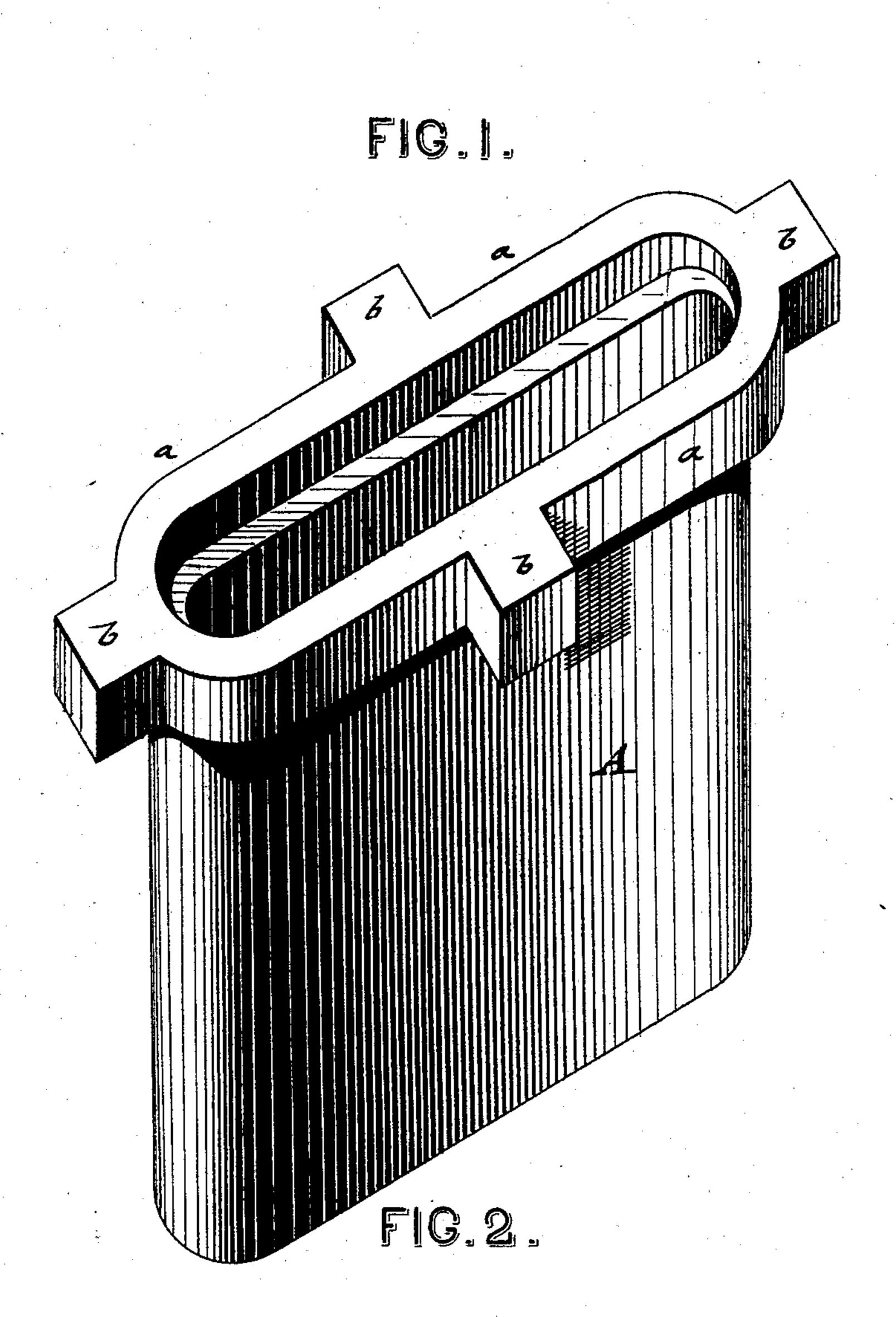
(No Model.)

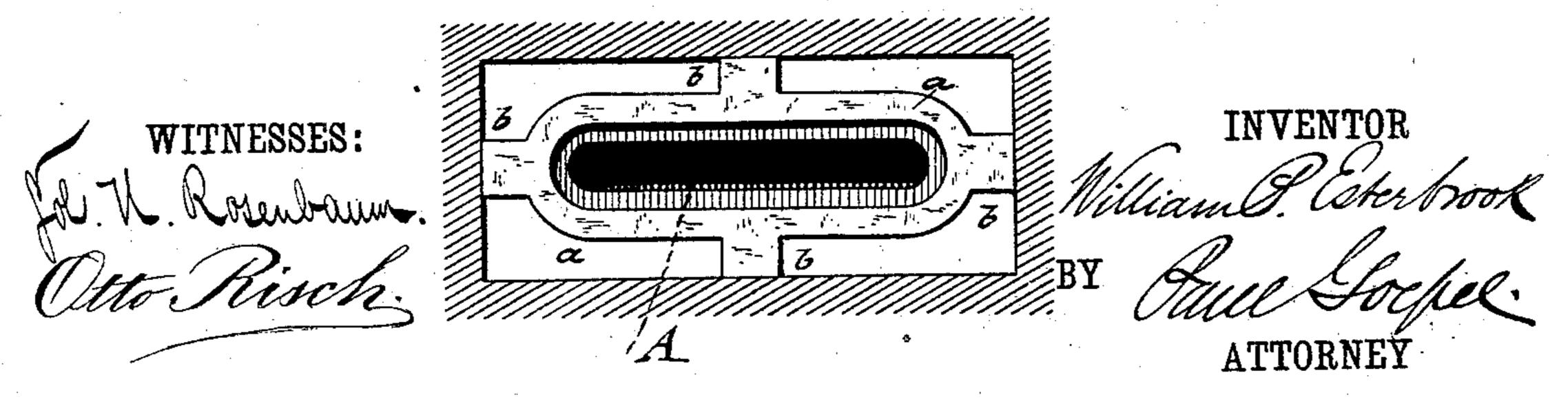
## W. P. ESTERBROOK.

CHIMNEY AND VENTILATING FLUE.

No. 280,024.

Patented June 26, 1883.





## United States Patent Office.

WILLIAM P. ESTERBROOK, OF NEW YORK, N. Y., ASSIGNOR TO G. W. RADER & CO., OF SAME PLACE.

## CHIMNEY AND VENTILATING FLUE.

SPECIFICATION forming part of Letters Patent No. 280,024, dated June 26, 1883.

Application filed February 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. ESTER-BROOK, of the city, county, and State of New York, have invented certain new and useful 5 Improvements in Chimney and Ventilating Flues, of which the following is a specification.

This invention has reference to certain improvements in the chimney-flue for which Letters Patent have been granted heretofore to ro Charles Buek, No. 268,770, dated December 5, 1882, whereby the construction of said chimney-flue is simplified and an increased ventilating action produced; and the invention consists of a ventilating chimney-flue, the sleeve 15 or socket of which is provided at the sides and ends with projections or spurs, by which the proper distance of the chimney-walls from the flue is determined.

In the accompanying drawings, Figure 1 20 represents a perspective view of my improved chimney-flue, and Fig. 2 is a plan of the same.

Similar letters of reference indicate corresponding parts.

25 A in the drawings represents the body of my improved chimney-flue, which is made of any suitable cross-section, preferably, however, with straight or flattened sides and rounded-off ends. The socket or sleeve a, at the upper co part of each flue-section A, is provided at the sides and ends with lateral projections b b, that serve as guides for keeping the walls of the chimney built around the flue a certain distance from the same. The flues form,

therefore, with the walls of the chimney, a 35 continuous air-space, excepting at the points where the projections b b abut against the chimney-walls. The heat of the products of combustion conducted through the chimney-flues causes an active circulation of air 40. in the air-space between the chimney-flue and the inclosing chimney-walls, by which the basements and other rooms and spaces connected thereto are effectively ventilated. A chimney-flue thus provided with the spurs or 45 projections at the upper end or sleeve requires less material and furnishes a larger ventilating air-space than when exterior longitudinal ribs are used along the sides of the chimney-flue, as in the patent heretofore referred to.

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

A ventilating chimney-flue provided at one end with lateral side and end projections, 55 whereby the inclosing chimney-walls are kept at the proper distance from the flue, and a large continuous ventilating-space formed between the flue and chimney-walls, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

WM. P. ESTERBROOK.

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Witnesses:

EDWD. G. DUMAHAUT, WILLIAM H. CLASS.