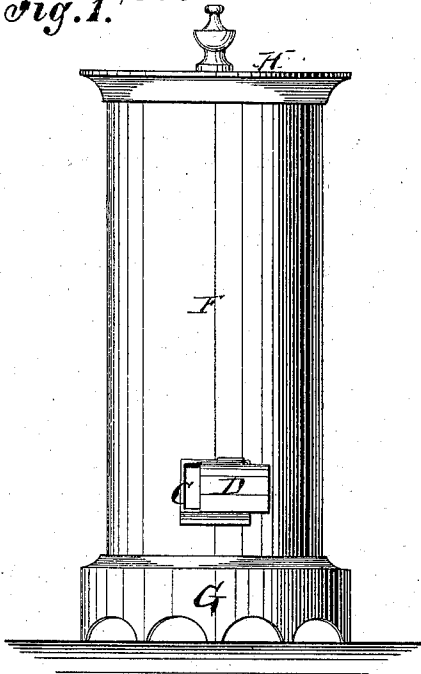


H. MEIDINGER.
Coal-Stoves.

No. 137,855.

Fig. 1.



Patented April 16, 1873.

Fig. 2.

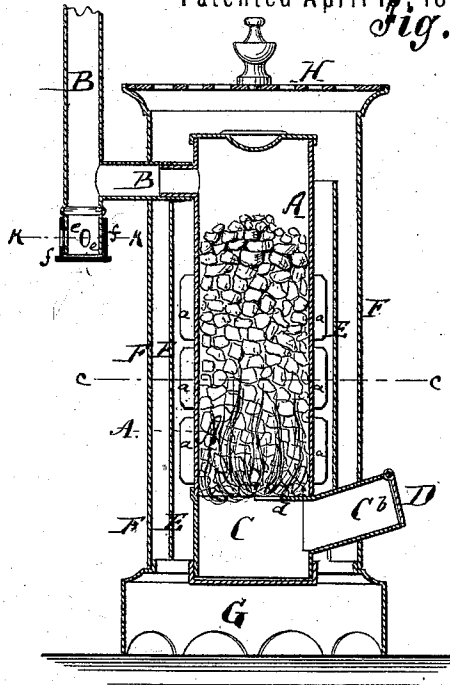


Fig. 3.

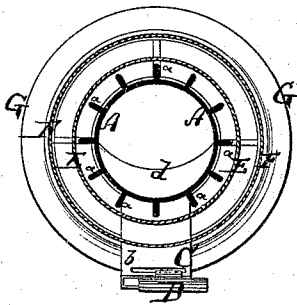


Fig. 4.

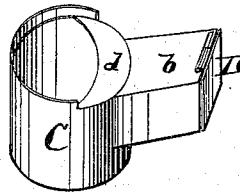


Fig. 5.



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UNITED STATES PATENT OFFICE.

HEINRICH MEIDINGER, OF CARLSRUHE, GERMANY, ASSIGNOR TO HIMSELF
AND FREDERICK GUTZKOW, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN COAL-STOVES.

Specification forming part of Letters Patent No. **137,855**, dated April 15, 1873; application filed
November 25, 1872.

To all whom it may concern:

Be it known that I, HEINRICH MEIDINGER, of Carlsruhe, Germany, have invented a new and Improved Regulating-Stove, of which the following is a specification:

Figure 1 is a front view of my improved stove. Fig. 2 is a vertical central section of the same; Fig. 3, a horizontal section on the line *c c*, Fig. 2; Fig. 4, a perspective view of the bottom piece C; and Fig. 5, a detail horizontal section through the tube *e* and sleeve *f*, taken on the line K K, Fig. 2.

Similar letters of reference indicate corresponding parts.

The invention consists in providing the lower part of fuel-chamber with a crescent-shaped throat-plate; also, in connecting with said plate a bottom piece having a mouth-piece, and also in connecting the door and said mouth-piece by a hinge so that the former can slide, all as hereinafter described and pointed out in the claims.

A in the drawing represents the inner cylinder or fuel-chamber. It is made cylindrical or of equivalent form, of cast iron or other material. It may be made in sections or rings of equal pattern, furnished with ribs *a* on the outside, and with an opening in top for the flue B. C is the lower or bottom piece of the vessel A. It is made with a rectangular mouth-piece and opening *b* for the admittance of air, which opening is covered by a well-fitting sliding and hinged door, D. An essential part of the stove is the crescent-shaped plate *d*, which is cast or otherwise formed on the upper part of the bottom piece C in the manner shown in Fig. 4. This plate *d* serves three important purposes: First, to force the air to enter the center of the heating-cylinder, and to prevent the irregular burning of fuel in front nearest to the hinged sliding door D; secondly, to prevent the burning fuel from falling too near the sliding door, and from getting chilled by the cold air entering there; thirdly, to form a throat in and to narrow that part of the stove where the combustion of fuel principally takes place. It causes the fuel to stow itself and to sink down on the heap of ashes in the ash-pit within C in small quantities at a time. Thus that portion of the fuel which

was stowed between the edge of the crescent-shaped plate *d* and the opposite part of the cylinder A, and had sunk down on the top of the ashes after it lost its cohesion, is exposed to the strongest current of air, and completely burned without being separated from the ashes by a grate or other intermediate structure. The application of a crescent-shaped plate, *d*, in the position shown I consider the best among the various methods of narrowing the place of combustion for the three purposes set forth, although other modes may be employed, such as the introduction of a narrowing inwardly-beveled ring, &c. E and F are two sheet-iron cylinders, which surround the heating-cylinder A at a distance of a few inches between each other. They rest upon the base or foot piece G, which also supports the heating-cylinder A. The outer mantle or cylinder F gives to the whole apparatus the outward shape, and is covered by a perforated cast-iron plate, H. By this arrangement a continuous current of air is caused to ascend in the spaces between the cylinders A E and E F, respectively, said current entering such spaces through openings in the base G, and escaping through apertures in the plate H. No radiating heat is felt in the room, the outer mantle F remaining comparatively cool and capable of receiving a coating of varnish. Only the combination of at least two such sheet-iron mantles E and F will make the outer one cool enough to retain such coating. This is an important point not used in other stoves. B is the stove-pipe. It has a vertical pendant, *e*, whose open lower end is lower than the flue-hole in the stove. In this pendant piece *e* are cut two or more round or rectangular openings, as shown in Figs. 2 and 5. A sleeve, *f*, embraces the pendant pipe *e*, and closes the bottom of same, and has holes cut through its side corresponding to those in the pipe *e*. Thus, by an easy turn of the sleeve *f*, more or less air is admitted from the room direct to the chimney, and the draft into the stove regulated at the same time. In fact, the fire may as well be regulated by this sleeve as by the hinged sliding door D.

To work my stove, I fill the chamber A to within some inches below the flue-hole with

coke or coal, light a wood fire on the top, close the heating-cylinder A, and open the sliding door D. The combustion takes place from top to bottom, and is regulated by the sliding hinged door, or by the ventilator *f*—that is, by admittance of air either into the stove or into the chimney. The burned fuel is replaced by fresh, filled into the heating-cylinder when required, and the ashes are removed once or twice during twenty-four hours, after shoving a small fork-shaped grate, provided with a handle, into the ash-pit. This grate rests and moves on slides that may be left in the mouth-piece of the bottom piece C. The grate serves merely to prevent the burning fuel from settling while the ashes are being removed, and is afterward withdrawn. Owing to the absence of grate-bars and the circumstance that the burning coal rests on a heap of hot ashes, I am enabled to keep the heat better collected than in any other stove, and to regulate the fire with such minuteness as to keep it going when its effect is barely felt and the stove appears quite cold to the touch of the hand.

The fire may be maintained for months without relighting, and may be brought to the highest blaze or a mere glimmering within a few minutes.

The door D is important in its arrangement, as it can be moved sidewise by sliding on its hinge-pivot, and thus moved slightly aside, as in Fig. 1, or swung entirely open on the hinge, as may be required.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The fuel-chamber A provided with the crescent-shaped plate *d*, or equivalent device, which forms a throat or contraction in its lower part, as set forth.

2. The bottom piece C, made in one piece with the plate *d*, and provided with the mouth-piece *b*, as shown.

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