

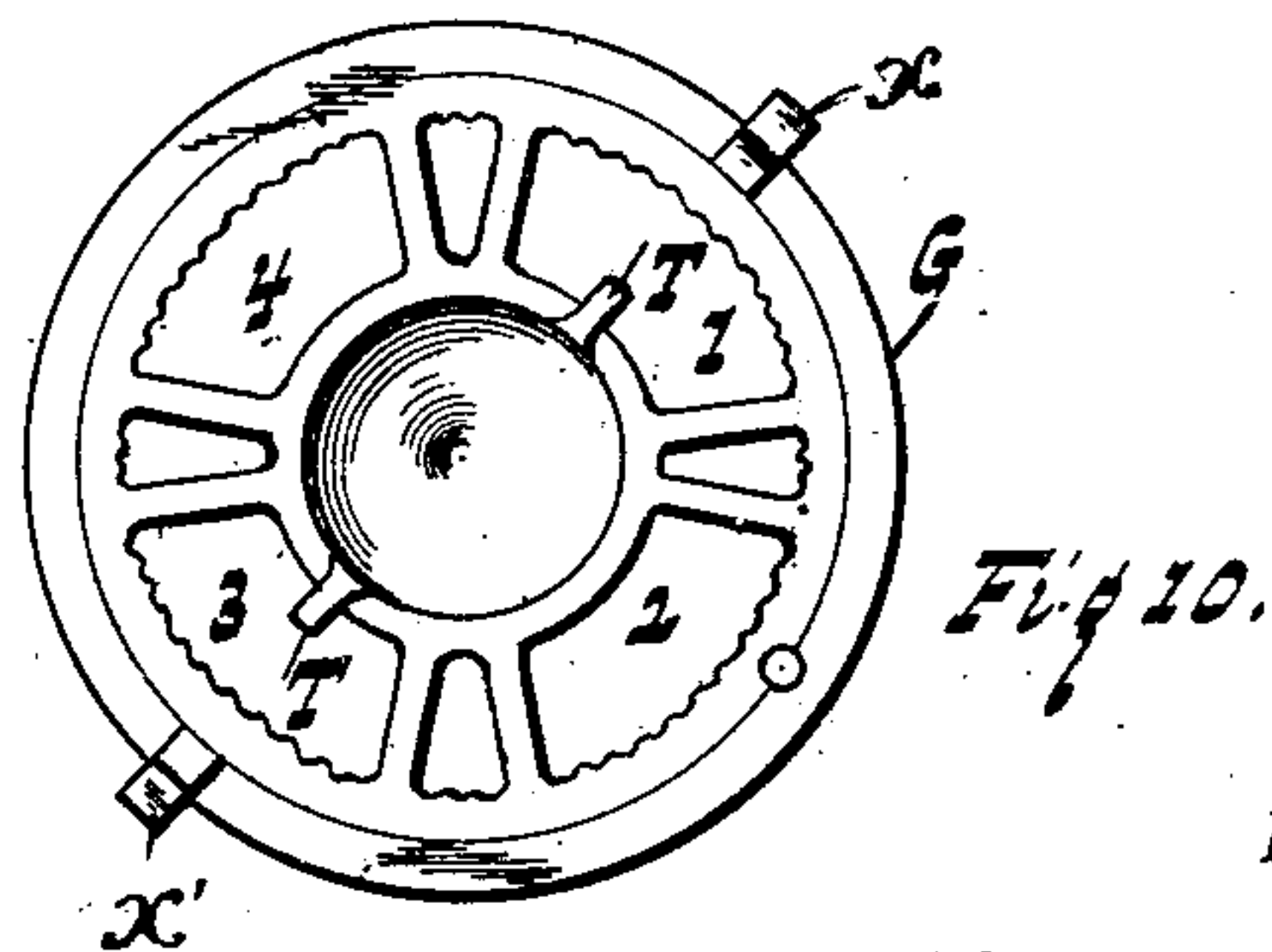
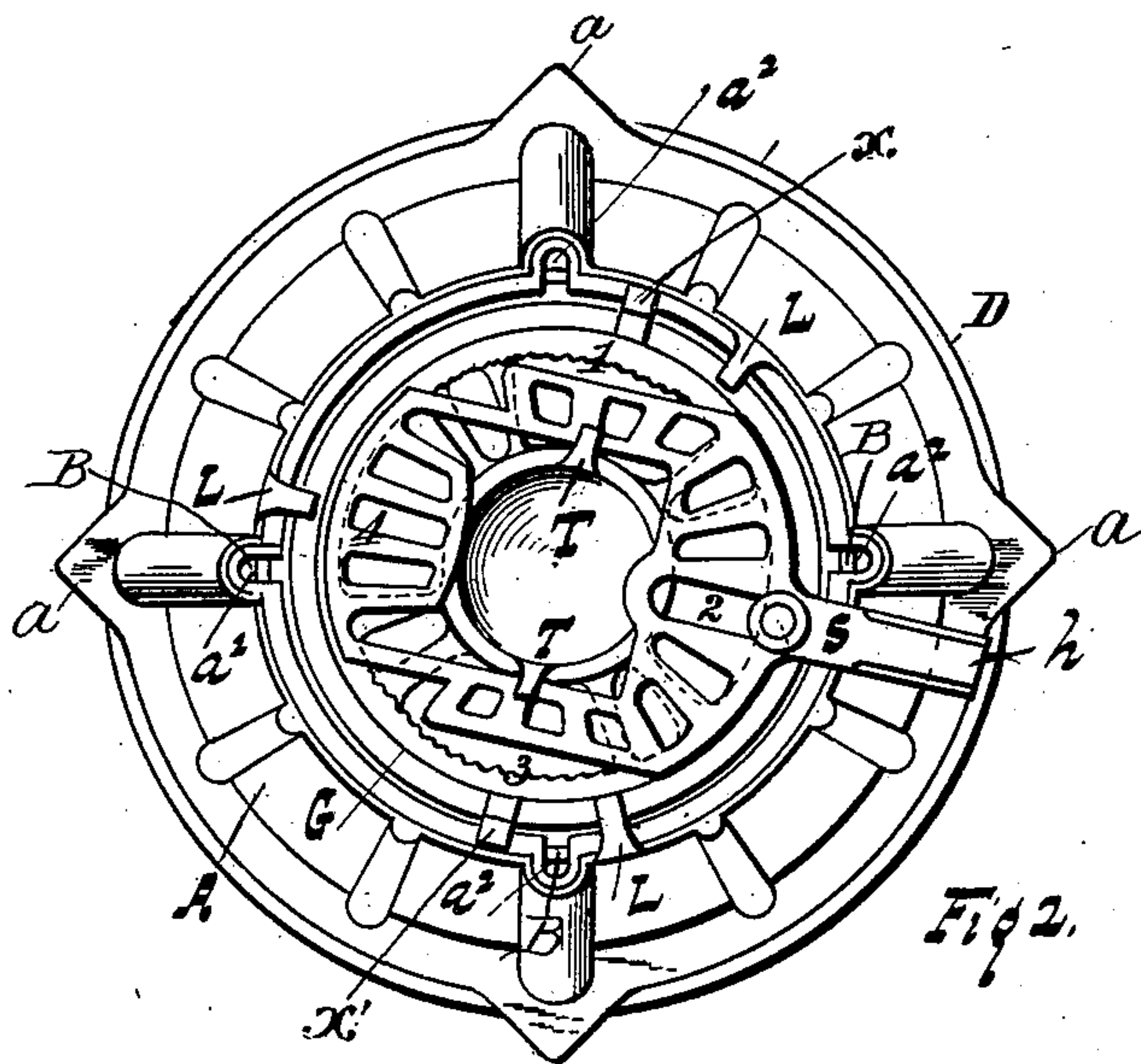
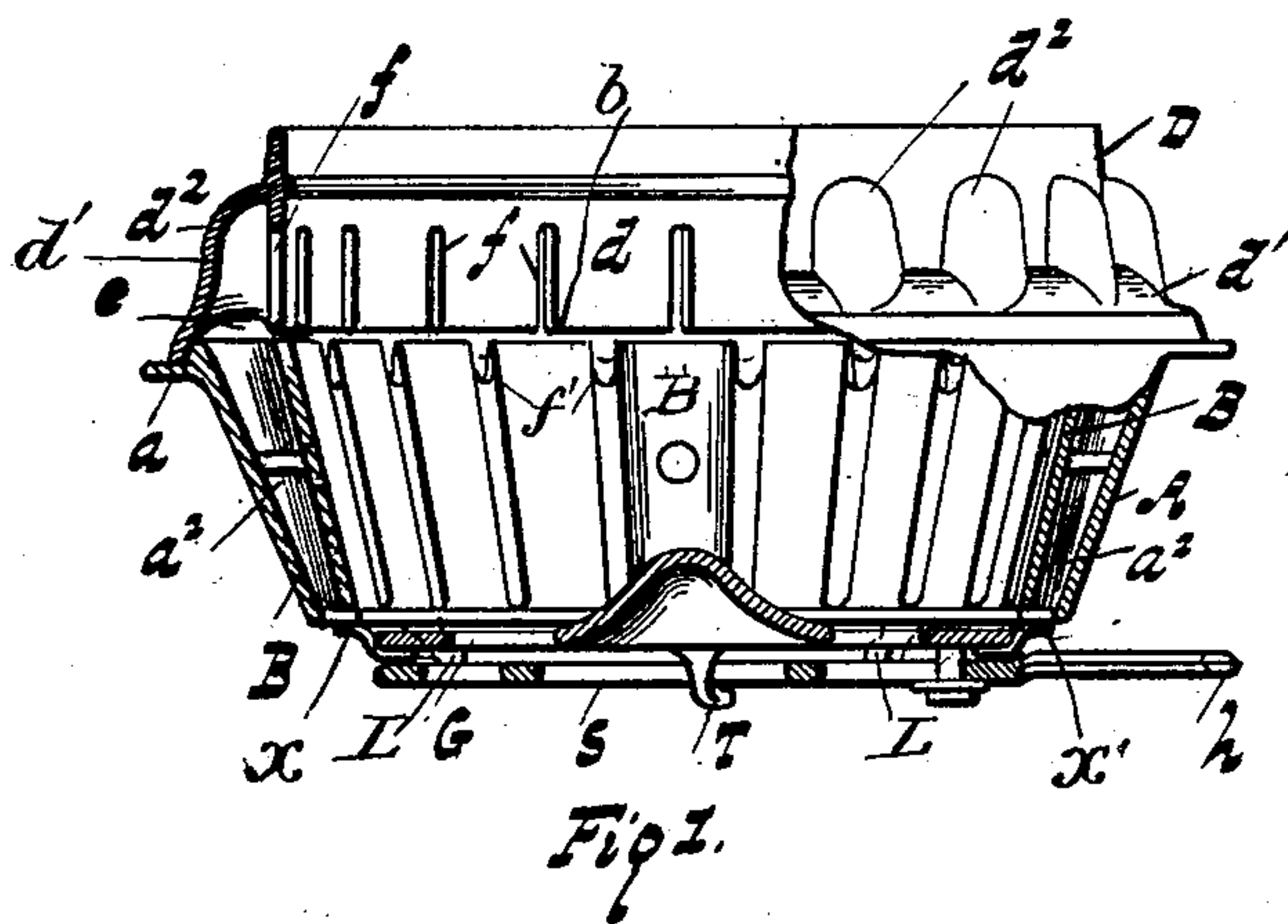
No. 698,708.

Patented Apr. 29, 1902.

W. J. KEEP.
FIRE POT FOR STOVES.
(Application filed Feb. 25, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES
J. Y. Massey
May E. Kott

By

INVENTOR
William J. Keep
Parker & Barton
Attorneys.

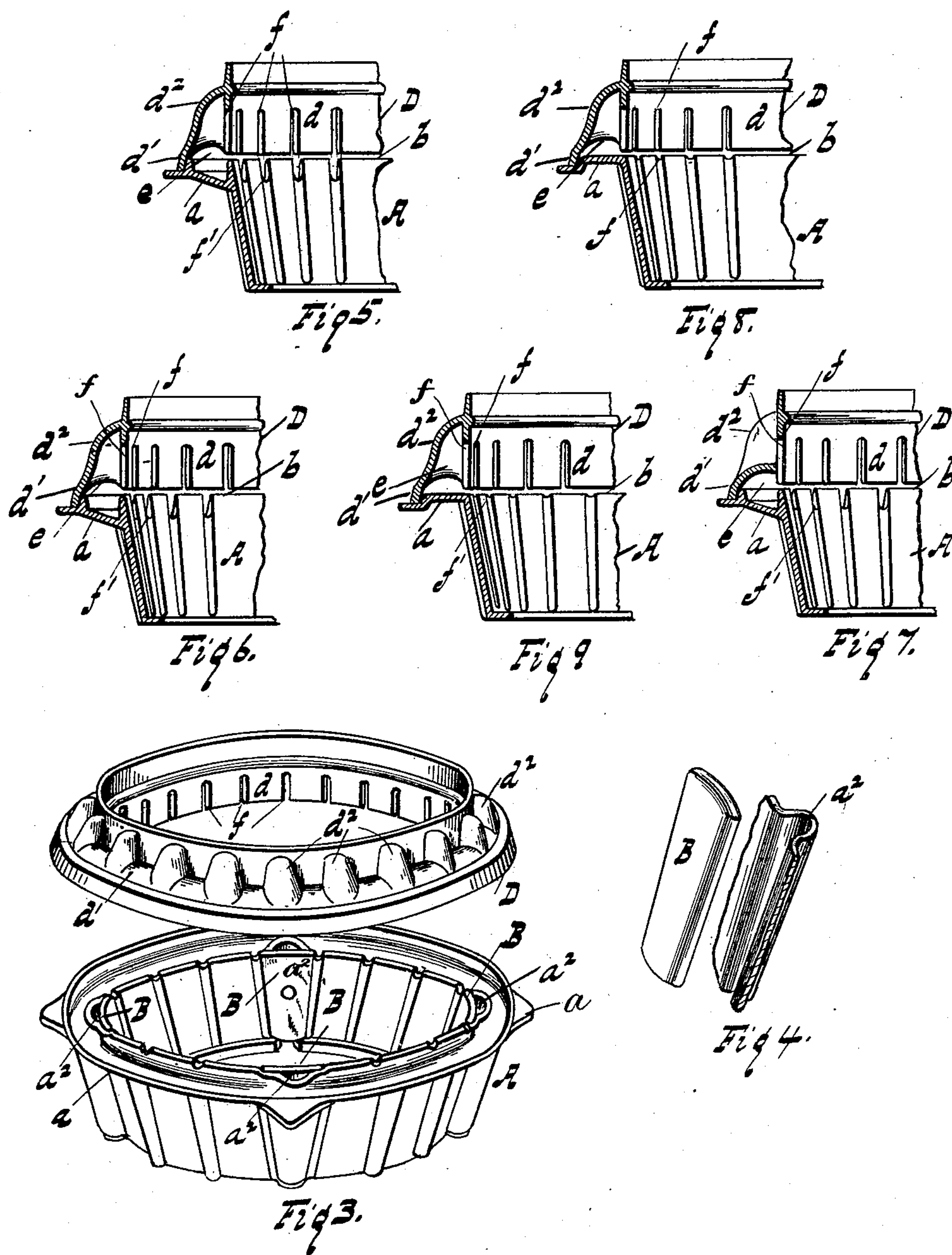
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WITNESSES
T. G. Massey
May E. Kott.

By

INVENTOR
William J. Keep
Parker & Burton
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM J. KEEP, OF DETROIT, MICHIGAN, ASSIGNOR TO THE MICHIGAN STOVE COMPANY, OF DETROIT, MICHIGAN.

FIRE-POT FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 698,708, dated April 29, 1902.

Application filed February 25, 1901. Serial No. 48,772. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. KEEP, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Fire-Pots for Stoves; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to fire-pots for stoves, and has for its object an improved fire-pot especially adapted to soft-coal-burning stoves, wherein it is desirable to introduce air to supply the requirements of combustion at the sides of the fire-pot and intermediate the bottom and the top thereof in addition to the air introduced into the fuel from below through the grate.

It also has for its object an improved grate in which provision is made for an opening of large size through which stones or clinkers may be removed.

In the drawings, Figure 1 is an elevation, partly broken away. Fig. 2 is a reversed plan. Fig. 3 is a perspective showing details of the two rings which compose a fire-pot. Fig. 4 shows a segment of the fire-pot ring and the plate which covers a groove therein. Figs. 5, 6, 7 are sectional elevations showing a cross-section of the air-chamber and showing the register of the slits through the rings and the grooves in the lower ring. Figs. 8 and 9 are sectional elevations of a modified form. Fig. 10 shows the shaking-ring which supports the sliding grate.

In Figs. 5 to 9 only a part of the ring is shown.

The fire-pot is made up of two rings A and D, and of these the ring A, which forms the lower section of the pot, has a number of corrugations, convex outward, so that there is on the inner surface a number of vertical grooves. Several of these vertical grooves are shallow and are left open. Others are deep grooves covered by plates B, and these grooves covered by plates B, secured by bolts at about the center of said plates, said bolts extending approximately vertically to said

plates, as indicated most distinctly in Fig. 1, constitute air-passages that are open at the bottom, outside the fire-pot, and at the top lead into an annular chamber. The annular chamber is made by providing the ring A with an outward-extending flange *a*. The ring D is formed with an inner face *d*, that in the assembled fire-pot forms a continuation of the ring A, from which it is, however, spaced by a horizontal slot *b*. From near the top of the inner face *d* of the ring D an outward-extending flange *d'* projects outward and downward to the outer and upper edges of the flange *a*. The wall of the flange *d'* is not, however, regular, but is broken up by providing it with high and low sections, and the high sections constitute small domes *d''*, that produce irregularities in the chamber *e*, making it higher at places than it is at other places. The high dome-covered portions of the chamber *e* are regularly spaced around the ring, and opposite the middle of each dome is a notch *f*, extending through the wall *d* from its lower periphery upward. In the assembled structure the annular chamber *e* communicates through a number of vertical passages *a''* with the outer air, and it communicates with the interior of the fire-pot through the horizontal slot *b* and through the vertical slots *f*.

On the outside of the ring A, between the corrugations which cover the air-duct, are a number of smaller corrugations, which strengthen this portion of the pot and provide for its expansion.

In the form shown in Figs. 5, 6, and 7 the flange *a* extends outward from the ring A some little distance below the upper edge of said ring, and notches *f'* are cut in the upper portion of the ring A above the flange *a*. The flange *d'* rests upon the flange *a*, so as to support the ring D with its lower edge above the upper edge of the ring A, thus forming the slot or opening *b* in a plane above the flange *a* or above the bottom of the chamber *e*.

In Figs. 6, 7, and 9 substantially the same construction that is shown in Fig. 5 is found; but the ring A is shifted with respect to the ring D so that the notches *f* and *f'* no longer register; but each notch of the lower ring is placed between two notches of the upper ring.

Figs. 8 and 9 show the flange *a* nearly horizontal.

In each form there are lugs *L* to support a shaking-grate *G*, which rests on the lugs and
 5 which is provided with several large openings 1 2 3 4, one at the rear with respect to the front door of the stove and one at each side. A slide *s*, which rests on lugs *T* on the grate *G*, is arranged to close or partially close these
 10 openings, the slide itself being provided with small air-openings through it, and the slide closes over the large openings, but itself furnishes air-passages through the small openings. The slide is provided with a removable
 15 handle *h*, by means of which the combined grate, composed of both the grate and the slide, can be vibrated. The middle part of the grate *G* is solid and coned upward.

X X' are lugs extending from the grate *G*
 20 and serving to guide the same.

What I claim is—

1. In a fire-pot, the combination of an upper and lower section provided with cooperating flanges extending outwardly from the
 25 walls thereof, said flanges formed to space the walls of the upper section from those of the lower section and to provide between them and the said walls an annular air-space leading into the fire-pot, the walls of the lower
 30 section being bent outward to form a groove extending from the upper to the lower edge of said lower section and a plate adapted to

form a continuation of the wall of said lower section and to cover said groove so as to form an inclosed air-passage opening at its upper
 35 end into said air-space and opening at its lower end to the air below the fire-pot.

2. In a fire-pot, the combination of an upper and lower section provided with cooperating flanges extending outwardly from the
 40 walls thereof, said flanges formed to space the walls of the upper section from those of the lower section and to provide between them and the said walls an annular air-space leading into the fire-pot, the walls of the lower
 45 section being bent outward to form a groove extending from the upper to the lower edge of said lower section and a plate adapted to form a continuation of the wall of said lower
 50 section and to cover said groove so as to form an inclosed air-passage opening at its upper end into said air-space and opening at its lower end to the air below the fire-pot, the outwardly-extending flange of the upper section being provided with a dome forming an
 55 enlargement of said annular air-space above said air-passage.

In testimony whereof I sign this specification in the presence of two witnesses.

WILLIAM J. KEEP.

Witnesses:

MAY E. KOTT,

CHARLES F. BURTON.