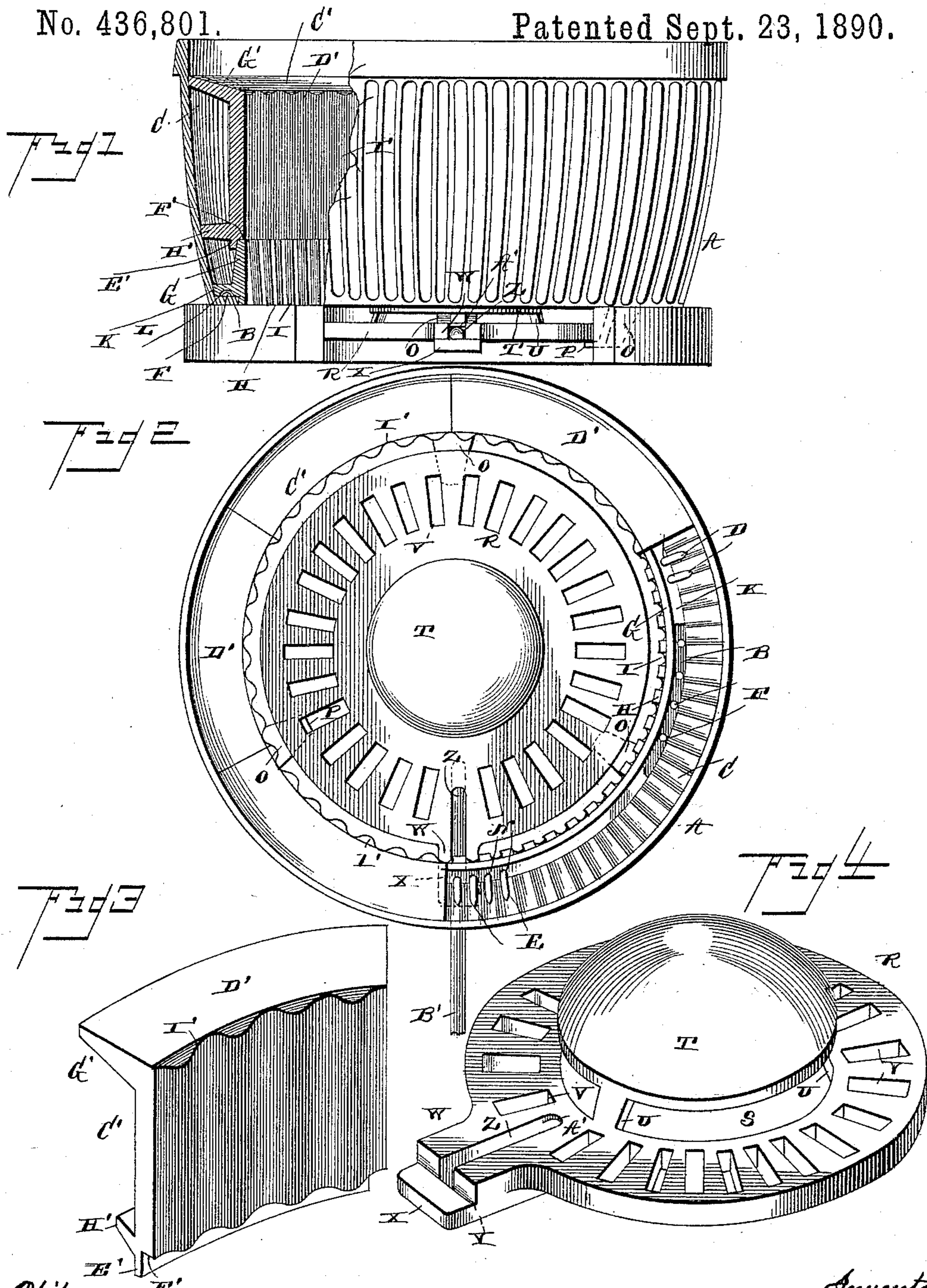


A. H. PEGG.
BASE BURNING STOVE.

No. 436,801.

Patented Sept. 23, 1890.



Witnesses
John Mirie
E. J. Rogers
W. H. Pegg

Inventor
Abijah H. Pegg
By his Attorneys
C. A. Snow & Co.

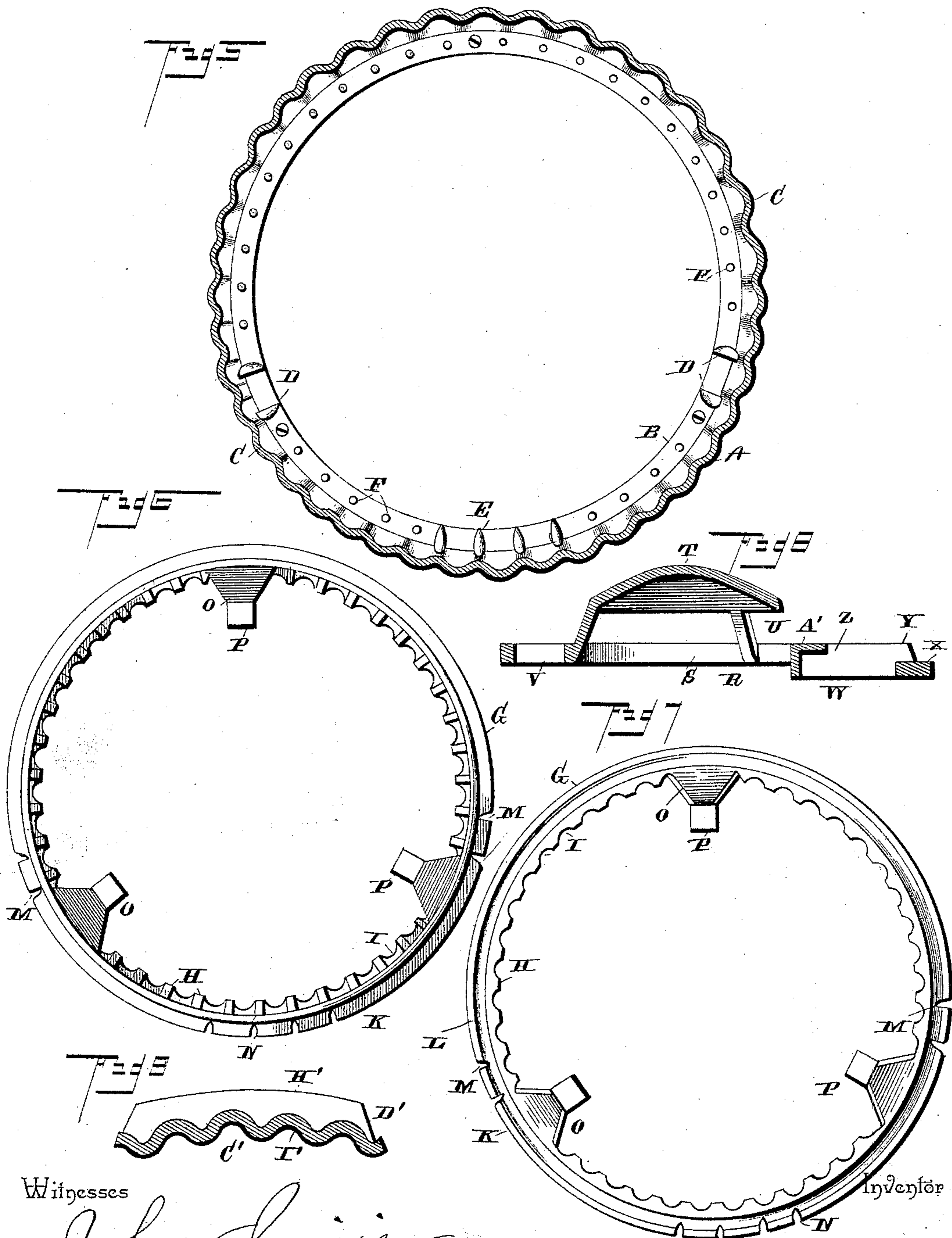
(No Model.)

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UNITED STATES PATENT OFFICE.

ABIJAH H. PEGG, OF DOWAGIAC, MICHIGAN.

BASE-BURNING STOVE.

SPECIFICATION forming part of Letters Patent No. 436,801, dated September 23, 1890.

Application filed April 13, 1889. Serial No. 307,089. (No model.)

To all whom it may concern:

Be it known that I, ABIJAH H. PEGG, a citizen of the United States, residing at Dowagiac, in the county of Cass and State of Michigan, have invented a new and useful Base-Burning Stove, of which the following is a specification.

My invention relates to an improvement in base-burning stoves; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is partly an elevation and partly a sectional view of the fire-pot, grate, and linings of a base-burning stove embodying my improvement. Fig. 2 is partly a top plan view and partly a horizontal sectional view of the same. Fig. 3 is a detail perspective view of one of the sections of the lining. Fig. 4 is a similar view of the grate. Fig. 5 is a horizontal sectional view of the fire-pot. Fig. 6 is a plan view of the base-ring. Fig. 7 is a bottom plan view of the base-ring. Fig. 8 is a sectional view of the grate. Fig. 9 is a horizontal sectional view of one of the sections of the lining.

The fire-pot A is provided at its lower edge with an inwardly-extending flange B, and the sides of the said fire-pot are provided with a continuous series of vertical flutes C, which are concavo-convex in cross-section. On the inside of the fire-pot, directly above the flange B and arranged nearly opposite each other, are two pairs of ribs or ears D, which are formed integrally with the fire-pot, and at a point midway between the said pairs of ribs or ears are formed a series, preferably four, of ribs or offsets E; also formed on the upper side of the inwardly-extending flange B, at suitable distances apart, are a series of semi-spherical bosses F.

The base-ring G is provided on its inner side with vertical ribs or offsets H, separated by grooves I. On the outer side of the said base-ring, near the lower edge thereof, is formed an annular lateral flange K, the same being provided on its lower side with an annular groove L, and the said flange K is adapted to rest on the flange B of the fire-pot, and the groove L receives the semi-spherical studs or bosses F on the said flange B. The function

of the said semi-spherical bosses and of the said concave groove is to arrange the base-ring concentrically in the lower side of the fire-pot. The said flange K is provided near opposite sides with two pairs of notches or recesses M, which serve to receive the ribs or ears D, and the said flange is provided at a point midway between the said pairs of notches or recesses with a series of similar notches or recesses N, which serve to receive the series of ribs or offsets E. Depending from the lower edge of the base-ring and arranged equidistant apart are a series of three downwardly-converging arms or hangers O, which have inwardly-extending horizontal feet P at their lower end.

The grate R is circular in form, and is provided with a central opening S, the diameter of which is equal to a little more than half the diameter of the grate, and over the said opening, at a height of about five-eighths of an inch, is a concavo-convex plate T, the same being arranged directly above the opening S, and supported by a series, preferably three, of inwardly-converging arms U, which are formed integral with and project upward from the main or lower portion of the grate. The latter is further provided with a series of radial openings V, arranged in a circle concentric with the opening S, and from one side of the grate extends an arm W. The said arm is provided at its lower outer side with a projecting transverse flange X, whereby an offset or shoulder Y is formed at the inner side of the said flange, and the said arm is further provided with a radial slot Z, the inner end of which is partly covered by a web A'. The said arm is also formed or cast integrally with the grate, and the latter is supported on the feet P of the arms or hangers O at a suitable distance below the base-ring, and the arm W extends outward under the lower side of the fire-pot and is adapted to play between two of the arms or hangers when the said grate is shaken or given an oscillating horizontal motion, which may be done by inserting the inner end of a shaker-rod B in the slot Z, and causing the same to bear upon the flange X and under the web A'.

The lining C' for the fire-pot is formed of a series of separable sectors D', each of which has a depending flange E' at its lower edge,

adapted to engage the outer side of the upper edge of the base-ring, and is provided with a rabbet F', adapted to receive the said upper edge of the base-plate. Projecting outward
 5 from the upper edge of each sector is a flared upwardly-inclined flange G', which is adapted to bear against and effect a moderately-tight joint with the inner side of the fire-pot at a point in line horizontally with the upper ends
 10 of the flutes of the latter, and also projecting from the inner side of each sector, near the lower edge thereof, is a flange H', which is adapted to bear against the inner side of the fire-pot. The said sectors are each provided
 15 throughout their entire length with a series of vertical concavo-convex flutes I', the concave sides of which are turned inward, and serve to conduct air upward around the mass of burning fuel.

20 The operation of my invention is as follows: The coal in the fire-pot has its central portion supported by the concavo-convex plate over the center of the grate, and the latter in great measure excludes air from the said central portion of the coal or fuel, so that the
 25 same will burn only slowly, if at all. The air which rises from below the grate passes upward through the slots V therein and outward through the openings under the plate T and
 30 between the arms U, and the air also enters through the annular space between the lower side of the base-rim and the outer edge of the grate. Hence the admission of air is confined practically to an annular space between the
 35 center of the fuel and the lining, and thereby the fuel in the said space is caused to burn very freely and to heat the lining so thoroughly that the fire-pot will be heated by radiation and will cast out heat mainly from
 40 the base of the stove at a point near the floor where it is most needed. The flutes in the fire-pot increase the superficial area thereof to a very considerable extent, and necessarily increase the amount of heating-surface of the
 45 said fire-pot, and thereby add to the efficiency of the stove. The shaker-rod may be introduced over the grate and under the plate T and manipulated in such manner as to effectually remove the clinkers, slag, and un-
 50 burned particles of fuel from the grate, and when the said shaker-rod is attached to the arm of the grate in the manner hereinbefore described the grate may be tilted by depressing the outer end of the said shaker-rod, so
 55 as to discharge all the contents of the fire-pot. It will be understood that when the grate is thus tilted it will be entirely supported by the two arms or hangers O nearest the front side of the stove.

Having thus described my invention, I 60 claim--

1. The herein-described improved grate, consisting of the horizontally-arranged casting having an annular series of radial slots, a central opening, and a concavo-convex plate ar- 65 ranged directly above said opening and elevated out of contact with the casting and having its convex outer face sloping toward the casting, the arms spaced apart to allow for the introduction and movement of the poker and 70 connecting the edge of said plate with the body of the casting, whereby a poker can be introduced and moved over the upper surface of the radial slots and passed under the convex plate, substantially as set forth. 75

2. In a stove, the combination, with the circular fire-pot having the annular inwardly-extending flange at its lower edge, of the base-ring and the lining formed of separable sectors D', said sectors having rabbets to engage 80 the upper edge of the base-ring and provided with the outwardly-extending flanges at their upper and lower sides to bear against the inner side of the fire-pot, substantially as described. 85

3. The stove-lining composed of the separable sectors D', each consisting of a body having a depending flange E', a rabbet F', an upwardly-inclined flange G' at its upper edge, and a flange H' near its lower edge, in 90 combination with the supporting-ring G, substantially as and for the purpose set forth.

4. The combination of the fire-pot having the ribs D and E and flange B with the base-ring G, having flange K, provided with notches 95 M N, substantially as set forth.

5. The combination of the fire-pot having the inwardly-extending flange B at its lower side, with the base-ring having the flange K bearing on the flange B, and the lining hav- 100 ing the rabbet on its lower side to receive the upper edge of the base-ring, and provided further with the flange E', arranged on the outer side of the base-ring, and the flanges G' and H', extending outward from said lining and 105 bearing against the inner side of the fire-pot, whereby an open space is formed between the lining and the fire-pot, substantially as described.

In testimony that I claim the foregoing as 110 my own I have hereto affixed my signature in presence of two witnesses.

ABIJAH H. PEGG.

Witnesses:

JULIA E. MICHAEL,
 HENRY MICHAEL.