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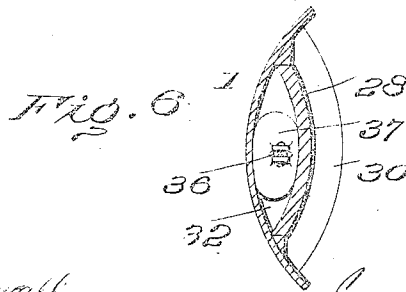
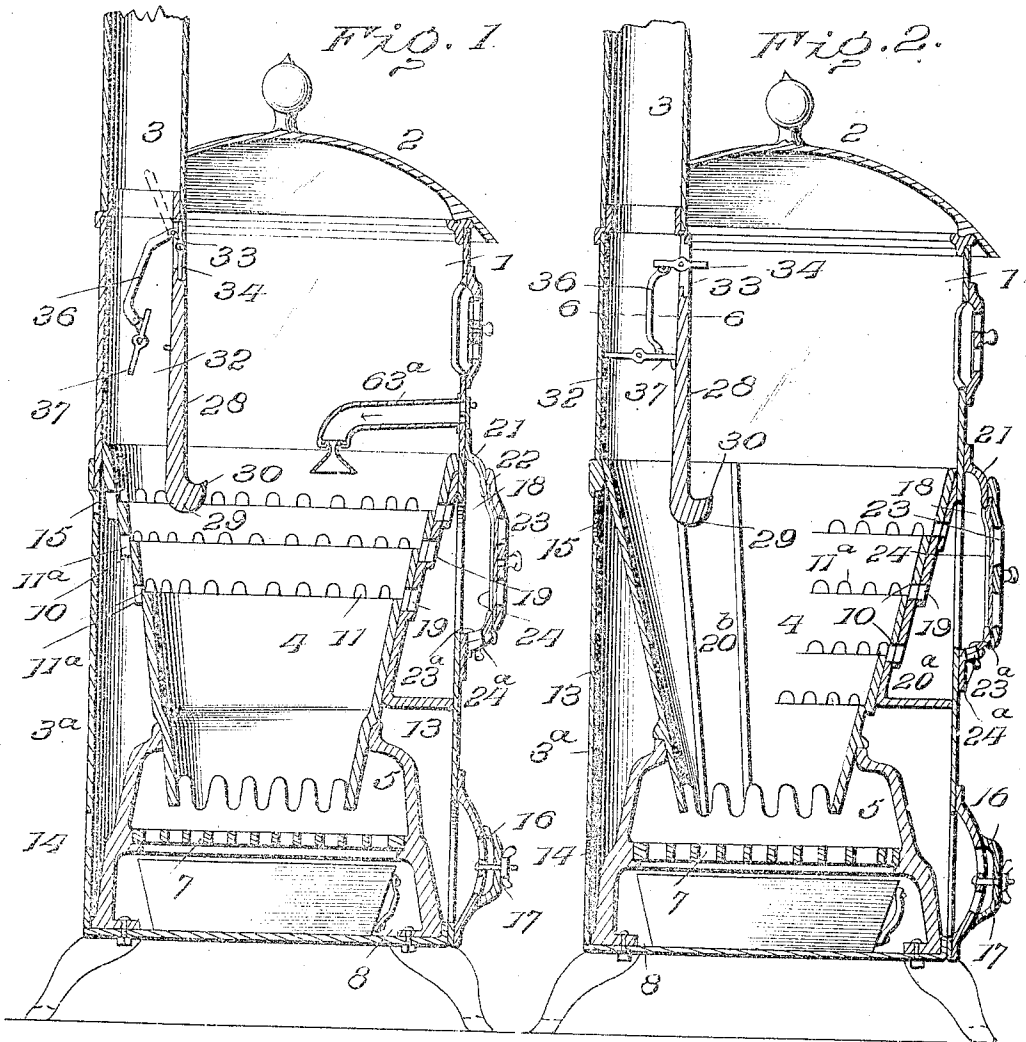
STOVE.

APPLICATION FILED JUNE 9, 1906.

932,959.

Patented Aug. 31, 1909.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3

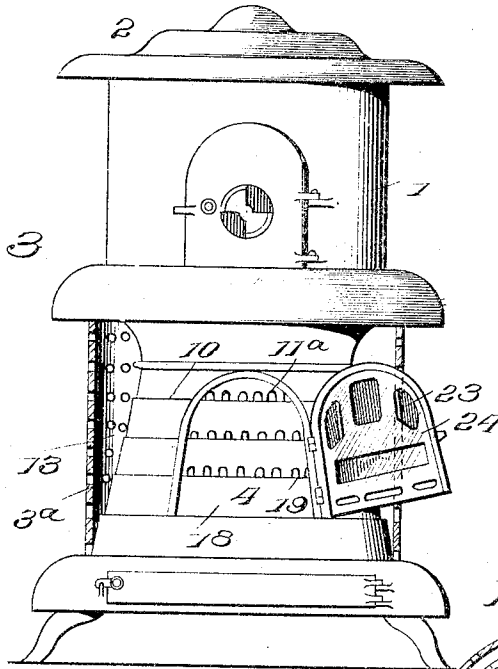


Fig. 5.

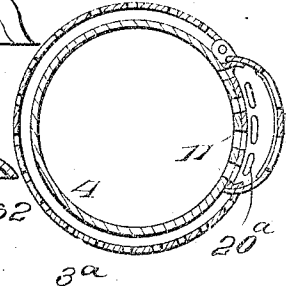
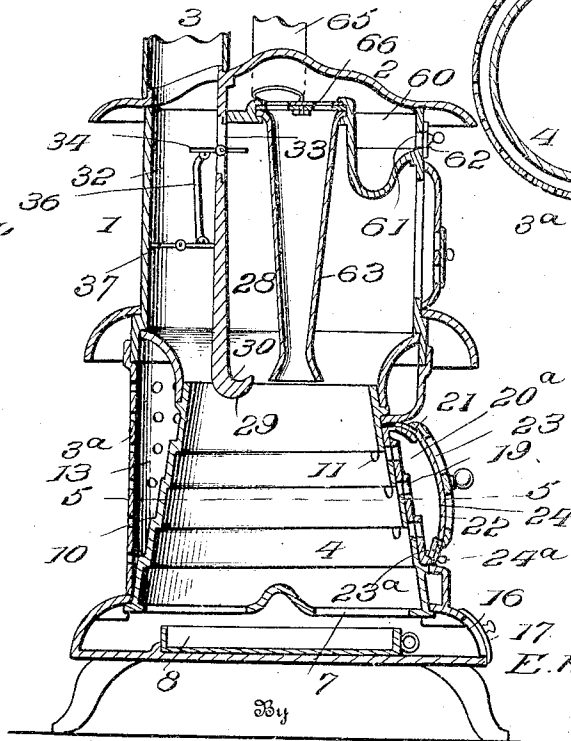


Fig. 4



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STOVE.

932,939.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWIN R. CARROONE, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Stoves, of which the following is a specification.

This invention relates to improvements in heating stoves.

The object of the invention is to provide a stove having a fire pot, formed with air inlet openings, and slots communicating therewith, whereby the pot may be withdrawn from the sand when molding.

A further object of the invention is to provide a flue in the stove with cooperating dampers, to regulate the exit of the products of combustion, for the proper distribution of heat according to the outside temperature.

Other objects and advantages will be hereinafter referred to and pointed out in the claims.

In the drawings—Figure 1 is a vertical section of my improved stove. Fig. 2 is a vertical section of a slightly different form of stove structure. Fig. 3 is an elevation partially in section of a stove, the fire pot being slightly different. Fig. 4 is a vertical section of the form of stove shown in Fig. 3. Fig. 5 is a horizontal section on the line 5—5, Fig. 4. Fig. 6 is a detail horizontal section on the line 6—6, Fig. 2.

The numeral 1, indicates a casing; 2, a top; 3, an exit flue, and 3^a, a drum. The fire pot 4, is supported on standard 5, secured to the stove base, and below the fire pot is the usual grate 7, and ash pit 8. The fire pot 4, is tapered in formation and formed with a series of flanges on the inside, and flanges 10, on the outside. In the flanges are openings 11, and intersecting the same, and communicating with the openings are slots 11^a, toward the small end of the pot, whereby when the casing is drawn from the sand it will not stick. The lower edge of the fire pot is formed with alternate projections and depressions, for the free passage of draft. The upper edge of the fire pot fits snugly within the casing, and as it is of tapered formation a space 13, is formed between it and the drum 3^a, and in this space air is introduced through openings 14, near the bottom, and escapes in a heated condition to the room through exit openings 15. The air

and should the draft be strong enough a part of it will be drawn through openings 11, to the fuel, however this is counteracted to a large degree by the greater volume of air introduced through the opening 16, regulated by a damper 17. The air introduced through opening 16, is divided; part passing into space 13, and part entering the ash pit, and thence to the fire pot.

A chamber 18 is formed in the space 13, preferably at the front of the stove, and in it are openings 19, which register with the openings 11. The drum is cut away opposite the chamber, and a door frame 21, is placed opposite said cut away portion. The frame 21, is provided with a cover or door 22, with openings 23, and a backing of mica 24, to permit a person in the room to view the incandescent mass of fuel through openings 19 and 11. This adds to the attractiveness of the stove as will be readily understood. But chamber 18, performs another function, in that it acts as a preheater for air entering the fuel through openings 19 and 11. In the bottom of the chamber is an air inlet opening or openings 25^a, provided with a damper 24^a. Air enters the chamber, and becomes heated, and is drawn, by the draft, through the openings to the fire pot. A partition 28, depends from the top 2, the lower end terminating a short distance below the top of the fire pot 4. Formed on the extreme lower end of the partition is an enlargement 29, with a shelf 30, on the top extending toward the center of the stove. At this point the heat is intense, and I enlarge it, and form a shelf for the accumulation of ashes, to protect the metal. Partition 28 forms a flue 32, which communicates with exit 3, and near the top of the partition is an opening 33, covered by a rocking damper 34, operated by a handle extending through the casing to be in convenient reach of the attendant. Connected to damper 34, as by a link 36, is a second damper 37, pivotally mounted in flue 32, and positioned to close said flue when damper 34 is opened.

In operation, a fire is started in the fire pot, and air is introduced thereto through the various openings described. If the dampers are positioned as shown in Fig. 1, the heated air introduced to the front of the fuel will rise, and be drawn by the draft over the top of the bed of fuel, and thence

rially assist in igniting the gases passing to flue 32. The heat does not radiate to such a large degree when the products of combustion are directed to the exit flue 3, through flue 32, but if better radiating effects are wanted, the damper 34 is turned to permit the gases to pass through opening 33, the movement of the latter operates damper 37 and closes flue 32, as shown in Fig. 2. The escaping products of combustion being compelled to rise above the fuel to escape through opening 33, the stove casing necessarily becomes very hot, and the heat therefore is more widely distributed.

In the form of the invention illustrated in Fig. 2, the openings 11, are only shown opposite the chamber 20^a, while on the inside of the fire pot I form a series of grooves 20^b, extending from the top to the bottom of said fire pot for the free passage of air when the fuel becomes packed.

Referring to Figs. 3 to 5, I have shown a tapered fire pot structure, similar to that shown in Fig. 1, except that it is inverted. When in operation the fuel will readily fall because of the widest part of the pot being at the bottom.

The drum 3^a, may be perforated when used in connection with the form of fire pot shown in Fig. 4, and when the fire pot becomes red by the heat, the openings expose it and give the same pleasing effect as when the openings expose the fuel.

In connection with the structures previously described, I may employ an air heating chamber 60, having an opening 61, and damper 62, shown in Fig. 4. From this chamber depends a tube 63, to supply heated air to the fire pot, while heated air may also be directed from the chamber through pipe or pipes 65, to heat remote rooms. A damper 66, over tube 63, closes it, when it is desired to utilize the heat for the rooms. While I have only shown this feature in Fig. 4, it is to be understood it may be applied to the other structures shown in this specification. For instance the tube may be used as shown at 63^a, in Fig. 1.

What I claim is—

1. A stove comprising a tapered fire pot formed with a series of inside flanges and a series of outside flanges and openings adjacent the flanges, a series of upwardly extending grooves being formed on the inside of the fire pot, the grooved portion of said fire pot being imperforate, a drum surrounding the fire pot and an exit flue above the fire pot.

2. A stove comprising a casing, a tapered fire pot formed with openings, standards supporting the fire pot, means for supplying air to the lower part of the fire pot, a partition extending downwardly within the fire pot to provide a flue, and formed near its upper end with an opening, a pivoted dam-

per in the opening, a pivoted damper in the flue, a link connecting the two dampers, and an exit pipe communicating with the flue.

3. A stove comprising a casing, a tapered fire pot, a drum surrounding the fire pot and spaced from the tapered portion thereof, a chamber adjacent the fire pot and communicating therewith, means for supplying air to the chamber, a partition depending toward the fire pot and formed with an opening near its upper end and enlarged at its lower end, dampers connected to move in unison for directing the products of combustion either through the opening to the exit flue, or through the flue formed by the partition, and an exit pipe communicating with the flue formed by the partition.

4. A stove comprising a fire pot formed with a series of openings, a chamber communicating with the openings, means for supplying air to the chamber, a partition formed near its upper end with an opening, and enlarged at its lower end, and depending to a point within the upper end of the fire pot the space between the casing and the partition forming a flue, dampers for directing the products of combustion through the opening or the flue, and means for supplying air to the fire pot.

5. In a stove, the combination with a casing, a perforated tapered fire pot supported in the casing, there being a space between the fire pot and casing, there being a chamber formed in said space, said chamber communicating with the fire pot through the perforations therein, a cover for the chamber, a damper for regulating the admission of air to the chamber, a partition extending toward the fire pot to provide a flue, and means operatively located in said partition and flue for directing the products of combustion directly to the bottom of the flue or to the flue near the top of the casing.

6. In a stove, the combination with a casing formed with openings, a perforated tapered fire pot supported in the casing and spaced therefrom, a chamber formed in the space, said chamber being larger at one end than at the other, means for introducing air to the chamber, means for introducing air to the space surrounding the fire pot, said air escaping to the atmosphere through the openings in the casing, means for introducing air downwardly in the fire pot, a partition extending within the fire pot to provide a flue, and means for directing the products of combustion to the bottom of the flue or to the flue near the top of the casing.

7. In a stove, the combination with a casing, a fire pot supported in and spaced from the casing, and formed with openings to communicate with the space, means for introducing air to said space, a flue on the inside of the casing, said flue communicating at its lower end with the fire pot, and formed

near its upper end with an opening, a damper to close said opening, a damper located in the flue, at a point above the fire pot and above the bottom of said flue, said damper
5 when closed completely closing the flue to prevent the products of combustion passing in the lower open end thereof, one of said dampers being closed while the other is open, means connecting the dampers to cause them
10 to be simultaneously operated to direct the products of combustion from a point near the top of the fire pot or from a point near the top of the casing.

8. In a stove, the combination with a casing, a fire pot supported in and spaced from the casing and formed with openings to communicate with the space, means for introducing air to the space, a flue above the fire pot formed at its lower end with an
20 opening at or near the upper end of the fire pot and formed with a second opening near

the upper end of the casing, means including two connected dampers operatively mounted in said flue and constructed to direct the products of combustion from a point near
25 the top of the fire pot to the flue through the opening near the bottom thereof or through the said second opening to the flue at a point near the top of the casing, one of said dampers being located some distance
30 from the bottom of the flue and above the fire pot and when closed fits the flue closely to prevent the escape of the products of combustion below said dampers.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

EDWIN R. CAHOONE.

Witnesses:

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JOSEPH P. SWIFT.