C. L. TAYLOR.

PORTABLE FIREPLACE.

APPLICATION FILED JUNE 10, 1911.

1,029,151.

Patented June 11, 1912.

2 SHEETS—SHEET 1.

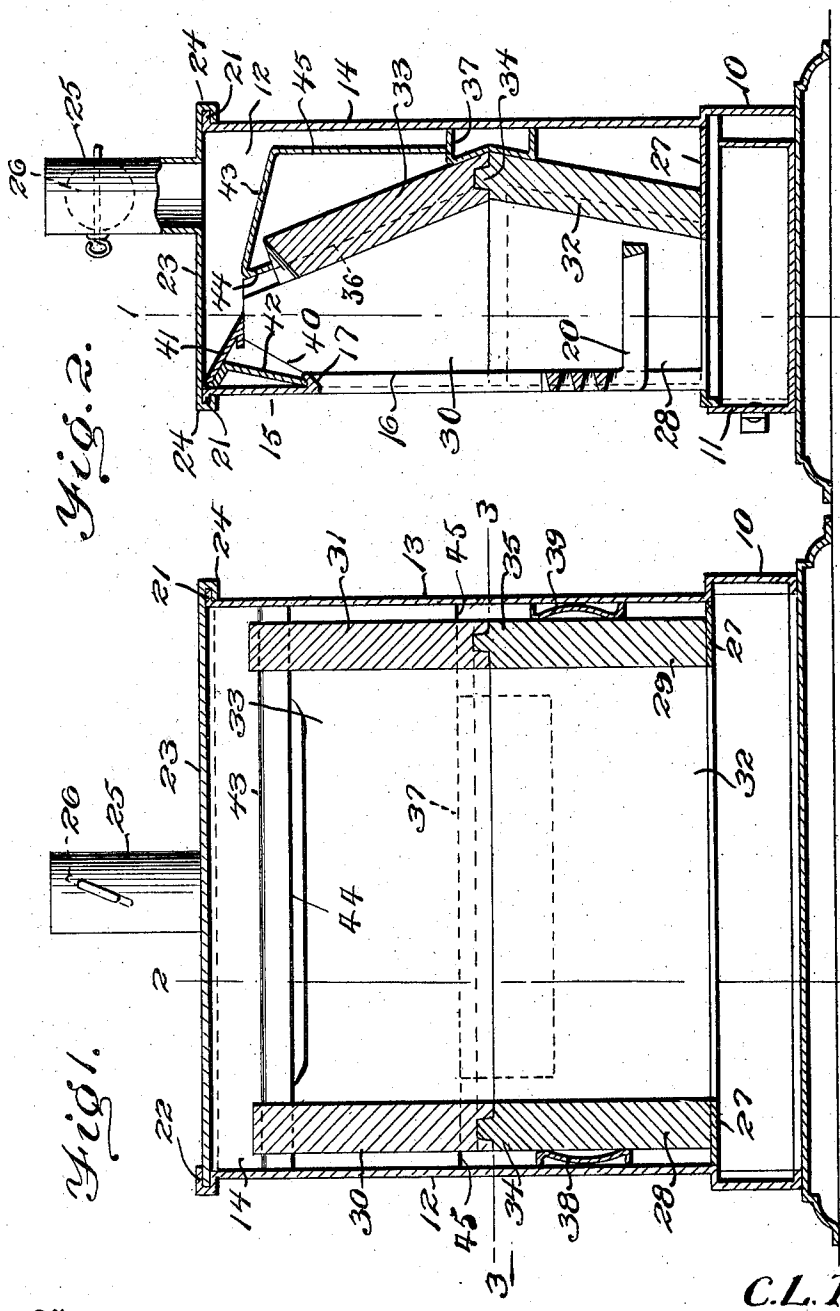

Fig. 2.

Fig. 1.

Witnesses

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By Attorneys.

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2 SHEETS—SHEET 2.

Fig. 3.

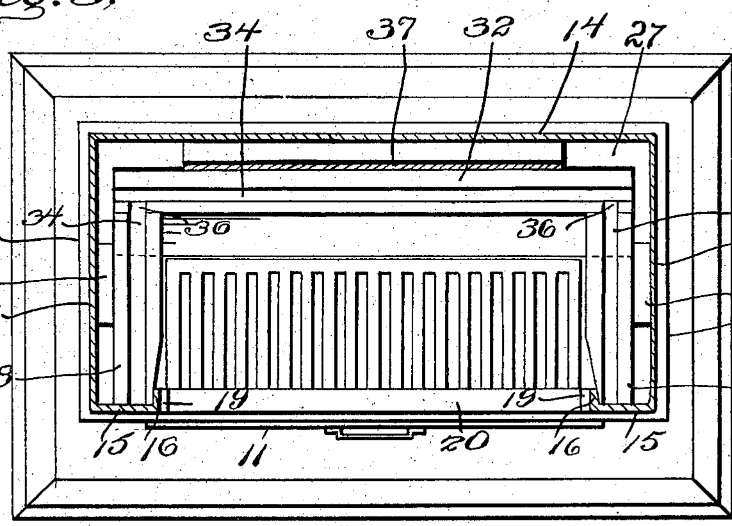
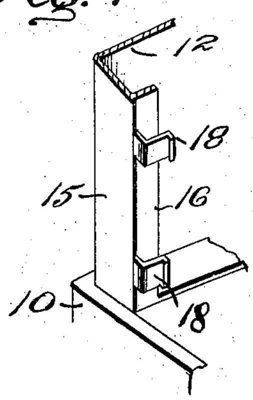


Fig. 4



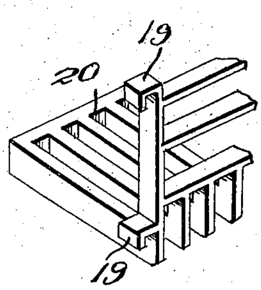


Fig. 5.

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UNITED STATES PATENT OFFICE.

CORNELIUS L. TAYLOR, OF HUNTINGTON, WEST VIRGINIA.

PORTABLE FIREPLACE.

1,029,151. Specification of Letters Patent. Patented June 11, 1912.

Application filed June 10, 1911. Serial No. 632,423.

To all whom it may concern:

Be it known that I, CORNELIUS L. TAYLOR, citizen of the United States, residing at Huntington, in the county of Cabell and State of West Virginia, have invented certain new and useful Improvements in Portable Fireplaces, of which the following is a specification.

This invention relates to improvements in heating apparatus, and more particularly to portable fire places, and has for its object to improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a device of this character wherein all of the advantages and conveniences of an open fireplace are combined with the same qualities of an ordinary heating stove.

Another object of the invention is to provide a simply constructed device of this character arranged in separable parts so that in event of the breakage or impairment of any of the parts the same may be renewed without discarding the remainder of the apparatus.

With these and other objects in view, as will more fully appear as the description proceeds, the invention consists of certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a vertical longitudinal section on the line 1—1 of Fig. 2; Fig. 2 is a vertical transverse section on the line 2—2 of Fig. 1; Fig. 3 is a horizontal longitudinal section on the line 3—3 of Fig. 1; Fig. 4 is a perspective detail of a portion of the casing illustrating the manner of arranging the grate hangers. Fig. 5 is a perspective view of a portion of the grate illustrating the manner of suspending the same from the casing or frame.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

The improved apparatus comprises in general, an inclosing casing or frame, a lining of refractory material such as fire brick or the like, a grate for supporting the fuel, and a plurality of deflecting or baffle plates arranged to control currents of hot air and the products of the combustion.

The casing or shell comprises a base 10 of any suitable size and constituting the ash pit of the improved heater, and in which a suitable receptacle 11, preferably in the form of a drawer, is arranged to receive the ashes and cinders from the grate above. Preferably the portion of the shell in which the ash pit is located will be somewhat larger than the upper portion of the shell as represented, to increase the capacity of the ash receptacle. The upper portion of the shell is in the form of a casing, preferably rectangular and comprising end members 12—13 and a back 14. The front 15 of the casing is formed with a relatively large opening leaving the upper portion of the front directed downwardly. The material of the casing at the ends of the opening is directed inwardly as shown at 16, at right angles to the front of the casing, while the top of the opening is directed inwardly and upwardly as shown at 17 in Fig. 2, the object to be hereafter explained.

The inwardly directed vertical portions 16 of the front 15 are provided with keepers or sockets 18 to receive suitably formed hooks 19 upon the ends of the grate 20, the latter extending inwardly from the front of the casing, and thus supported in position. By this means the grate is detachably connected within the casing and projects inwardly from the front as hereafter more fully explained.

At its upper end the end 13, the back 14 and the front 15 are directed outwardly in the form of ribs 21, while the other end 12 is provided with an overhanging lip or flange 22. The top of the casing or shell is represented at 23, and is in the form of a relatively large plate with its side edges and one end bent under as shown at 24, to engage around the ribs 21 and with one end engaging beneath the lip 22 as shown in Figs. 1 and 2. By this means the top of the shell is readily detached when required, while at the same time is firmly coupled to and locked upon the shell. The smoke flue represented at 25, extends upwardly from the top 23 and is preferably provided with a damper 26 of suitable construction. The ordinary stove pipe is coupled to the flue 25 and leads thence to a suitable chimney, not shown.

At the juncture of the ash pit portion of the shell and the upper or body portion of

the shell, an inwardly directed supporting flange 27 is arranged around three sides of the interior of the shell and forms a seat for a plurality of blocks of fire brick or other refractory material which form the lining of the fireplace. The ends of the lining are preferably each formed of two blocks, while the rear of the lining is formed with two relative large blocks, the blocks being united at their engaging edges by tongues and grooves. The lower end blocks are represented respectively at 28—29, the upper end blocks at 30—31, the lower rear block at 32, and the upper rear block at 33. The end blocks 28—29 rest upon the ledge or flange 27 at the ends of the shell and bear at their forward edges against the front 15 in the rear of the vertical inwardly directed ribs 16 as shown, and extend thence inwardly with their inner edges inclined rearwardly and upwardly. The upper end blocks 30—31 bear at their lower edges upon the lower end blocks 28—29 and likewise extend at their front edges in the rear of the inwardly directed ribs 16 of the front of the shell and with their rear edges inclined upwardly and forwardly, as shown in Fig. 2. The rear lower block 32 rests at its lower edge upon the rear ledge or flange 27, and bears at its ends against the rear inclined edges of the lower end blocks 28—29, while the rear block 33 rests at its lower edge upon the upper edge of the lower rear block 32 and bears at its ends against the rear forwardly inclined edges of the end blocks 30—31. The confronting edges of the blocks 28—30 are tongued and grooved as represented at 34, while the confronting edges of the end blocks 29—31 are correspondingly tongued and grooved, as shown at 35. The rear edges of the end blocks are provided with tongues which fit in corresponding grooves in the rear blocks 32—33 as indicated at 36. By this means the blocks when united, are firmly supported and prevented from displacement. Connected to the rear 14 of the shell opposite the joint between the rear blocks 32—33 is a longitudinally extending supporting plate 37, while similar supporting plates 38—39 are connected to the ends of the shell and against which the lower end members 28—29 bear when in position. By this means the lining members are supported in place and prevented from lateral movement within the shell. At their upper ends the end blocks 30—31 are preferably inclined forwardly and downwardly as represented at 40 in Fig. 2, and extending between the ends of the shell above the end blocks 30—31 is a baffle plate 41 having a forwardly and downwardly inclined portion 42 which is seated at its lower end upon the inclined ledge 17 of the front. By this means the baffle plate is supported in position and operates to conduct the products of the combustion rearwardly as they rise from the grate. Another baffle plate 43 is located within the shell above the upper rear block 33, and extends between the ends of the shell and is provided with a downwardly directed forward edge 44 which rests upon the upper edge of the block 33. The baffle plate is inclined downwardly and rearwardly and is provided at its rear edge with a downwardly directed plate 45 which rests at its lower edge upon the upper edge of the supporting member 37. By this means the plate 43 is firmly supported in position and co-acts with the plate 41 to confine the products of the combustion and guide them to the flue 25. By this arrangement it will be obvious that the fire is directed forwardly by the forwardly inclined upper block 33 in the same manner as in the ordinary fireplace construction and passes thence through the relatively contracted space between the inner edge of the baffle plate 41 and the outer edge of the baffle plate 43. The top 23 being detachable as before described, renders the interior members of the shell readily accessible for removal in event of the impairment of any of the parts. Thus a broken or impaired part may be readily removed and replaced by a perfect one without discarding the remainder of the parts. The "life" of the apparatus is thus extended indefinitely and its value and efficiency thereby materially increased. The shell may be constructed of any suitable material, but will preferably be of sheet metal of sufficient weight to withstand the heat and strains to which it will be subjected while the lining members 28—29—30—31—32 and 33 are preferably of fire clay or like material or compound.

The improved device is simply constructed, can be manufactured in any required size and any required ornamental design, and combines all of the advantages of the open fireplace with the portable advantages of the ordinary heating stove.

What I claim is:

1. A portable fire place comprising a shell having inwardly directed ledges, said shell having an opening in the front with inwardly directed flanges at the side and upper margins of the same, a lining formed of end blocks of refractory material supported upon said ledges and extending at the front edges rearwardly of the side flanges of the opening and rear blocks of refractory material extending between the end blocks and inclined forwardly at the upper part, a forward baffle member within the shell and bearing at one edge upon the upper margin flange of the opening and supported at its rear edge upon the end lining blocks and inclined rearwardly and downwardly, and a rear baffle member sup-

ported upon the lining blocks, the upper portion of said rear baffle member being inclined downwardly and rearwardly.

2. A portable fire place comprising a shell having an ash pit in the lower portion, inwardly directed ledges at the juncture of the ash pit and the body of the shell, said shell having an opening in the front with inwardly directed flanges at the side and upper margins of the same, a lining formed of blocks of refractory material supported upon said ledges and extending at the front edges rearwardly of the side flanges of the opening, supporting members connected to the inner faces of the shell and bearing against the lining members and maintaining them in spaced relations to the shell, a forward baffle member within the shell and bearing upon the lining and inclined forwardly and upwardly, and a rear baffle member supported upon the lining and inclining rearwardly and downwardly.

3. A portable fire place comprising a shell having an ash pit in the lower portion, inwardly directed ledges at the juncture of the ash pit and the body of the shell, said shell having an opening in the front with inwardly directed flanges at the side and upper margins of the same, a lining formed of blocks of refractory material supported upon said ledges and extending at the front edges rearwardly of the side flanges of the opening, supporting members connected to the inner faces of the shell and bearing against the lining members and maintaining them in spaced relations to the shell, a forward baffle member within the shell and bearing upon the lining and inclined forwardly and upwardly, and provided with a deflector portion supported upon the upper marginal flange of the opening of the shell, and a rear baffle member supported upon the lining and inclining rearwardly and downwardly.

4. A portable fire place comprising a shell having an ash pit in the lower portion, inwardly directed ledges at the juncture of the ash pit and the body of the shell, said shell having an opening in the front with inwardly directed flanges at the side and upper margins of the same, a lining formed of blocks of refractory material supported upon said ledges and extending at the front edges rearwardly of the side flanges of the opening, supporting members connected to the inner faces of the shell and bearing against the lining members and maintaining them in spaced relations to the shell, a forward baffle member within the shell and bearing upon the lining and inclined forwardly and upwardly, and provided with a deflector portion supported upon the marginal flange of the opening of the shell, and a rear baffle member supported upon the lining and inclining rearwardly and downwardly, said rear baffle member having a downwardly directed rear portion supported by one of the lining supporting members.

In testimony whereof, I affix my signature in presence of two witnesses.

CORNELIUS L. TAYLOR. [L. S.]

Witnesses:

R. JOURHAT,

HOWARD T. SIMMS.