

J. B. MOORE.  
SEWER-TRAP.

No. 193,266.

Patented July 17, 1877.

Fig. 1.

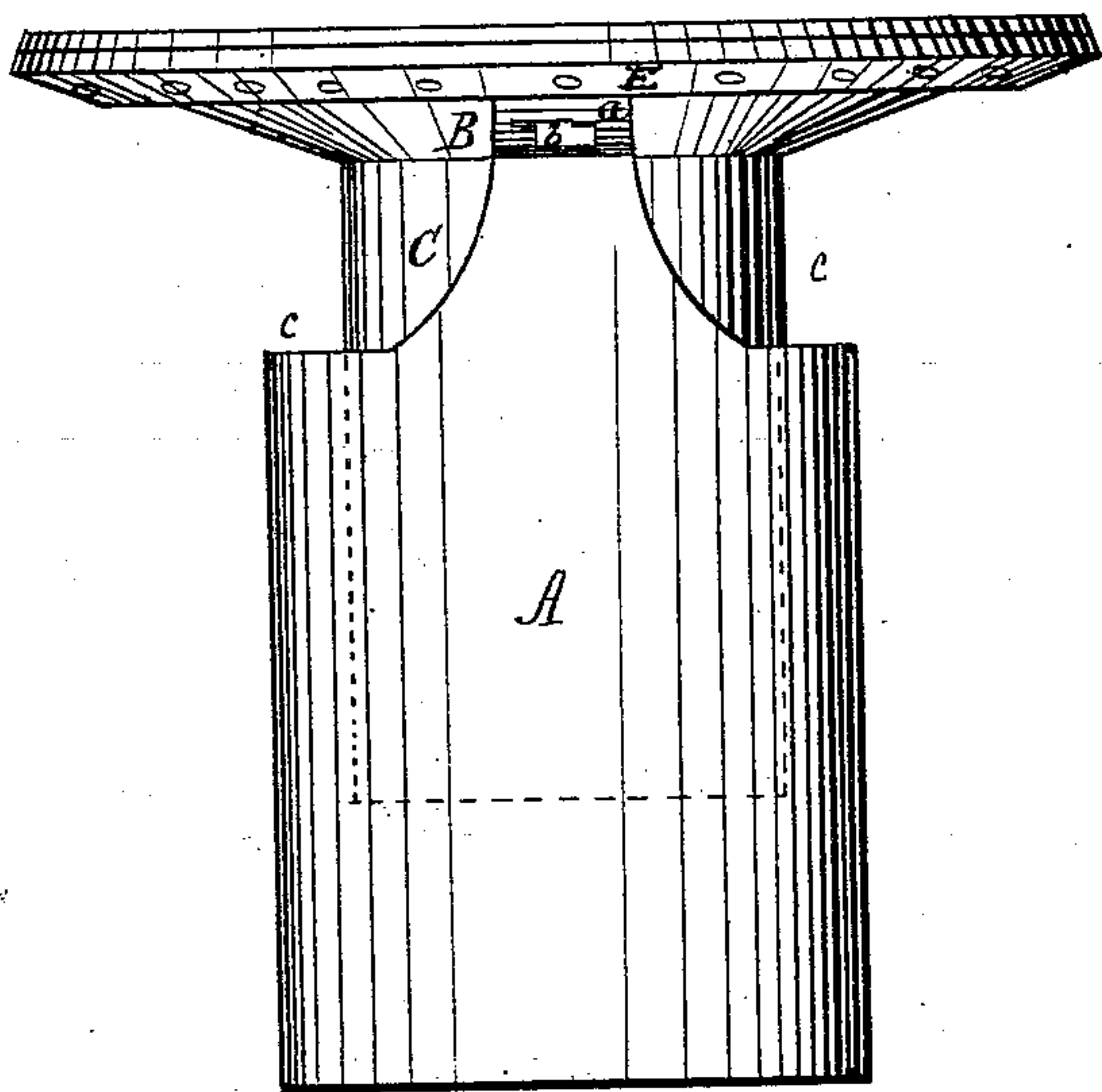


Fig. 2.

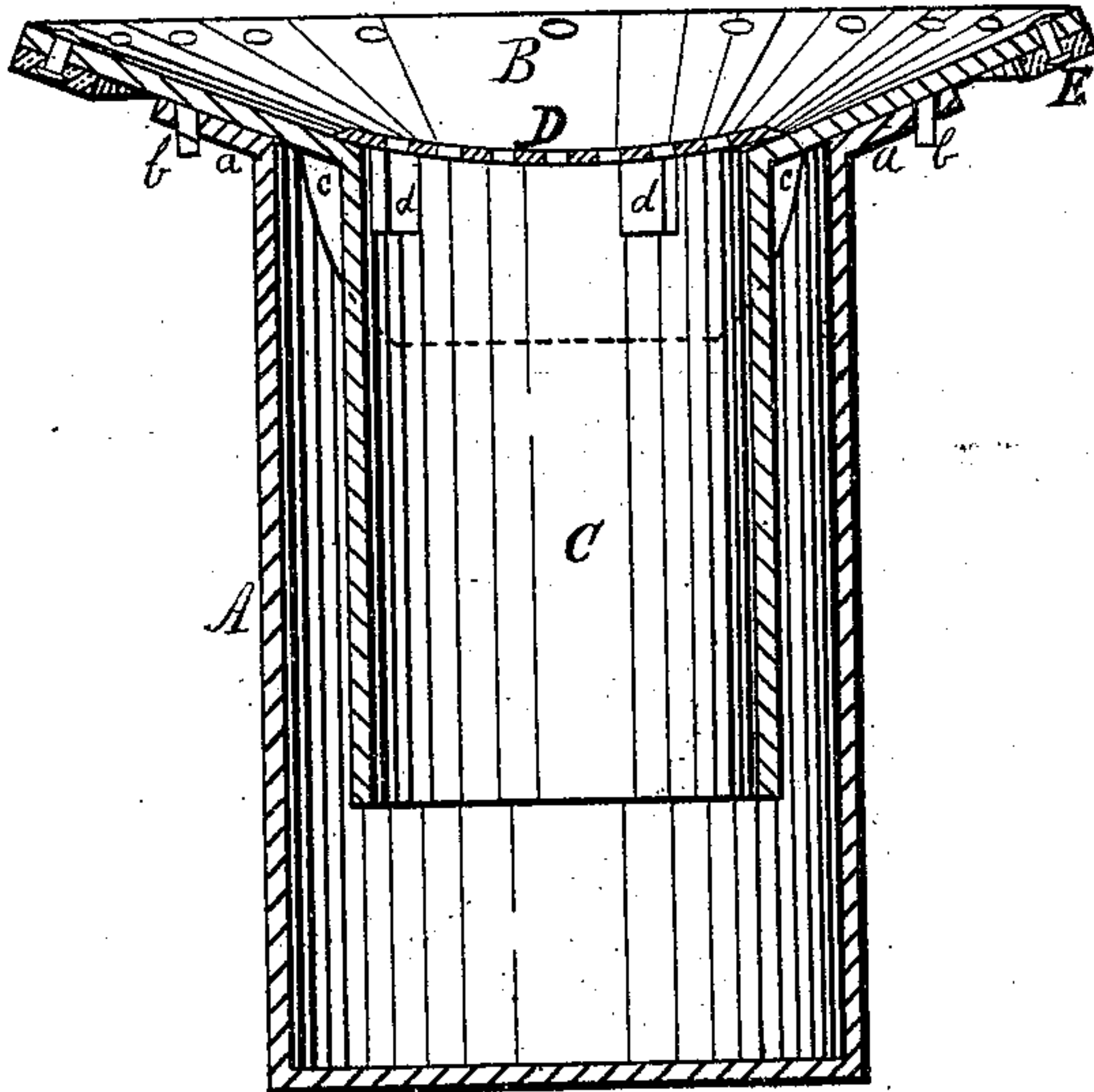
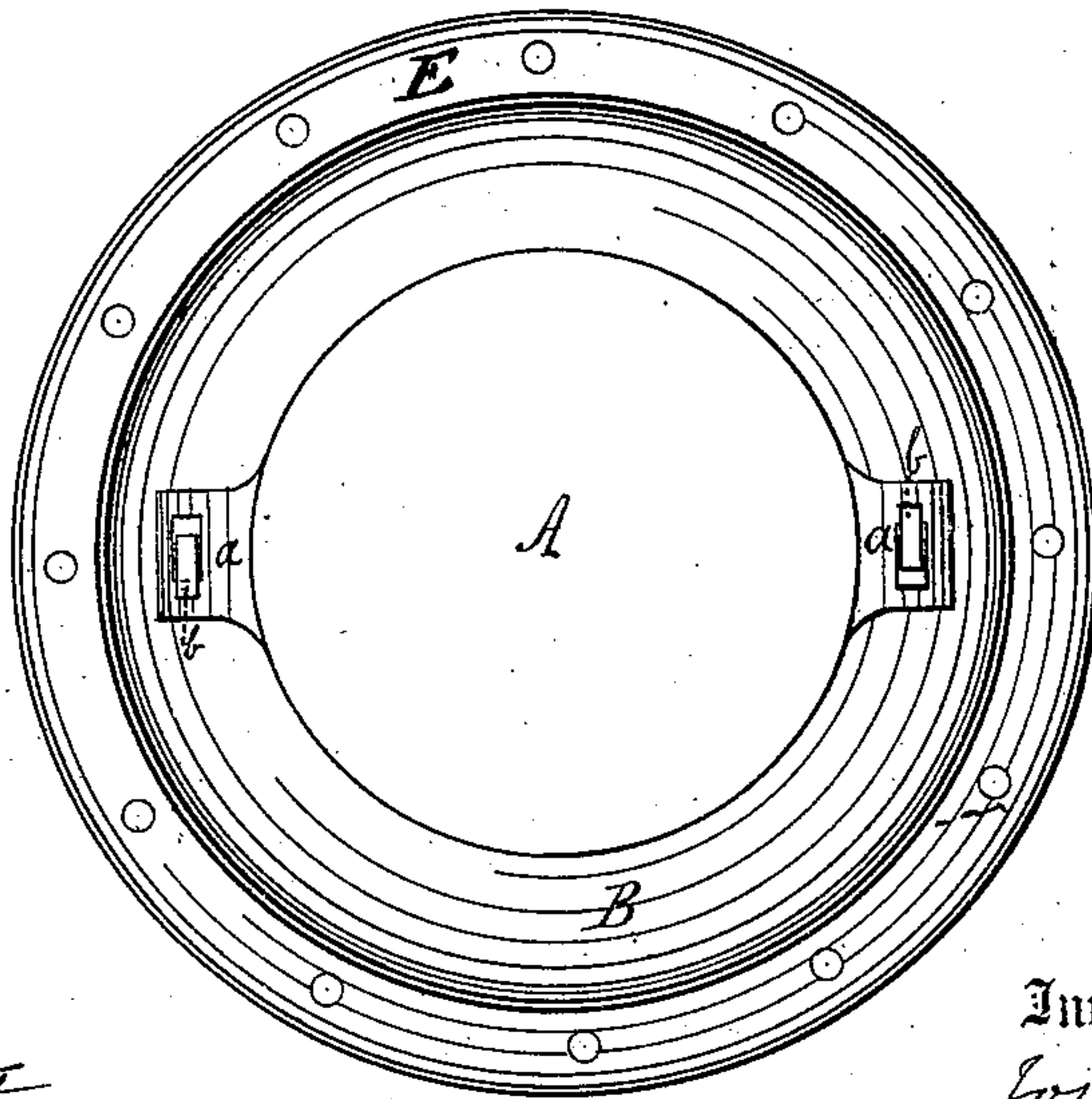


Fig. 3.



Witnesses.

A. B. Robertson.

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# UNITED STATES PATENT OFFICE.

THOMAS S. MORRIS, OF COLUMBUS, OHIO.

## IMPROVEMENT IN GRAIN-DRIERS.

Specification forming part of Letters Patent No. **193,267**, dated July 17, 1877; application filed December 30, 1876.

*To all whom it may concern:*

Be it known that I, THOMAS S. MORRIS, of the city of Columbus, in the county of Franklin and State of Ohio, have invented a new, economical, and useful improvement for the purpose of drying corn, wheat, and other grain, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective view of a steam-boiler furnace with my grain-drier passing through the same. Fig. 2 is a section of the grain-drier, showing the manner in which it enters the furnace, and also the friction-rollers upon which it works.

The object of my invention is to furnish a device by which all kinds of grain can be kiln-dried at steam-mills and at grain-shipping establishments where corn is shelled by steam—that is, dried in and by the boiler-furnace used for generating steam for the steam-engines used in such establishments—thereby economizing fuel by having the boiler-furnace perform the double duty of generating the steam and drying the grain.

In the drawings, Figure 1, A is an iron tube,

which may vary in size, and through which the grain passes. Said iron tube enters at one side of the engine or boiler-furnace, passes through the furnace, and out at the opposite side. B is an iron tube, which leads the grain into the drier. C C is the furnace. D is a section of the boiler. E E represent the brick walls forming the furnace. F is the pulley around which the belt passes which drives the drier.

Fig. 2 is a drawing, showing the way in which the drier enters and passes out of the furnace. *a* is an iron plate, bolted on the outside of the furnace-wall, and through which the drier passes. B' B' are friction-rollers, upon which the drier revolves.

What I claim is—

The combination, with the furnace of a steam-boiler, of the revolving tubular grain-drier A, hung on the friction-rollers B', and constructed, arranged, and operating in the manner and for the purposes specified.

THOMAS S. MORRIS.

Witnesses:

IVOR HUGHES,  
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