

(Model.)

A. W. La FRANCE.
Smoke-Stack.

No. 227,272.

Patented May 4, 1880.

Fig. 1

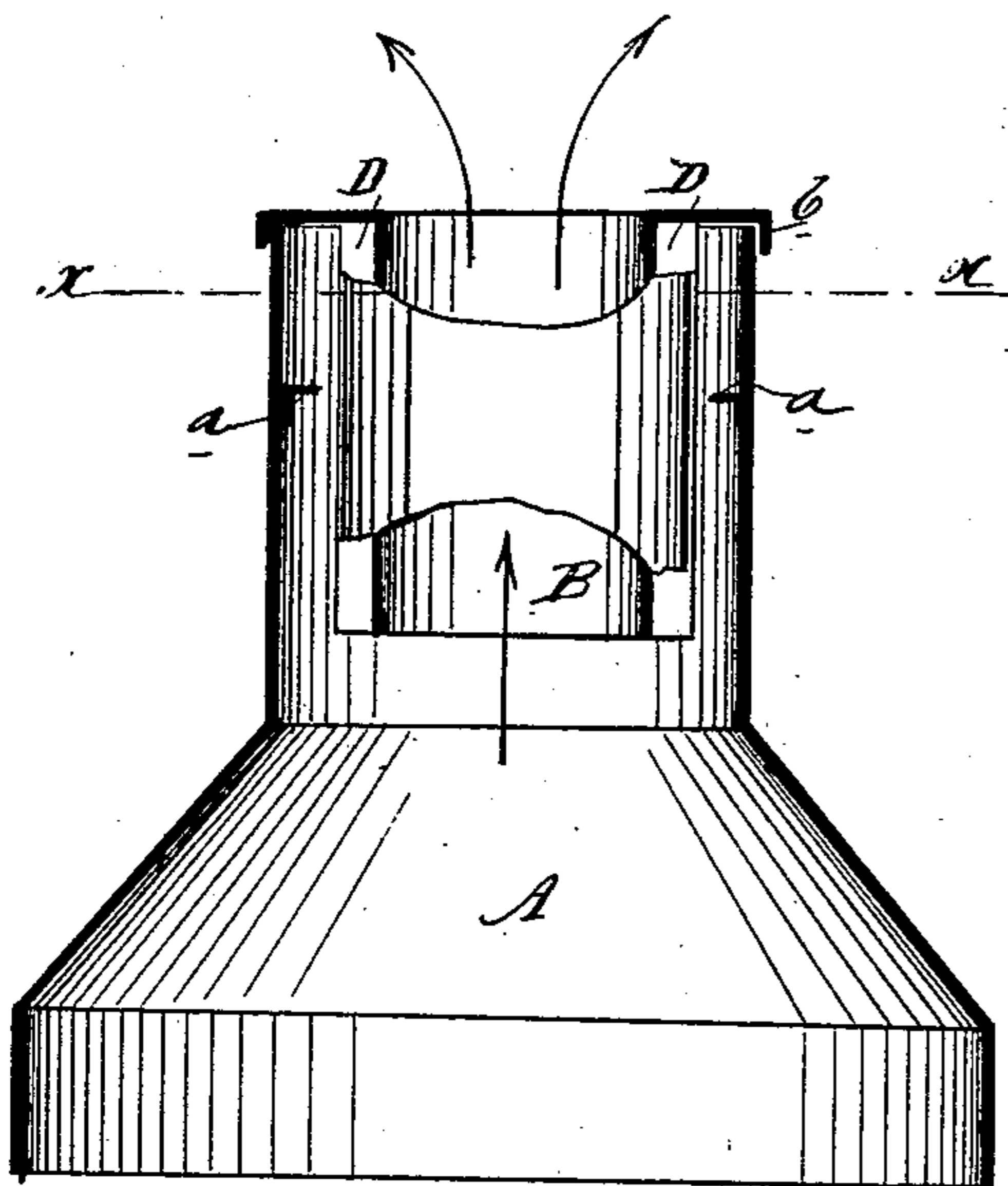


Fig. 2

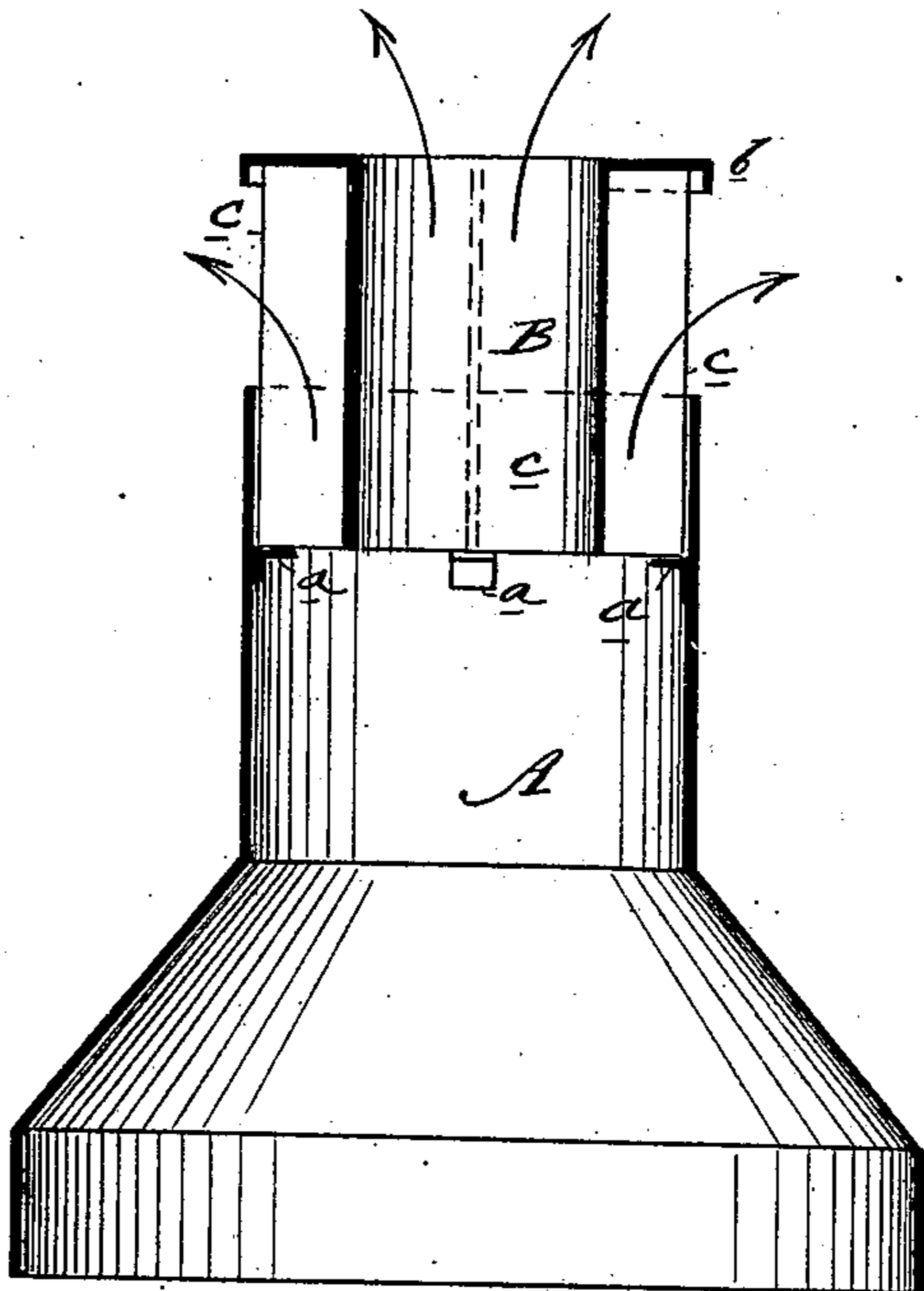
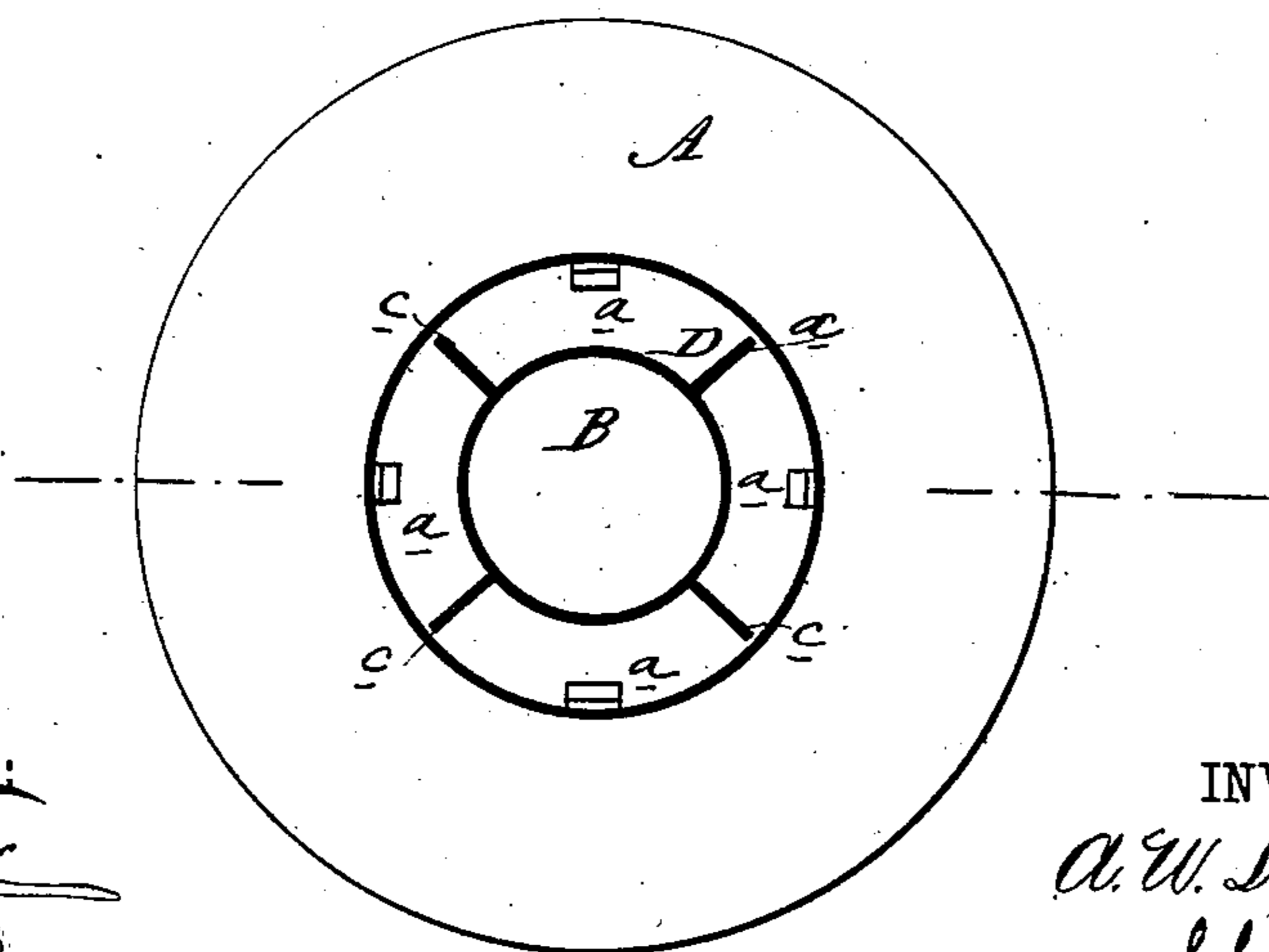


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

ASA W. LA FRANCE, OF ELMIRA, NEW YORK.

SMOKE-STACK.

SPECIFICATION forming part of Letters Patent No. 227,272, dated May 4, 1880.

Application filed March 13, 1880. (Model.)

To all whom it may concern:

Be it known that I, ASA W. LA FRANCE, of Elmira, in the county of Chemung and State of New York, have invented a new and Improved Smoke-Stack, of which the following is a specification.

The object of this invention is to provide an adjustable smoke-stack especially designed for steam fire-engines, whereby the draft from the boiler can be increased or diminished at will.

The invention consists of a section of a flanged and longitudinally-ribbed pipe smaller than the outer section of the smoke-stack set within said stack and vertically adjustable therein, whereby the exit of the smoke-stack may be diminished or increased at pleasure.

Figure 1 is an elevation, partly sectional, of the smoke-stack with the inner pipe closed down. Fig. 2 is a sectional elevation of a smoke-stack with the inner pipe elevated. Fig. 3 is a plan of the smoke-stack on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the smoke-stack, provided with interior lugs, *a a*. B is the adjustable extension-section of a pipe, provided at its top with a lateral annular flange, *b*, and having fixed upon its sides vertical ribs *c c*, that extend its whole length.

All steam fire-engines are provided with smoke-stacks of diameters best adapted to the requirements of an engine when in full operation; but it has been found that stacks of this character are not sufficiently large to freely

carry off the smoke and other products of combustion when first getting up steam in the boiler. To obviate this defect I provide a smoke-stack, A, with an inner pipe, B, which, when drawn up, as shown in Fig. 2, and held centrally in position by its ribs *c* resting on the lugs *a* of the stack, opens the stack A, which is made of a larger size than usual, to its full extent, thereby permitting the products of combustion to pass freely off, as indicated by arrows in Fig. 2, and when enough steam is generated to start the engine the pipe B is turned partly around, so as to disengage its ribs *c* from the lugs *a*, and then dropped down into the stack A, so that the flange *b* of the pipe B shall rest upon the rim of the stack A and close the extra smoke-space D, so as to leave only the required opening for the escape of the products of combustion when the engine is in operation, said products of combustion then passing up only through the pipe B, as indicated by the arrows in Fig. 1.

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

The combination, with the smoke-stack A, provided with lugs *a a*, of the adjustable pipe B, provided with annular flange *b* and vertical ribs *c*, substantially as herein shown and described, whereby the smoke-space of the said stack may be diminished or increased, as set forth.

ASA WILLIS LA FRANCE.

Witnesses:

HENRY S. REDFIELD,
J. M. DIVEN.