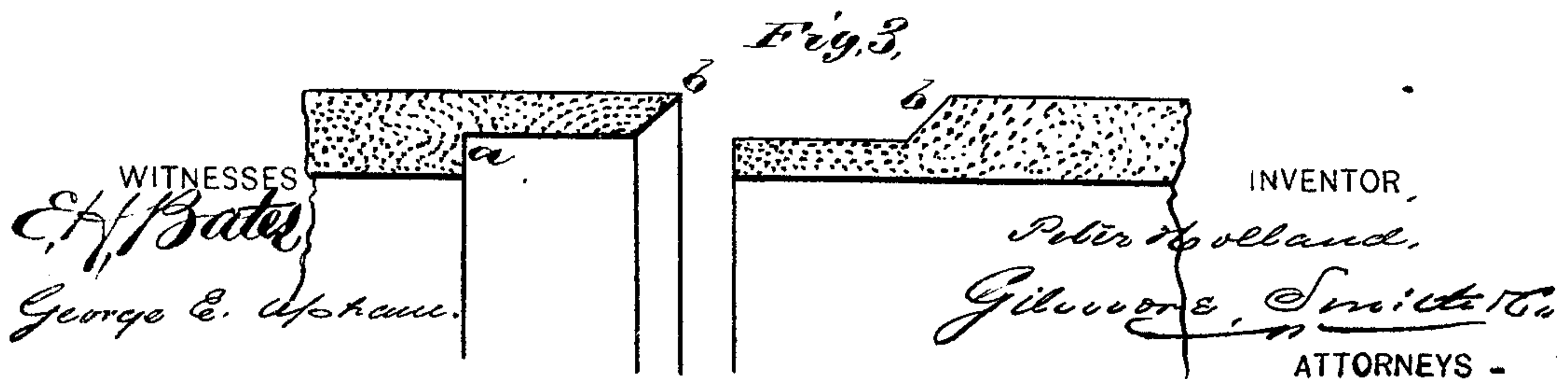
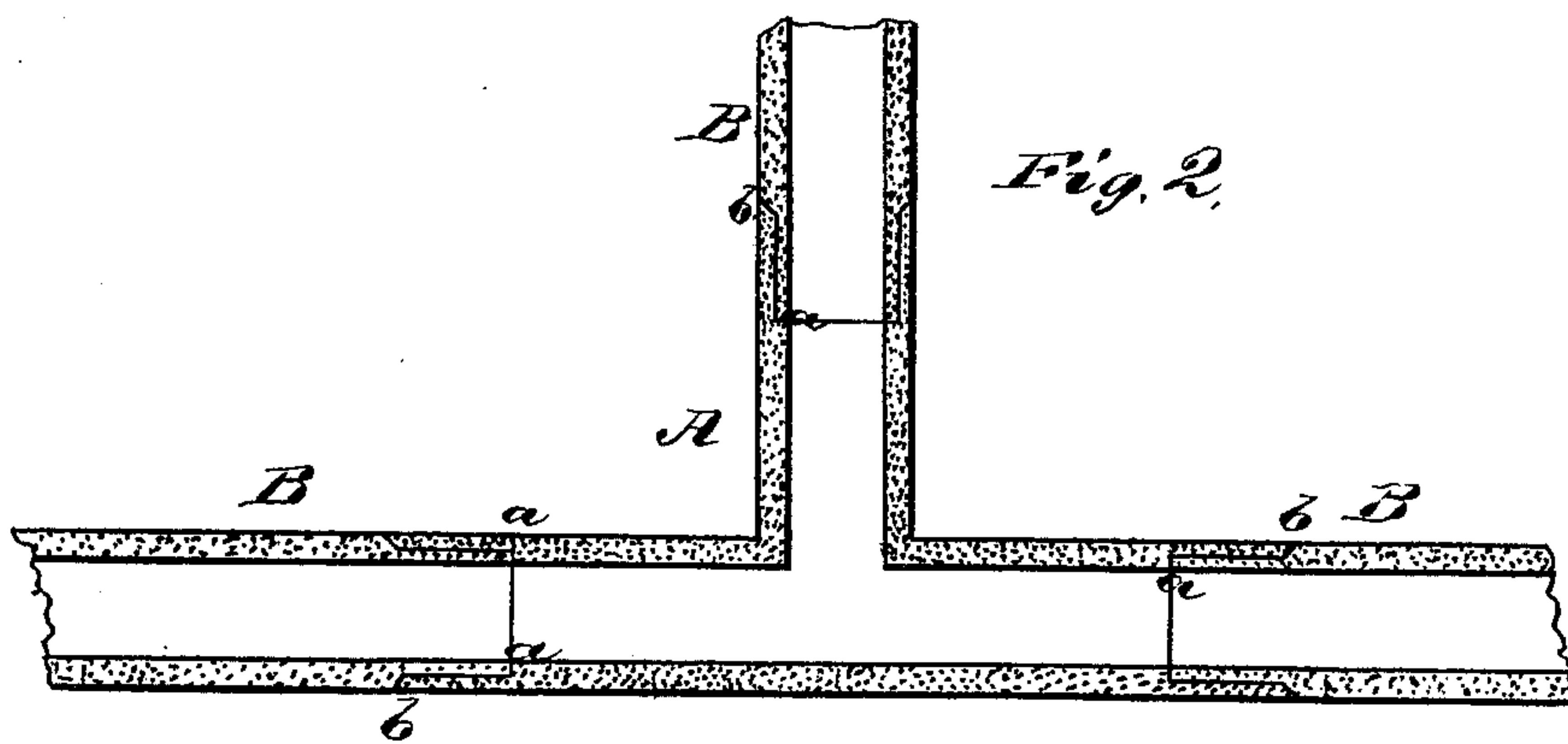
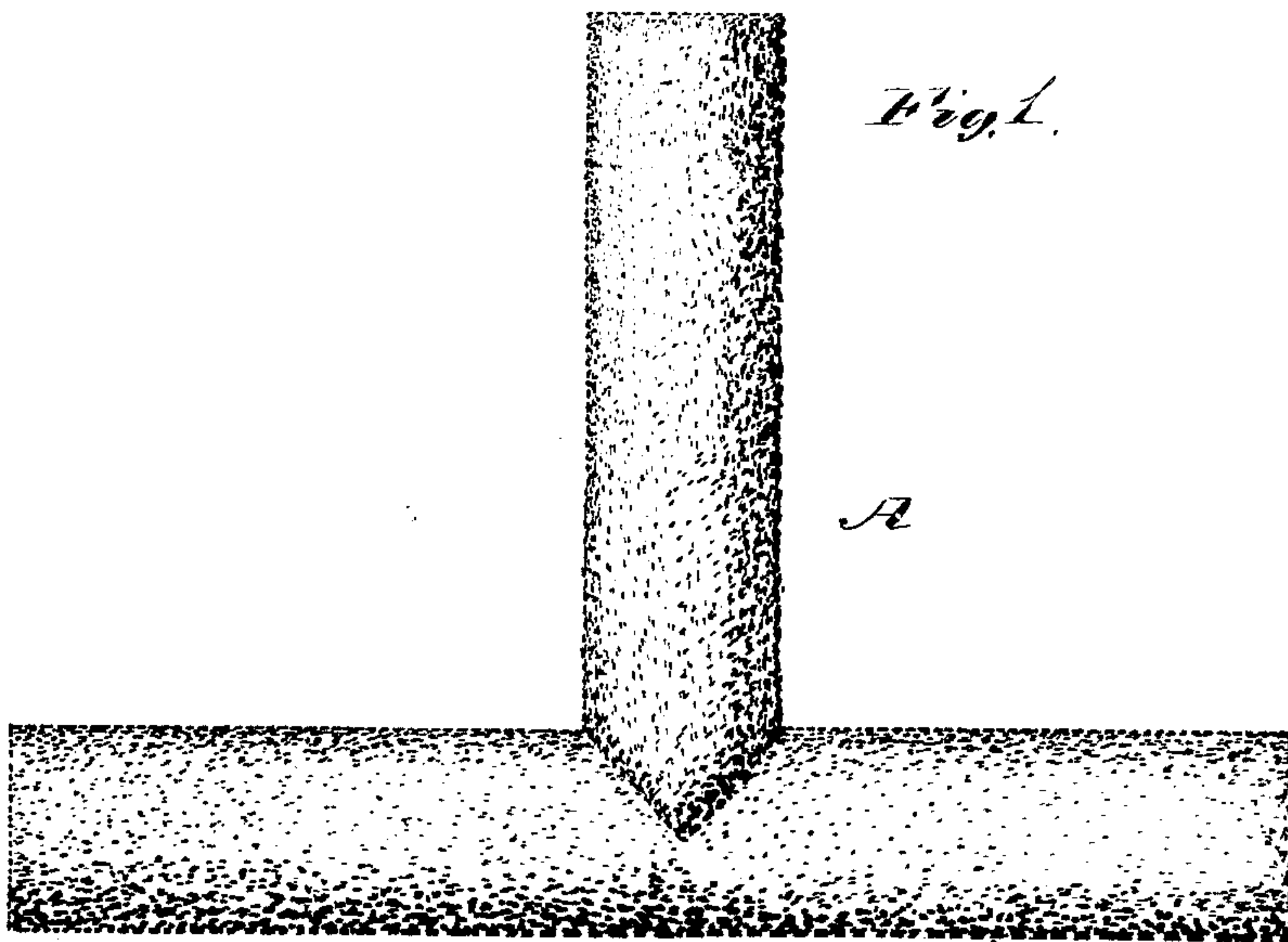


P. HOLLAND.  
GRAIN VENTILATION.

No. 183,762.

Patented Oct. 31, 1876.



WITNESSES  
*E. H. Bates*  
*George E. Upkum.*

INVENTOR,  
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ATTORNEYS -

# UNITED STATES PATENT OFFICE.

PETER HOLLAND, OF DECORAH, IOWA.

## IMPROVEMENT IN GRAIN-VENTILATION.

Specification forming part of Letters Patent No. **183,762**, dated October 31, 1876; application filed April 15, 1876.

*To all whom it may concern:*

Be it known that I, PETER HOLLAND, of Decorah, in the county of Winnesheik and State of Iowa, have invented a new and valuable Improvement in Grain-Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

Figure 1 of the drawing is a representation of a front elevation of my grain-elevator, and Fig. 2 is a longitudinal vertical sectional view of the same. Fig. 3 is a detail view thereof.

The object of my invention is to dry moist grain, in bulk, in bin, on ship-board, or any other places where large quantities are held, so as to render it unnecessary to handle it over for that purpose. To this end the nature of my invention consists in introducing through the mass of grain ventilating-tubes of clay or other porous material, that will absorb the moisture and evaporate the same, as will be hereinafter more fully set forth.

In the annexed drawing, A represents a T-shaped pipe or tube, made of clay or other suitable material, and burned or sun-dried to make it hard and porous. To the ends of the

arms of this T-shaped tube are added other pipe-sections, B B, of similar material, so as to make the arms of any length desired, the center or vertical arm being of such length as to extend above the grain. The ends of the section are formed with beveled ends *b*, with shoulders *a* to fit into and support each other. Any desired number of these pipes are placed in the receptacle in which the grain is packed, and, being porous, they will absorb the moisture from the grain, which moisture will then be evaporated through the ends of the pipes, thus obviating the necessity of handling the grain over again, as is now often required to prevent burning or injury to the grain.

What I claim as new, and desire to secure by Letters Patent, is—

A ventilator consisting of a T-shaped pipe or tube, A, with sections B attached to the arms thereof, all made of clay or other suitable material, and placed through the grain, as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

PETER HOLLAND.

Witnesses:

WILLIS WHEELLOCK,  
E. E. COOLEY.