

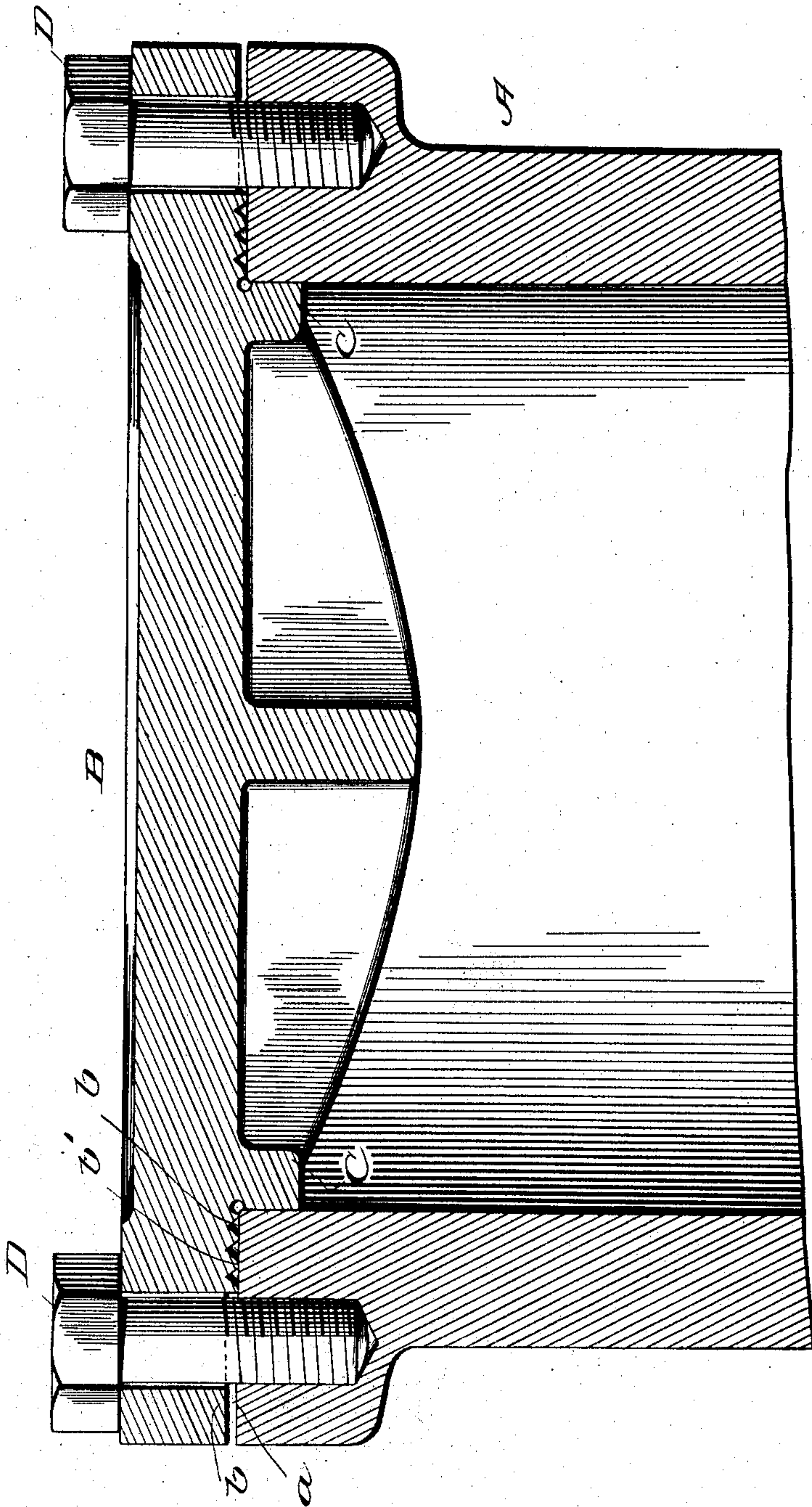
No. 757,376.

PATENTED APR. 12, 1904.

R. WHITAKER.
GROUND JOINT.

APPLICATION FILED MAR. 7, 1903.

NO MODEL.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

RICHARD WHITAKER, OF NEW BRUNSWICK, NEW JERSEY, ASSIGNOR OF TWO-THIRDS TO ROBERT W. JOHNSON AND JAMES W. JOHNSON, OF NEW BRUNSWICK, NEW JERSEY.

GROUND JOINT.

SPECIFICATION forming part of Letters Patent No. 757,376, dated April 12, 1904.

Application filed March 7, 1903. Serial No. 146,693. (No model.)

To all whom it may concern:

Be it known that I, RICHARD WHITAKER, a citizen of the United States, residing at New Brunswick, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Ground Joints, of which the following is a specification.

My invention has reference to what is technically known as a "ground joint," a joint that is extensively used in connection with ammonia-engines and the like; and it aims to provide a novel and expeditious method of grinding the joint between two pieces of the same or different metals, whereby an economy in time, labor, and monetary expense is secured.

Broadly stated, it consists in grinding to a joint a smooth-faced member and a member having its grinding-surface grooved, indented, or otherwise considerably reduced in area.

The nature, characteristic features, and scope of the invention will be more readily understood by reference to the following description, taken in connection with the accompanying drawing, which is a sectional view of the head of a cylinder in which this construction of joint is used.

Referring to said drawing, A represents one member of the joint having the face *a* finished smooth, and B represents the other member of the joint having a portion or the whole of its opposed face provided with grooves or interstices *b*, separated from one another by the narrow ledges or projections *b'*, so that when the two members are placed in juxtaposition for grinding their faces are in contact at the points of the projections *b'* only. In grinding a joint so constructed the particles of emery or other abrasive material can roll each way from under the surfaces *b'* into the spaces *b*. Consequently the grains of emery that are un-

der pressure and are doing the actual grinding have but very little chance for lateral movement, their path being almost wholly circular. By thus lessening the tendency to lateral movement the liability of scratching or cutting is reduced to a minimum and a perfect joint is secured in much less time than with the ordinary flat face. A flange C is shown in the drawing for use in centering the head in respect to the cylinder, the head being secured in position by means of the bolts D. Only about one-third of the face of the grooved piece is utilized in making the joint, the remainder being relieved or cut away. The spaces between the narrow ledges or projections *b'* of the joint form small chambers, which when filled with oil where the joint is made effectually seal it.

It will be obvious to those skilled in the art to which the invention relates that modifications may be made in details without departing from the spirit and scope of the invention. Hence I do not limit myself to the precise mode of procedure hereinbefore described and illustrated; but,

Having described the nature and objects of the invention, what I claim as new, and desire to secure by Letters Patent, is—

A ground joint between hard-metal bodies which consists in the plane face of one of said bodies extending uniformly from its inner edge to its outer edge and the surface area of the opposed body reduced in size and provided with a series of grooves with means uniting said bodies, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD WHITAKER.

Witnesses:

FRED. B. KILMER,
R. W. JOHNSON.