

A. E. BROWN.
 PORTABLE FURNACE.
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1,194,131.

Patented Aug. 8, 1916.

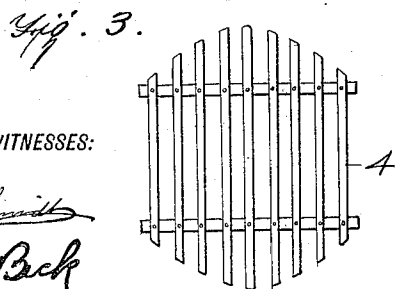
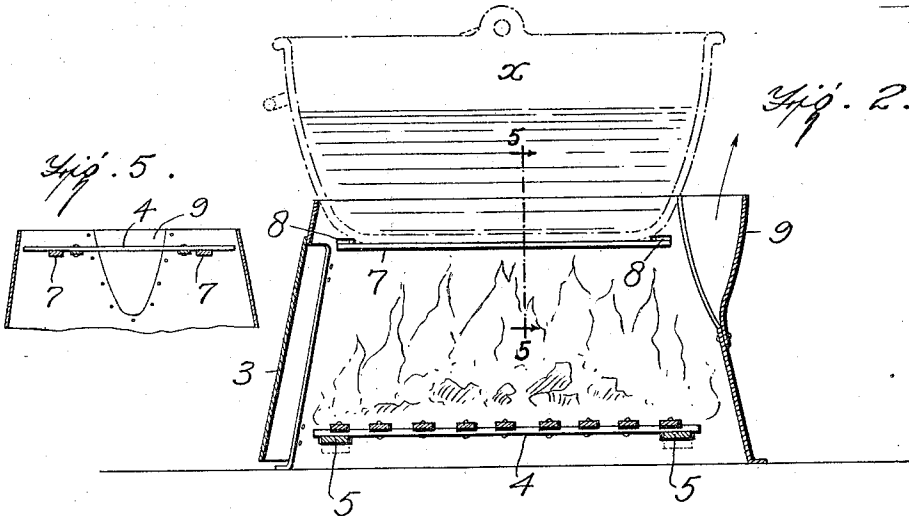
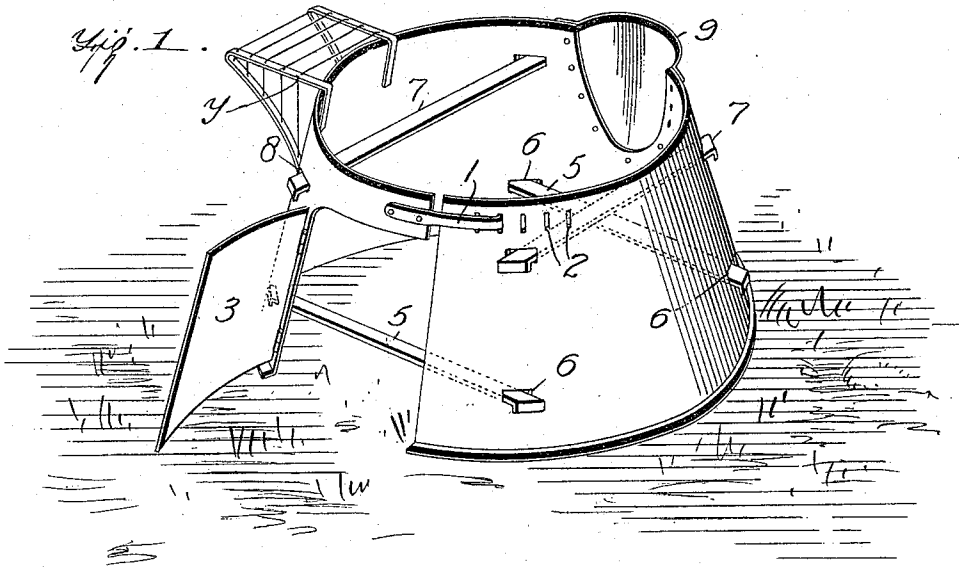


Fig. 4.

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PORTABLE FURNACE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ARCHIE E. BROWN, a citizen of the United States, and a resident of Faywood, in the county of Grant and State of New Mexico, have made an Improvement in Portable Furnaces, of which the following is a specification.

My invention is an improvement in that class of portable furnaces which are constructed of sheet metal and adapted for supporting and heating metal wash tubs or boilers, also camp stoves or ovens and sad irons, etc.

The details of construction, arrangement and combination of parts are as hereinafter described and illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of the complete furnace. Fig. 2 is a vertical section of the furnace supporting a metal wash tub or boiler, and with fuel on the grate. Fig. 3 is a view of the removable grate. Fig. 4 is an enlarged horizontal detailed section illustrating the adjustable fastening for the meeting edges of the furnace. Fig. 5 is a vertical section of the furnace body with the grate arranged at the top.

The furnace body is formed of a single piece of sheet metal and has the form of a truncated cone. The body is divided vertically, as shown in Fig. 1, and a considerable portion of one of the opposing ends of the body is cut out, thus forming an opening sufficiently large for convenient insertion of fuel. A hinged door 3 is provided for the opening. The end of the body which is thus cut out is provided with an extension in the form of a spring hook 1, which, as shown in Fig. 4, is adapted to engage any one of several alined slots 2, formed in the opposing end of the body. The arrangement of the fuel opening adjacent to, and directly under, the hook 1 is practically important, since it enables the opening to be readily enlarged for convenient insertion of fuel into the furnace body and also the manipulation of fuel within the same, such enlargement or expansion being easily effected by disengaging the hook 1.

Fuel is placed and supported on a grate 4 resting on horizontal bars 5 which have hooked or downwardly projecting ends that project through horizontal slots 6 in the furnace body. The said bars are flat so that they cannot rotate when duly inserted in the slots, and the hooks formed on their ends

prevent accidental detachment of the bars by sliding lengthwise in the slots 6. This feature is of practical importance since it enables the bars 5 to retain their place when fuel is again placed or adjusted on the grate. The slots 6 are made of sufficient vertical width to allow the hooked ends of the bars 5 to be readily inserted or removed by sliding movement at the same time that accidental displacement is prevented.

As shown in Fig. 5, the grate 5 may be raised and located on the upper cross bars 7, when for example, it is required to support sad-irons for heating. It is apparent that the furnace body may be contracted or expanded in diameter to accommodate it to wash tubs or boilers of different sizes, and that the bars 5 and 7 in such case slide in the slots 6 and 8.

As shown in Fig. 1, a skeleton bracket *y* may be supported by hooks from the top rim of the furnace body. This bracket is particularly useful for supporting a fuel-oil tank when required. A pipe from the tank would in such case be introduced through a hole formed in the door 3.

The base of the furnace is provided with a lateral flange to support it from the ground or other surface. The back of the furnace opposite the door is provided with a curved lip 9 which projects laterally and serves as a smoke flue.

The fastener comprising the hook 1 and a series of slots 2 permits instantaneous adjustment, that is, contraction or expansion of the furnace body, and in such case, the horizontal bars 5 and 7 are self-adjusting by reason of their adaptation to slide in the slots 6 and 8.

It is apparent that by removing the bars 5 and 7 several furnace bodies may be telescoped so as to occupy minimum space in shipment and storage. In such case the smoke flues 9 fit together, as will be readily understood.

The furnace is adapted and intended to be used with wood or coal as fuel, and can also be used with oil or gasolene burners, which would in such case be set on the grate 4.

I claim:—

1. A portable furnace constructed of sheet metal in the form of a truncated cone divided vertically, the adjacent and opposed ends of the said body having an adjustable hook fastening and one of the said ends be-

ing cut out below the fastening, whereby a fuel opening is formed whose sizes may be enlarged when required.

2. A portable furnace whose body is formed of sheet metal and divided vertically and having an adjustable fastening applied at its opposed ends and provided with a

series of horizontal slots, flat bars having pendent hooked ends and resting in said slots, the latter being of sufficient vertical width to permit manual insertion and removal of the bar, as described. 10

ARCHIE EDWARDS BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."