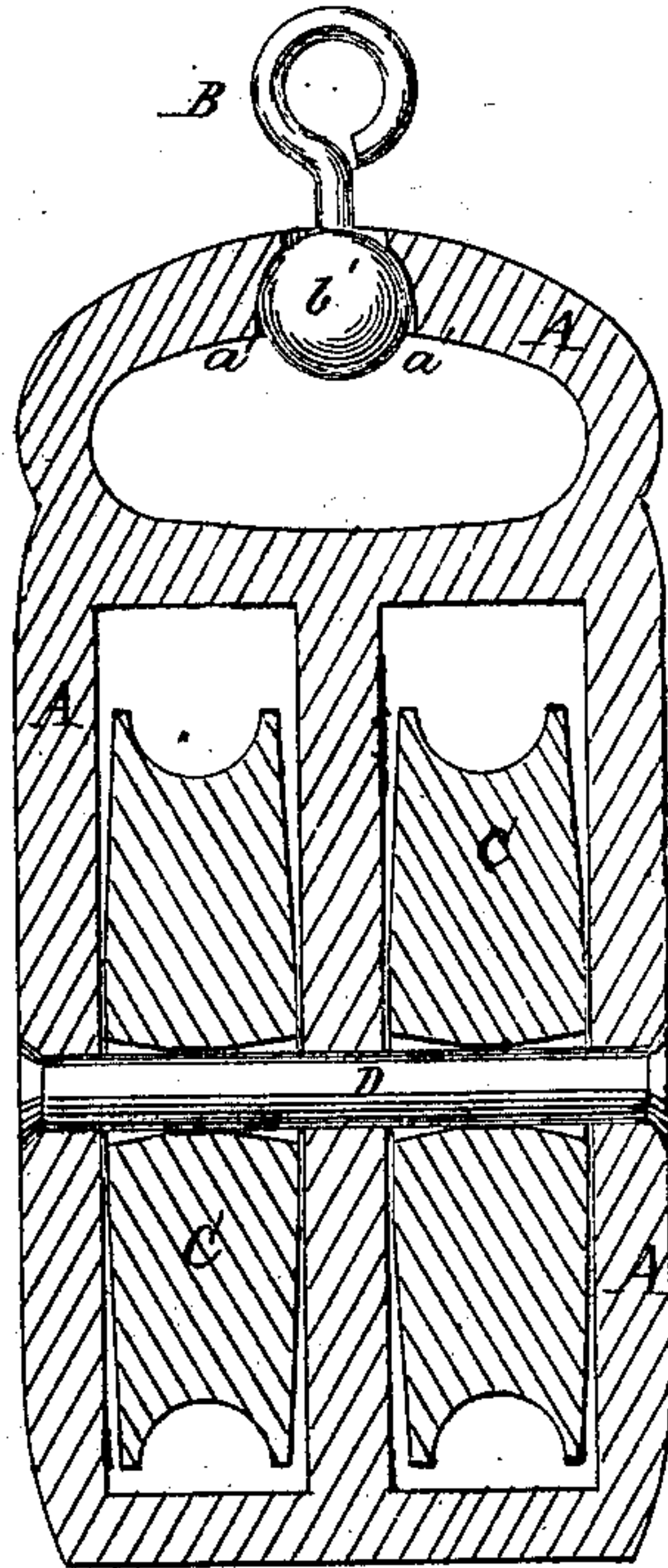


J. BOYLE.

Improvement in Pulley-Blocks.

No. 131,594.

Patented Sep. 24, 1872.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN BOYLE, OF NEW YORK, N. Y.

IMPROVEMENT IN PULLEY-BLOCKS.

Specification forming part of Letters Patent No. **131,594**, dated September 24, 1872.

To all whom it may concern:

Be it known that I, JOHN BOYLE, of the city, county, and State of New York, have invented a new and useful Improvement in Pulley-Blocks, of which the following is a specification:

The figure is a detail longitudinal section of my improved pulley-block.

My invention has for its object to improve the construction of pulley-blocks in such a way that the block may turn in any direction upon its support, and in such a way that the pulleys may revolve with less friction than when constructed in the ordinary manner; and it consists in the construction and combination of various parts, as hereinafter more fully described.

A represents the block or case, in the upper part of which is formed a socket, *a'*, to receive a ball, *b'*, attached to the eye or hook B, by means of which the block is suspended. By this construction the pulley-block will be supported by a ball-and-socket connection, so that it may turn freely in any direction. C are the pulleys, which are pivoted to the block A by the pin, rivet, or bolt D in the ordinary manner. The hole through the pulleys C is reamed

out or countersunk at each end, as shown in the figure, so that only the middle part of the pulleys may bear upon the pin D, thus diminishing the friction. The sides of the pulleys C, directly around the pivot-hole, are made at right angles with the pivoting-pin D, and the outer parts of said sides are slightly beveled, as shown in the figure, thus diminishing the friction between the sides of the pulleys and the blocks.

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

1. The combination of a ball-and-socket connection, *b' a'*, with a pulley-block, A, and its suspension eye or hook B, substantially as herein shown, and for the purpose set forth.

2. The pulleys C, constructed with the ends of their pivot-holes countersunk or reamed out, and the outer part of their sides beveled, substantially as herein shown and described, and for the purpose set forth.

JOHN BOYLE.

Witnesses:

JAMES T. GRAHAM,
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