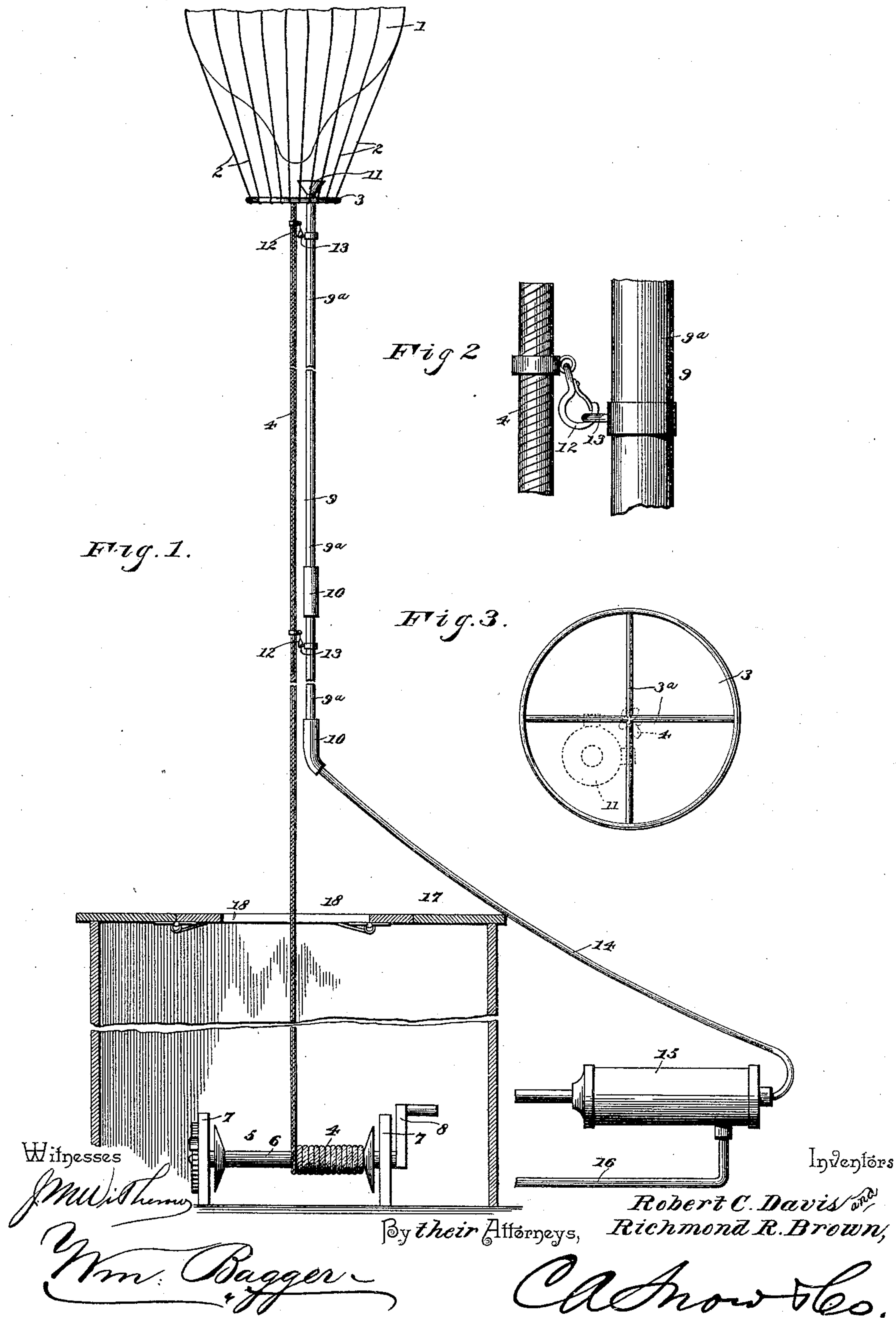


(No Model.)

R. C. DAVIS & R. R. BROWN.
AERIAL VENTILATOR.

No. 446,813.

Patented Feb. 17, 1891.



UNITED STATES PATENT OFFICE.

ROBERT C. DAVIS AND RICHMOND R. BROWN, OF COLUMBUS, OHIO.

AERIAL VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 446,813, dated February 17, 1891.

Application filed October 21, 1890. Serial No. 368,782. (No model.)

To all whom it may concern:

Be it known that we, ROBERT C. DAVIS and RICHMOND R. BROWN, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Aerial Ventilator, of which the following is a specification.

Our invention relates to an improvement in a device for drawing pure air from air altitudes, its objects being to supply pure air for ventilating buildings, such as dwelling-houses, hospitals, or for other purposes; and it consists in certain features of novelty to be hereinafter described, and then particularly pointed out in the claims.

In the drawings, Figure 1 is an elevation showing the parts of our apparatus, a considerable length of the cable and the air-conduit being broken off. Fig. 2 is an enlarged detail view of the cable and air-conduit, showing the manner in which they are connected. Fig. 3 is a detail view of the suspending-ring.

A balloon 1, attached to cable 4 through the medium of cords 2 and a ring 3, suspended from the cords, is let up into the air to a suitable height—say a thousand feet—by means of the cable 4. This cable unwinds from a windlass 5, provided with a shaft 6, journaled in standards or uprights 7, resting on the ground, where they are fixed. 8 is a crank at one end of the windlass for winding up the cable and to permit the gradual ascent of the balloon.

The ring 3 is provided with cross-bars 3^a, to which the upper end of the cable 4 is securely attached; also, attached securely to the cross-bar and depending therefrom is the air-conduit 9. The air conduit consists of a number of tubular sections 9^a, preferably constructed of tin; but any other suitable material may be adopted, these sections being connected at their contiguous ends by means of rubber coupling-sleeves 10, which provide flexible joints. At the upper end of the upper tubular section 9 is a funnel 11. The cable and the air-conduit are loosely connected at suitable distances apart by means of loose connections, such as snap-hooks 12 and eyelets 13, secured to the respective members, thus taking the

weight of the lower sections off of the upper sections. A pipe 14 is connected with the lower end of the air-conduit composed of said tubular sections, and is also connected with an air-pump 15, from which a pipe 16 leads to a suitable system of piping. (Not shown.) By operating the air-pump when the apparatus is in operative position fresh air is drawn through the mouth or funnel 11 down through the air-conduit and into the air-pump, from which it is forced into pipe 16 to supply pure air where desired.

17 represents a suitable structure, which we designate the "balloon-house," said structure being provided at top with suitable trap-doors 18, adapted to open automatically when the balloon is lowered through the door and to close automatically when the balloon has passed through. Any suitable construction of trap-doors may be employed. This balloon-house is for the purpose of storing the balloon during windy or stormy weather.

What we claim is—

1. In the herein-described apparatus, the combination, with a balloon and a cable for holding it, of an air-conduit leading from said balloon to the ground, and loose connections between the cable and the air-conduit, substantially as and for the purpose set forth.

2. In the herein-described apparatus, the combination, with a balloon and a cable for holding it, of an air-conduit composed of a series of tubular sections provided with flexible couplings, and loose connections between each section of the conduit and the cable, substantially as and for the purpose set forth.

3. In the herein-described apparatus, the combination, with a balloon and a cable for holding it, of an air-conduit consisting of a number of flexibly-jointed sections, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ROBERT C. DAVIS.

RICHMOND R. BROWN.

Witnesses:

J. S. TURNER,

C. O. HUNTER.