

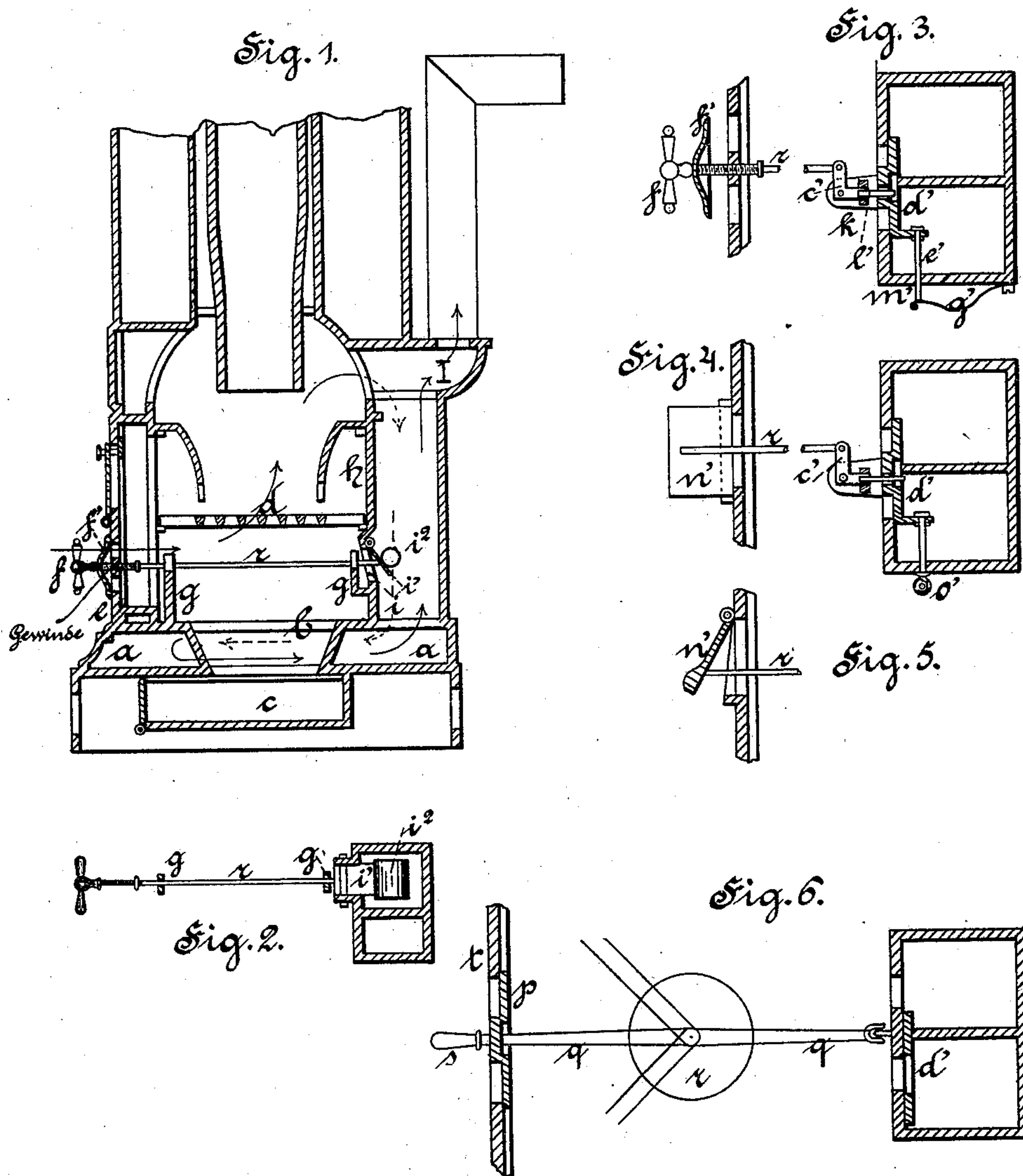
(No Model.)

2 Sheets—Sheet 1.

M. SCHNEIDER.  
REGULATING MANTEL STOVE.

No. 393,859.

Patented Dec. 4, 1888.



Witnesses.  
Paul Fischer.  
Carl Gregor.

Inventor.  
Max Schneider.  
by  
H. W. A. A. A.  
Att'ies.

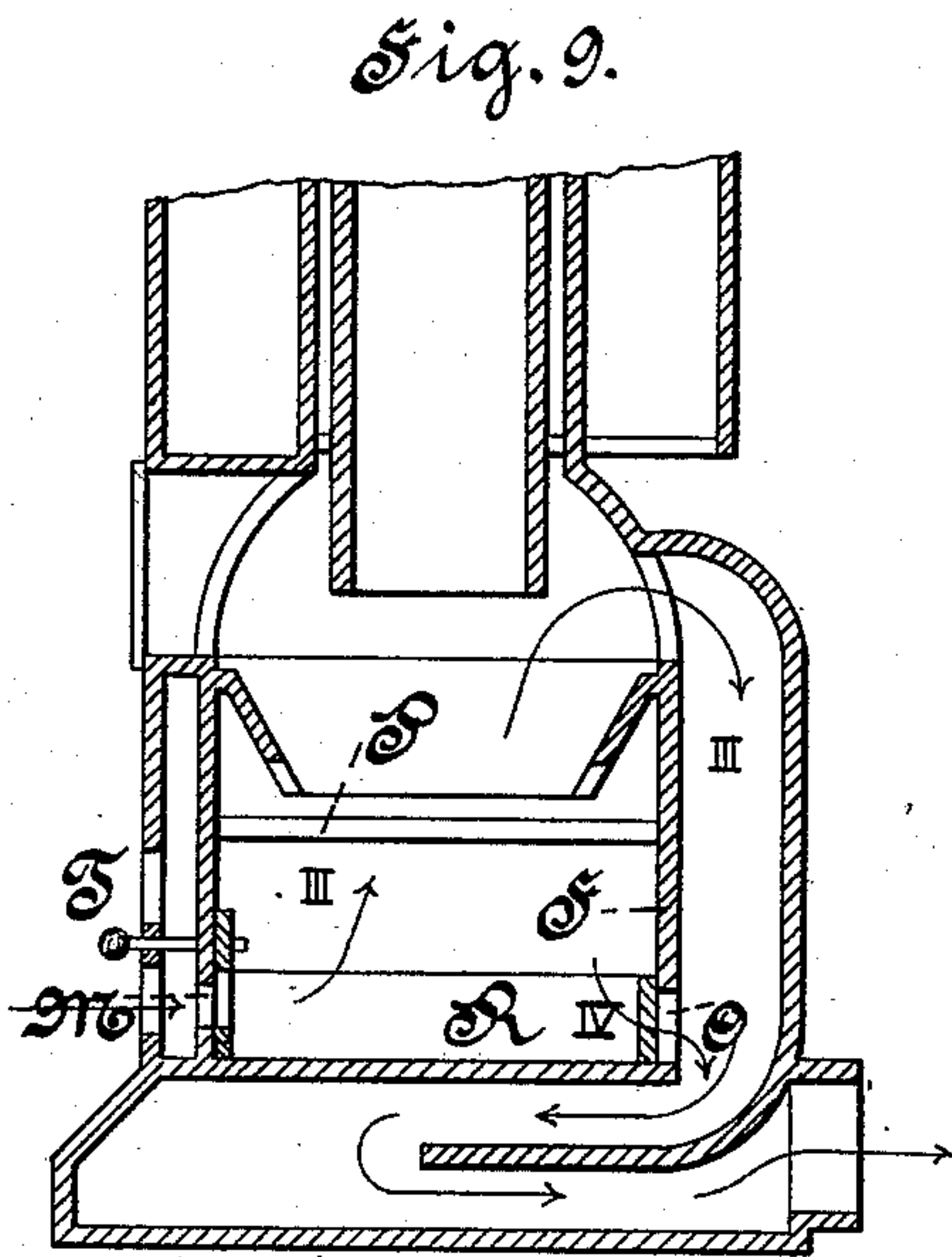
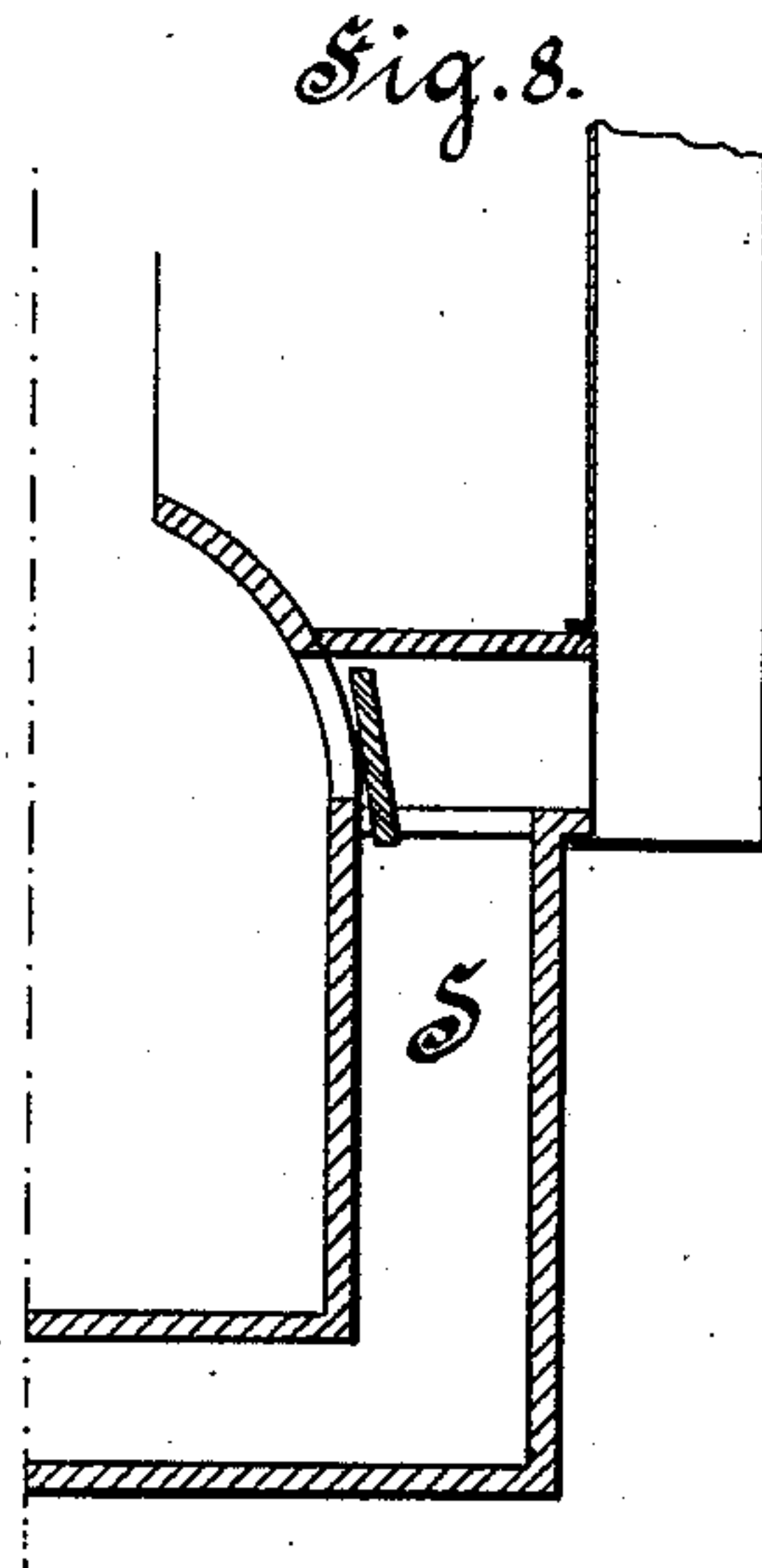
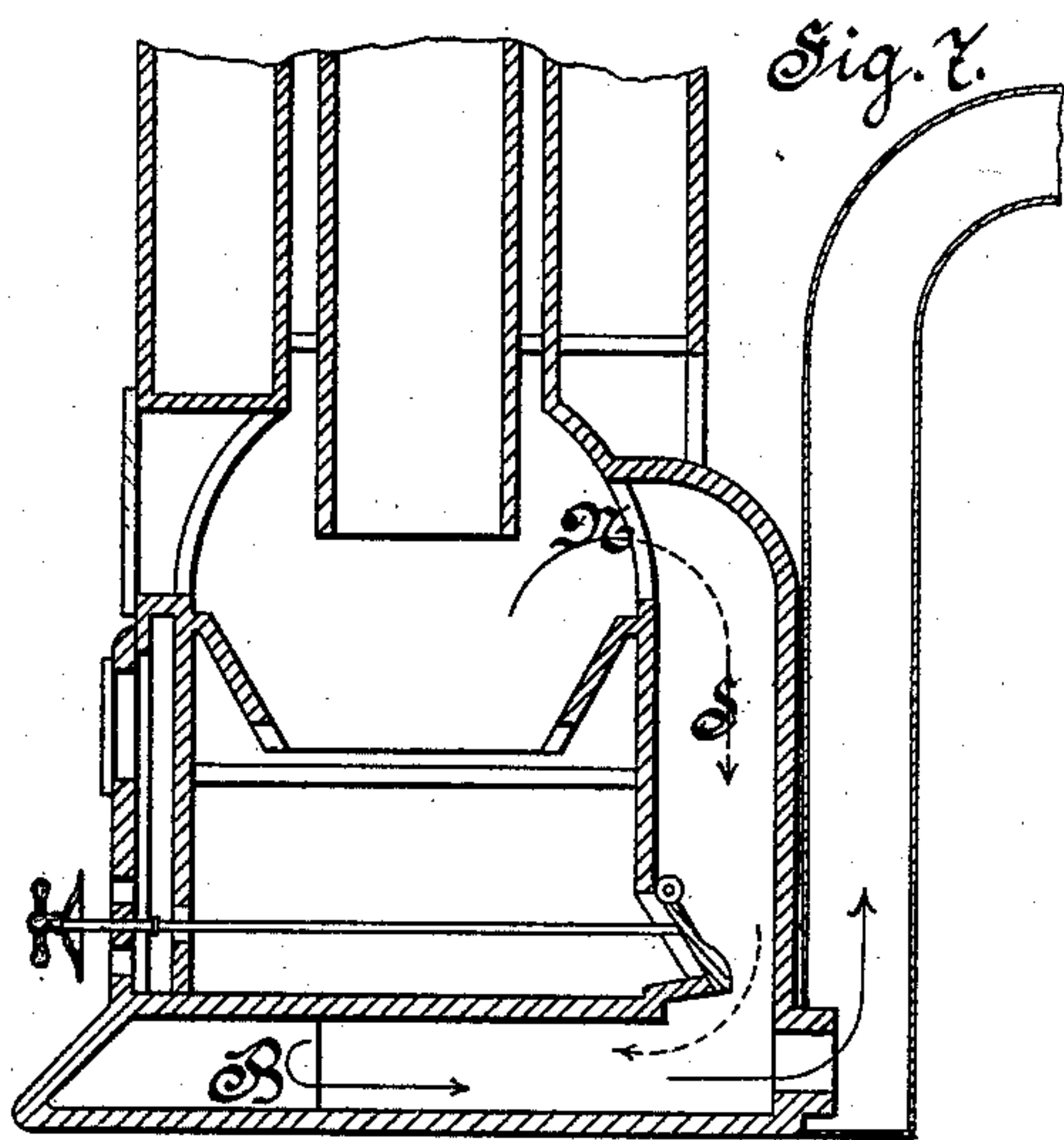
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# UNITED STATES PATENT OFFICE.

MAX SCHNEIDER, OF DOOS, NEAR NUREMBERG, BAVARIA, GERMANY.

## REGULATING MANTEL-STOVES.

SPECIFICATION forming part of Letters Patent No. 393,859, dated December 4, 1888.

Application filed March 25, 1886. Serial No. 196,523. (No model.) Patented in Germany February 6, 1884, No. 29,821, and May 5, 1885, No. 34,429; in France April 15, 1885, No. 168,287, and in Belgium April 15, 1885, No. 68,531.

*To all whom it may concern:*

Be it known that I, MAX SCHNEIDER, of Doos, near Nuremberg, in the Kingdom of Bavaria, and German Empire, have invented  
5 a new and useful Improvement in Dampers for Fire-Place Stoves, of which the following is a specification, reference being had therein to the accompanying drawings, (no patents being obtained by me anywhere for this invention  
10 save in the German Empire, No. 29,821, dated February 6, 1884, and No. 34,429, dated May 5, 1885; France, No. 168,287, dated April 15, 1885; Belgium, No. 68,531, dated April 15, 1885.)

15 My invention relates to magazine-stoves; and it consists in certain improvements in the construction of the same, the fire-chamber being provided with suitable passages for the admission and circulation of air and devices  
20 for regulating the same, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a vertical central section of my improved stove. Fig. 2 illustrates a hinged  
25 plate or valve for the admission or exclusion of air and the rod by which it is operated. Figs. 3, 4, 5, and 6 are sectional views of details, showing modifications in construction. Figs. 7, 8, and 9 show different constructions of air-  
30 passages of the stove.

In the base of the stove is an air-chamber, *a*, which surrounds the ash-hopper *b*, and in which the air circulates below the fire-chamber. The ash-box *c* is placed centrally in the  
35 base, as shown. The grate *d* is placed in position somewhat elevated, so that considerable air-space is left between the grate and the hopper *b*. Across this space extends a rod, *r*, which rests in bearings on the uprights  
40 *g*, and is connected with a flap-valve, *i'*, formed of a hinged plate, and a valve, *f'*, formed of a plate or disk carried by the rod, the valve *i'* being to the rear and valve *f'* being at the front of the stove. Both of said valves, being  
45 placed at opposite openings, may be operated simultaneously by means of the rod *r*, so that one of the valves is closed when the other is opened. The extended end of rod *r* is provided with a handle, *f*, and a portion of the  
50 rod *s* is screw-threaded and provided with a threaded bearing, so that by rotating the rod

it may be moved rearward, so that the disk *f'*, being fixed to the rod, closes the adjacent opening, and the valve *i'* or the rod may be moved forward, opening the valve *f'*, and  
55 valve *i'*, being weighted at *i<sup>2</sup>*, is closed at the same time. The opening *i*, at which the valve *i'* is located, is for the admission of a counter-current of air, and by the use of the regulating-rod *r* the draft is increased or diminished  
60 at either of the two opposite openings, and thus a rapid or slow combustion is produced, as desired, in the fire-chamber *h*. The arrow I indicates the course of the draft when the valve *f'* is open, the valve *i'* being closed, and  
65 the arrow II indicates the counter air-current when valve *i'* is open, the valve *f'* being closed.

In Figs. 3, 4, 5, and 6 modifications are shown in the construction of the valve-rod  
70 and its connections. In Fig. 3 the rod *r*, carrying disk-valve *f'* at one end, is provided with a crank form, *c'*, at its opposite end, which has a support, *k'*. *d'* is a slide-valve by which the counter-current of air is regulated.  
75 A pin, *l'*, projects from valve *d'* and fits in an arm of the crank *c'*, and when valve *f'* is closed by turning the handle *f* the slide-valve *d'* is opened by the movement of the crank. Another pin, *e'*, Fig. 3, attached to  
80 valve *d'*, is pressed in the smoke-box *m'* by a spring, *g'*, and when valve *f'* is opened, drawing the rod *r* from valve *d'*, the latter will be closed by the pressure of the spring *g'*.

In Figs. 4 and 5 a further modification is  
85 shown. The crank *c'* is in construction similar to that shown in Fig. 3; but a flap-valve, *n'*, is used instead of the disk-valve *f'*, the valve *n'* being opened or closed by means of the handle *o'*, fastened to the slide-valve *d'*.  
90 With this construction the effect above described is produced by means of the handle *o'* in opening or closing valve *d'*.

In Fig. 6 a slide, *p*, is used instead of disk *f'*, and is connected with slide *d* by a lever, *g*.  
95 This lever is pivoted on a tripod, *r'*, in the center of the ash-hopper. The handle *s* of the lever extends from the door *t*, as shown, and the slides *p* and *d'* are respectively opened or closed according to the movement given  
100 lever *g* by means of the handle *s*.

For the purpose of dispensing with the disk



and flap valves used in the constructions before described, and to obtain a constant and uniform circulation of air in the base of the stove, I apply the smoke-pipe B, Fig. 7, to the base, which is divided by a partition, S', Figs. 7 and 8. This makes a much shorter draft and draws the fire toward the base more effectively.

In Fig. 9 the base of the stove is also shown divided by the partition-wall S, and the back or fire wall, F, has an aperture, O, opening into the base-conduit and situated under the fire-box and grate P. An aperture, M, is made in the front part of the heating apparatus or in either side of it. A rotary regulating-ring, R, adapted to close or open these apertures severally, is applied, as shown. When the front aperture, M, is open, the opposite aperture, O, is closed by the ring. When the front aperture, M, is open, the air entering through it passes through the grate to the fuel and from thence to the chimney in the direction of the arrow III. Then if, by means of handle T, the regulating-ring R is turned so that aperture M is closed and aperture O is opened, the counter-current of air passes under the grate toward the base in the direction of the arrow IV and the draft is at once checked and combustion becomes slower.

I claim—

1. In a stove, a central chamber, an air-passage outside of said chamber and leading toward the base of the stove, a valve opening from said chamber into said air-passage, and an opposite valve, both of said valves being so connected that either valve may be opened and the other simultaneously closed, substantially as and for the purposes described.

2. In combination with a stove having a central chamber and a rear air-passage outside of said chamber, a valve between said chamber and said air-passage, an opposite valve, and a valve-rod connected with both valves and provided with a handle, the parts being so constructed that either valve may be opened and the other valve closed by a movement of the handle, substantially as set forth and described.

3. In a stove, a valve-rod, *r*, screw-threaded and provided with a handle and a threaded bearing, as shown, and opposite valves *f'* and *i'*, connected with rod *r* and operated by said rod, substantially as and for the purposes specified.

In witness whereof I have hereunto set my hand in presence of two witnesses.

MAX SCHNEIDER.

Witnesses:

F. J. HIRSCHMANN,  
WM. ESSENWEIR.