

Fig. 1.

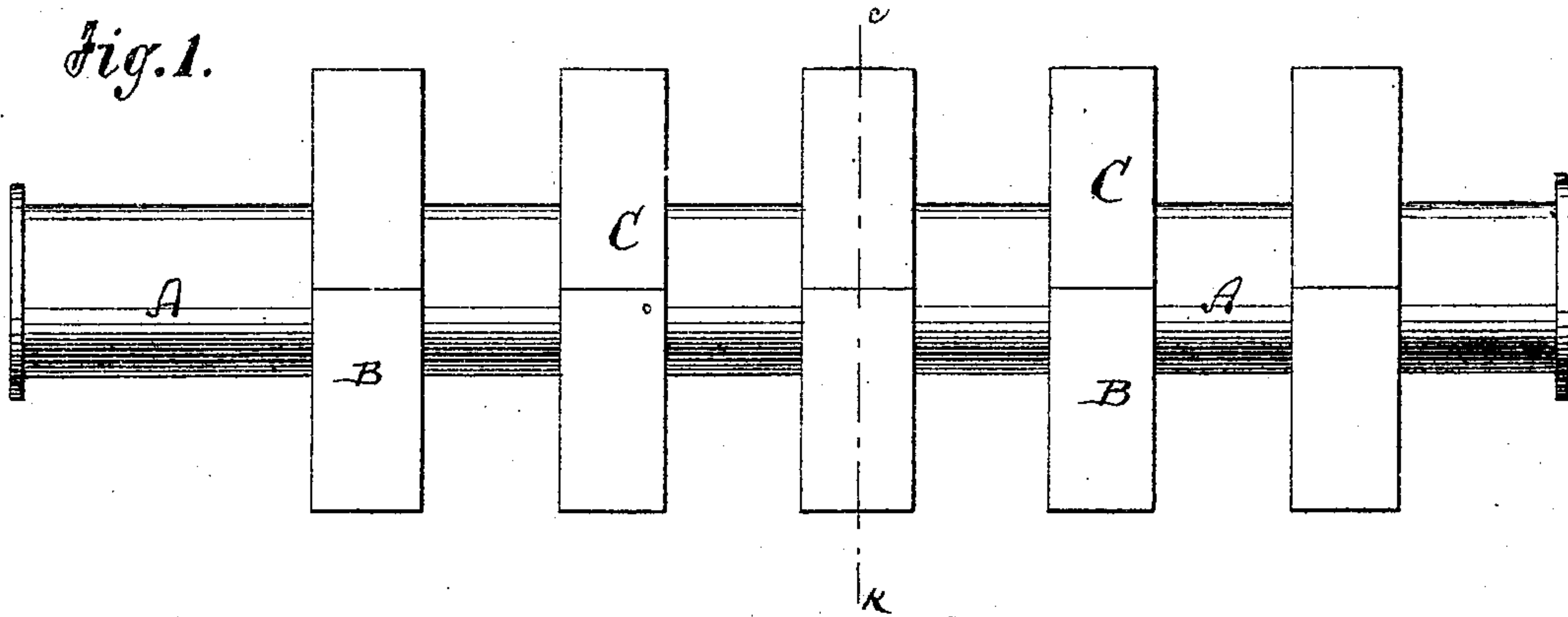


Fig. 3.

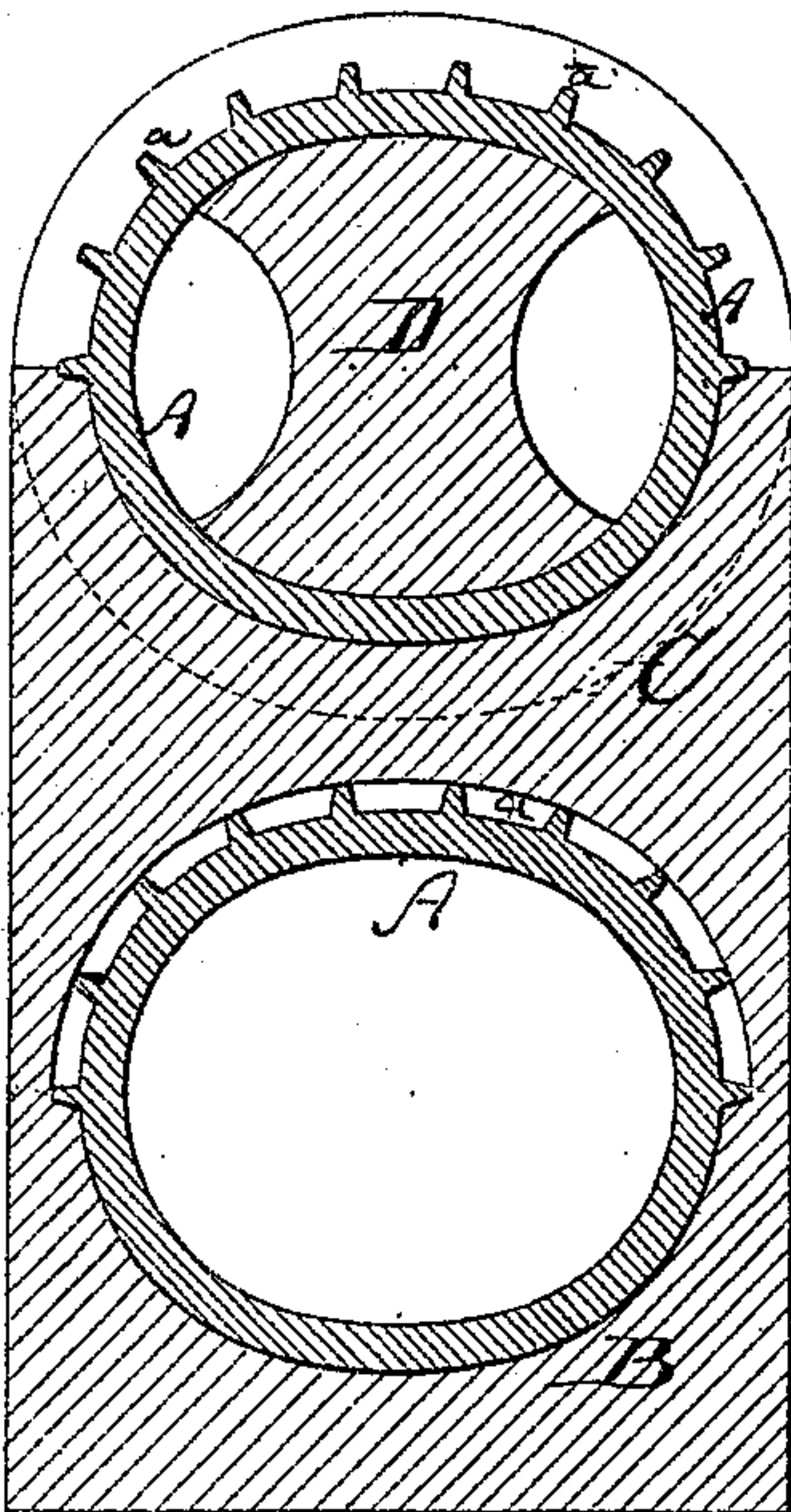


Fig. 2.

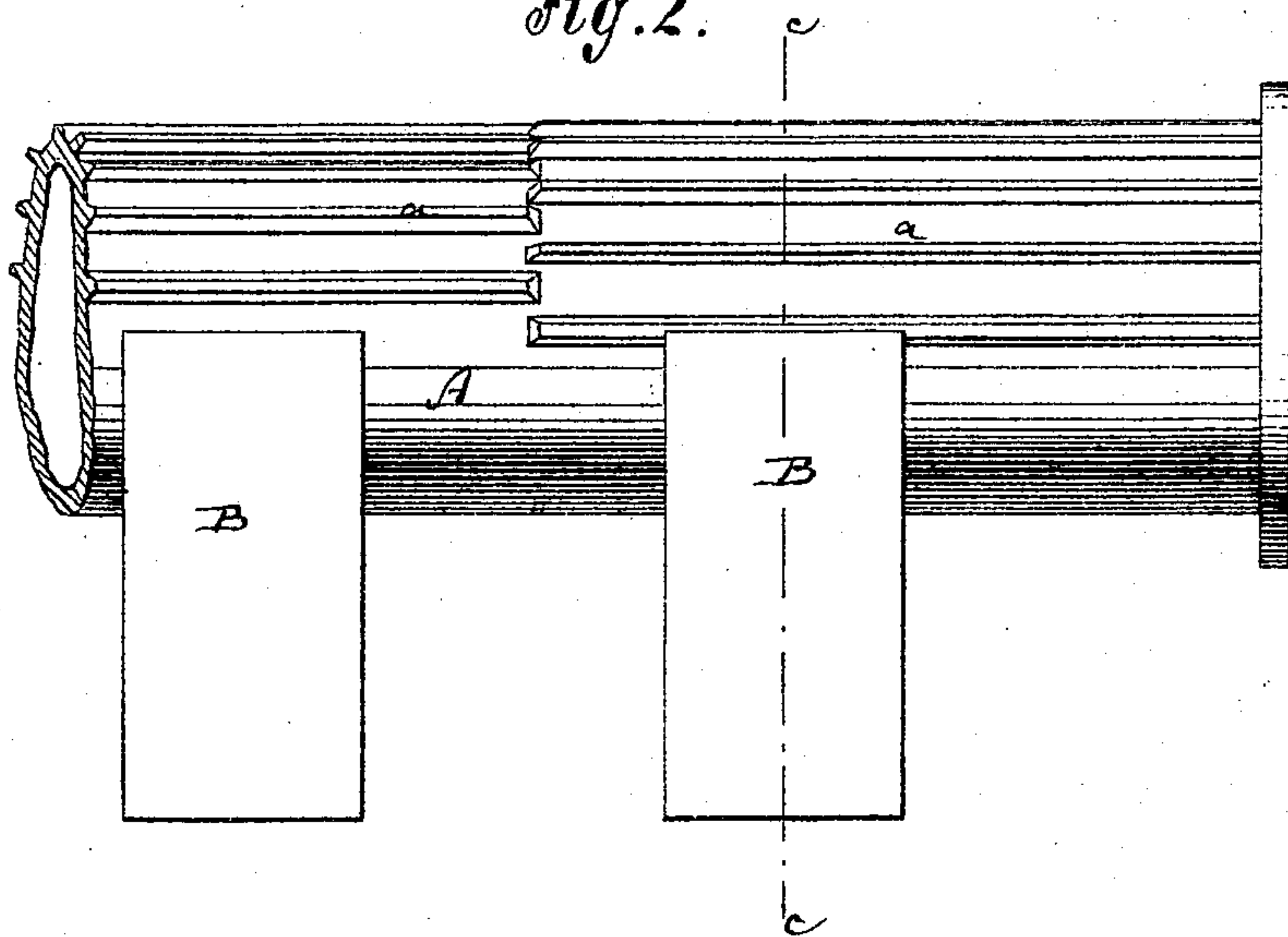


Fig. 4.

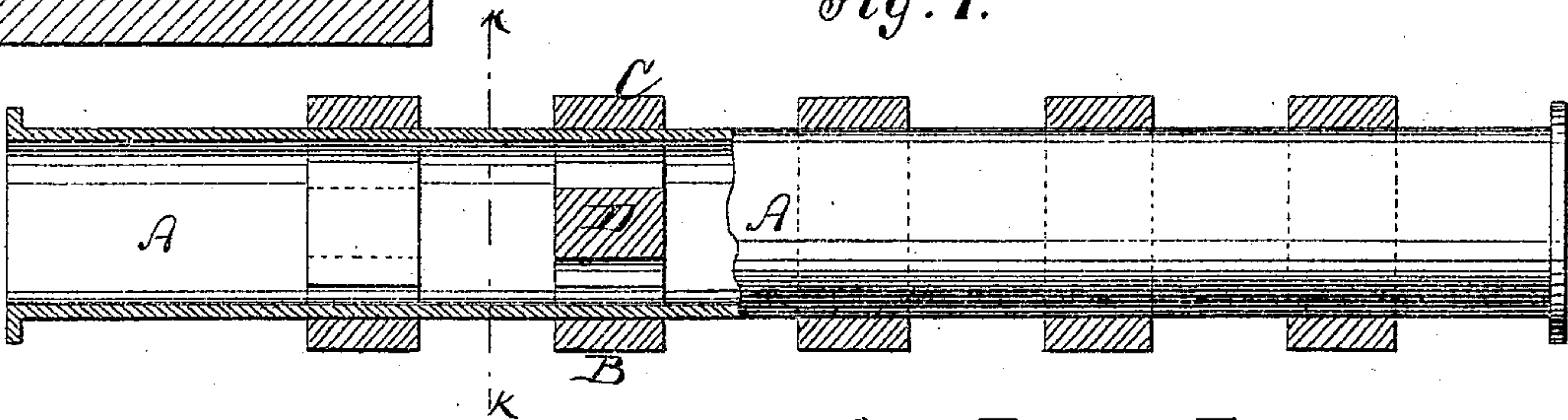


Fig. 5.

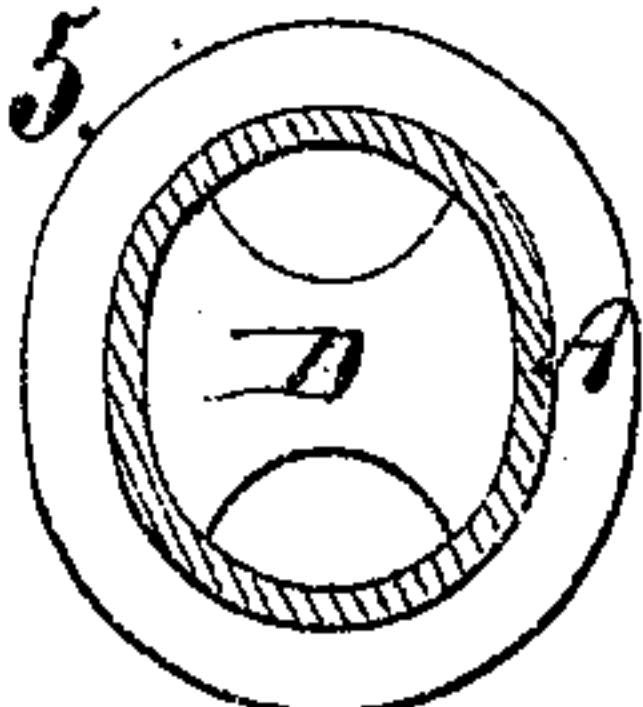
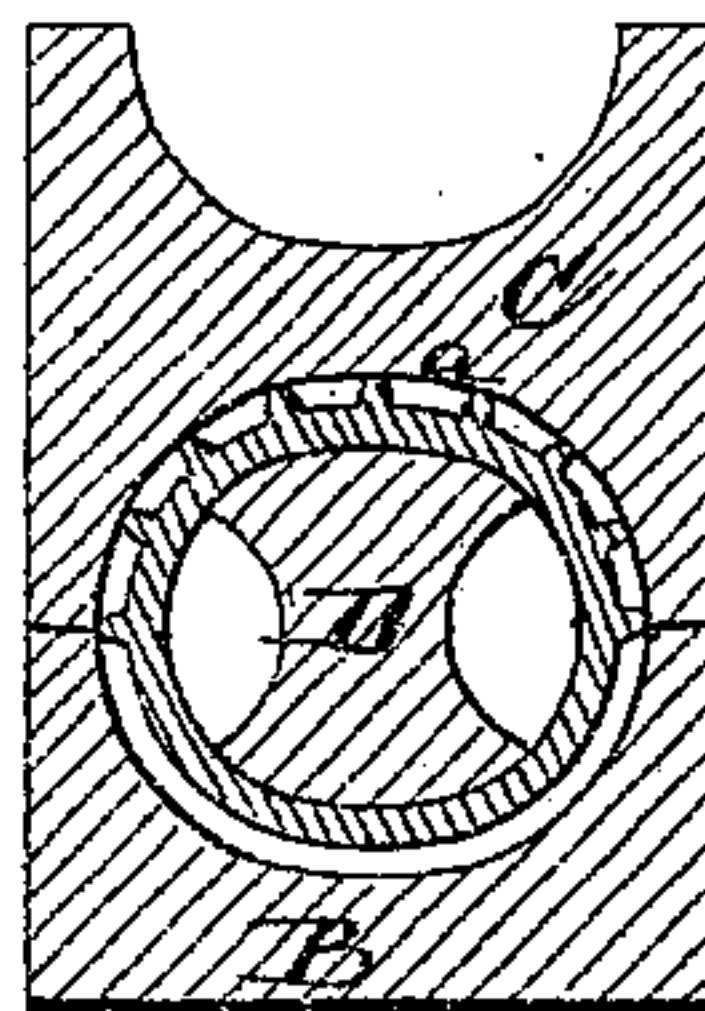


Fig. 6.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN GAS-RETORTS.

Specification forming part of Letters Patent No. 119,586, dated October 3, 1871.

*To all whom it may concern:*

Be it known that I, HENRY H. EDGERTON, of Fort Wayne, in the county of Allen and State of Indiana, have invented a new and Improved Iron Gas-Retort; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a side view of my improved gas-retort. Fig. 2 is an enlarged side view of the same, showing the outer ribs. Fig. 3 is a vertical transverse section of the same on the line *c c*, Fig. 2. Fig. 4 is a longitudinal section of the same. Fig. 5 is a transverse section on the line *K K*, Fig. 4. Fig. 6 is a transverse section of Fig. 1 on the line *c K*.

Similar letters of reference indicate corresponding parts.

This invention relates to a new gas-retort, more particularly intended for machines in which hydrocarbon vapors are converted into illuminating-gas; and consists principally in the introduction of tiles within the retorts for bracing the same, and to prevent their settling in case the supporting-tiles should give way.

A in the drawing represents an iron retort, of cylindrical or oval form. B B are the supporting-tiles, and C C the top tiles, which rest upon B, and can be used to support other retorts above. The tiles C do not rest upon the retorts below them, but only on the tiles B or C, so that thus the entire weight of the upper retorts is carried by the tiles and not by any retorts. The several tiles B B C C are applied at suitable distances

apart. Within the retort are placed perforated tiles D D, which are in line with the other tiles B C. They serve to brace the retort and prevent it from settling in case the outer tiles are broken or injured. The tiles D should be put in position within the retort while the same is heated and has attained its full expansion. *a a* are longitudinal or diagonal ribs or studs framed on the top of the retort to hold a cap of luting of sand or clay, whereby the top of the retort is rendered more enduring, the bottom being protected by fire-tile in suitable manner. Retorts were heretofore supported in such manner that those below supported those vertically above them. It is evident that thereby the lower retorts were exposed to an undue proportion of strain, which is taken off by the use of the tiles C. These rest on the tiles C or B below, but do not oppress the lower retorts, serving only as supports for the upper.

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

1. The interior tile D, set up within the retort in line with the supporting-tile, as and for the purpose specified.

2. The tiles C, so constructed as to support the retorts and the upper tiles above, so that the upper tiles will not rest on retorts, as specified.

The above specification of my invention signed by me this 7th day of July, 1871.

HENRY H. EDGERTON.

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(38)