

(No Model.)

2 Sheets—Sheet 1.

W. S. PARKER.  
CULVERT.

No. 567,653.

Patented Sept. 15, 1896.

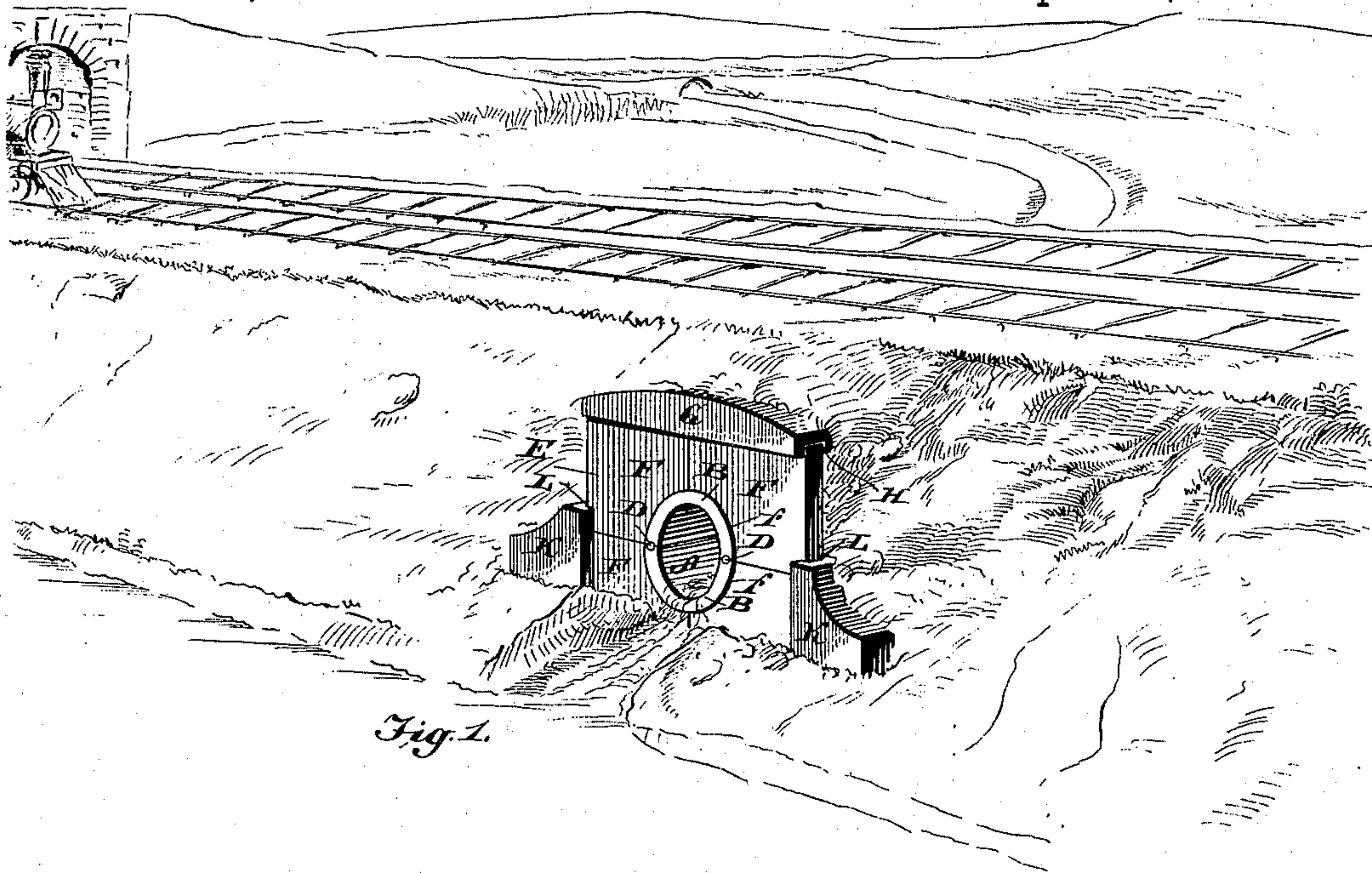


Fig. 1.

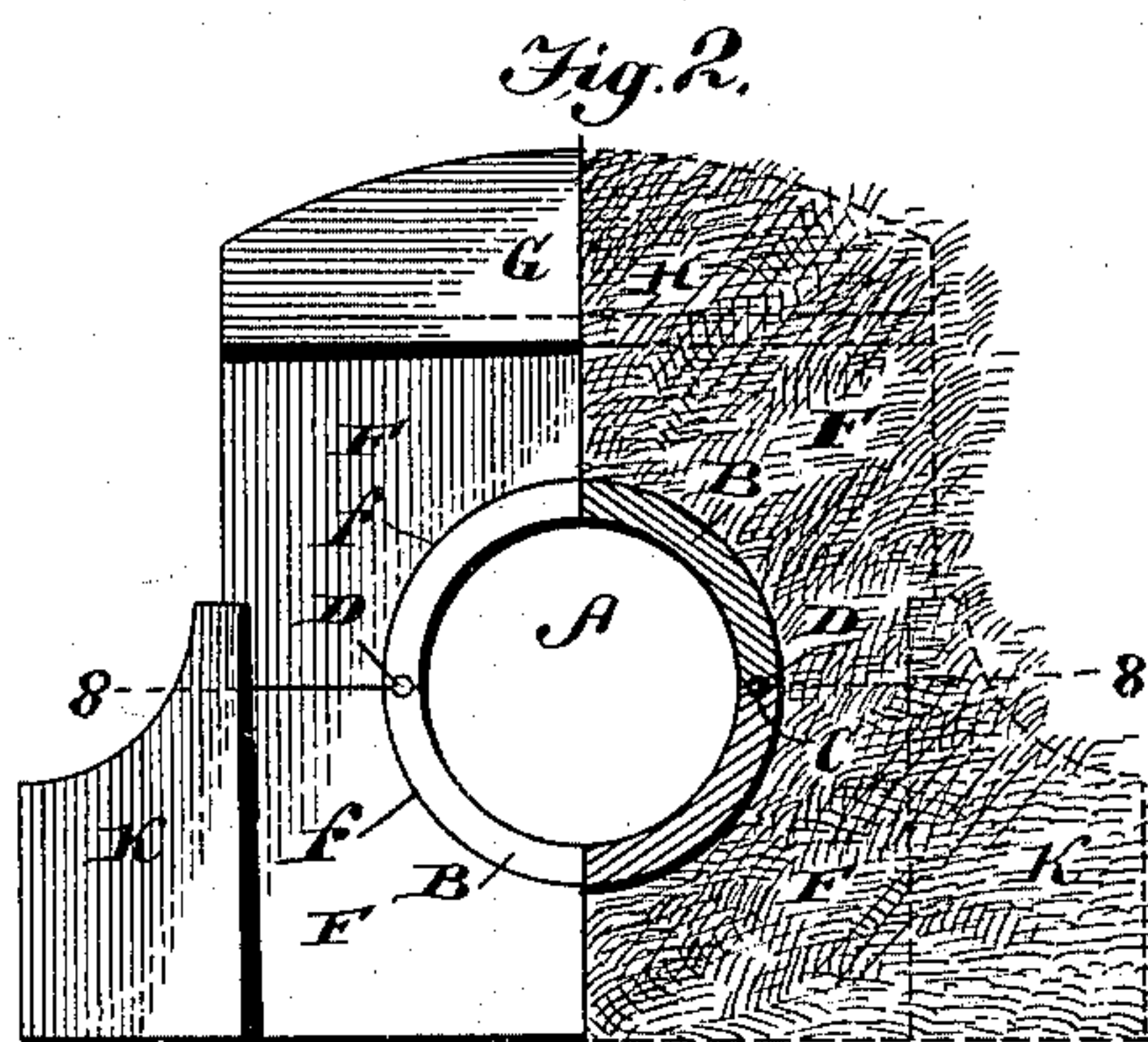


Fig. 2.

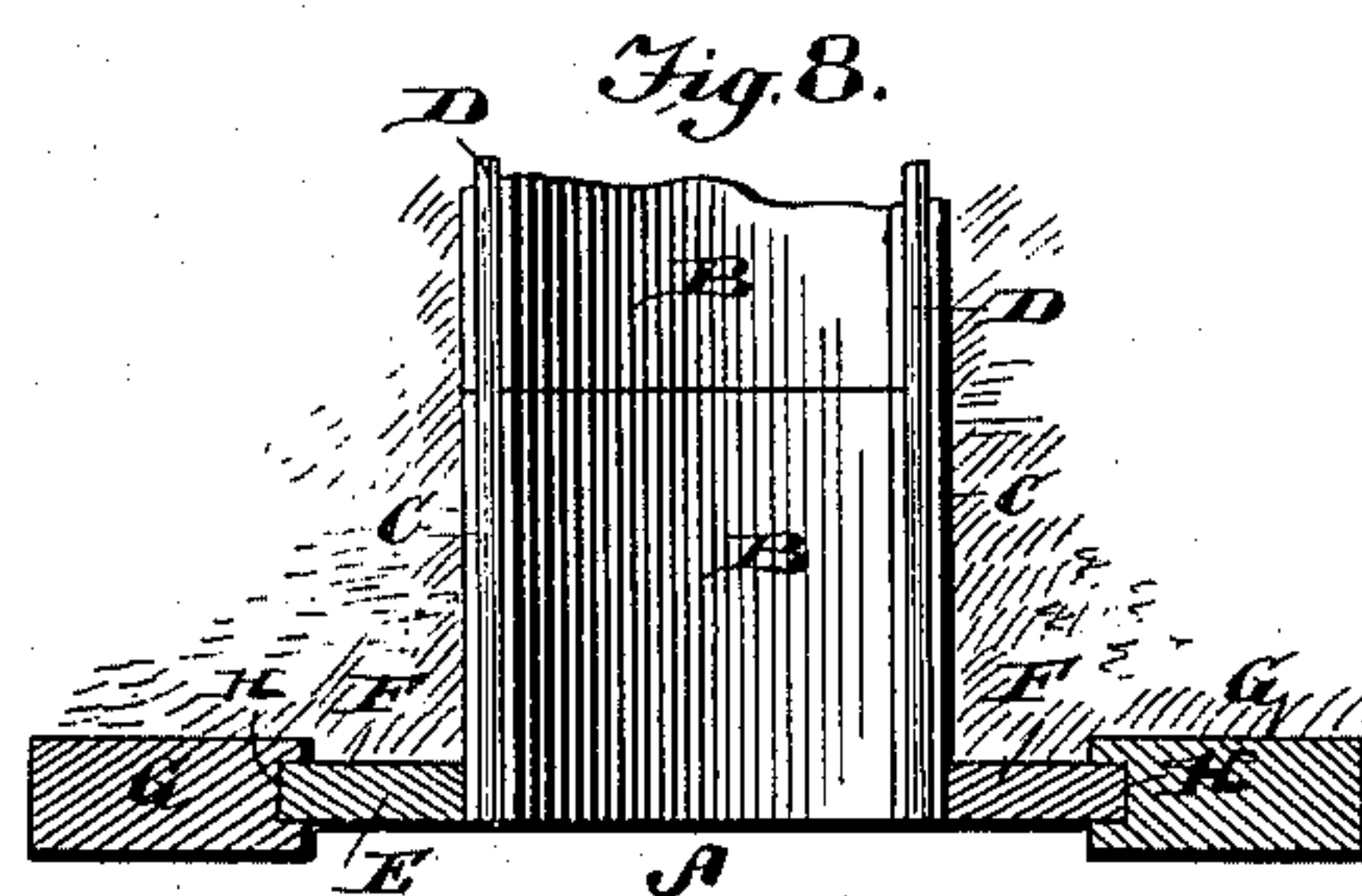


Fig. 3.

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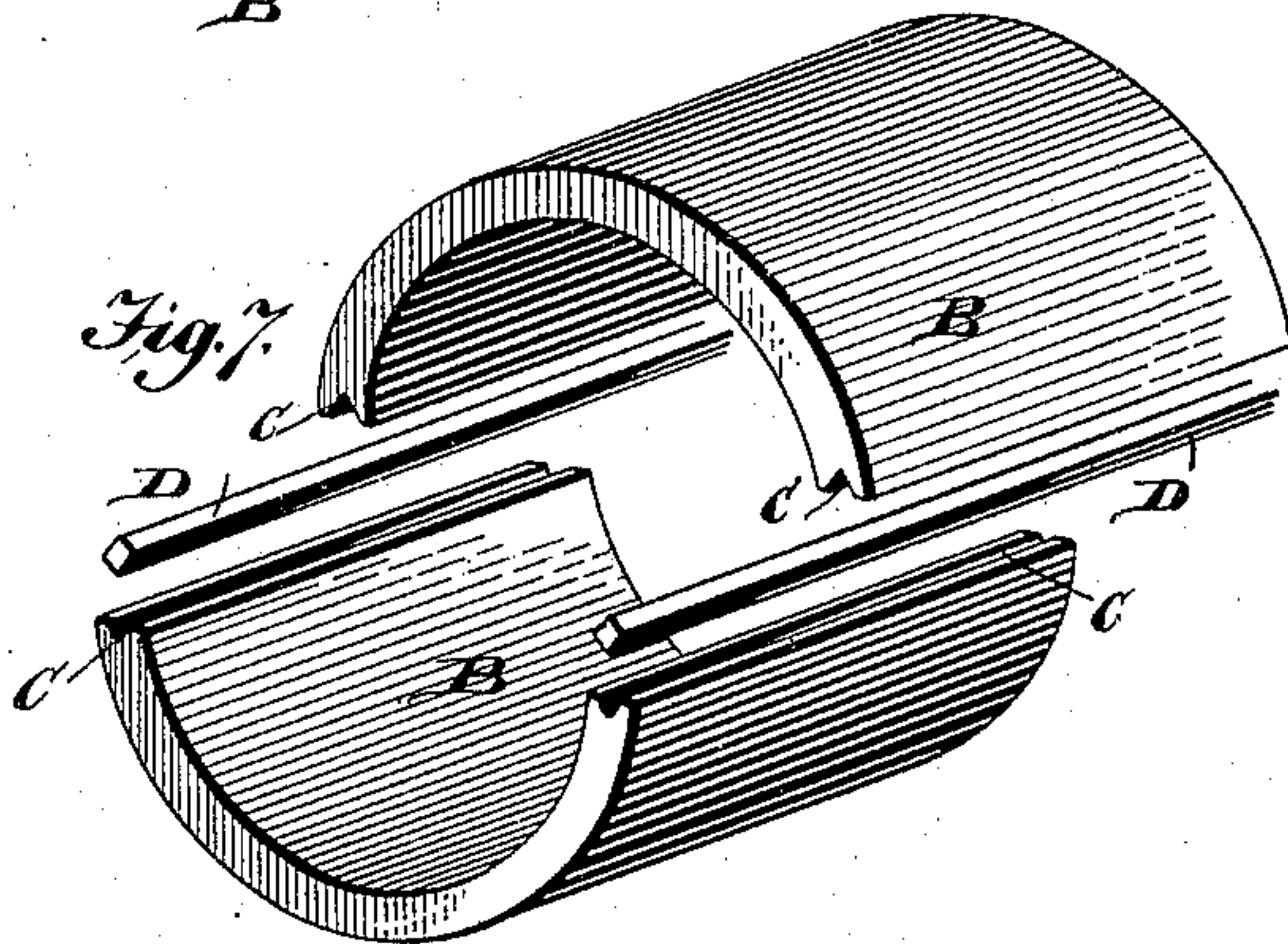
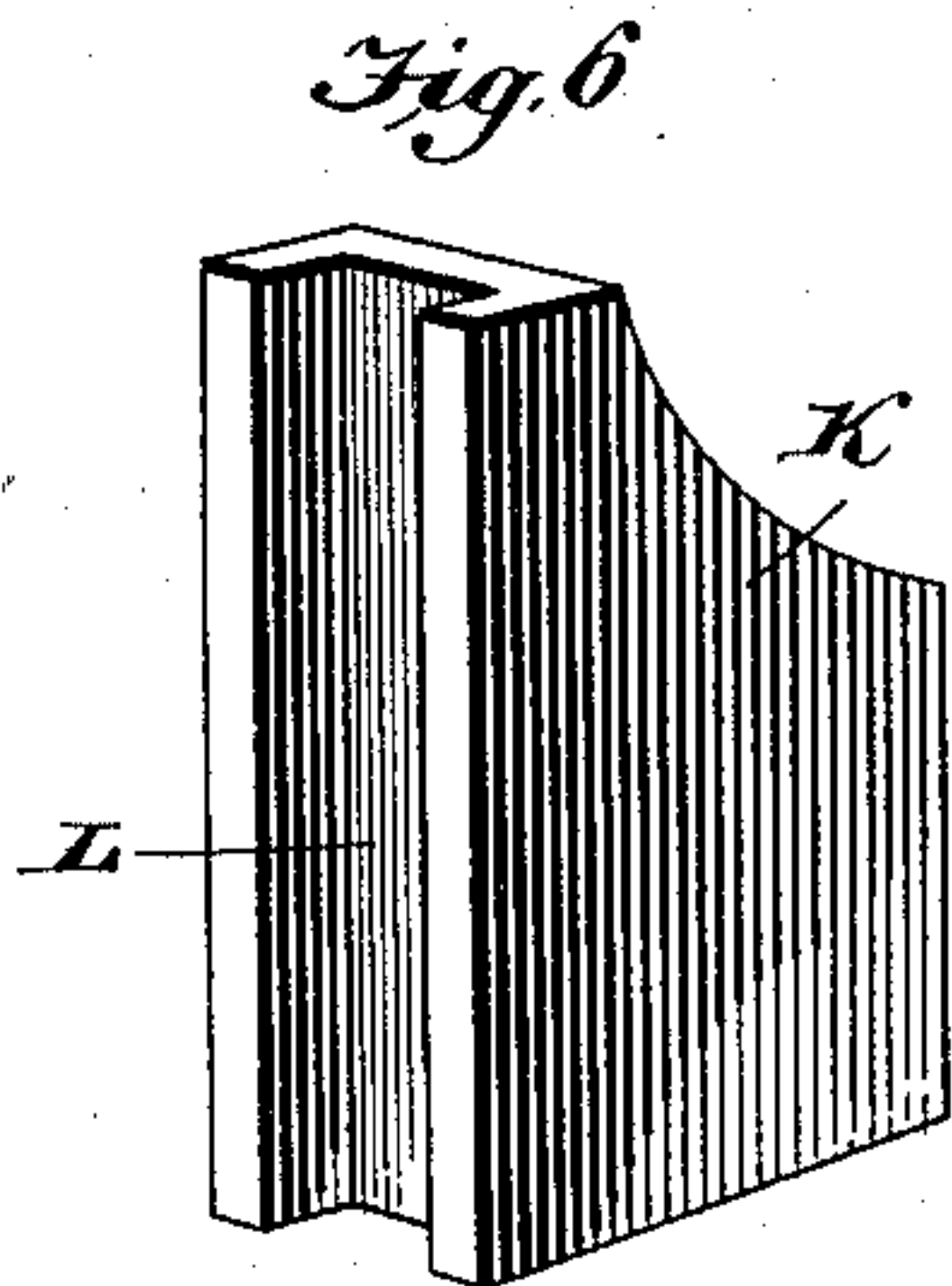
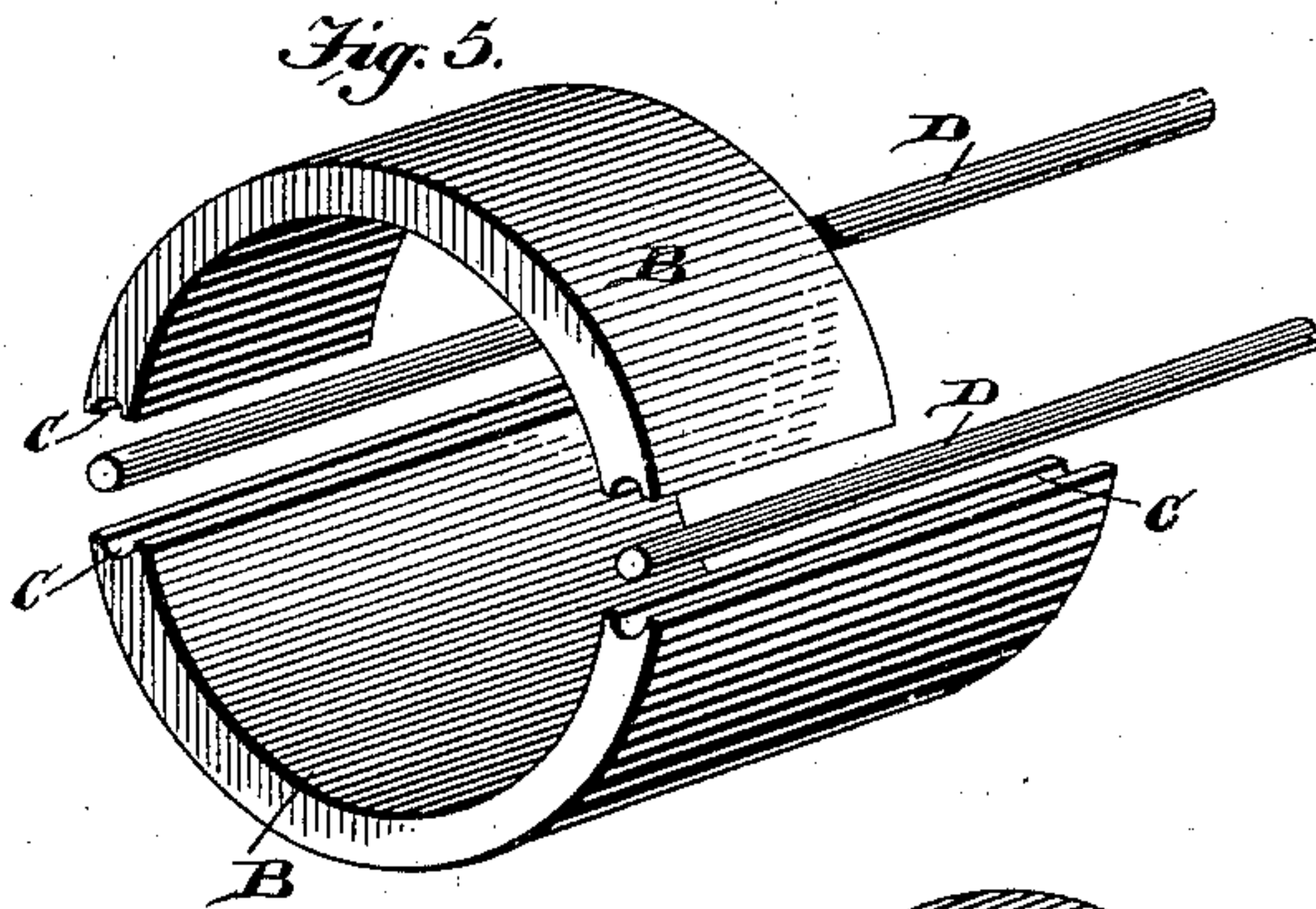
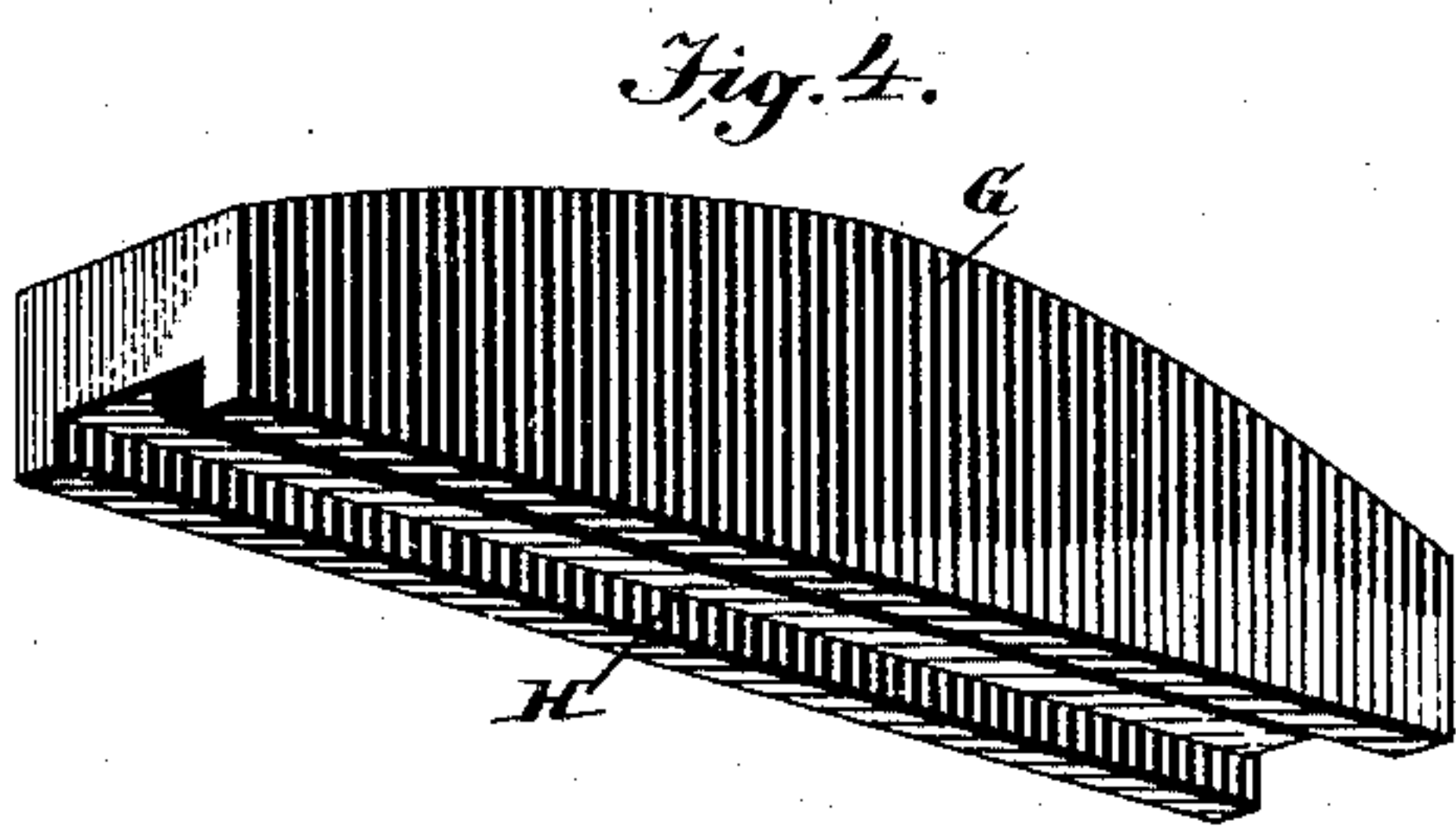
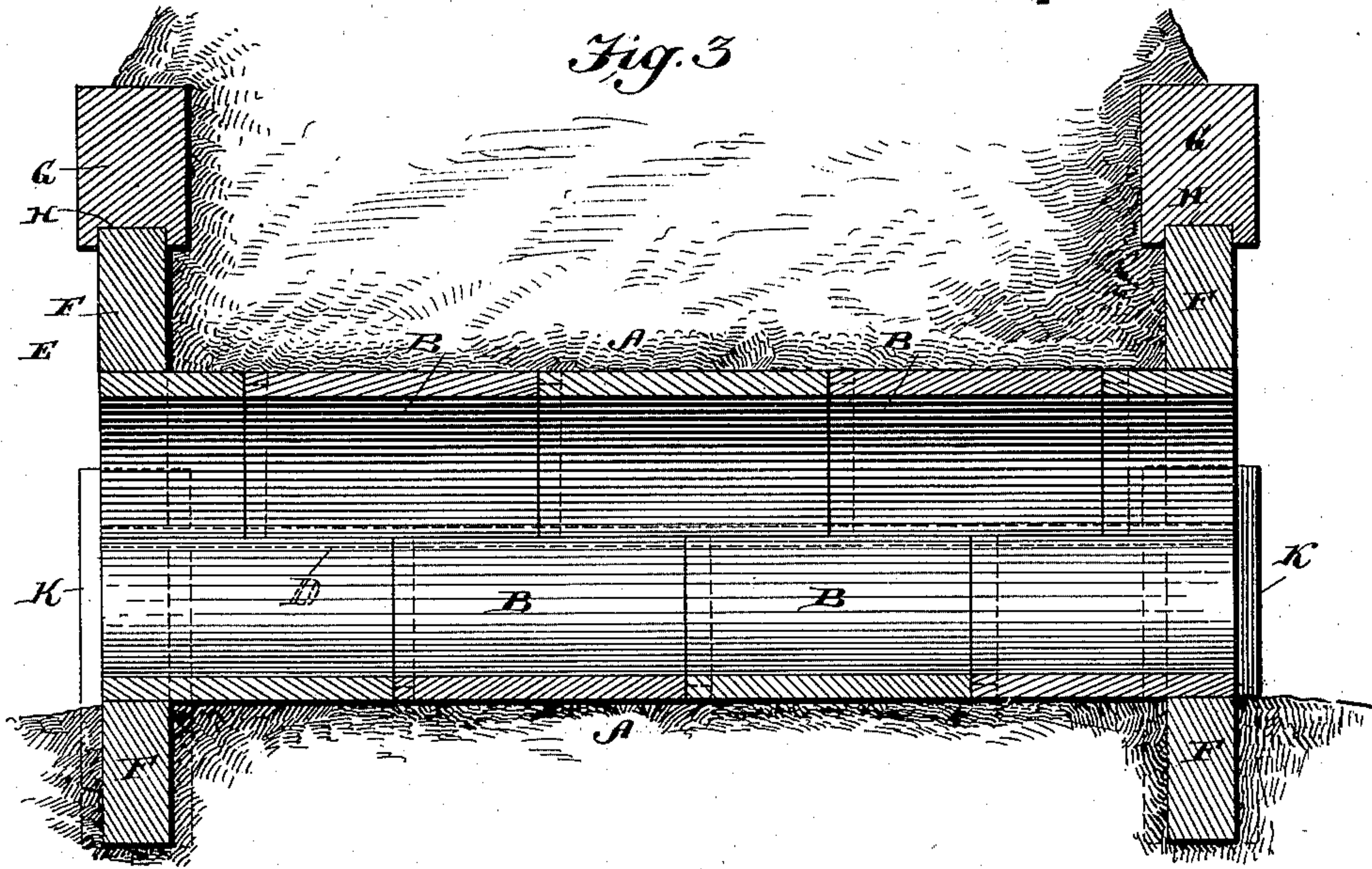
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# UNITED STATES PATENT OFFICE.

WILLIAM SINK PARKER, OF AUSTIN, TEXAS, ASSIGNOR OF TWO-THIRDS TO  
OTTO BERGSTROM AND ROBERT M. ARMSTRONG, OF SAME PLACE.

## CULVERT.

SPECIFICATION forming part of Letters Patent No. 567,653, dated September 15, 1896.

Application filed March 25, 1896. Serial No. 584,865. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM SINK PARKER, residing at Austin, in the county of Travis and State of Texas, have invented a new and useful Improvement in Culverts, of which the following is a specification.

This invention relates generally to culverts, and particularly to certain improvements upon patent granted to me, numbered 546,245, dated September 10, 1895.

The object of the present invention is to provide an improved construction of culvert which is particularly adapted for railroad use.

Another object is to provide a culvert which shall be so constructed that the jarring caused by the passing of trains or wagons will not impair the solidity of the culvert.

Another object is to provide a culvert which shall be simpler in construction than those commonly in use.

Another object is to provide a culvert in which the end walls shall be securely connected and braced; and a still further object is to provide a culvert embodying novel constructions of cap-pieces and buttresses.

With these various objects in view and such others as may hereinafter appear my invention consists in the peculiar construction of the several parts and also in the novel combination or arrangement, all of which will be fully described, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view showing my invention as in use. Fig. 2 is an end view, partly in section. Fig. 3 is a vertical longitudinal section of the culvert-pipe and end walls. Fig. 4 is a detail view of the cap-piece of end wall. Fig. 5 is a detail perspective view showing the manner of assembling the sections and keys. Fig. 6 is a detail perspective view of one of the buttresses. Fig. 7 is a detail perspective view similar to Fig. 5, showing a slightly-modified form of section; and Fig. 8 is a horizontal section taken on the line 8 8 of Fig. 2.

In constructing a culvert in accordance with my invention I provide a culvert-pipe A, which is built up from a series of concrete, terra-cotta, or burnt-clay sections B, said sections being preferably semicircular or rectangular in shape, but in case a very large pipe

is required said sections will be made in segments.

The edges of each section are grooved longitudinally, as shown at C, said groove being semicircular, V shape, or any other desired, said groove being adapted to mate and receive a key D, which may be of wood or other suitable material, and when the parts are assembled with such key between them said key acts as a cushion to take up any jar that may be caused by passing of heavy trains or wagons. In case it is not desired to use a key D, of wood or other material, the groove can be filled with cement, thus securely binding the sections together.

The grooves C are all substantially the same width at the top, so that no matter what their shape they will always mate properly. Thus a curved and V-shaped groove will mate to form a mixtilineal passage-way which will receive either a circular or diamond-shaped key.

The sections of pipe are preferably arranged to meet in the same horizontal plane, but so far as their longitudinal arrangement is concerned they are preferably arranged to break joints, as clearly shown in Fig. 3, thus rendering said pipe firmer.

The pipe A rests in a wall E at each end, and, if desired, similar walls may be arranged at intermediate points.

The walls E are preferably composed of a series of concrete or terra-cotta blocks or bricks F, cut away at *f* in the shape of a quadrant, so that when said blocks or bricks are properly assembled a circular opening will be provided to snugly receive the culvert-pipe.

Though I have shown only four blocks or bricks composing the end walls it is obvious that I may employ more, the inner blocks or bricks only being curved out to receive the pipe.

In order to securely hold the blocks together at the top, I provide a cap-piece G, which is of such length that it extends across the top of the wall, thus securely uniting the blocks or bricks of the top portion of wall, the bottom edge of the cap-piece having a groove H wide enough to receive the top edges of the blocks or bricks.



To prevent lateral displacement, I provide buttresses K K, which have grooves L L to embrace the side edges of the blocks or bricks, and it will be noticed that the buttresses extend above the middle joint of the wall, thus bracing both the upper and lower sections of wall.

It will thus be seen that I provide an exceedingly cheap and simple form of culvert, one in which provision is made to prevent the jar of trains or wagons impairing the solidity of the culvert-pipe, and one in which the end walls are securely connected at the top and braced at the side, thus providing end walls which are very simple in construction, easily assembled, and very durable.

It will also be understood that the sections are made with either plain or with overlapping edges, as shown in dotted lines in Fig. 3, this being accomplished by molding the sections with mating rabbets or shoulders at each end.

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

1. In a culvert, the combination with the end walls, composed of a series of blocks or bricks, the cap-pieces and buttresses, of the

pipe composed of sections the edges of which are grooved longitudinally, and a key inserted in the said grooves substantially as shown and described. 30

2. In a culvert, the end wall composed of a series of blocks or bricks, and the buttresses arranged at the sides and extending above the middle joint of wall said buttresses being grooved to receive the side edges of the wall substantially as shown and described. 35

3. In a culvert, the end wall composed of a series of blocks or bricks the grooved cap-piece extending across the top, and the grooved buttresses arranged at the sides of wall and extending above the middle joint, said buttresses being grooved to embrace the edges substantially as shown and described. 45

4. In a culvert, the pipe composed of sections the edges of each section being grooved longitudinally, the end walls, composed of a series of blocks or bricks, the inner blocks being arranged to receive the pipe, the grooved cap-piece and the grooved buttresses all arranged substantially as shown and described. 50

WILLIAM SINK PARKER.

Witnesses:

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F. M. COVERT.