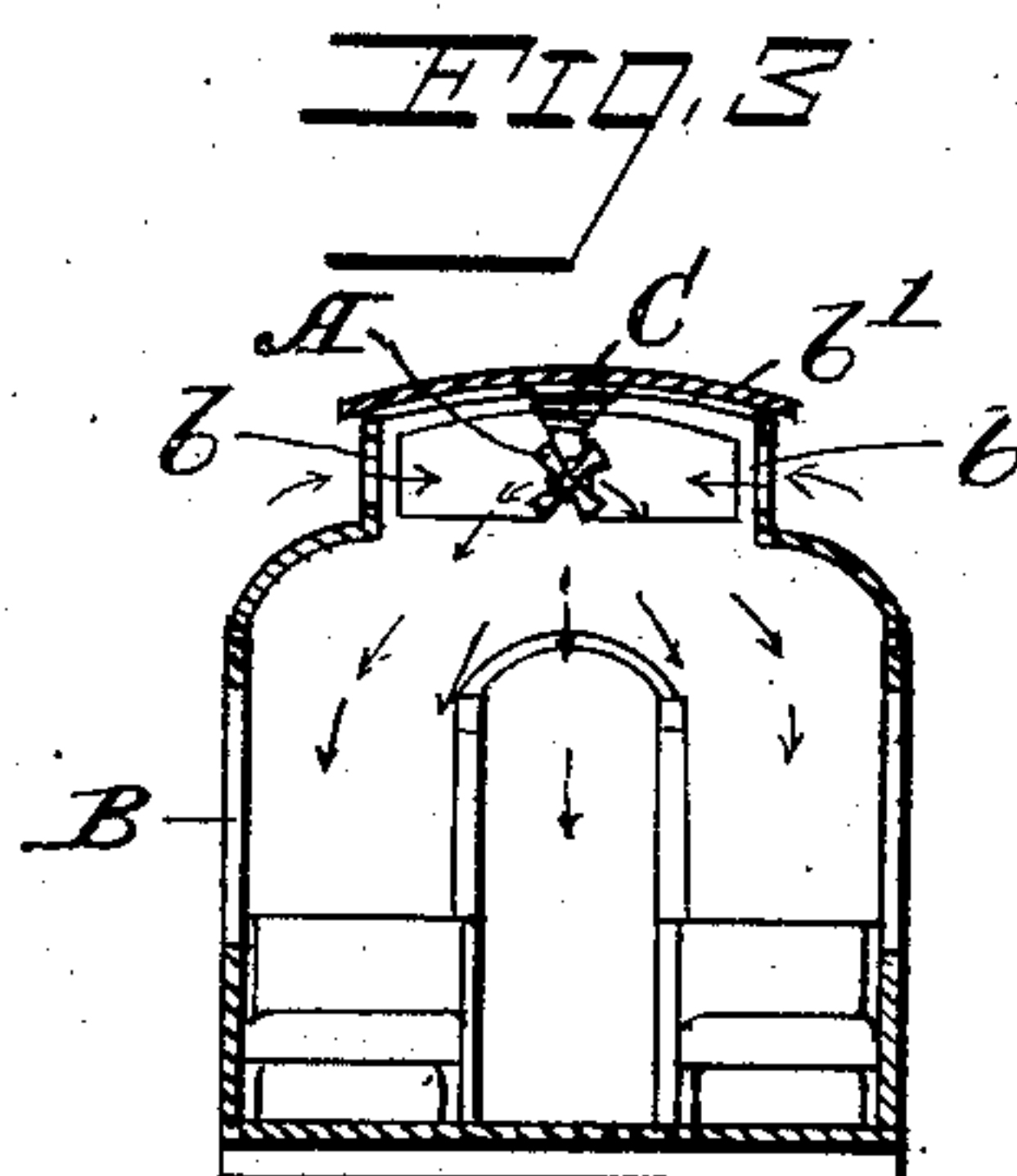
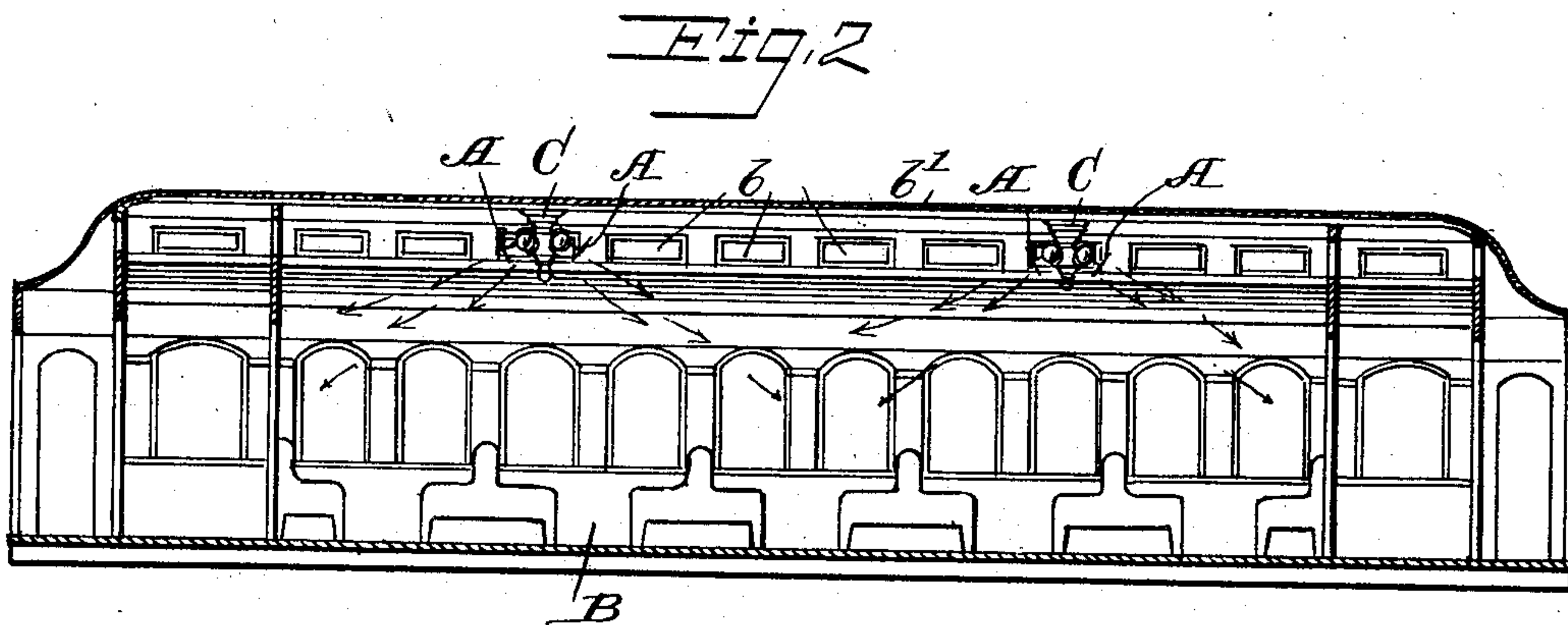
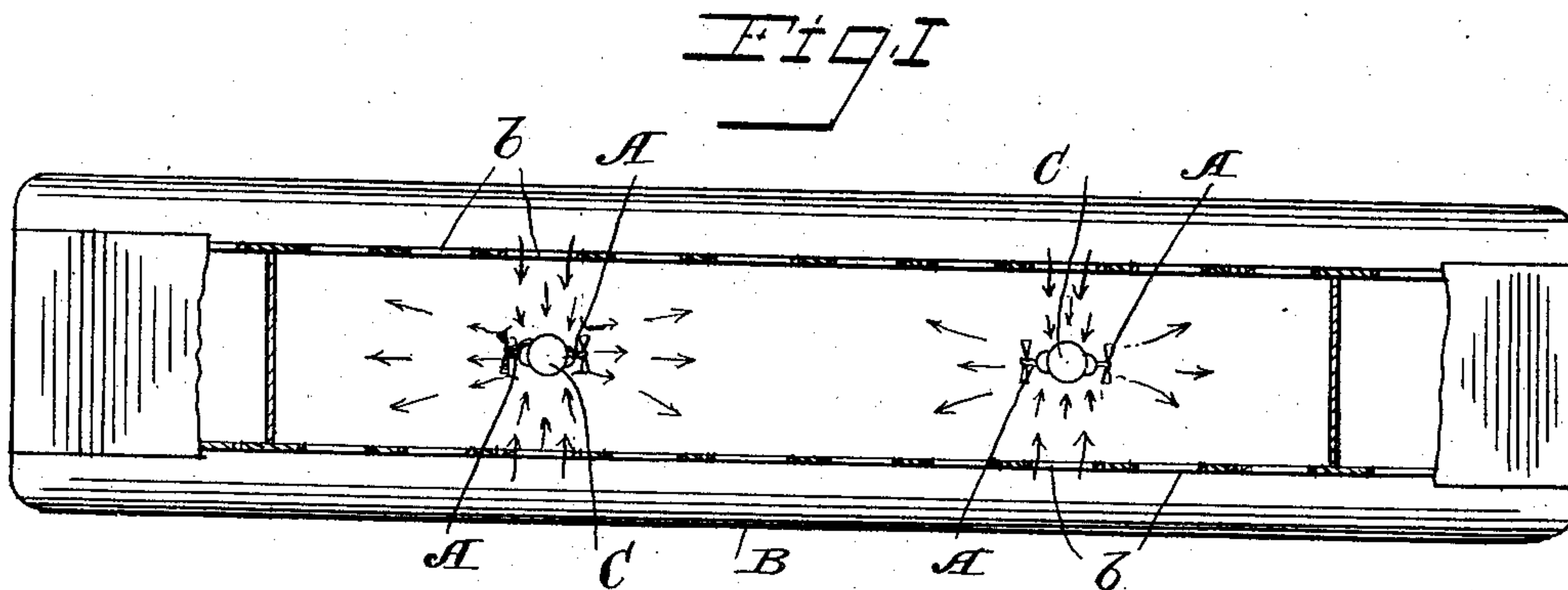


B. A. STOWE.  
VENTILATING MECHANISM.  
APPLICATION FILED JULY 6, 1909.

992,824.

Patented May 23, 1911.

3 SHEETS—SHEET 1.

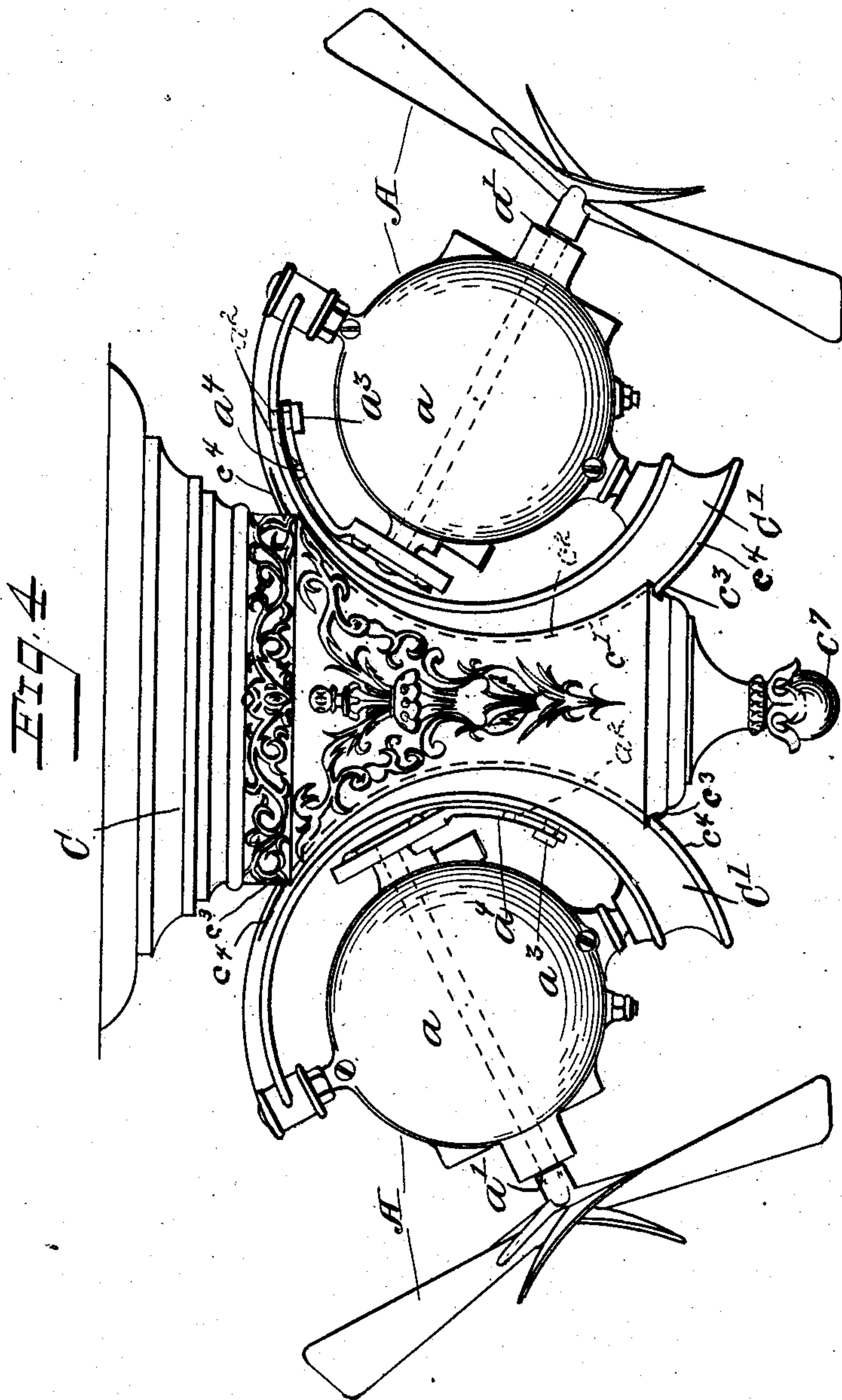


Witnesses:  
J. C. Turner  
Jno. F. Oberlin

Inventor:  
Bernard A. Stowe  
by J. B. Fay  
Attorney.

**992,824.**

8 SHEETS--SHEET 2.



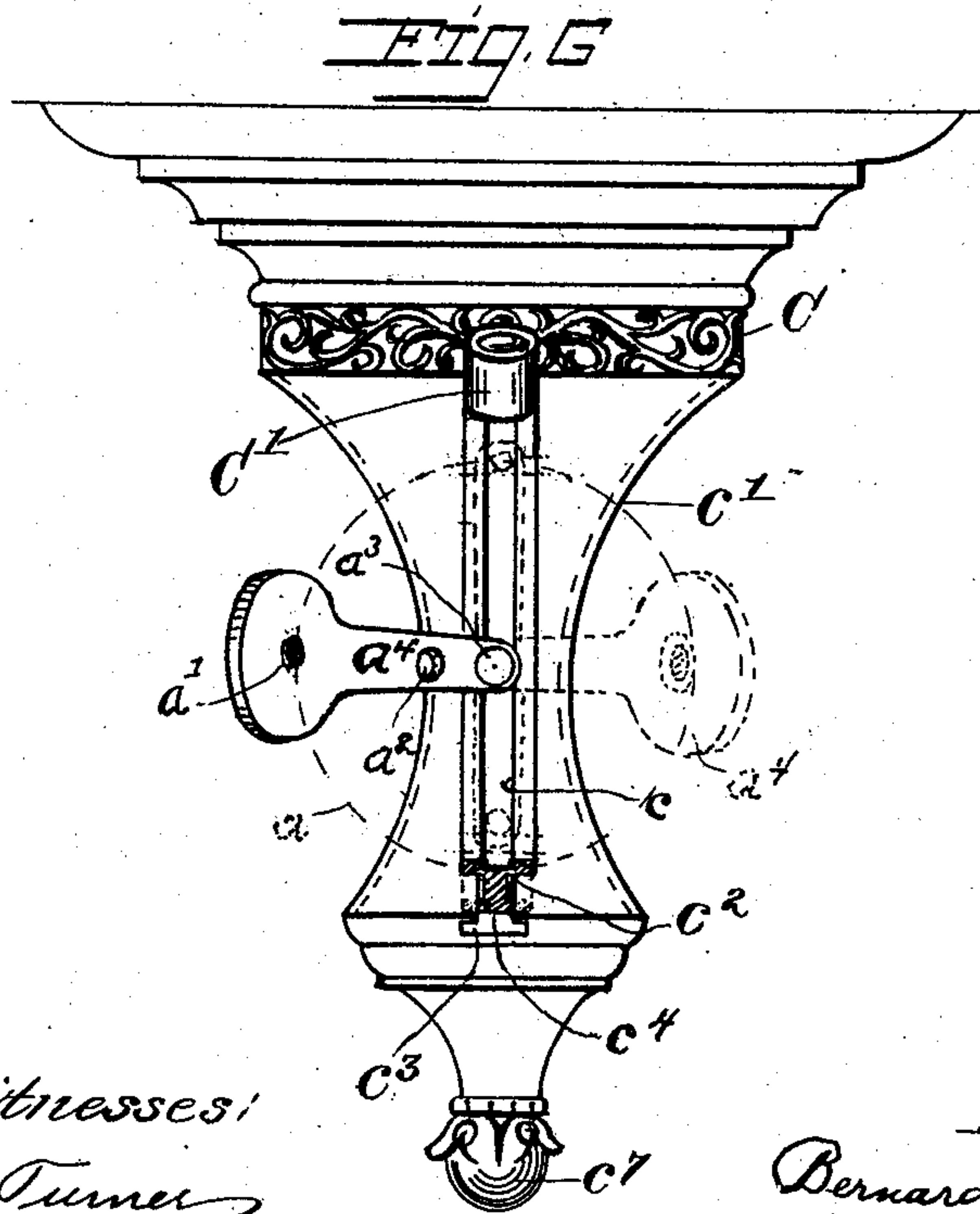
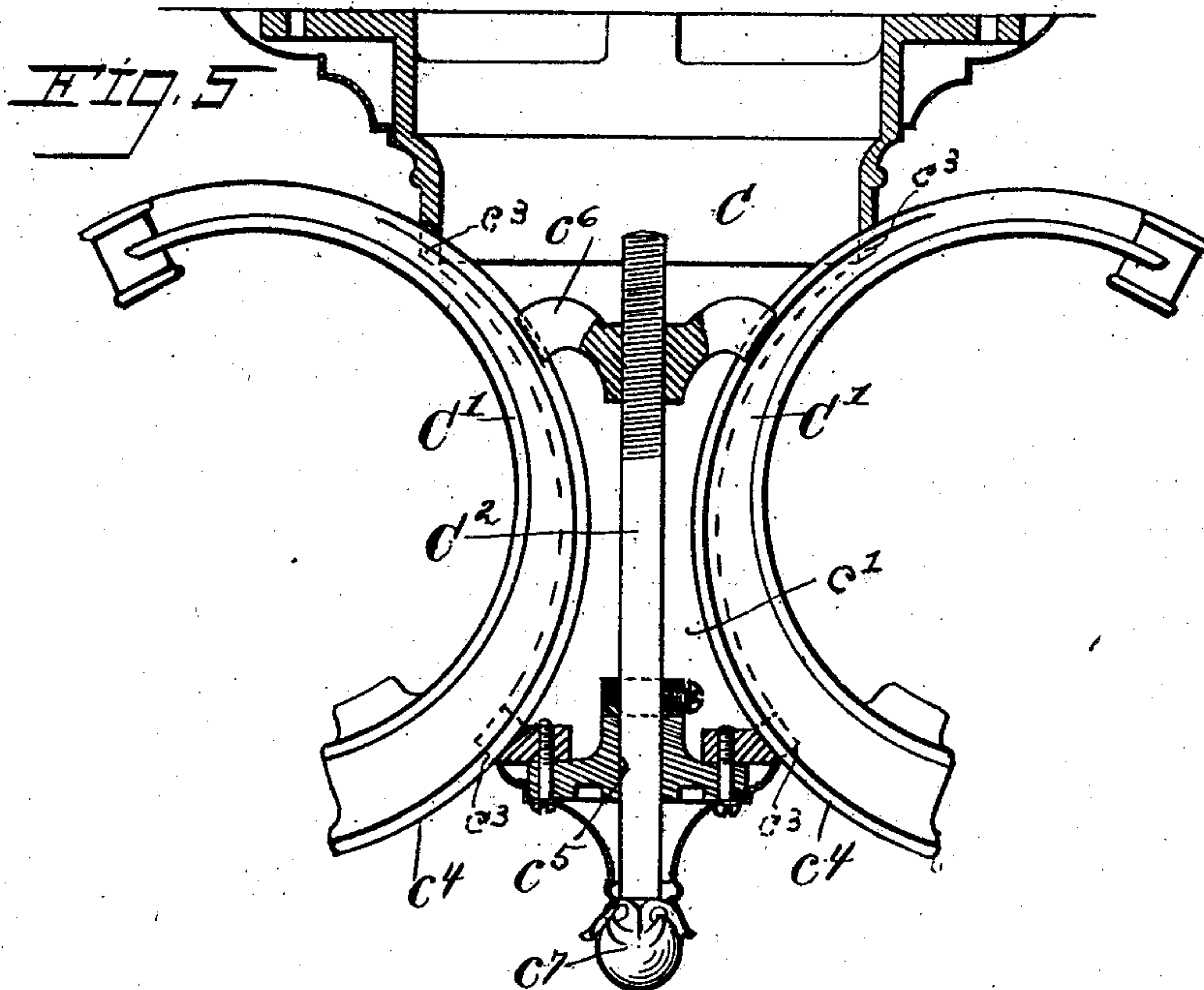
*Inventor:*  
Bernard A. Stowe  
*by* J. B. Fay  
*Attorney.*

B. A. STOWE.  
VENTILATING MECHANISM.  
APPLICATION FILED JULY 6, 1909.

992,824.

Patented May 23, 1911.

3 SHEETS—SHEET 3.



Witnesses:  
J. C. Turner  
Jno. F. Oberlin

Inventor:  
Bernard A. Stowe  
by J. B. Fay  
Attorney.



# UNITED STATES PATENT OFFICE.

BERNARD A. STOWE, OF CLEVELAND, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO  
THE ADAMS-BAGNALL ELECTRIC COMPANY, OF CLEVELAND, OHIO, A CORPORATION  
OF OHIO.

## VENTILATING MECHANISM.

992,824.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed July 6, 1909. Serial No. 505,988.

*To all whom it may concern:*

Be it known that I, BERNARD A. STOWE, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Ventilating Mechanism, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The present invention, relating as indicated to ventilating mechanism, has regard more particularly to the ventilation of railway coaches and the like, the object being both to provide a suitable ventilating device for this service, and so to locate the same in the coach as to provide pure, fresh air throughout the entire coach, and not merely stir up the stagnant air within the coach at either end of the same, as in prevailing constructions.

The more general features and construction of my improved ventilating mechanism have been required to be divided out, and so form the subject matter of a separate application filed October 11, 1909, Serial No. 522,147. The features herein presented hence pertain more especially to the construction of the ventilating device proper, which indeed is not restricted in its field of use to the particular situation just referred to.

Said invention, then, consists of the means hereinafter fully described, and particularly pointed out in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:—Figure 1 is a plan view, more or less diagrammatic, of a railway coach, illustrating the manner of installing my improved ventilating devices therein; Fig. 2 is a vertical longitudinal section of such coach; Fig. 3 is a transverse sectional view thereof; Fig. 4 is a side elevational view of one of the ventilating devices; Fig. 5 is a vertical sectional view of the same; while Fig. 6 is an end elevation thereof, with the portion of the face, however, indicated in dotted outline, merely.

Referring first of all to the general fea-

tures of construction and arrangement characterizing my improved ventilating mechanism as installed in a railway coach (Figs. 1, 2 and 3), such mechanism will be seen to comprise a series of double, oscillating fans A mounted between the ventilators *b* of the upper deck, or "clear-story," of the coach B. Each pair of fans is suitably supported from a pendent base C attached to the ceiling *b'* of the coach, the fans being ranged longitudinally of the latter and their oscillatory movement being in a plane transverse of such coach. Said fans, furthermore, are angularly adjustable in their base in substantially vertical planes, so that the currents of air set up thereby, may be directed downwardly into the coach body at any desired angle. Such currents of air, by reason of the location of the fixture, will obviously be drawn through the ventilators *b*, so that a fresh supply is constantly being furnished, instead of merely agitating the body confined within the coach.

In a coach of the usual size, such as the ordinary Pullman car, two fixtures of the kind just described will ordinarily be utilized, said fixtures being located, one at a distance approximately one-quarter the length of the coach body from each end thereof. An equable distribution of the ventilating currents of air set up by said fixtures, will thus be secured throughout the entire length of such body.

While, obviously, various forms and constructions of fans may be utilized in the arrangement just referred to, I have devised an improved ventilating fixture especially for this service, utilizing in order to obtain the oscillatory effect, the same principle of construction described and claimed in a copending application filed March 24, 1909, Serial No. 485,465. Such principle of construction briefly stated, consists in oscillatorily mounting the fan casing *a* in a curved support *C'*, the axis of such casing being aligned with a diameter of the circle to which the support, and a way *c* on the inner face of the latter, conform. The axis of the motor shaft *a'*, upon the forward end of which is mounted the fan A proper, likewise coincides with a diameter of said circle at right angles to said first diameter.

Upon the end of the casing opposite the fan, which end freely moves across the support, is rotatably mounted an arm *a\** that is



curved to lie close to the way, or inturned face, of the support C' when alined therewith, and that is connected to be rotated by the same motor shaft  $a'$  upon the forward end of which is mounted the fan. Since the latter will ordinarily require to be driven at a higher rate of speed than is desirable for the rotation of this arm (having in view its function which will now be explained), suitable reduction gearing (not shown) is interposed between the shaft and the arm. Said arm has a plurality of apertures  $a^2$ , shown as two in number, located at different radial distances from its axis of rotation through which a pin  $a^3$  may be inserted so as to extend into engagement with the way  $c$  in the support, thereby eccentrically connecting said arm with said way. As a result of such eccentric connection, rotation of the arm will be obviously effective to impart an oscillatory movement to the motor casing about its own pivotal axis. To receive said curved supports C', I provide, in the present instance, a hollow pendant base C previously referred to, which may be given a more or less ornamental character, but will preferably be of a general cylindrical form, a portion  $c'$  of the lateral walls thereof conforming in vertical section with the arc of a circle of the same radius as that upon which the curved supports are described. In such curved portion of the base, are formed two oppositely located, vertically disposed slots  $c^2$ , extending through the walls of the base, being undercut where they emerge therefrom at  $c^3$  so as to form seats for a flanged rib  $c^4$  wherewith the supports are provided on their rear faces. Said ribs slidably fit in the slots thus provided, so as to incline at various angles, the fan casing being obviously supported at correspondingly different angles. A threaded shaft C<sup>2</sup>, rotatably supported at its lower end in said base, a suitable bearing  $c^5$  being provided for this purpose, extends thence upwardly between said supports, and a yoke member  $c^6$  mounted on the shaft and engaging said ribs  $c^4$  with its respective ends, is adapted to press said supports against their corresponding seats upon proper rotation of the shaft, as will be readily understood. An ornamental knob  $c^7$ , mounted in the lower projecting end of the shaft, serves alike to complete the design of the base, and to afford a handle for thus rotating the shaft. It will be understood that by reason of the disposition of the slots wherein the supports are held, the latter would remain at whatever angle they may be disposed without the clamping means thus provided, were it not for the jarring to which they are subjected in a railway coach. Such clamping device, accordingly, has no more severe burden imposed upon it than to prevent the tendency, that might otherwise be present, for said

supports to slidably move in their seats; the latter at all times sustain the weight of the supports and the fans carried thereby.

The foregoing construction of the ventilating device proper will obviously be suited for use in any chamber of oblong form, wherein a fan carried about a complete circle would not be suitable. It will furthermore be seen that my improved construction of oscillating means readily lends itself to the production of a harmonious and ornamental effect when secured to a base of the conformation herein described, while the benefits derived from the assembled mechanism in the coach have been already pointed out.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. A ventilating device comprising a hollow pendent base adapted to be secured to a ceiling or the like and provided with a vertically disposed undercut slot, a curved support having a flanged rib slidably fitting such seat so as to incline at different angles, a threaded shaft within said casing and parallel with such slot, a member mounted upon said shaft and adapted, upon rotation thereof, to press such rib against its seat and thereby fix said support in desired position, and an electric fan oscillatorily mounted in said support.

2. A ventilating device comprising a pendent base adapted to be secured to a ceiling or the like, a plurality of supports adjustably held in said base so as to incline at various angles in substantially vertical planes, means for simultaneously fixing said supports in their respective seats, and electric fans carried by said supports.

3. A ventilating device comprising a pendent base adapted to be secured to a ceiling or the like, and provided with a plurality of vertically disposed seats, curved supports adjustably held in such seats so as to incline at various angles, means for simultaneously fixing said supports in their respective seats, and electric fans oscillatorily mounted in said supports.

4. A ventilating device comprising a hollow pendent base adapted to be secured to a ceiling or the like and provided with a plurality of vertically disposed, undercut slots, a corresponding series of curved supports having flanged ribs slidably fitting such slots respectively so as to incline at various angles, a movable member within said base adapted to simultaneously press such ribs against their seats and thereby fix said sup-



ports in desired positions, and electric fans oscillatorily mounted in said supports.

5 5. A ventilating device comprising a hollow pendent base adapted to be secured to a ceiling or the like and provided with a plurality of vertically disposed, undercut slots, a corresponding series of curved supports having flanged ribs slidably fitting such slots respectively so as to incline at various angles, a threaded shaft vertically supported  
10 within said base, a member mounted upon said shaft and adapted upon rotation thereof to simultaneously press the ribs of said supports against their seats and thereby fix  
15 said supports in desired positions, and electric fans oscillatorily mounted in said supports.

20 6. A ventilating device comprising a hollow pendent base of general cylindrical form adapted to be secured to a ceiling or the like, a portion of the lateral walls of said base conforming in vertical section with the arc

of a circle; two oppositely located, vertically extending slots in such portion, such slots extending through the walls of the base and  
25 being undercut where they emerge therefrom so as to form seats; curved supports provided with a flanged rib slidably fitting such slots so as to incline at various angles, said supports conforming in their curvature  
30 with that of said base portion; a threaded shaft supported in said base and extending upwardly between said supports; a yoke member mounted upon said shaft and engaging such ribs with its respective ends so as to  
35 press the same against said seats upon proper rotation of said shaft; and electric fans oscillatorily mounted in said supports.

Signed by me this 1st day of July, 1909.

BERNARD A. STOWE.

Attested by—

ANNA L. GILL,  
JNO. F. OBERLIN.

---

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

---