No. 797,295. PATENTED AUG. 15, 1905.

M. R. LEHMANN & A. OHNEMUS.

SELF FEEDING COAL STOVE.

APPLICATION FILED SEPT. 22, 1904.

2 SHEETS—SHEET 1.

Fig. II

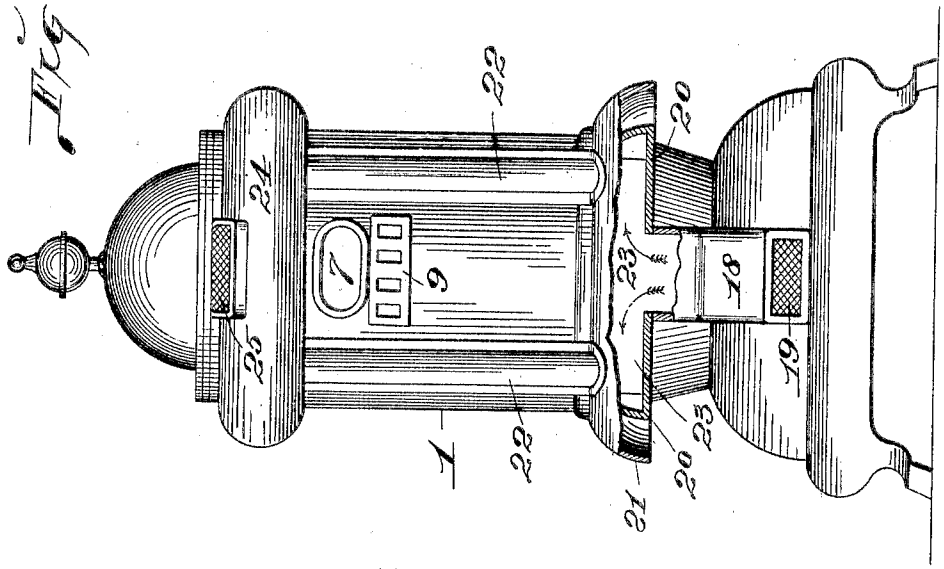
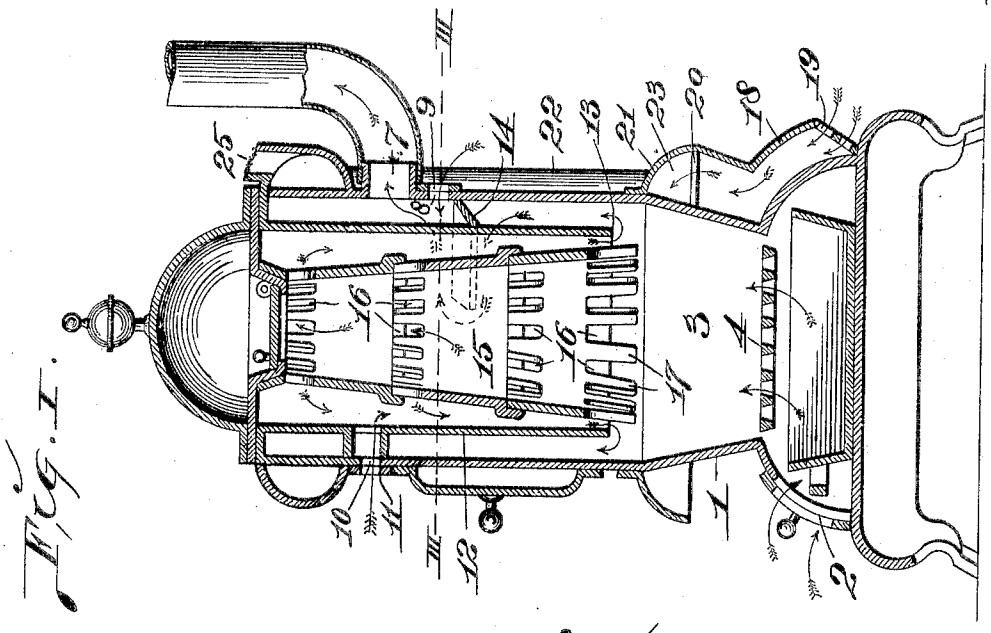


Fig. I.



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2 SHEETS—SHEET 2.

Fig. III.

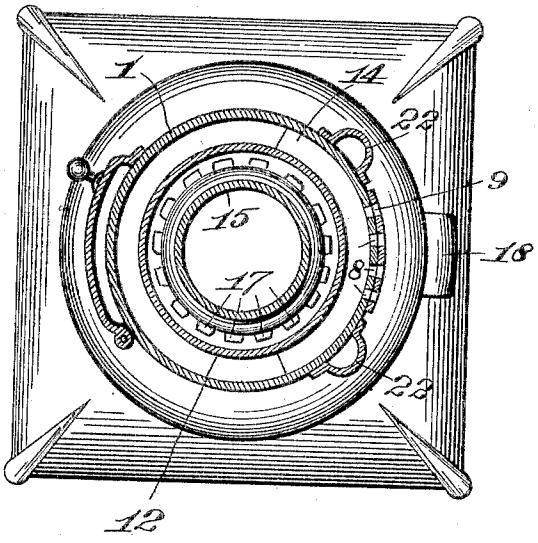
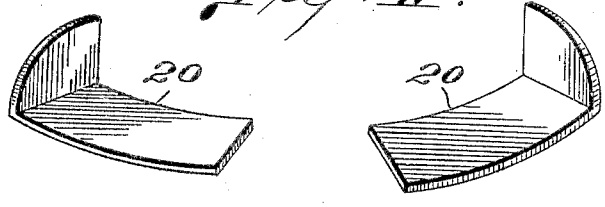


Fig. IV.



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UNITED STATES PATENT OFFICE.

MAX R. LEHMANN AND ANTON OHNEMUS, OF QUINCY, ILLINOIS, ASSIGNORS TO EXCELSIOR STOVE & MANUFACTURING COMPANY, OF QUINCY, ILLINOIS, A CORPORATION.

SELF-FEEDING COAL-STOVE.

No. 797,295. Specification of Letters Patent. Patented Aug. 15, 1905.

Application filed September 22, 1904. Serial No. 225,447.

To all whom it may concern:

Be it known that we, MAX R. LEHMANN and ANTON OHNEMUS, citizens of the United States, residing in Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Self-Feeding Coal-Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to a self-feeding soft-coal stove, and has for its object to furnish a construction whereby the carbon of the fuel may be the most effectively consumed as a result of providing a perforated fuel-magazine and a surrounding shell concentric therewith, into which a portion of the products of combustion enter to be returned by downdraft to the fire and consumed.

The invention further relates to details of construction of the fuel-magazine and to features of construction aside from the magazine and its inclosing shell whereby combustion is rendered as nearly complete as possible.

The invention further relates to a construction permitting of ingress and egress of fresh air into the stove outside of the combustion-chamber.

Figure I is a vertical section taken through our stove from front to rear thereof. Fig. II is a rear elevation of the stove with parts broken away and in vertical section. Fig. III is an enlarged horizontal section taken on line III III, Fig. I. Fig. IV is a perspective view of two plates at the rear of the stove.

1 designates the main shell of our stove, at the lower portion of which, at its front side, is a damper 2, that controls the air passage-way leading into the ash-box.

3 is the fire-pot within the shell 1, and 4 is the grate at the bottom of said pot.

At the rear of the stove and protruding from the main shell is a stovepipe-receiving neck 7, and beneath said neck is an air-inlet 8, that is controlled by a damper 9. At the front of the stove in the main shell is an air-inlet 10, that is controlled by a damper 11.

12 designates a cylindrical inner shell depending within the stove and closed at its upper end. The shell 12 terminates in an open lower end at 13. (See Fig. I.)

14 designates a baffle-plate located interior of the main shell 1 and extending to the inner shell 12. This baffle-plate is located beneath the stovepipe-neck 7 and air-inlet 8, and it serves to prevent direct passage of the products of combustion in an upwardly direction to the stovepipe, so that the products of combustion will be retarded to occasion more complete combustion.

15 designates a fuel-magazine, that is located within the inner shell 12, with a space existing between said shell and magazine to permit free circulation of products of combustion. The fuel-magazine, which is composed of sections, is provided at the ends of the sections with perforations 16, that furnish communication between the interior of the magazine and the space between the magazine and the inner shell 12. At the lower end of the fuel-magazine are a plurality of fingers 17, that extend downwardly beneath the lower end of the inner shell, as seen in Fig. I. By having these fingers project below the termination of the inner shell we hold the coal in the fire-pot 3 away from the inner shell to maintain the space between the lower end of the shell and the fuel-magazine unobstructed in order that there may be free circulation at such point for air and products of combustion, and also a free passage-way for the descent to the fire-pot of fine particles of fuel that may escape through the perforations in the fuel-magazine.

18 designates a fresh-air-inlet flue at the rear of the stove, that extends upwardly from the stove-base and at the bottom of which is an inlet 19. Surmounting this inlet-flue 18 are a pair of L-shaped flue-plates 20, (see Figs. I, II, and IV,) the upturned wings of which fit beneath a flaring rim 21, surrounding the main shell of the stove. 22 represents air-flues, that extend vertically of the stove at the rear of the main shell 1 from an air-chamber 23, formed by the air-flue 18, in combination with the flue-plates 20. The air-flues 22 extend to the top of the stove and have free communication with an air-box 24, that surmounts the main shell 1 and is provided with an exit 25. Air enters the flue 18 through the inlet 19 and on ascending through the flues 22 becomes heated and is discharged into the air-box 24, from which it escapes through the exit 25 without becoming impregnated with the products of

combustion, and the heated air is therefore delivered into the room in which the stove is located in a pure state.

We claim as our invention—

1. In a stove, the combination of a main outer shell, an inner shell within said outer shell having an open lower end, and a fuel-magazine within said inner shell provided with fingers projecting below the lower end of said inner shell, substantially as set forth.

2. In a stove, the combination of a main shell, a flaring rim surrounding said main shell, an inlet air-flue beneath said rim, flue-plates surmounting said inlet-flue and positioned beneath said rim, and vertical air-flues at the exterior of said main shell and having communication with said air-inlet flue, and an air-box at the top of the stove with which said vertical air-flues have communication; said air-box being provided with an exit, substantially as set forth.

MAX R. LEHMANN.
ANTON OHNEMUS.

In presence of—
W. M. PIGOTT,
GEO. P. SWERTRING.