

F. SCHOFER.
COMBINED SMOKE AND VENTILATION SHAFT.

APPLICATION FILED OCT. 14, 1910.

995,097.

Patented June 13, 1911.

2 SHEETS—SHEET 1.

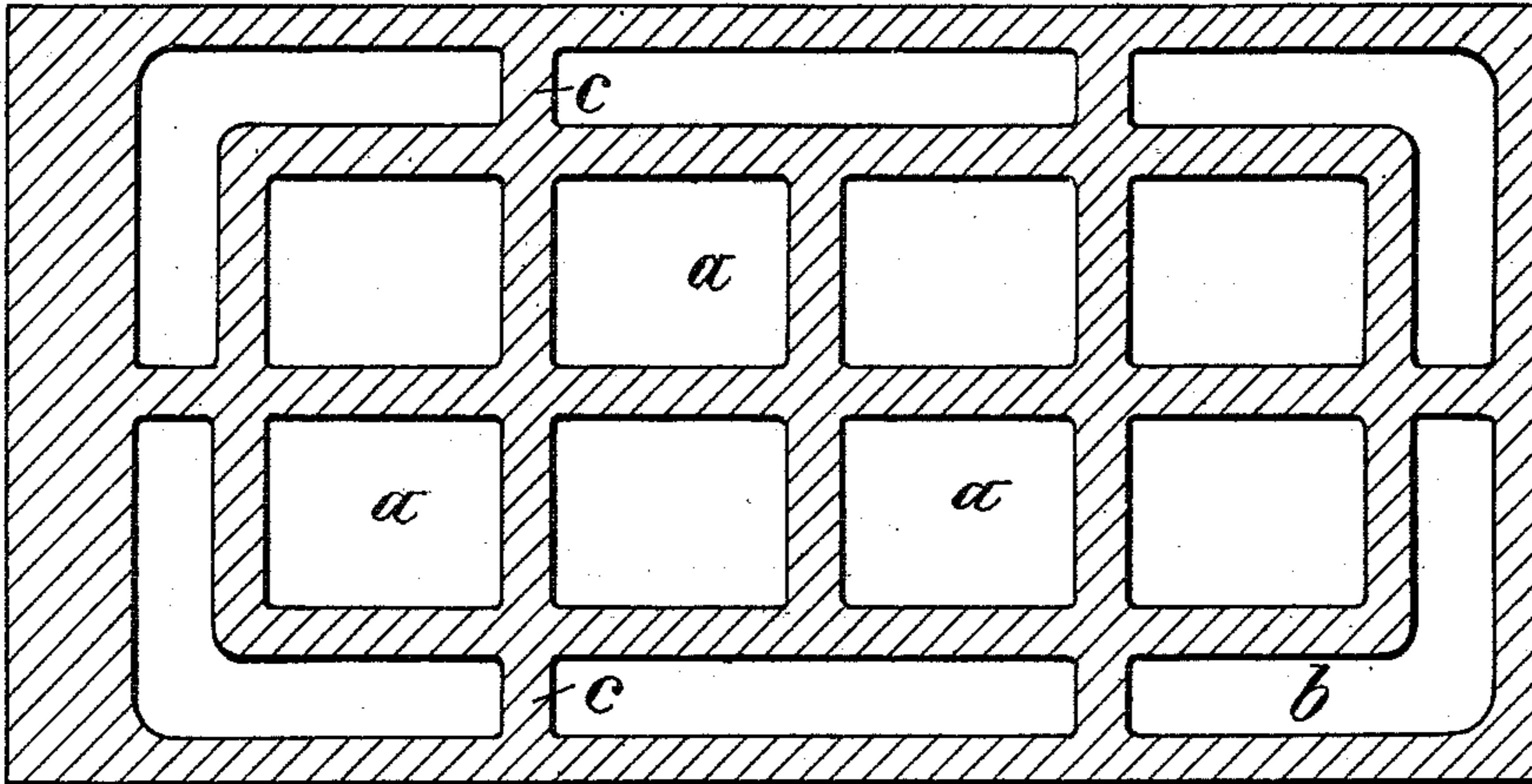


Fig. 1.

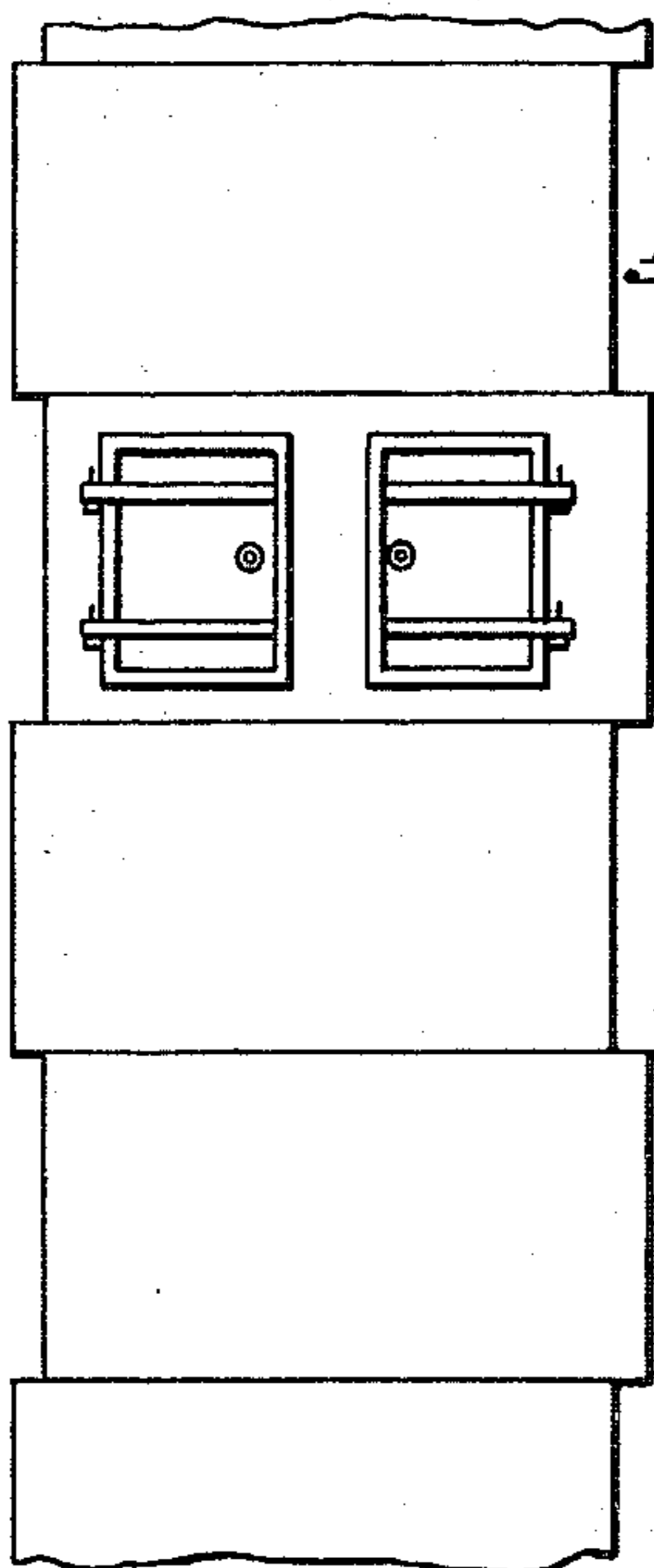


Fig. 2.

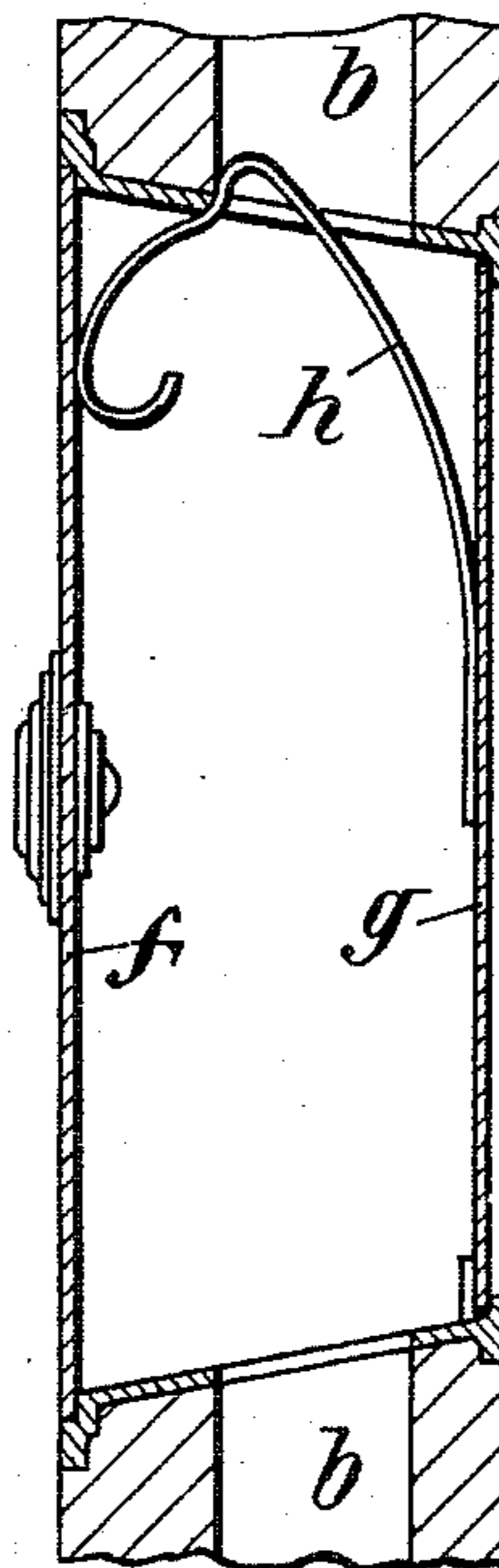


Fig. 3.

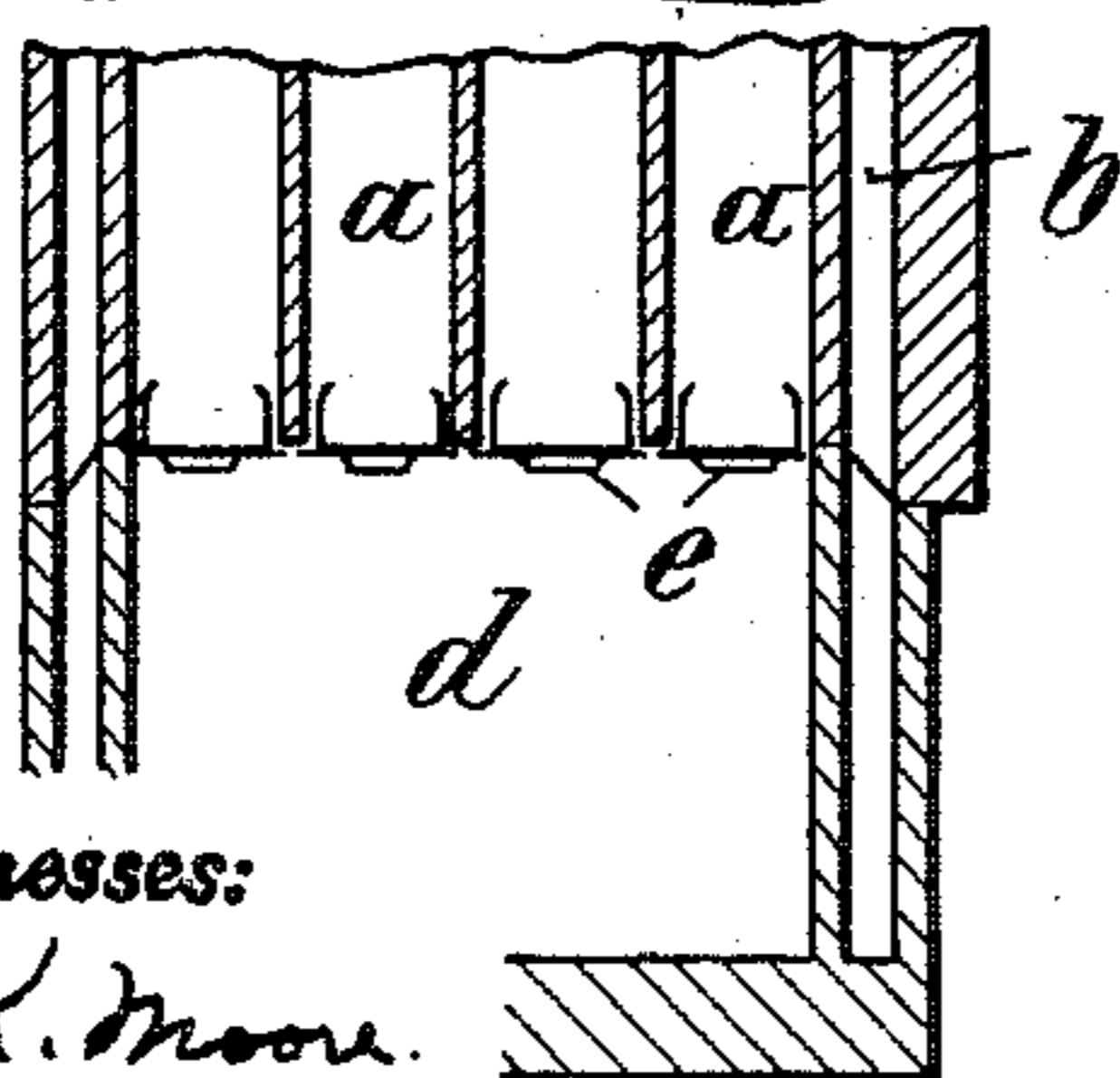
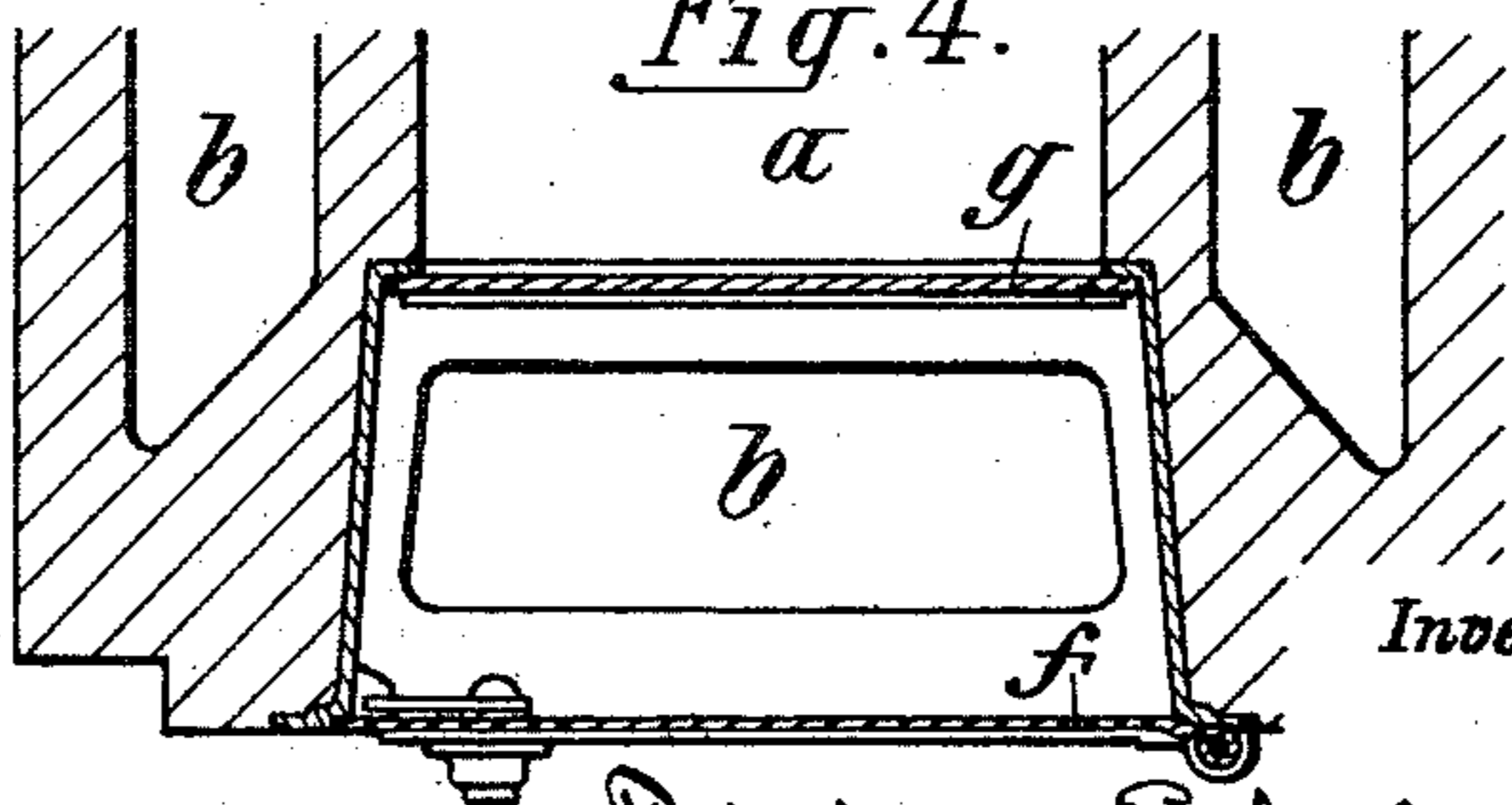


Fig. 4.



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R. E. Barry.

Inventor:

Friedrich Schofer
By Whitehead & Assoc. Attys.

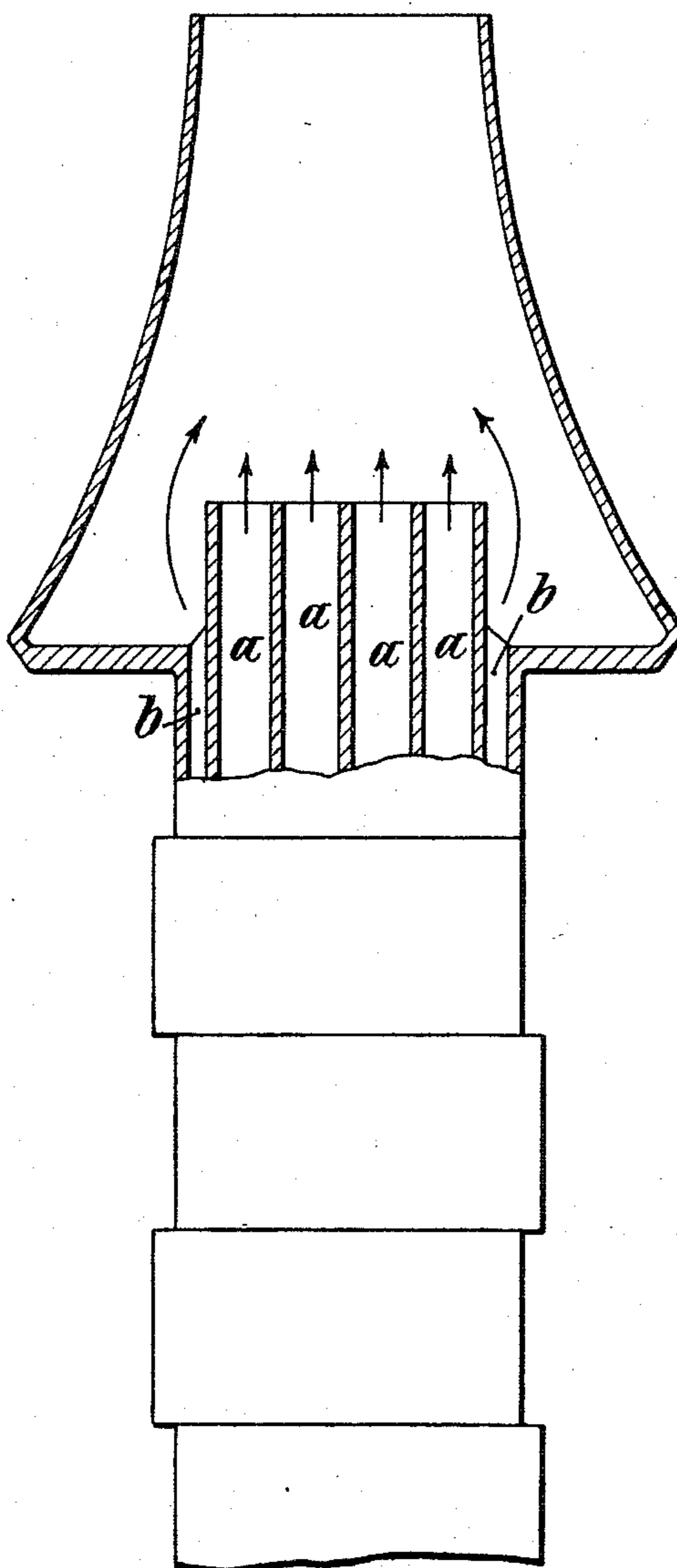
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2 SHEETS—SHEET 2.

Fig. 5.



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UNITED STATES PATENT OFFICE.

FRIEDRICH SCHOFER, OF WAIBLINGEN, NEAR STUTTGART, GERMANY.

COMBINED SMOKE AND VENTILATION SHAFT.

995,097.

Specification of Letters Patent. Patented June 13, 1911.

Application filed October 14, 1910. Serial No. 587,088.

To all whom it may concern:

Be it known that I, FRIEDRICH SCHOFER, a subject of the German Emperor, residing at Waiblingen, near Stuttgart, in the German Empire, have invented new and useful Improvements in Combined Smoke and Ventilation Shafts, of which the following is a specification.

This invention relates to combined smoke and ventilation shafts.

The ventilation of rooms has hitherto been defective owing to the inefficiency of the ventilating shafts employed for this purpose. For example it has been proposed to surround the smoke chimney by a ventilating air shaft so as to utilize the radiating heat of the smoke chimney for inducing an upward movement of the air in the said shaft. In such cases it is, generally assumed that the smoke chimney will be always heated by the exhaust gases of a fire, but it is not always so. It frequently happens that while only a few rooms of a house are heated, it is also desired to ventilate the remaining or unheated rooms, such for example, as sleeping rooms which are seldom heated.

My invention consists in combining a number of smoke chimneys or flues and surrounding the same by a common or mutual ventilating air shaft, the said smoke chimneys extending at the top into a headpiece or chimney outlet resembling a steam injector.

To enable my invention to be fully understood I will describe the same by reference to the accompanying drawings, in which:—

Figure 1 is a section of a combined smoke and ventilation shaft constructed in accordance with my invention. Fig. 2 is a front view partly in section of the same. Fig. 3 is a vertical section of the door hereinafter referred to, drawn to a larger scale. Fig. 4 is a horizontal section of the same and Fig. 5 is a view of the chimney outlet.

a, a are the smoke flues which are juxtaposed and surrounded by a single ventilation shaft *b*. The smoke flues and ventilation jacket are rigidly connected by means of tie-pieces *c*. This arrangement enables the heating of the air in the surrounding ventilation shaft to be effected by means of any one of the smoke flues. A kitchen fire

would be sufficient to ventilate all the rooms connected to the ventilation shaft *b*. The ventilation can be assisted by the injector-like shape of the headpiece or chimney outlet shown in Fig. 5. By using a number of smoke flues with thin partitions the smoke flues adjacent to a heated flue become warmed and a strong draft will be consequently caused from the commencement when newly lighting an oven or furnace.

To facilitate the cleaning or sweeping of the chimneys *a*, the individual smoke chimneys project into a mutual soot receptacle *d* which receives any fallen particles of soot or ash which may collect on the closures *e* of the smoke chimneys when the said closures are removed. Each individual chimney is provided with a separate closure *e*, in order to prevent communication between the smoke chimneys *a* and, thereby the creation of a prejudicial draft.

The upper part of the combination chimney is so formed that each smoke flue can be cleaned by a chimney sweep in the usual way. To this end a suitably formed door *f* (or doors) is provided which is most clearly shown in Figs. 3 and 4. The chief feature of this door is that a closing plate *g* is connected to the door by means of one or more springs *h*, the plate *g* being pressed into the smoke chimney opening without materially obstructing the ventilation shaft. If it is desired to make both rows of smoke chimneys accessible from one door, a chambered portion is inserted which can be removed during the cleaning operation. This combination smoke and air shaft is preferably made in pieces of about one meter in length.

Claims:

1. A combined smoke and ventilation shaft comprising a number of smoke flues having thin partition walls, a ventilation shaft surrounding said smoke flues, a door located in the outer wall of the ventilator shaft and a plate located in the wall which separates the ventilator shaft from the smoke flues, said plate being provided with a part which extends to the said door and which serves to hold the said plate in place.

2. A combined smoke and ventilating shaft comprising a number of smoke flues having thin partition walls, a ventilating shaft sur-

rounding said smoke flues, an opening extending into a smoke flue from the outside of the shaft, and a closure for said opening comprising a door in the outer wall of the
5 ventilator shaft and a plate for closing the opening in the wall separating the ventilator shaft from the smoke flue, said plate being

provided with a spring connecting said plate with the said door.

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Witnesses:

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FRIDA KLAIBER.

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