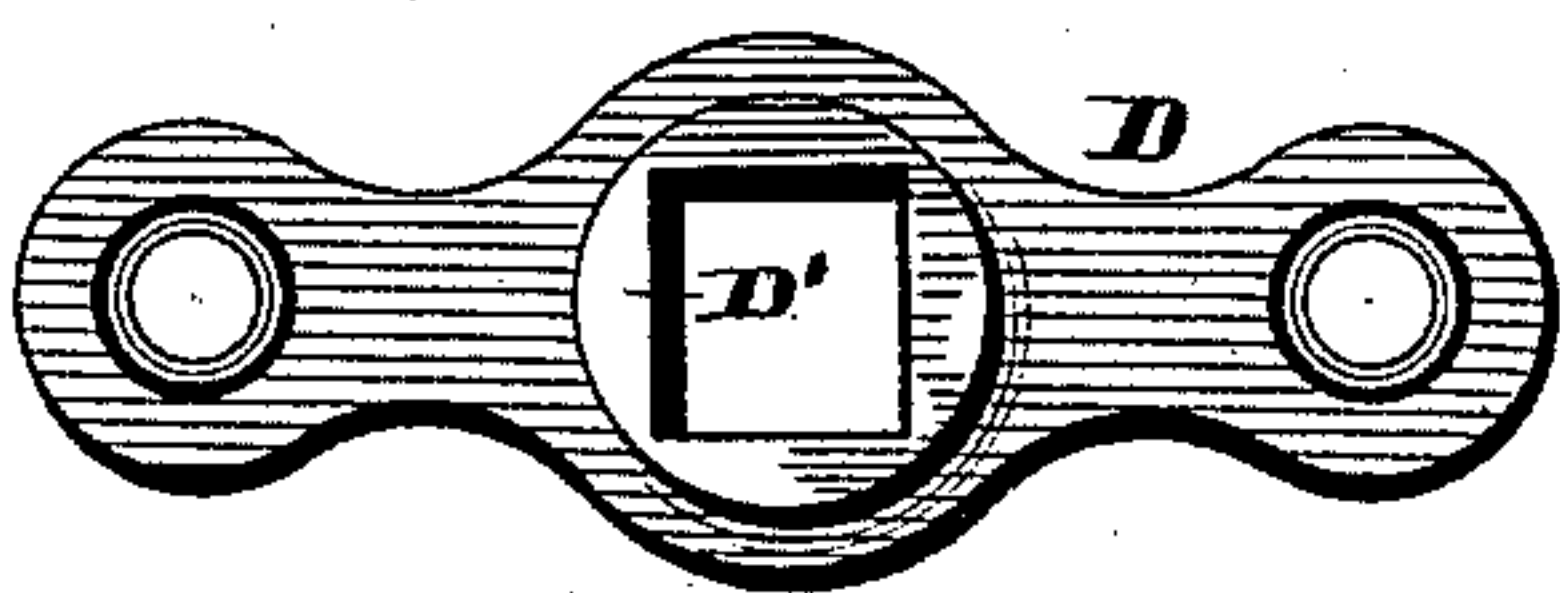


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN JACOBS, OF SPRINGFIELD, ASSIGNOR TO HENRY JACOBS, OF SANDUSKY, OHIO.

NECK-YOKE CENTER-SWIVEL.

SPECIFICATION forming part of Letters Patent No. 225,059, dated March 2, 1880.

Application filed September 20, 1879.

To all whom it may concern:

Be it known that I, JOHN JACOBS, of Springfield, county of Clarke, and State of Ohio, have invented a new and useful Improvement in Neck-Yoke Center-Swivels; and I declare the following to be such a full, clear, and exact description thereof as will enable others skilled in the art to which my invention pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists in providing the washer-plate with a collar or bushing which extends into a corresponding annular recess in the part to which the pole-loop or supporting-strap is attached, so as to provide a long squared recess to engage with the square neck of the swivel-bolt.

In the drawings, Figure 1 is an external perspective view of a neck-yoke with my center-swivel attached. Fig. 2 is a central section, showing the construction of the same. Fig. 3 is a separate view, in plan, of the washer-plate and the part to which the strap is attached.

This is designed as an improvement upon the device patented by me November 23, 1869, No. 97,197. In that device the washer-plate was provided with a square opening for the passage of the square neck of the swivel-bolt, and also with an annular recess to receive the annular flange which projected from the part to which the pole-supporting loop was attached.

In the manufacture of carriage-bolts or other machine-made bolts of a similar nature, which are made from round iron, so as to produce a round-stemmed, square-necked, headed bolt, the heated blank, being grasped between dies, is subjected to the swaging action of a heading-tool which strikes it endwise, and at the same time that it makes the head it so upsets the metal that it spreads out into the square angles and forms the square neck; but in practice it has been found exceedingly difficult to make a square neck which shall extend much farther along the stem from the head than the thickness of the bolt. Therefore in my former device I experienced great trouble, owing to the fact that the square neck

would not extend far enough to engage perfectly with the square opening in the washer-plate, and when they did engage it was through such a small distance that the opening would soon become enlarged and permit the bolt to turn.

This invention is designed to overcome those difficulties; and I accomplish it by simply reversing the location of the annular flange and corresponding annular recess, so that by putting the flange or bushing upon the washer-plate and extending that up into a corresponding recess in the piece to which the pole-supporting loop is attached the square orifice is made to extend not only through the former thickness, but through the length of the annular flange as well, and thus affords a broad bearing along the square neck, where before there was but a very narrow and uncertain bearing.

In my improved device, A is a neck-yoke. B is its pole-supporting strap or loop, attached to a plate, C. D is a washer-plate secured to the yoke by screws *d*, or other device. The washer-plate is provided with an annular projection or flange, D', which sets into a corresponding annular groove, C', in the plate C. The plate C is also provided with a cavity, C², into which the head of the swivel-bolt is recessed until flush with the surface of the plate.

The washer-plate D, with its projection D', is provided with a square passage for the square neck E' of the bolt E; and it is apparent from the construction that the squared passage bounds the square neck throughout the greater portion of its length.

The orifice through the plate C is cylindrical, so as to permit the plate to revolve freely about the swivel-bolt. The swivel-bolt has a head, E², a square neck, E', round stem E³, and is provided with a nut, E⁴, as shown.

It is apparent that with this device no attention has to be paid to the neck being fully squared throughout its whole length, for the great length of the squared passage in the washer-plate insures in all cases a sufficiently broad bearing to hold the bolt firmly against turning and against wear.

What I claim is—

1. In a center-swivel for neck-yokes, the com-

5 bination, with a washer-plate adapted to be
secured to the neck-yoke and provided with
an annular projection and a square passage
extending through the plate and projection,
of a plate for the attachment of the pole-loop,
said plate provided with a recess, which af-
fords a bearing for the end and periphery of
the projection on the washer-plate, and with a
recess on its opposite side for the head of the
10 swivel-bolt, substantially as set forth.

2. A neck-yoke center-swivel consisting of
the washer-plate D, with projection D', and
square passage extending through the plate

and projection, in combination with the plate
C, with recess C', the latter affording a bearing 15
for the end and periphery of projection D',
said plate C also provided with a recess on its
opposite side for the head of the swivel-bolt E,
substantially as set forth.

Witness my hand at Springfield, Ohio, this 20
12th day of September, 1879.

JOHN JACOBS.

Witnesses:

C. H. PIERCE,
FRANK J. ZASLEY.