

(No Model.)

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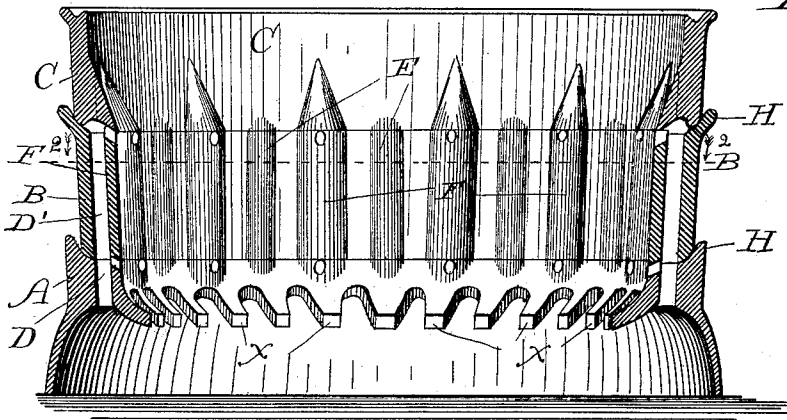
G. H. HESS.

FIRE POT FOR STOVES AND FURNACES.

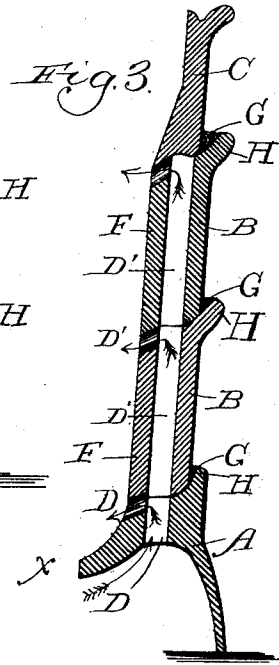
No. 333,627.

Patented Jan. 5, 1886.

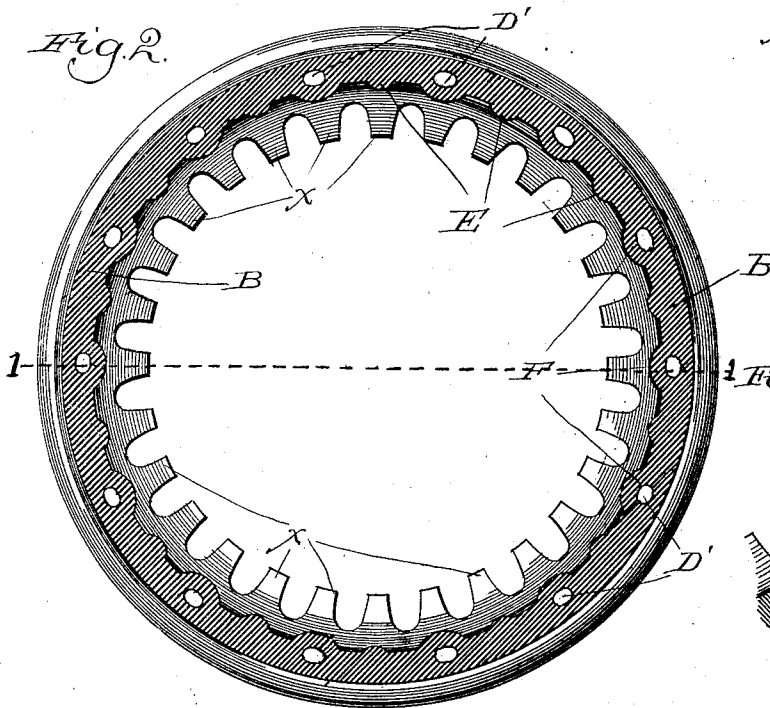
*Fig. 1.*



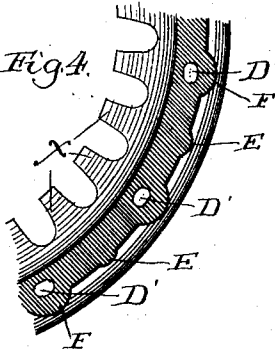
*Fig. 3.*



*Fig. 2.*



*Fig. 4.*



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By Charles T. Brown,  
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(No Model.)

2 Sheets—Sheet 2.

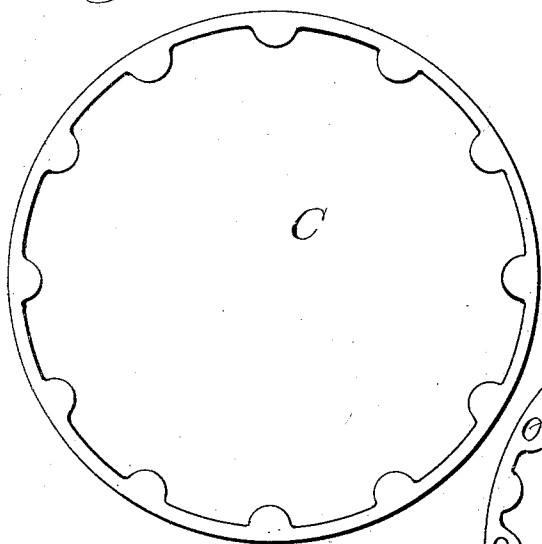
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FIRE POT FOR STOVES AND FURNACES.

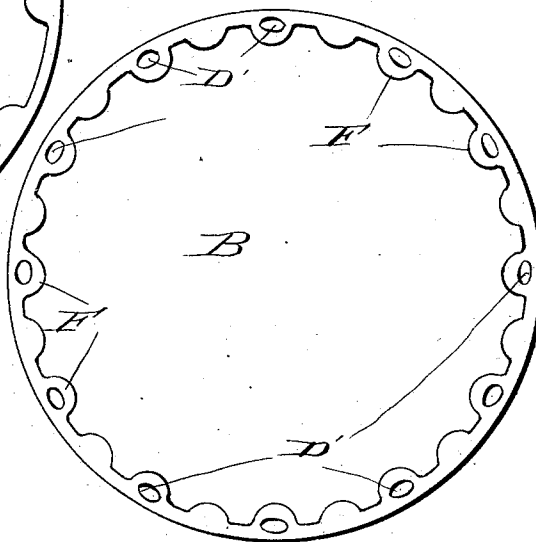
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*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

GEORGE H. HESS, OF CHICAGO, ILLINOIS.

## FIRE-POT FOR STOVES AND FURNACES.

SPECIFICATION forming part of Letters Patent No. 333,627, dated January 5, 1886.

Application filed March 9, 1885. Serial No. 158,201. (No model.)

### *To all whom it may concern:*

Be it known that I, GEORGE H. HESS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fire-Pots for Stoves and Furnaces, of which the following is a specification.

My invention relates to improvements in round, oval, and rectangular fire-pots for coal stoves and furnaces; and the object of my invention is to construct a fire-pot economically, and so arranged as to be easily set up or placed together, not easily injured or broken, and durable, and in such a manner that a supply of air will be furnished to the outer edge of the fire throughout the body of the burning mass in said fire-pot, at the surface thereof, or at both of said places when my improved fire-pot is placed in any stove or furnace.

My invention is also constructed with a view to placing the same in any stove or furnace without change or alteration in said stove or furnace.

My invention is formed or built up of a varying number of round, oval, or rectangular ring-sections placed the one upon the other, as hereinafter more fully described, the said rings having air ducts cast therein, and ribs or projections cast thereon.

I have illustrated my invention by the drawings accompanying this specification, and forming a part thereof.

Like letters refer to like parts throughout the several views.

Figure 1 is a cross-section on line 1 1 of Fig. 2. Fig. 2 is a cross-section on line 2 2 of Fig. 1. Fig. 3 is a cross-section showing one more section than appears in the other figures of the drawings. Fig. 4 is a broken section on the same line (2 2 of Fig. 1) as Fig. 2, with ribs or projections on the outside of the fire-pot. Fig. 5 is a plan view of the edge or bottom of the upper ring used. Fig. 6 is a plan view of the lower edge or bottom of the ring used by me as the middle ring or rings.

A is the lower ring-section of my improved fire-pot.

B is a ring-section used in my invention.

One, two, or three ring-sections, B, may be used, as preferred.

C is a ring-section used in my invention, forming the upper part of the fire-pot.

D is an air-duct cast in A.

D' is an air-duct cast in B. When ring-section B is placed upon ring-section A, (shown in Figs. 1 and 3,) air-duct D' forms a continuation of air-duct D.

E E are ribs or projections cast on ring-sections A B C.

F F are the ribs or projections in which air-ducts D D' are cast.

G is a cement joint.

H is a flange on the upper and outer edge of the several ring-sections, serving, in connection with the outer surface of the next higher section, to form the basin in which cement joint G is made.

X X are projections or fingers extending toward the grate. The form of fingers and the form of grate used is immaterial.

The lower edge or bottom of ring-sections B and C are of such form, Figs. 2 and 3, as to form the top or upper surface of the horizontal outlet or escape for the air rising in air-ducts D D'.

The manner in which my invention is placed in a stove, furnace, or the fire-box of a boiler, &c., is: Ring-section A is placed in the stove or furnace, &c. One or more ring-sections B are placed upon ring-section A. Ring-section C is placed upon ring-section B. The sections may be placed together before putting the fire-pot in the place for which it is designed, and cement joints G G made.

The object of the cement joints G G and of the top ring covering the air-ducts D D' is to prevent the escape of heated gases from said joints and vertically from said air-ducts, thus allowing a draft from the burning mass contained in the fire-pot, in place of forcing heated air into and over said fire.

The operation of my invention when in use is: The burning mass contained in the fire-pot heats the material (preferably cast-iron) of which the fire-pot is constructed. An upward current of heated air is formed in air-ducts D D' and discharged into the burning mass contained in said fire-pot through the outlets above described.

The result attained by the above-described invention is a very complete and perfect com-

bustion of the mass of coals in the fire-pot and the smoke and gases evolved therefrom.

Projections or ribs E and F serve when placed on the inner surface of the fire-pot to keep the burning mass contained therein from close contact with the body of the fire-pot, and when such contact is desired these ribs or projections are placed on the outside, as in Fig. 4.

I am aware that a horizontally-corrugated fire-pot formed of a plate or plates, and with an outside diameter smaller than the inside diameter of the stove in which the fire-pot is placed, thus forming an air-chamber between the same, has been heretofore made, and that numerous perforations in the corrugated lining have also been made, communicating with said air-chamber.

I am also aware that an interior auxiliary fire-pot located at a distance from an outer fire-pot, to create an intervening air-space, and

constructed with a top flange having an annular series of perforations, to form air passages, has been heretofore constructed.

I do not claim, broadly, means for introducing a current of air into or over the burning mass contained in the fire-pot.

Having thus described my invention, its construction and operation, what I claim, and desire to secure by Letters Patent, is—

In a fire-pot, the combination of ring-sections A B, provided with air-ducts therein, and flange or rim H thereon, ring-section C, resting upon and covering ring-section B and the air-ducts therein, and cement joint G between said flange H and the outer surface of the next higher ring-section, all substantially as described, and for the purpose set forth.

GEO. H. HESS.

Witnesses:

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