

J. H. COMBS.
Carriage-Top Joints.

No. 143,669.

Patented Oct. 14, 1873.

Fig. 1.

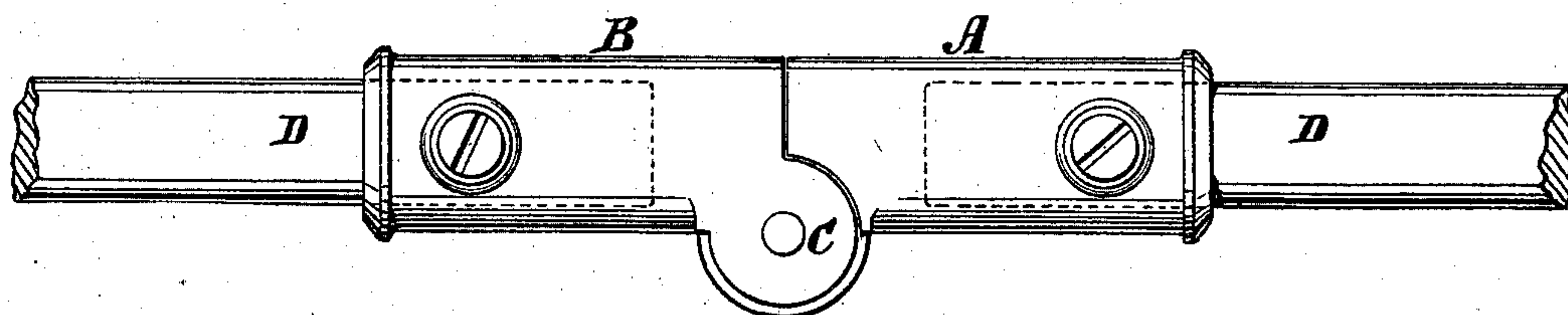
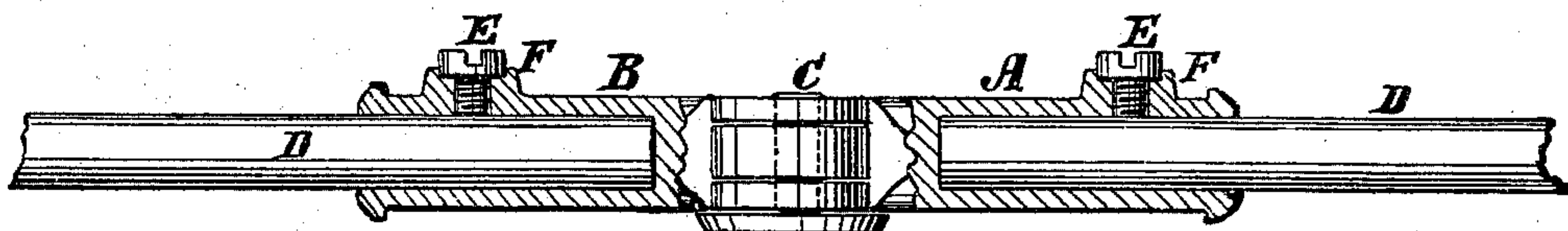


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN H. COMBS, OF STAMFORD, CONNECTICUT.

IMPROVEMENT IN CARRIAGE-TOP JOINTS.

Specification forming part of Letters Patent No. **143,669**, dated October 14, 1873; application filed June 7, 1873.

To all whom it may concern:

Be it known that I, JOHN H. COMBS, of Stamford, in the county of Fairfield and State of Connecticut, have invented a new and Improved Carriage-Top Brace-Joint, of which the following is a specification:

My invention consists in the construction and arrangement of short socket-pieces of malleable metal jointed together, and the brace-rods fitted in them and secured by set-screws, the socket-pieces and the brace-rods being made elliptical in cross-section and arranged with the major axis in the direction of the greatest strain.

Figure 1 is a side elevation of my improved brace-joint, and Fig. 2 is a sectional elevation.

Similar letters of reference indicate corresponding parts.

A and B are the short socket-sections united by the joint C. D represents the brace-rods fitted in the socket-sections, and E represents the screws for fastening them in. The socket-sections are made of malleable iron in order to make the hinge-joint cheaper than it can be forged and milled out on wrought-iron rods. F represents re-enforcing bosses at the holes for the set-screws.

I am aware that wrought-iron extension-joint sections have been made before lengthening and shortening the connections, and I

do not claim such broadly. In those heretofore made round holes with screw-threads for the connection of the brace-rods by screwing them in have been employed. They have also been held by set-screws.

The advantages of my joint as compared with such are, besides the economy in cost, unimpaired strength in the rods where they enter the sockets; the oval form thereat, as well as in other parts, with the major axis in the direction of the greatest strain; ability to shorten or lengthen the stretching or shrinking of the top cover without unshipping the rods at the ends; and ability to lengthen the rod without weakening and loosening the connection with the socket-pieces, which is common to the screwed connection.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The joint-sections A B, in elliptical form, in cross-section, in combination with the brace-rods D, of corresponding form, made adjustable and secured by set-screws, substantially as and for the purpose specified.

J. H. COMBS.

Witnesses:

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