

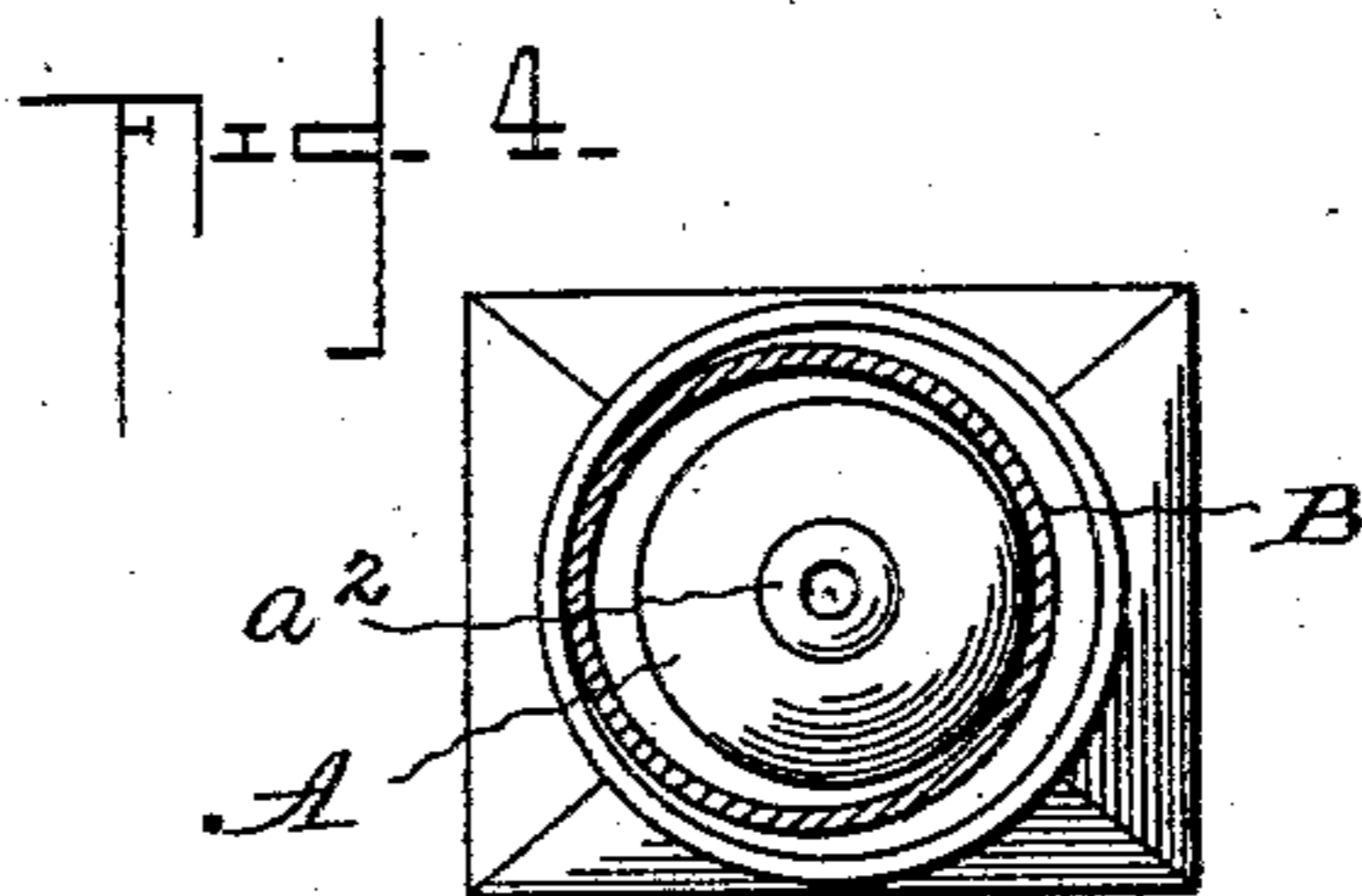
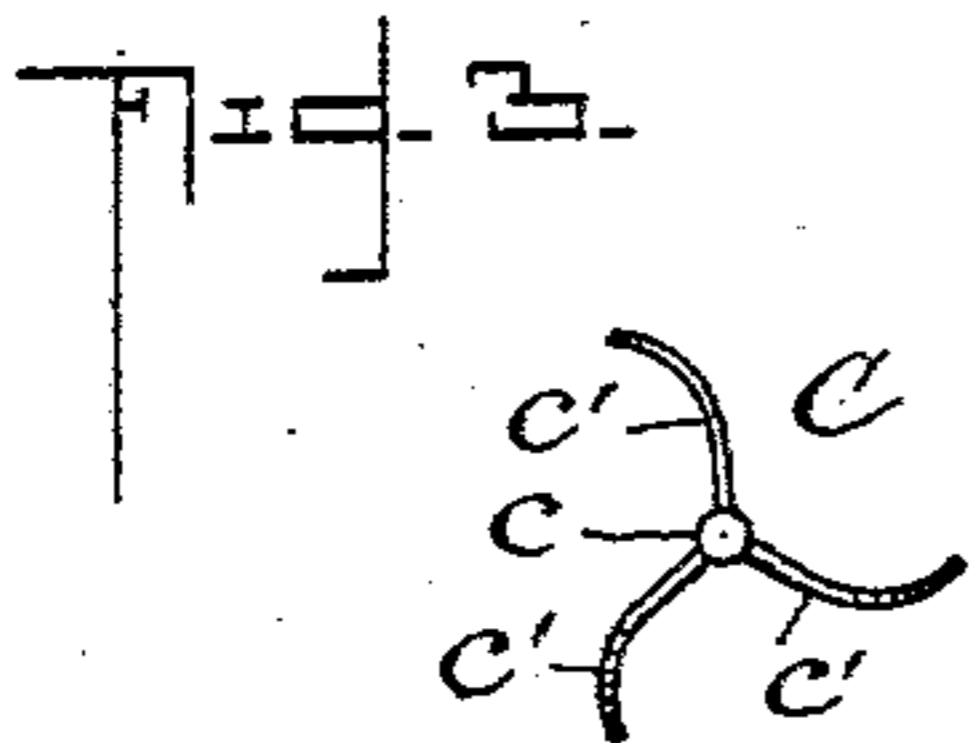
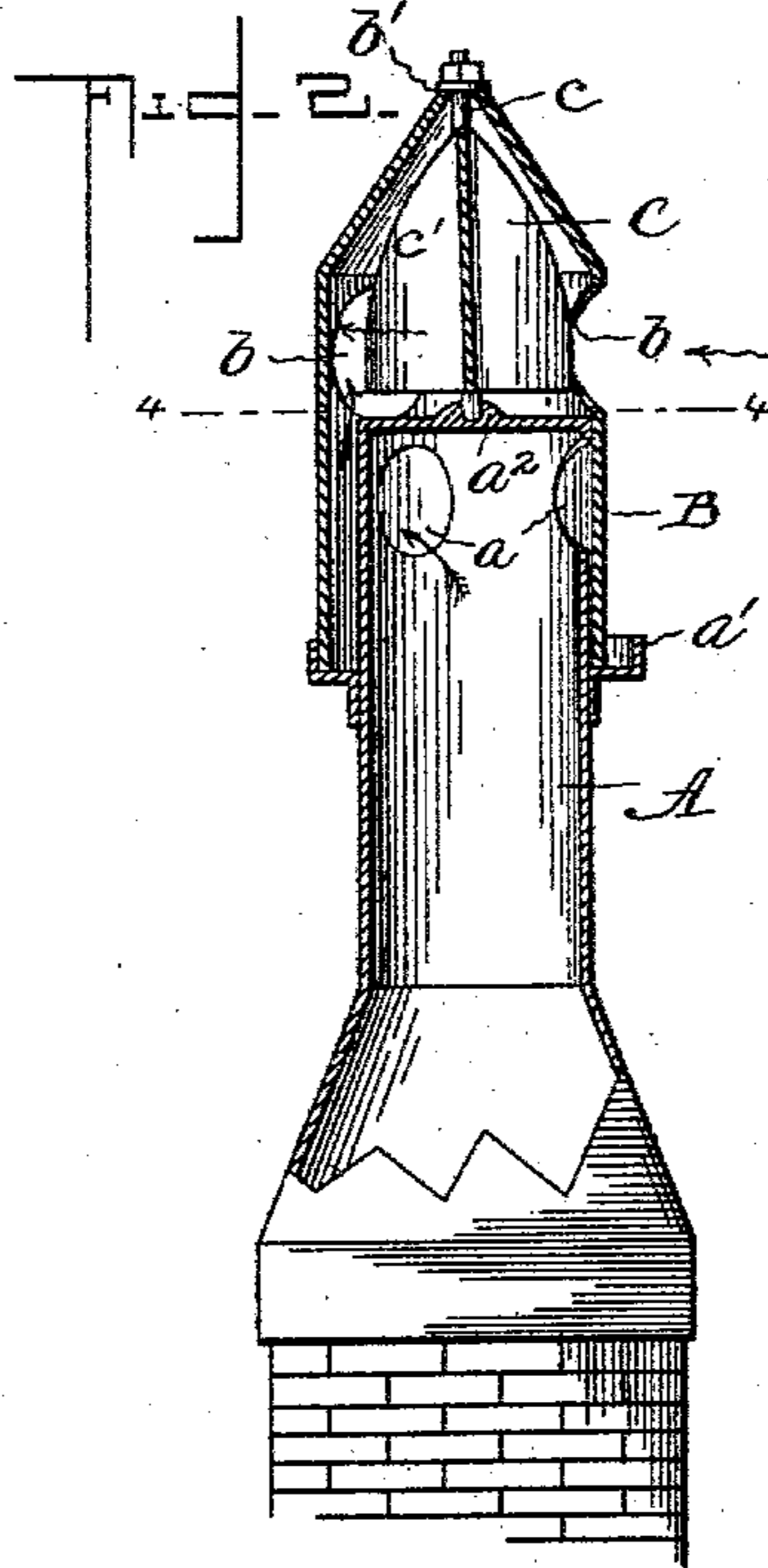
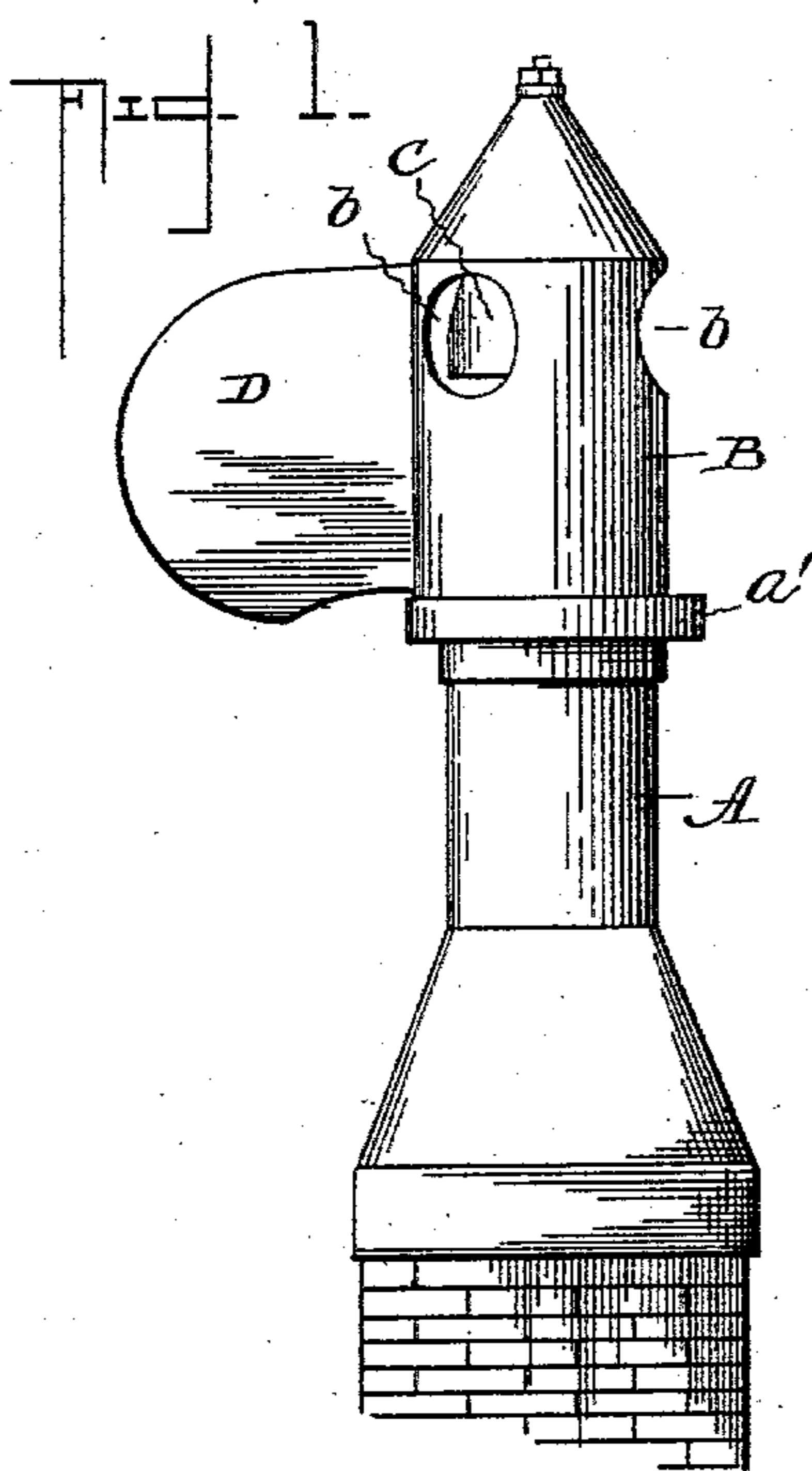
No. 751,912.

PATENTED FEB. 9, 1904.

F. HAYDEN.  
CHIMNEY TOP.

APPLICATION FILED SEPT. 22, 1903.

NO MODEL.



Witnesses:-  
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Attorneys.

# UNITED STATES PATENT OFFICE.

FRANK HAYDEN, OF DANVILLE, ILLINOIS.

## CHIMNEY-TOP.

SPECIFICATION forming part of Letters Patent No. 751,912, dated February 9, 1904.

Application filed September 22, 1903. Serial No. 174,179. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK HAYDEN, a citizen of the United States, and a resident of Danville, in the county of Vermilion and State of Illinois, have invented an Improved Chimney-Top, of which the following is a full and clear specification.

This invention is an improvement in chimney-tops; and the principal objects thereof are to materially increase the draft and to prevent wind from blowing down the chimney.

Other objects and advantages of the invention will appear in the following specification, and what I claim as new, and desire to secure by Letters Patent, is more specifically set forth in the appended claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of a chimney-top constructed in accordance with my invention. Fig. 2 is a vertical sectional view through the same. Fig. 3 is a detail view of the fan, which is mounted in the cap to create a suction in the chimney. Fig. 4 is a transverse sectional view on the line 4-4 of Fig. 2.

Similar letters of reference indicate similar parts in the several views of the drawings.

In carrying out my invention I employ in the first instance a vertical pipe A, forming a continuation or extension of the chimney, said pipe being closed at its upper end and a short distance below said closed upper end provided with a circumferential series of holes, as  $a$ , preferably three in number, and spaced at equal distances apart. Below this series of holes is an annular support having an upwardly-projecting flange  $a'$  at its outer edge, and upon this support rests a rotatable cylinder or cap B, the upper end of which is conical. In this cap, below the conical portion thereof, is a circumferential series of holes  $b$ . It will be noted that the cylindrical portion of the cap covers the openings  $a$  in the pipe A and also that said cylindrical portion of the cap is of slightly greater diameter than said pipe, so as to leave a space or air-passage between them.

Located in the conical portion of the cap B is a vertical fan C, the shaft  $c$  of which has an upper bearing in an opening, as  $b'$ , in the apex of

the cap and at its lower end is stepped in a socket  $a^2$ , formed at the center of the closed end of the pipe A. The shaft has a slight play in the upper and lower bearings therefor sufficient to permit of a slight tilting movement thereof to accommodate the lateral movement of the cap. The blades  $c'$  of this fan are tapered toward their upper end and are curved laterally, as shown, the wider portion of the blades being located opposite the openings  $b$  in the cap, so that the wind blowing into any one of said openings will rotate the fan.

In the operation of the chimney-top the wind striking against the cap will move the same laterally against the pipe A, so as to close the openings  $a$ , which are toward the wind, and open the opposite holes, which are away from the wind, establishing an air-passage between said latter holes and the upper part of the cap. In this position the wind blowing in one of the openings  $b$  will revolve the fan and the latter will create a suction that will draw the smoke from the chimney and blow it out through the openings in the opposite side of the cap, the air-currents and direction the smoke takes being indicated by arrows in the drawings. The cap may be provided with a tail D at one side, so that one of the holes will at all times be presented to the wind.

Though I have herein shown and described my invention as applied to a chimney, it will be understood that it may be with equal advantage applied to a ventilator for ships, dwellings, &c. It will also be understood that the device may be used without the fan, in which instance the laterally-movable cap would close the openings toward the wind and open those away from the wind and an up-draft would be created by the air passing directly through the upper part of the cap.

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

1. In a chimney-top, the combination with the extension or pipe A closed at its upper end and provided below said upper end with holes or openings, of a support below said openings, and a laterally-movable cap of slightly greater diameter than the pipe fitting over the upper end thereof and resting on said support, the

said cap being provided with openings in its upper end.

2. In a chimney-top, the combination, of the pipe A closed at its upper end and provided below said upper end with holes or openings, an annular support below said openings, and a laterally-movable cap fitting the upper end of the pipe and seated on said support and provided with openings in its upper end.

3. In a chimney-top, the combination, of the pipe A closed at its upper end and provided below said upper end with openings  $\alpha$ , an annular support below said openings having an upwardly-projecting flange at its outer edge, and a rotatable and laterally-movable cap of greater diameter than the upper end of the pipe A over which latter it is placed to cover the openings  $\alpha$  and rest upon the aforesaid support, the upper end of said cap being conical and provided with openings.

4. In a chimney-top, the combination, of the pipe A closed at its upper end and provided below said upper end with openings  $\alpha$ , an annular support below said openings, a rotatable and laterally-movable cap of greater diameter

than the upper end of the pipe A over which it is placed to rest upon the aforesaid annular support, said cap having openings in its upper end, and a vertical fan in the upper part of the cap.

5. In a chimney-top, the combination, of the pipe A closed at its upper end and provided below said upper end with openings  $\alpha$ , an annular support below said openings, a laterally-movable cap of greater diameter than the upper part of the pipe A over which it is placed to rest upon the aforesaid annular support, the upper part of the cap being conical and provided with openings, and a vertical fan bearing at its upper end in the apex of the cap and at its lower end in a socket on the closed end of the pipe A, substantially as shown and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK HAYDEN.

Witnesses:

L. HEADLEY,  
L. F. TOWN.