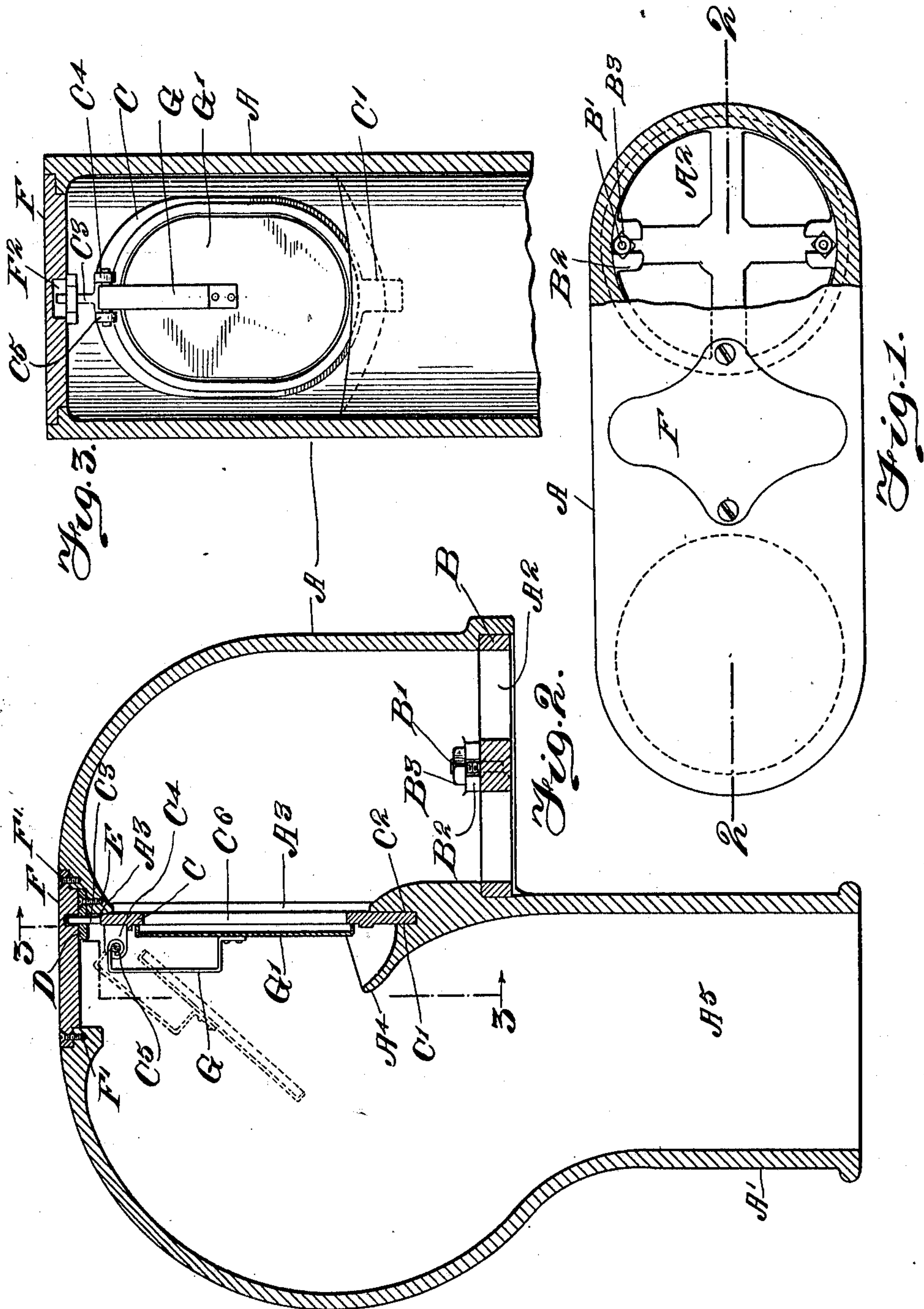


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FRESH AIR INLET DEVICE.
APPLICATION FILED JULY 1, 1910.

992,849.

Patented May 23, 1911.



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JOSEPH CHALKE, OF NEW YORK, N. Y.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH CHALKE, a citizen of the United States, and a resident of New York city, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Fresh-Air-Inlet Devices, of which the following is a specification.

My invention relates to means for supplying a constant inflow of fresh air, from the street, through the pipes and fittings of a plumbing system, combined with means preventing the expulsion at such fresh air intake of foul air and gases due to pressure created by periodic waste discharges through the system.

In modern plumbing employing intercommunicating waste and vent stacks, venting above the building, and where a fresh air intake is located near the street, the objection exists that during a discharge in the system the back pressure set up thereby, being greater than the vent suction, causes the emission into the street of foul air and gases which prove both disagreeable and deleterious to health of passers by.

It is, therefore, the purpose of my invention to provide a fresh air intake having a check valve of such character that while ingress is absolutely uninterrupted, egress therefrom is positively prevented.

A further object is to arrange the valve in the casing in such a manner that it may be easily removed therefrom without disconnecting the casing from the conduits to which it may be attached.

A further object is to arrange the interior of the casing so that the back draft of foul gases will be directed against the back of the valve in such a manner as to more perfectly seat the same to prevent any portion of the back gases from flowing out through the intake.

Referring to the drawings which form a part of my specification, Figure 1 is a plan view of my device shown partly in section. Fig. 2 is a vertical sectional view, and Fig. 3 is a side sectional view through a portion of the casing, taken on the broken line 3—3 of Fig. 2.

A indicates a casing of cast iron or other suitable material which is adapted to be connected at A' with the plumbing system, the upper end of which is open to the point usually above the roof of the building to be ventilated. The casing is preferably made

of the form of a return bend, and is provided with a fresh air inlet at A² which inlet is protected by a cast iron grid B which is secured to the casing by stud bolts B' which pass through slotted brackets B² located at each side of the casing as illustrated, the nuts B³ serving to hold the parts together, as will be readily understood. This grid serves to prevent the draft of air from carrying newspapers and other foreign matter within the casing.

The casing is provided near the middle thereof with a flange portion A³ which is made with a flat face and against which a removable valve seat portion C abuts, the lower projecting end piece C' of which enters into a slot C² formed in the casing. The upper end of the valve seat C is provided with a vertically extending pin C³, by means of which the valve seat portion is held in position through the instrumentality of a piece of sheet metal D which is provided with a hole through which the pin C³ projects, and is held to the casing by a screw E.

A cover F is provided which fits into an opening formed in the top of the casing, and is held to the casing by screws F' as indicated. The cover F is provided with a slot F² in which the exterior upper end of the pin C³ projects, so that the valve seat portion would be held in such a way as to prevent it from being forced from the flange A³ even though the metal piece D should become broken.

The valve seat portion C is provided with two short brackets C⁴ through which extends a pin C⁵ on which swings a light piece of sheet metal G which carries at its lower end a valve G' which is also formed of light sheet metal or other suitable material, and is adapted to close the opening C⁶ formed in the valve seat portion C.

The casing A is provided with a lip or extended portion A⁴, which extends outward and below the valve G, and across the casing, so that any foul air which would tend to blow out through the opening C⁶ and air inlet A² would be deflected in its upward movement through the passage A⁵ and cause the air to flow directly against the back of the valve, and thereby close the same before any of the foul gases could flow through the passage C⁶.

It is obvious that if the valve and the valve seat portion should become inoperative from any cause or should require renewal,

that the same could be renewed by removing the cover F and the screw E and the valve could then be withdrawn through the opening provided in the top of the casing A, since the cover F and the said opening are of greater width than the width of the valve seat portion.

The operation of the device is based on the principle of the difference of gravity between a heated column of air and the pressure of the atmosphere outside of said conduit, the said column of air becoming heated due to the higher pressure developed in the upwardly extending flues or conduits of the building to which this device is attached and carrying with it the foul gases collected from the traps, but at times in case of storm or for other reasons when the draft is reversed and would otherwise flow out from the inlet A², the valve G' would immediately close, thereby preventing the foul gases from flowing out through said inlet.

Having thus described my invention what I claim as new is:

1. In an air inlet valve the combination of a casing having a centrally arranged flange portion A³, a valve-seat portion C having a vertically extending pin C³, which engages with a metal piece D, which is secured to the casing, the lower edge of said valve-seat portion being seated in a slot C²

formed in said casing, and a valve G' pivotally supported in lugs carried by said valve-seat portion C, substantially as shown and described.

2. In an air inlet valve the combination of a casing having a centrally arranged flange portion A³, a valve-seat portion C, having a vertically extending pin C³, engaging with a metal piece D, which is secured to the casing, the lower edge of said valve-seat portion being seated in a slot C², formed in said casing, a valve G' pivoted at the upper part of the casing in lugs carried by said valve-seat portion, an opening in the top of said casing, and a cover F closing said opening and having a slot F² in its under surface for receiving and retaining the top of the pin C³, substantially as shown and described.

3. In an air inlet valve the combination of a casing, a removable valve-seat portion, a pivoted valve, and a lip or extending portion A⁴ extending outward and behind the said valve and across the casing, substantially as and for the purposes set forth.

Signed at New York city, in the county of New York and State of New York this 30th day of June A. D. 1910.

JOSEPH CHALKE.

Witnesses:

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