

(No Model.)

B. B. BIGNALL.
ROOF CONNECTION FOR VENTILATING PIPES.

No. 501,643.

Patented July 18, 1893.

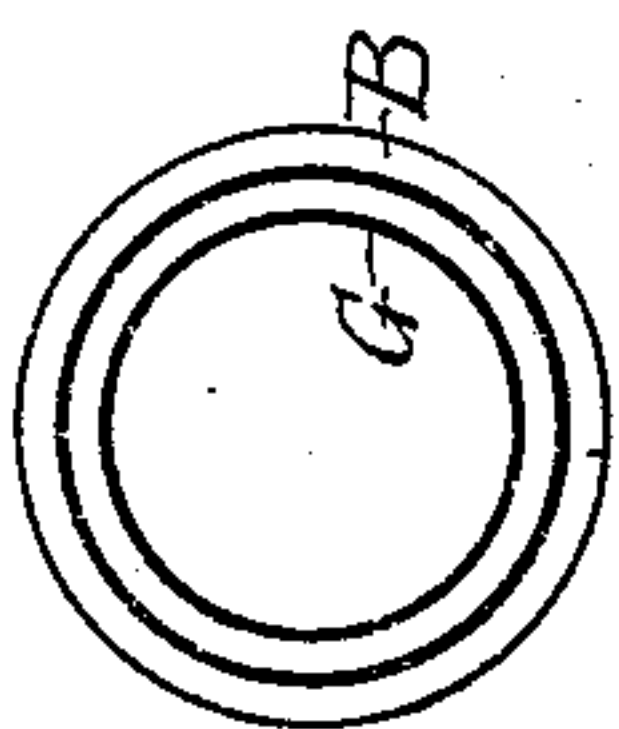
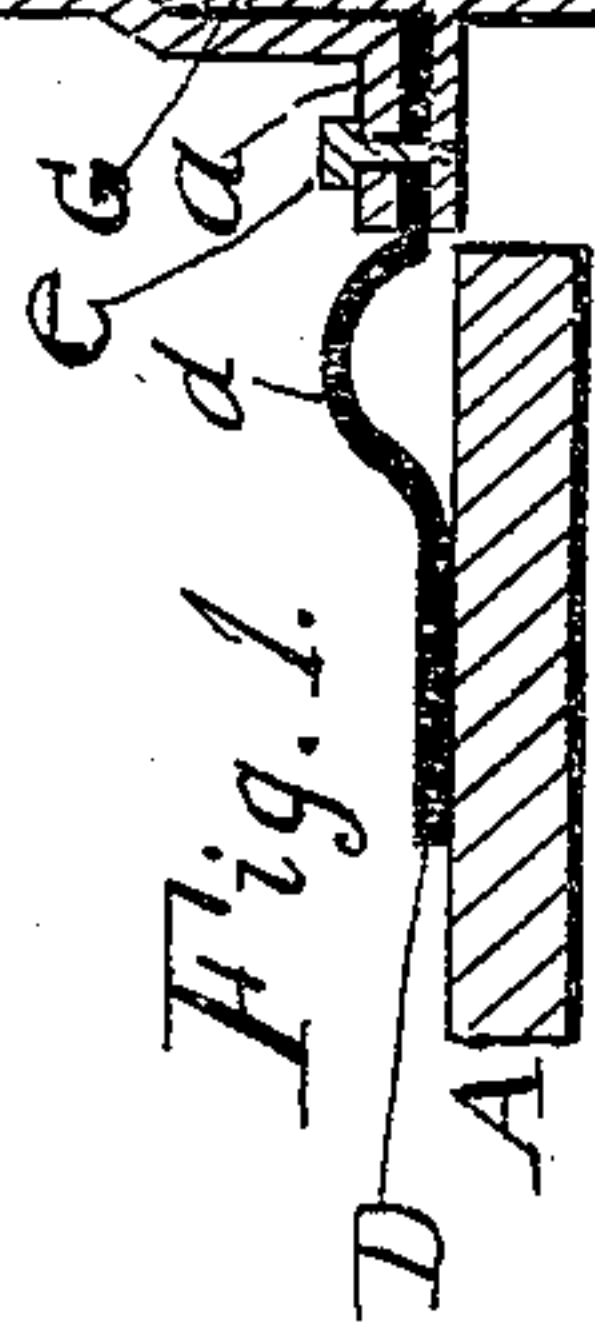
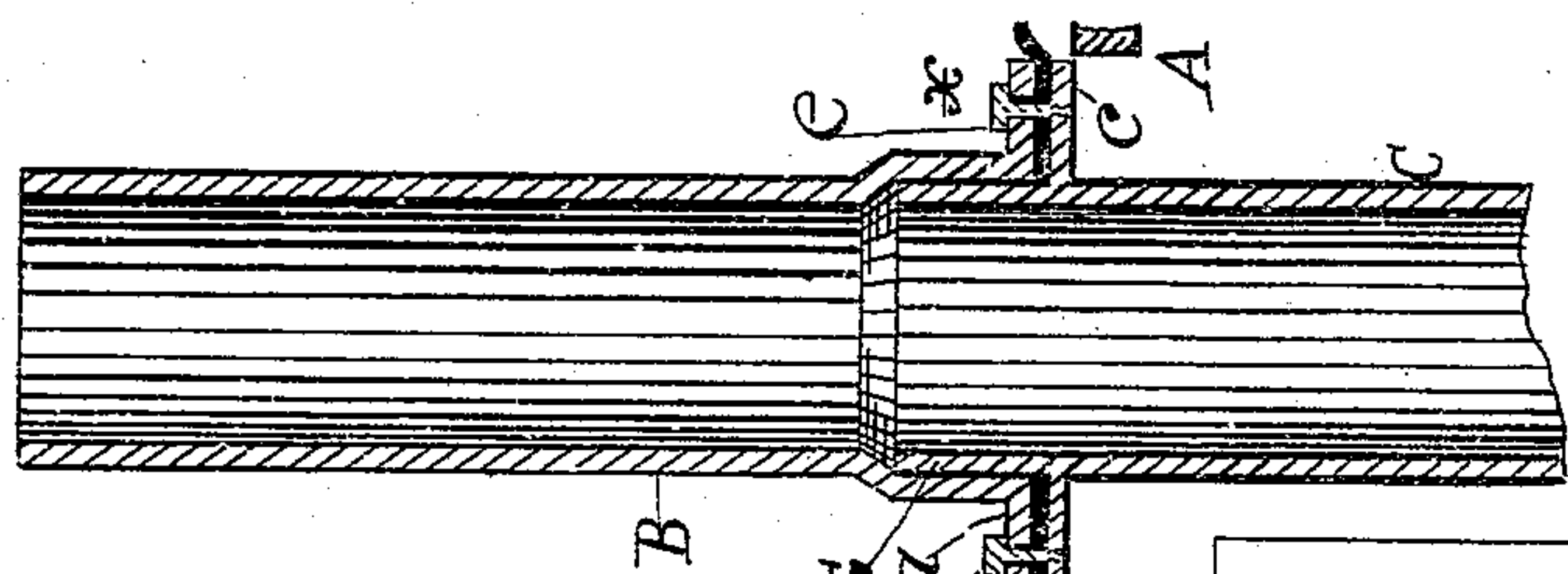


Fig. 2.

Fig. 3.

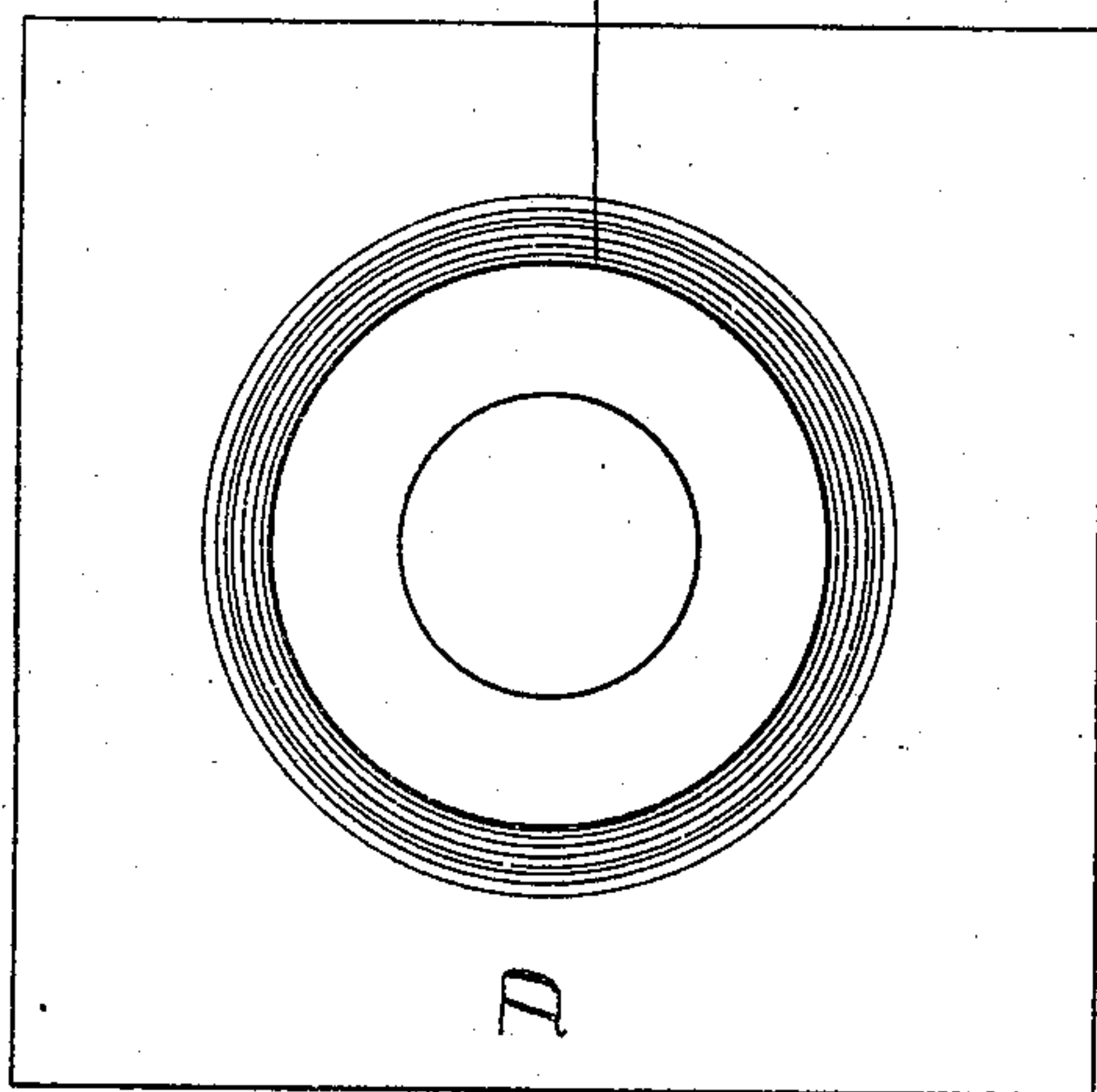
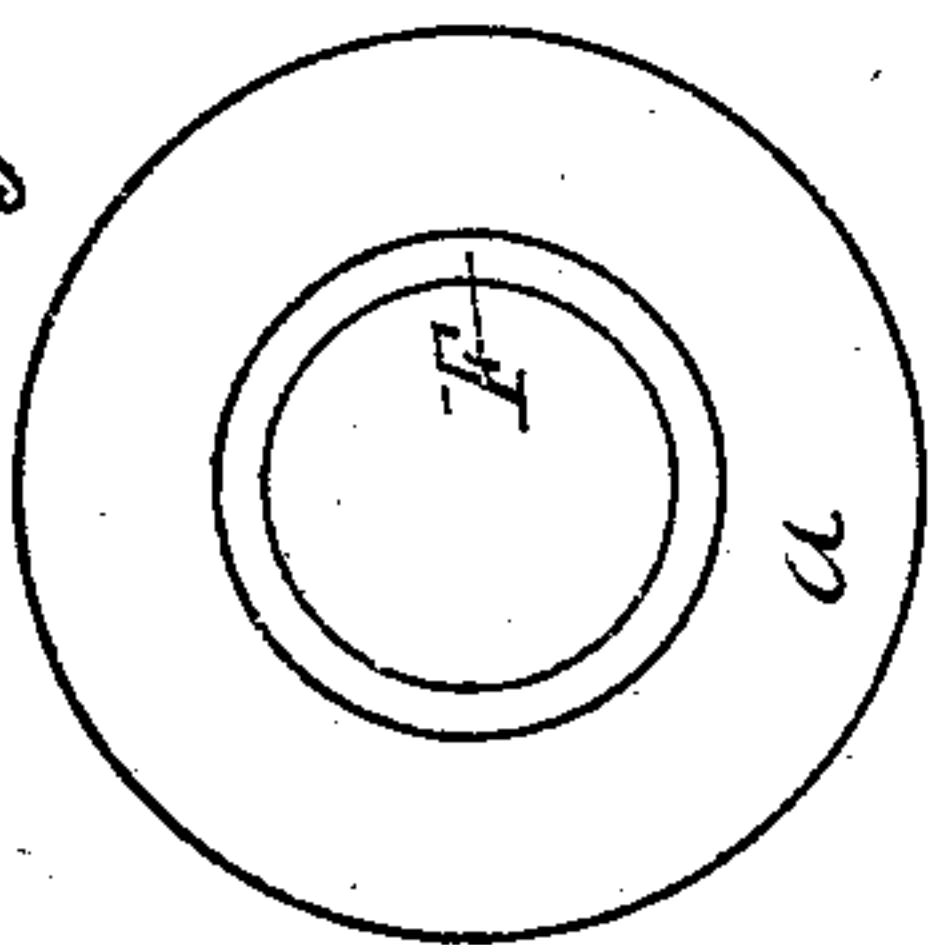


Fig. 5.

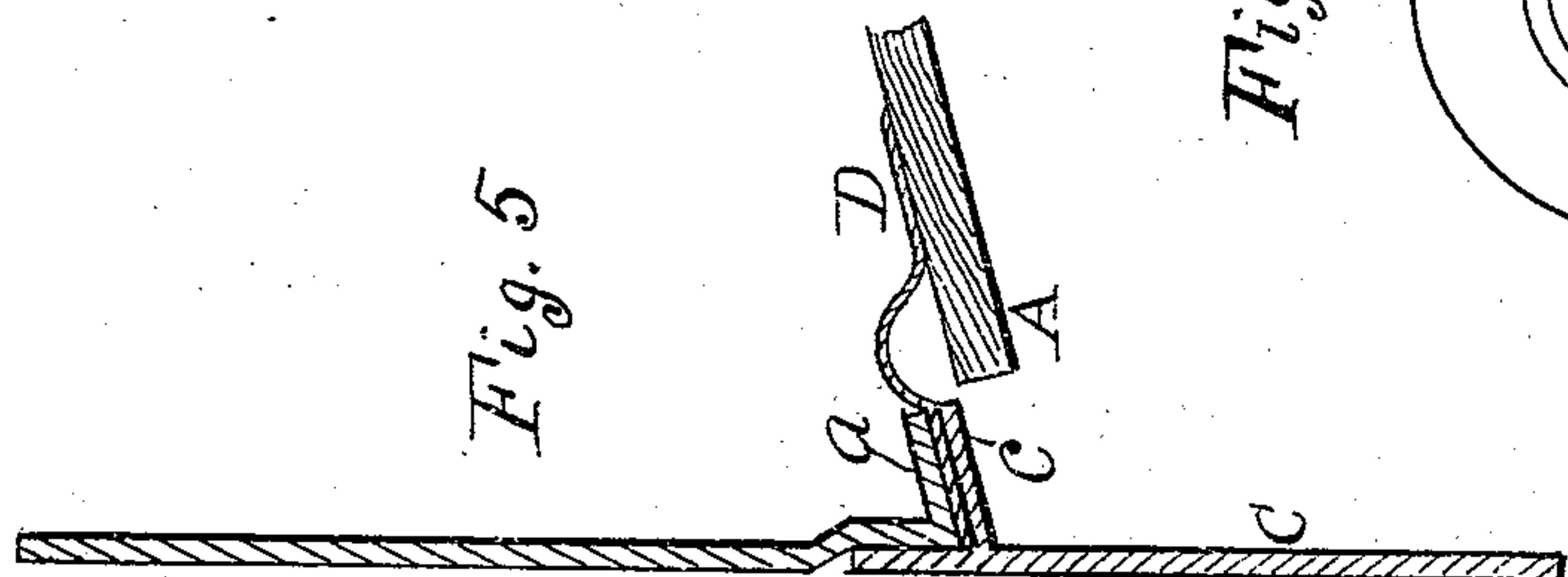
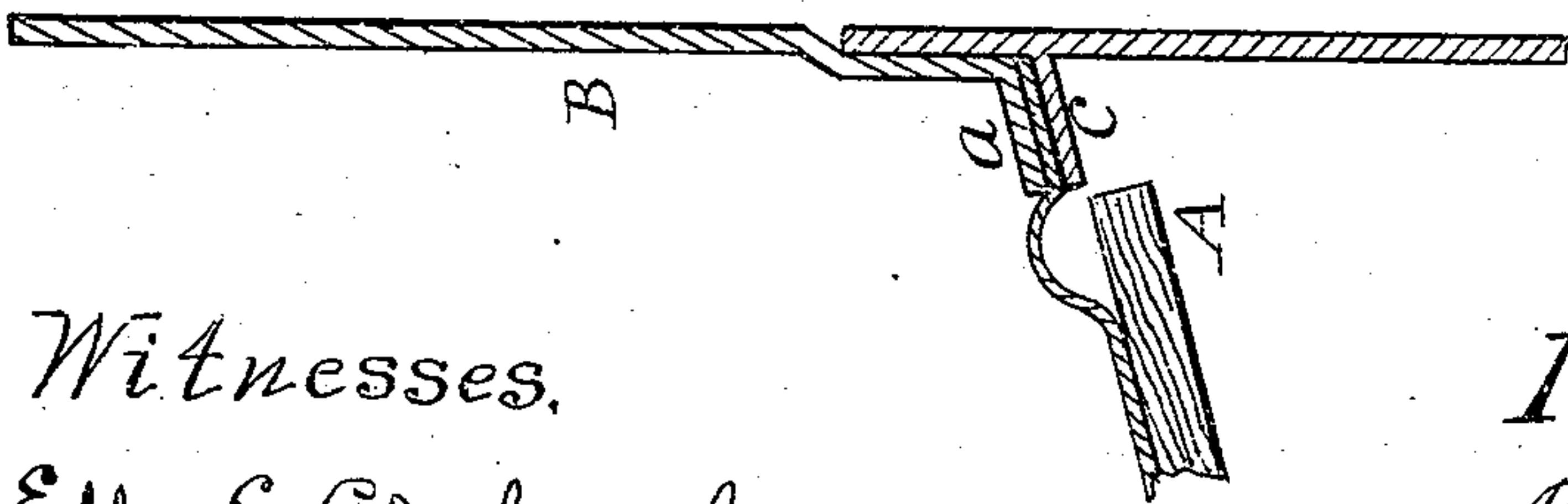


Fig. 6.



Witnesses.
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UNITED STATES PATENT OFFICE.

BURNETT B. BIGNALL, OF AURORA, ILLINOIS.

ROOF CONNECTION FOR VENTILATING-PIPES.

SPECIFICATION forming part of Letters Patent No. 501,643, dated July 18, 1893.

Application filed March 11, 1892. Serial No. 424,485. (No model.)

To all whom it may concern:

Be it known that I, BURNETT B. BIGNALL, a citizen of the United States, and a resident of Aurora, county of Kane, and State of Illinois, have invented new and useful Improvements in Roof Connections for Ventilating-Pipes, of which the following is a specification, reference being had to the annexed drawings, illustrating the invention, in which—

Figure 1, is a vertical central section of the ventilating pipe which extends above and below the roof, a section of the roof and the flash plate by which the roof is water proofed to the pipe; Fig. 2, a horizontal section of the portion of pipe which extends above the roof on line X. Fig. 3, is a top view of that portion of the pipe which extends below the roof. Fig. 4, is a view of the lower end of the pipe which constitutes the section above the roof. Fig. 5, shows the pipe and connection formed with an angular joint to apply to a roof which is inclined. Fig. 6, is a plan of the flash plate removed from the roof and pipe.

The nature and construction of this invention will be fully comprehended by the following detail specification.

A is a section of the roof-boards of a building, and B is that portion of the ventilating pipe which extends above the roof, and C is a portion which extends below the roof; and is supposed to extend to the sewer, or other pipe to be ventilated.

D is the flash plate which I preferably construct of lead, copper, or other malleable metal for the better class of roofs. The connecting flange of the upper pipe is shown at *a* and the flange to the lower pipe is shown at *c*, and the flash plate which is secured between the flanges is formed with an elevated annular ring *d* to produce an excess of material at the exterior portion of the flanges that the ventilating pipe may settle, or the roof may settle without breaking, or cracking the flash plate.

When the flash plate is to form a portion of a metal roof, or employed where shingles, or slate is for a covering, it is first made in a separate piece as shown and then united in the ordinary manner with the metal roof, or united with shingles or slate as is now the custom. Where tar-felt is employed for composition roofs, or tar and gravel roofs, the felt is formed in substantially the same man-

ner as the flash plate and clamped between the flanges *a*, *c*, by two, or more nuts and bolts *e*. Where felt is employed, roofing tar can be used as a packing to make a water tight connection with the flanges. But where a metal flash plate is used putty or ground lead and oil is preferable but any well-known packing may be employed to make a water proof connection.

For the convenience of making a connection of the pipe B, with the pipe C, an annular rabbet F is formed within the lower portion of pipe B and an annular extension G is formed on pipe C above the flange *c* and telescoped into the rabbet. By this means the pipe B is firmly held in place and makes it very convenient for securing the nuts and bolts *e*. The closest analogy to this construction for the purpose specified, is a hub formed on the ventilating pipe, an annular groove formed in the hub and the flash plate wedged therein by packing.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. An improvement in roof connections for ventilating pipes consisting of the pipes B above the roof and the pipe C connecting therewith and extending below the roof, said pipes provided with flanges between which the flash plate is secured; as and for the purpose specified.

2. The flanged pipes above and below the roof, in combination with a flash plate secured between the flanges, and formed with an elevated annular bead exterior to the flanges to permit of a settlement of the roof, or pipes; substantially as and for the purpose specified.

3. The upper section of a ventilating pipe provided with a flange at its lower end and an annular rabbet which enlarges the inner periphery of the pipe, the lower pipe provided with a flange on its top portion and an extension portion which enters said rabbet, in combination with a flash plate which is clamped between the flanges; as and for the purpose specified.

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Witnesses:

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