

J. BAHLSEN.

AIR TIGHT DOOR FOR STOVES, CHIMNEYS, &c.

No. 506,387.

Patented Oct. 10, 1893.

Fig. 1.

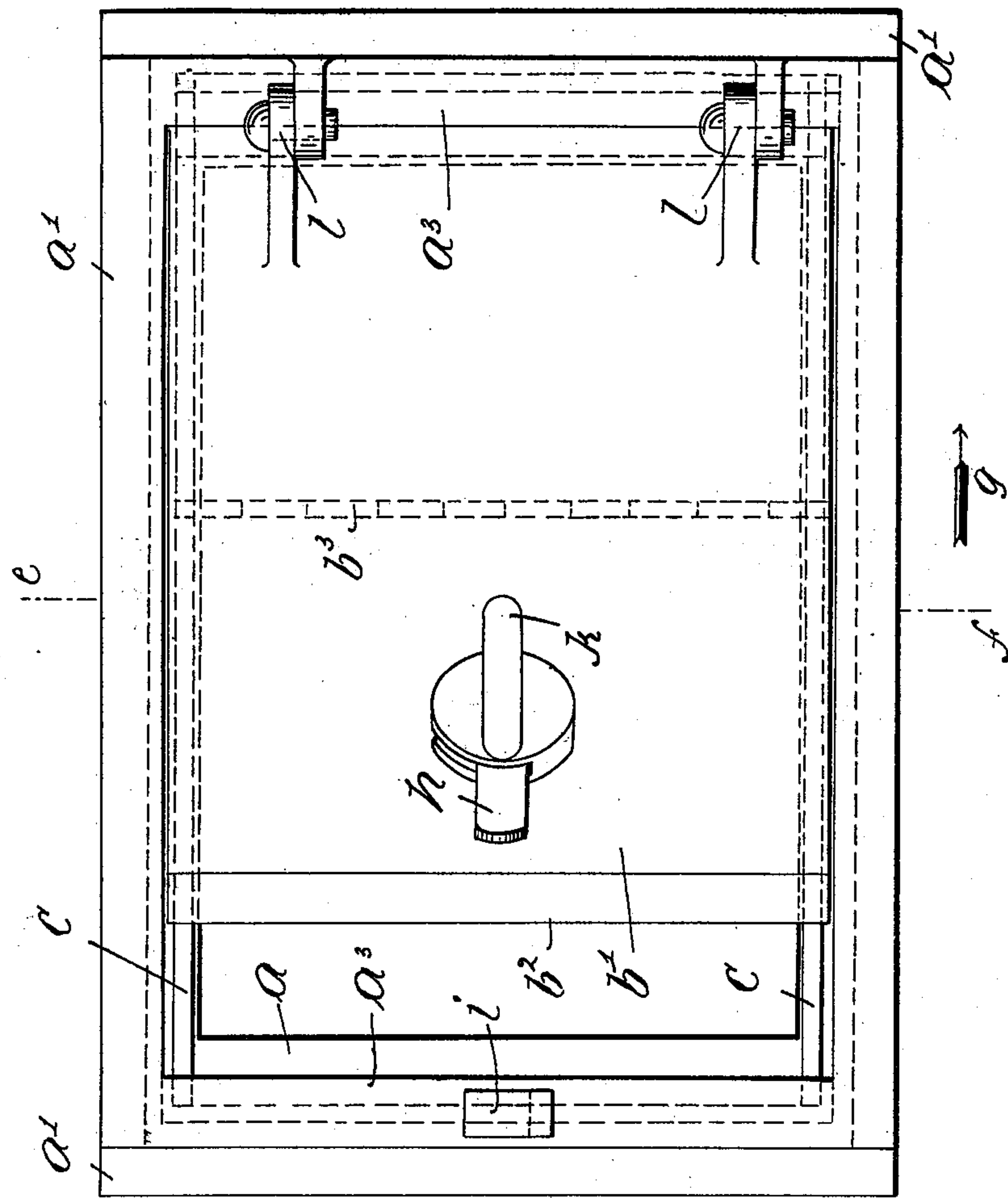
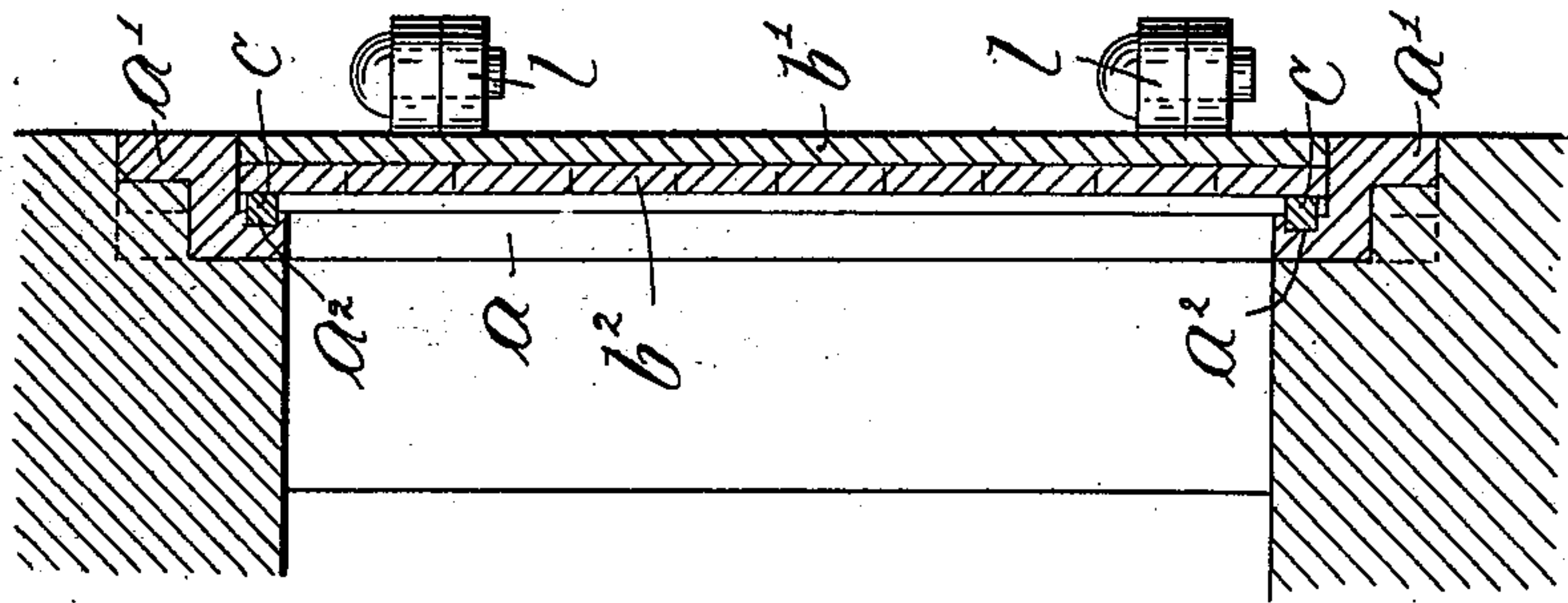


Fig. 4.



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Inventor:
Julius Bahlse.
by
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(No Model.)

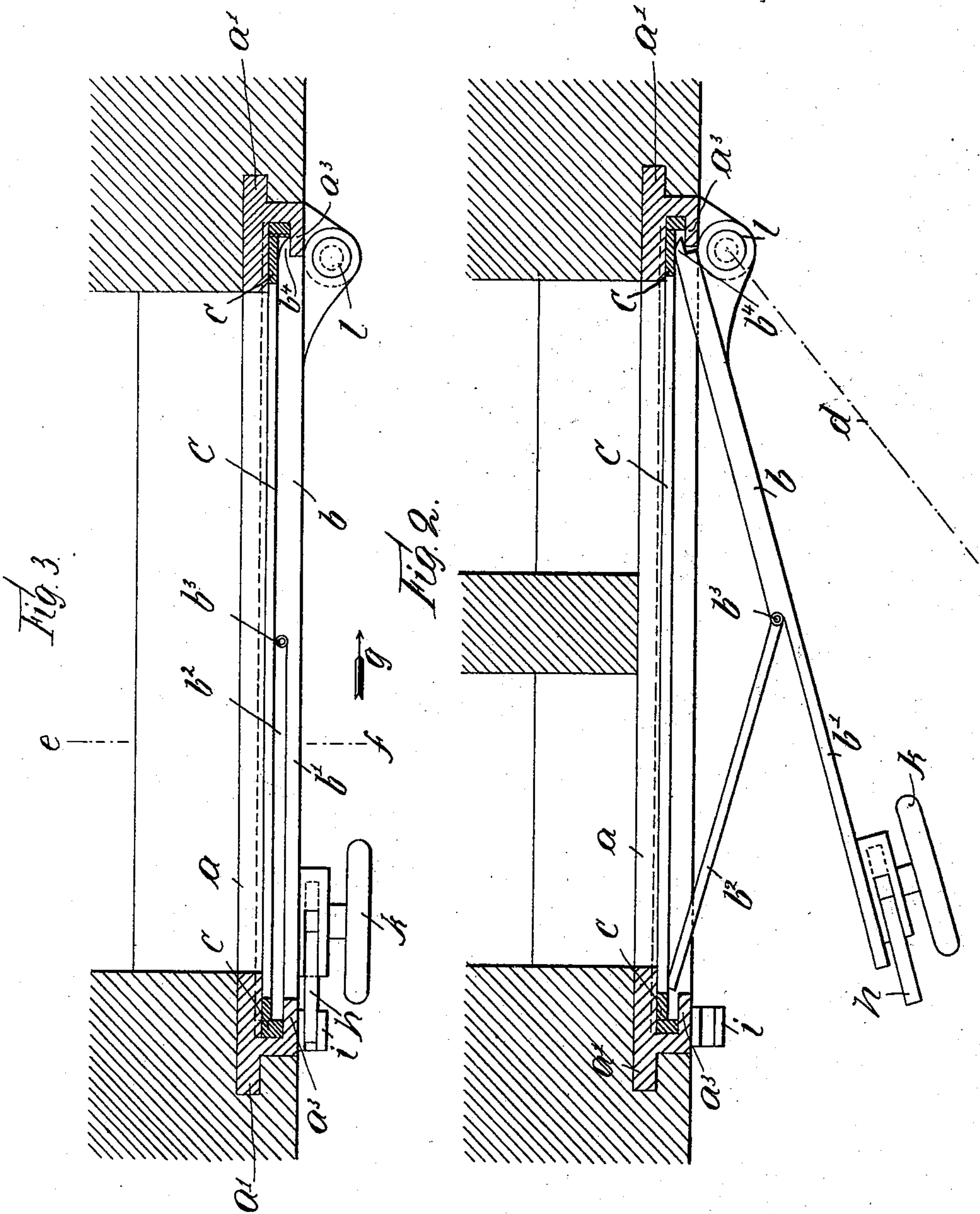
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UNITED STATES PATENT OFFICE.

JULIUS BAHLSEN, OF BERLIN, GERMANY.

AIR-TIGHT DOOR FOR STOVES, CHIMNEYS, &c.

SPECIFICATION forming part of Letters Patent No. 506,387, dated October 10, 1893.

Application filed April 5, 1893. Serial No. 469,110. (No model.)

To all whom it may concern:

Be it known that I, JULIUS BAHLSEN, a subject of the King of Prussia, German Emperor, and a resident of Berlin, in the Kingdom of Prussia, German Empire, have invented a new and Improved Air and Dust Tight Door for Stoves, Chimneys, and the Like, of which the following is an exact specification.

My invention relates to an improved door for stoves, ovens, chimneys and the like, the use of which, in its closed position, absolutely precludes the escape of dust, soot, &c., into the room during cleaning of the chimney, stove, &c., or by the force of the wind blowing down the chimney. The deterioration of the atmosphere of the room by the escape of carbonic oxide gas into the same is also prevented by the use of these air-tight doors. I effect this by building into the brickwork, &c., of the stove or chimney a cast-iron frame, having hinged at one side thereof a door, which is made thicker at the half nearest the hinge, than the other half. To the thinner half is hinged a shutter projecting somewhat beyond the end of the door, and fitting, when closed, into a groove the entire length of the side of the frame. The frame is surrounded by a layer or packing of asbestos, which at the sides fits into the grooves aforementioned and is retained there by projecting flanges. The hinged end of the door is also made to fit into a groove and against the asbestos packing, the door when closed being thus absolutely dust and air tight.

I will now proceed to describe my invention more fully with reference to the accompanying drawings, in which—

Figure 1 represents the door in elevation in an almost closed position; Fig. 2 a horizontal section of the door nearly closed; Fig. 3 a horizontal section of the door closed. Fig. 4 is a vertical cross-section of the door in the direction of the arrow-head *g*.

The cast iron frame *a* is fixed into the brickwork of the stove, &c., by means of the flanges *a'*, and carries a door *b* hung on hinges 1 1. This door *b* is thicker at the half nearest the hinges, than the other half. This second half *b'* carries a shutter *b²* hinged to the door at *b³* and extending somewhat over the end of said door, when closed. The shut-

ter *b²* and portion *b'* are together of the same thickness as the other half of the door *b*. A layer of asbestos packing *c* is provided round the edge of frame, *a*, fitting at the sides into grooves, and kept therein by the flanges *a³*.

Fig. 1 represents the door *b* open at the angle shown in dotted line *d* Fig. 2. If the door is now closed, the shutter *b²* comes against the asbestos packing on the horizontal sides of the frame and proceeding along these, reaches the position in front of the flanges *a³* shown in Fig. 2. The shutter then enters behind the flange *a³* and presses against the packing, so that a complete closure is obtained. At the same time the other edges of the door are pressed firmly against the packing of the frame (Fig. 3) the edge at the hinges likewise entering behind the flange *a³*. The door is kept firmly closed by the latch *i k h*, but I do not desire to limit myself to this particular form of latch. An almost hermetic closure is thus obtained. The door can be made either of cast or sheet iron, or of brass, of iron with a thin covering of brass, with ornamentations or not, as desired. This door is further admirably suited for baking ovens, as it prevents the heat from escaping.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In combination with stoves, ovens, chimneys, and the like, a door consisting of a door proper and a shutter hinged thereto, and a frame having a groove into which the door proper and shutter are adapted to fit, substantially as and for the purpose set forth.

2. In combination with stoves, ovens, chimneys, and the like, a door consisting of a door proper and a shutter hinged thereto, and extending beyond the same, and a frame edged round with a packing of asbestos having a groove into which the door proper and shutter are adapted to fit, substantially as and for the purpose set forth.

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

JULIUS BAHLSEN.

Witnesses:

L. A. EDWARDS,
W. HAUPT.