

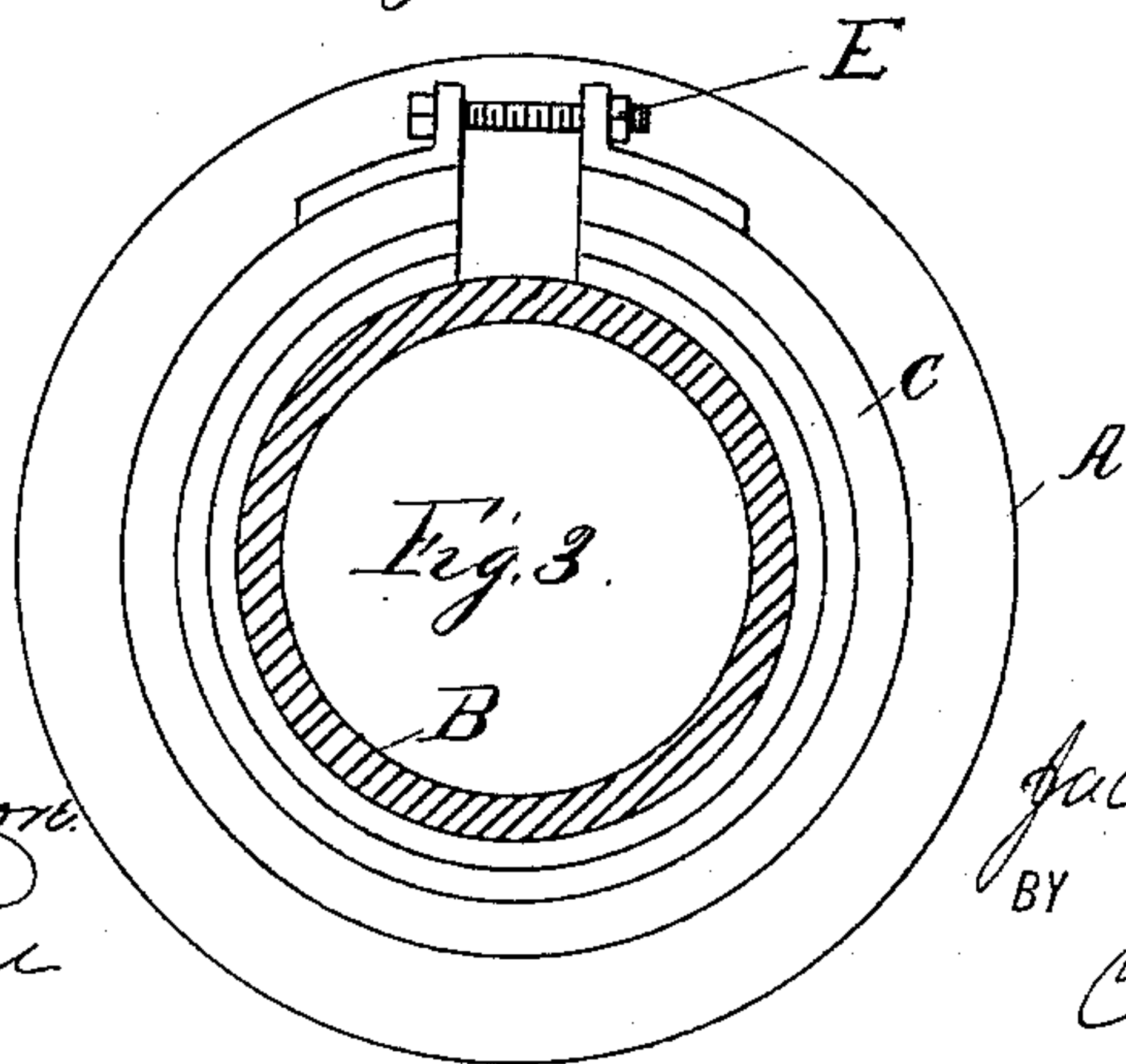
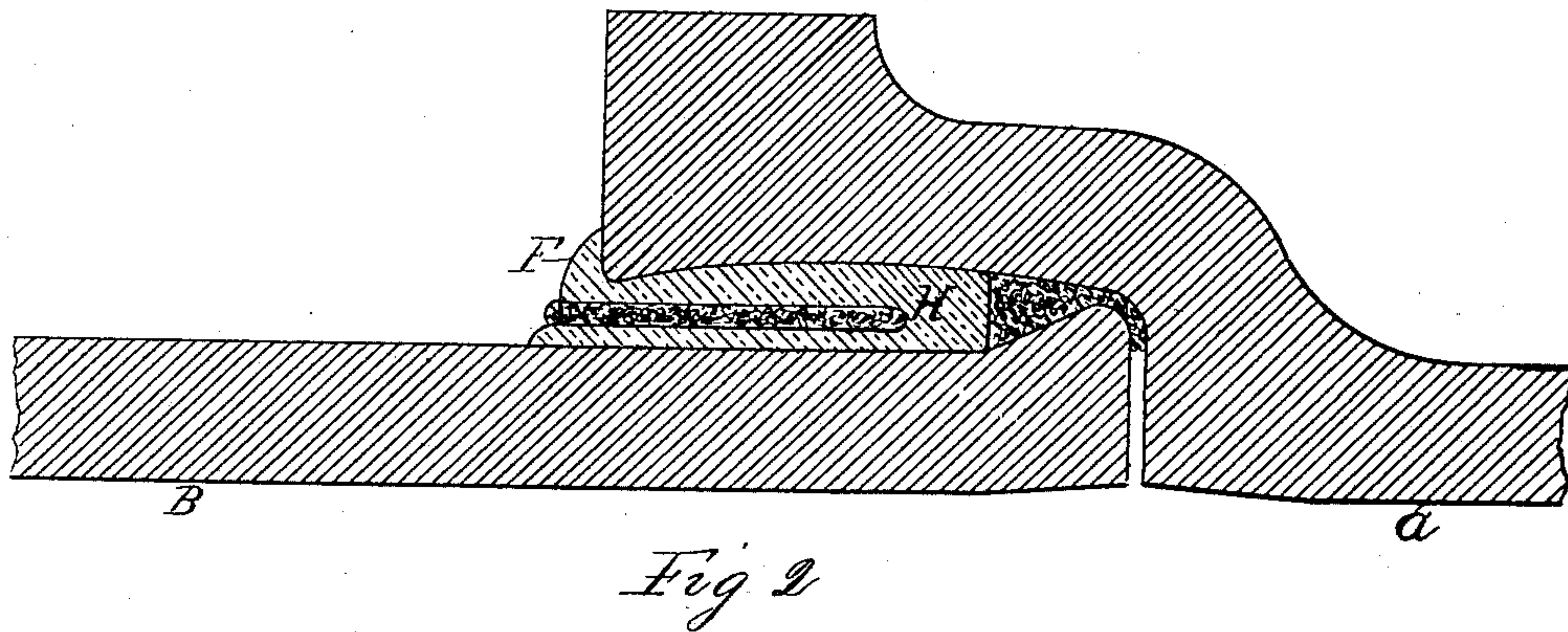
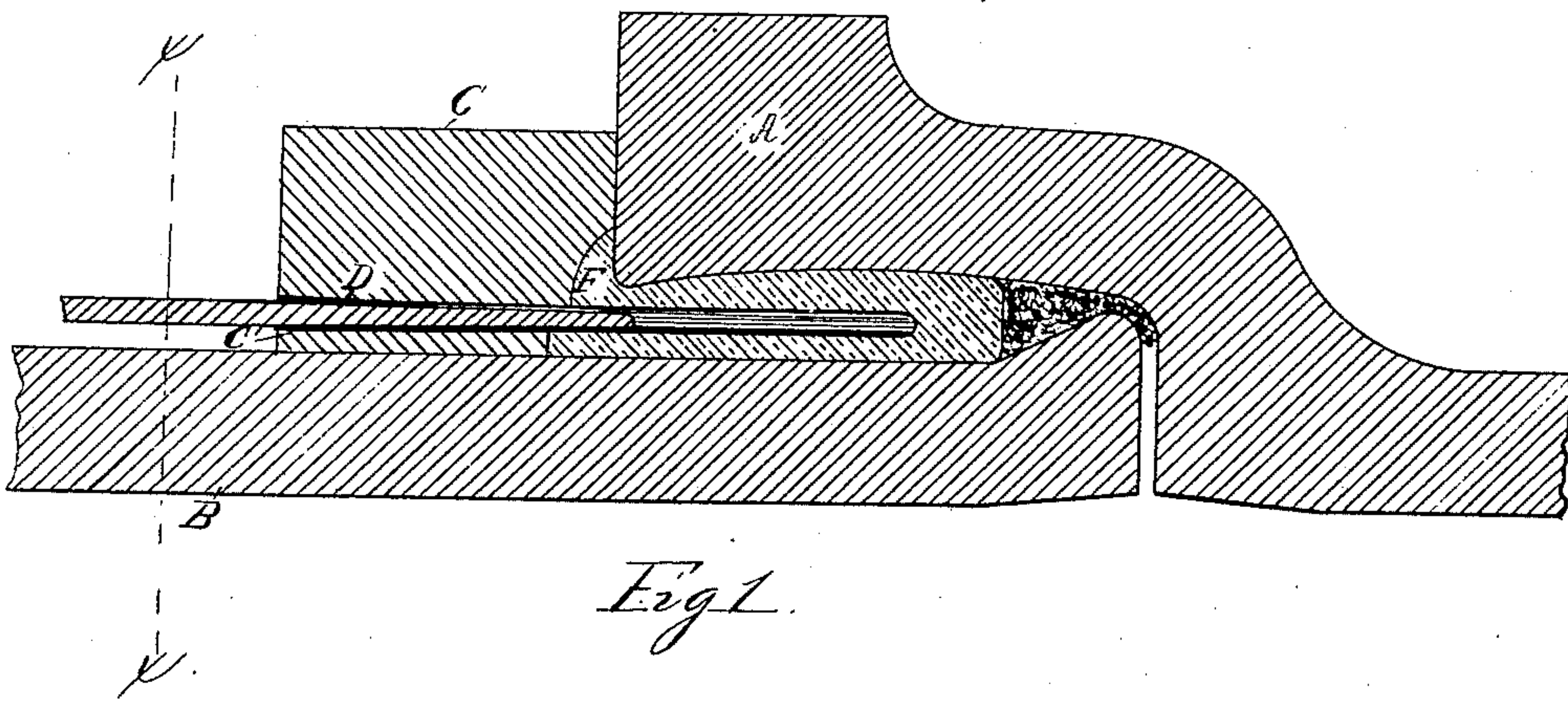
(No Model.)

J. SCHINNELLER.

METHOD OF SEALING NATURAL GAS PIPE JOINTS.

No. 341,280.

Patented May 4, 1886.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB SCHINNELLER, OF PITTSBURG, PENNSYLVANIA.

METHOD OF SEALING NATURAL-GAS-PIPE JOINTS.

SPECIFICATION forming part of Letters Patent No. 341,280, dated May 4, 1886.

Application filed March 15, 1886. Serial No. 195,302. (No model.)

To all whom it may concern:

Be it known that I, JACOB SCHINNELLER, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Sealing Pipe-Joints for Natural Gas; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

This invention has relation to methods of forming seals for the joints of gas-pipes, and has for its object to provide a means and apparatus for casting double-wall rings within the bowl or surrounding sleeve of the connecting pipes.

In an application for a patent of the United States made by me and filed November 21, 1885, and numbered 183,545, I have shown and described a novel form of pipe-joint seal, in which I use a ring of lead having its walls folded over upon each other, and the intervening space filled or packed with a suitable packing.

The present invention, therefore, consists in the provision of a novel means and apparatus for making and applying the said double-walled ring and the inclosed packing.

This invention further consists in the novel methods and process employed in the application of the apparatus.

This invention further consists in the combination, arrangement, and methods of applying the parts, more fully described and specifically claimed.

Referring to the accompanying drawings, Figure 1 is a transverse sectional view of a coupled section of pipe with the molding apparatus and a former or cast packing-ring in position. Fig. 2 is a transverse sectional view of a coupled joint with the molding apparatus removed and the packing inserted within the ring; Fig. 3, a cross-sectional view through the line *x x* on Fig. 1.

A B are the two sections of pipe, the section A being formed with the bowl *a* to receive the end of the section B.

C is the bank or tamp of the mold, which may be made of clay, putty, &c., or which may be formed, as shown, of a flexible ring, held in position surrounding the mouth of the

bowl by a fastening clamp or screw. This tamp or band is formed, essentially, in two sections, and between them I place a tubular hollow core, D, extending a sufficient distance from the front of the tamp to enter the mouth of the bowl and form a core, around which is cast the double-walled packing-ring, the open portion of the core being at the outside of the tamp or bank, in order to permit of the insertion of a circular wedge, the object of which will be further explained. This core may be, if desired, made solid and of a tapering form, thereby dispensing with the wedge G.

A recess, E, in the inner face of the tamp or bank forms a flange around the upper edge of the packing-ring.

The operation of the device is as follows: The two ends of the pipe being brought together, the ring or tamping-piece C' is placed around the section B; the hollow core D and its wedge G is then inserted in the mouth of the bowl or sleeve, and retained in this position by the second tamping-piece, C, which encircles the hollow core and bears upon the mouth of the bowl, as shown in Fig. 1. A sufficient quantity of melted lead or other suitable material is then poured, by way of the opening at the meeting-point of the ends of the tamping-ring, to fill the space between the interior of the bowl or sleeve and the exterior of the adjacent pipe end. A small quantity of oakum or other suitable packing is placed at the inner end of the bowl, to prevent the molten lead from entering the pipe at the point of juncture. After the lead has cooled, the core D is withdrawn and the walls of the packing-ring are expanded by driving a wedge-shaped tool between the walls. At the junction of the tamping-piece and core the orifice *i* in the ring H will be closed, but may be easily opened, thereby making the walls of the ring continuous or unbroken. The packing is then calked in the orifice in the lead ring H, to more fully expand its walls and retain them in position; and, if desired, the flange F is then turned down to retain the calking in position.

The object of the before-mentioned wedge is to expand or spread the core D to different thicknesses, and also facilitate the withdrawal of the core.

The open ends of the core can be closed before casting by being luted with clay.

Having described my invention, what I claim is—

1. The herein-described method of sealing the joints of pipe-couplings, which consists in casting a double-walled tubular ring within the bowl or sleeve of the pipe and expanding the walls of said ring by packing or calking, as set forth.
2. The herein-described method of sealing the joints of gas-pipes, which consists in casting a double-walled tubular ring surrounding the end of one of the sections of pipe and within the bowl on the end of the adjacent section of pipe-surrounding sleeve, and expanding the walls of said ring by calking the space between the walls of the ring with an elastic packing, as set forth.

3. The herein-described method of sealing the joints of gas-pipes, which consists in casting a double-walled ring surrounding the end of one of the sections of the pipe, and expanding said ring by an elastic packing, said elastic packing being retained in place by turning down the edge of the ring, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of March, 1886.

JACOB SCHINNELLER.

Witnesses:

JNO. F. ATCHESON,
A. A. MOORE.