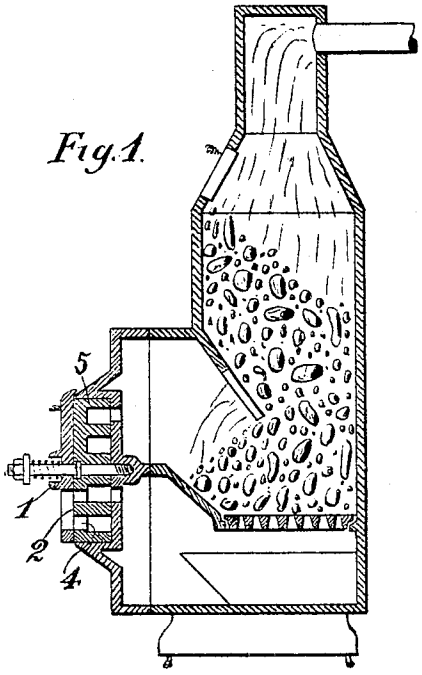
No. 795,226. PATENTED JULY 18, 1905.

J. A. JENSEN.

HEATING STOVE.

APPLICATION FILED JAN. 16, 1899.

Fig. 1.



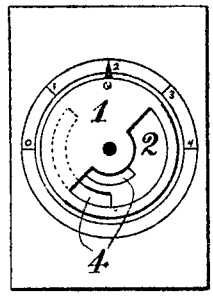


Fig. 2.

Fig. 3.

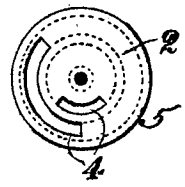


Fig. 5.

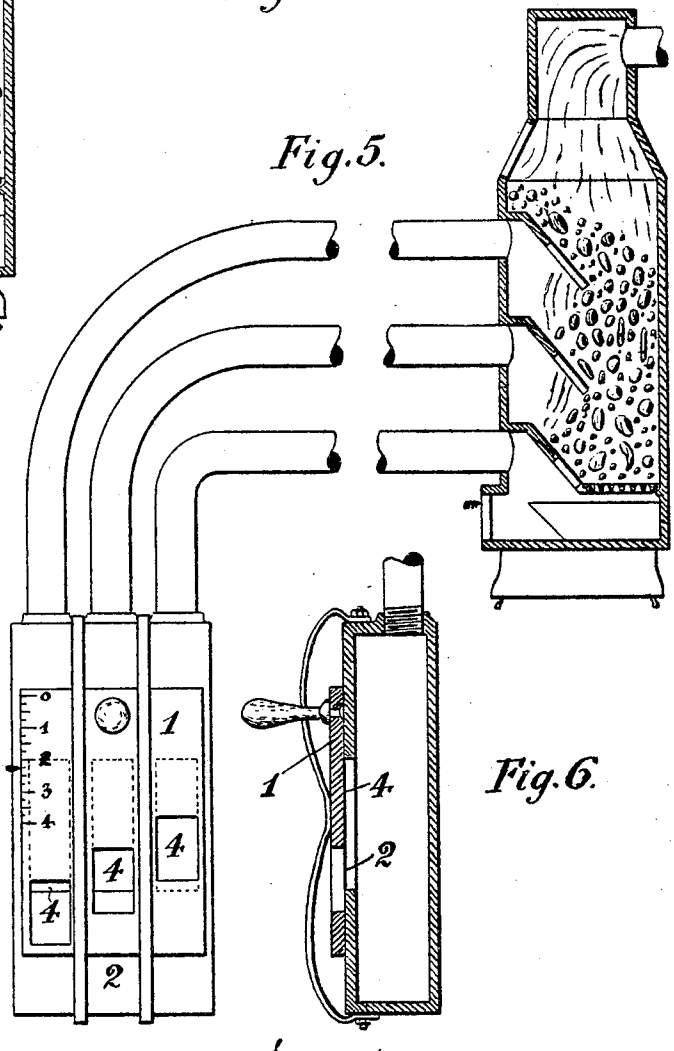


Fig. 4.

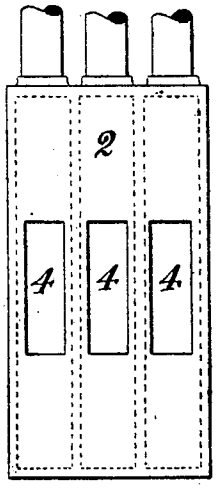


Fig. 6.

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No. 795,226. Patented July 18, 1905.

UNITED STATES PATENT OFFICE.

JESS ADOLPH JENSEN, OF COPENHAGEN, DENMARK.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 795,226, dated July 18, 1905.

Application filed January 16, 1899. Serial No. 702,328.

To all whom it may concern:

Be it known that I, JESS ADOLPH JENSEN, a subject of the King of Denmark, residing at Copenhagen, in the Kingdom of Denmark, have invented certain new and useful Improvements in Heating-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to an air-feeding device in such stoves as are furnished with two or more adjustable air-holes. In stoves of this kind the admission of air thereto has been regulated hitherto by providing each of the air-admission holes corresponding with the respective parts of the stove where combustion is desired with a special slide-valve, in using which a certain gift of observation and technical capacity were requisite, and consequently it often happened that one air-hole received too much air and the other too little, the combustion being imperfect and unsatisfactory as regards results obtained. According to the present invention the quantity of air necessary for the several parts of the combustion-chamber at each phase of combustion is determined previously, and from this the dimensions and relative positions of the air-supply channels are calculated, so that in every case a certain quantity of air for different parts of the stove where combustion is desired and which varies considerably according to circumstances corresponds to a certain position of the edge of the slide-valve by means of which the regulation is effected. The arrangement is such that each air-supply channel is completely isolated from the remainder from the point where it begins to that where combustion takes place. Under this arrangement it may be too cold or too warm in the room; but in all cases the combustion is as complete as possible.

In the accompanying drawings, Figure 1 is a vertical sectional view of a stove embodying my invention. Fig. 2 is a front elevation of the door with the damper or valve in connection therewith. Fig. 3 is a front view of the removable case. Fig. 4 is a front view of a modified form of case having three openings. Fig. 5 is a view broken away, showing in vertical section a stove having three combustion-chambers and in elevation the case seen in Fig. 4 with a rectangular damper or valve in connection with the same. Fig. 6 is a vertical sectional view through one of the air-chambers of the valve-case.

In the construction shown in Figs. 1 to 3 the regulating edge of the slide-valve is rectilinear, and in the latter construction (shown in Figs. 4 to 6) said edge is "set back" in the form of steps.

In the drawings, 1 is the slide-valve; 2, the slide-valve surface, which contains the air-inlet holes 4. The said holes 4 are large enough to allow for the passage of the estimated maximum of air for combustion for the particular case. In Figs. 1 to 3 the outer air-inlet opening 4 runs into the circular chamber of a case or receiver 5, which is closed at the back by a part of the stove-door, this part having an opening returning into the space above the grate, while the inner air-inlet opening 4 runs into a similar circular chamber connected by another opening with the stove ash-pit, whence the air enters from beneath through the grate into the body of fuel. If the regulating edge of the semicircular slide-valve is straight, the two openings are so placed that upon the slide-valve being turned from left to right they do not open simultaneously. Thus the inner air-inlet opening first opens and admits air beneath the grate. The air is subsequently admitted to both parts of the stove where combustion is desired, and finally only the cross-section of the upper air-inlet opening is enlarged. Each possible position of the slide-valve within the points "0" to "4" on the scale corresponds to a different stage of combustion. If the regulating edge of the slide-valve is set back step fashion, as in Figs. 4 to 6, the edges of the two channels 4 may commence at the same radius. In order that the slide-valve, which turns on a pin or bolt and is retained in position on its seat by means of a spiral spring, may be capable of being adjusted to any position, a

pointer or indicator is attached to the slide-valve 1, and by means of this the position at any time is exactly indicated on a scale on the door, which is graduated and furnished with figures. The indicator can also be placed on the door and the scale on the slide-valve similarly as in Fig. 5. In Fig. 1 there is a further special characteristic not found in Fig. 5. The part which contains the air-inlet openings consists of a special single piece, which can be easily put in and readily exchanged for another containing either smaller or larger openings 4 in order to adapt the fire-place to other conditions of draft. The above-mentioned spiral spring presses with one of its ends on the slide-valve. With the other it rests against a nut arranged on the pivot-pin or a disk placed beneath.

In Figs. 4 to 6 the openings 4 in the surface 2 are rectangular and arranged at the same height adjoining one another, while the slide-valve 1, which is guided straight in any suitable manner, can be pushed along the surface 2, two spring-plates pressing it to the latter, and is furnished with openings arranged step fashion to one another and with a handle for the purpose of operating it. In this case also the slide is furnished with a scale, while the fixed surface 2 bears the indicator or a mark. The opening 4, moreover, may begin at different heights if the slide has a straight regulating edge.

By means of the arrangement described above an almost perfect combustion will be effected with any desired supply of air, this being only occasionally and quite accidentally attained by the simultaneous adjustment of several slides at once.

What I claim, and desire to secure by Letters Patent, is—

1. The combination with a stove having a plurality of chambers to which air is to be fed, of a case provided with air-inlet openings, each in communication with one of the aforesaid chambers of the stove, and an adjustable damper or valve arranged to control the admission of air through the openings in the case, the said valve and openings being arranged relatively so that the admission of air to the several chambers of the stove and the order in which the air is admitted will be controlled by the adjustment of the valve.

2. The combination with a stove having a plurality of chambers to which air is to be fed, of a case detachably secured to the stove and having openings each in communication with one of the aforesaid chambers of the stove, and an adjustable damper or valve arranged to control the admission of air through the openings in the case, the said valve and openings being arranged relatively so that the admission of air to the several chambers of the stove and the order in which the air is admitted will be controlled by the adjustment of the valve.

In testimony whereof I have affixed my signature in presence of two witnesses.

JESS ADOLPH JENSEN.

Witnesses:

JULES BLOM,

C. L. MENGELBERG.