

W. H. JOHNSTON.
 PORTABLE FIREPLACE HEATING STOVE.
 APPLICATION FILED AUG. 16, 1919.

1,336,700.

Patented Apr. 13, 1920.
 3 SHEETS—SHEET 1.

Fig. 1.

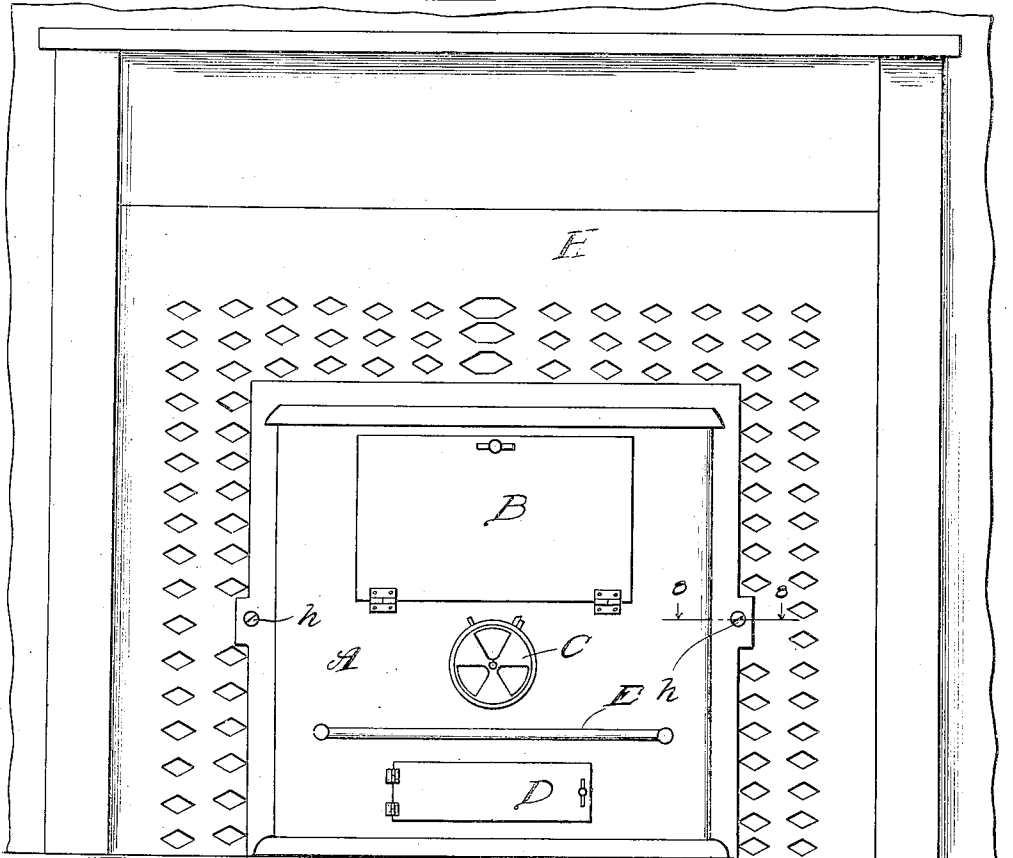
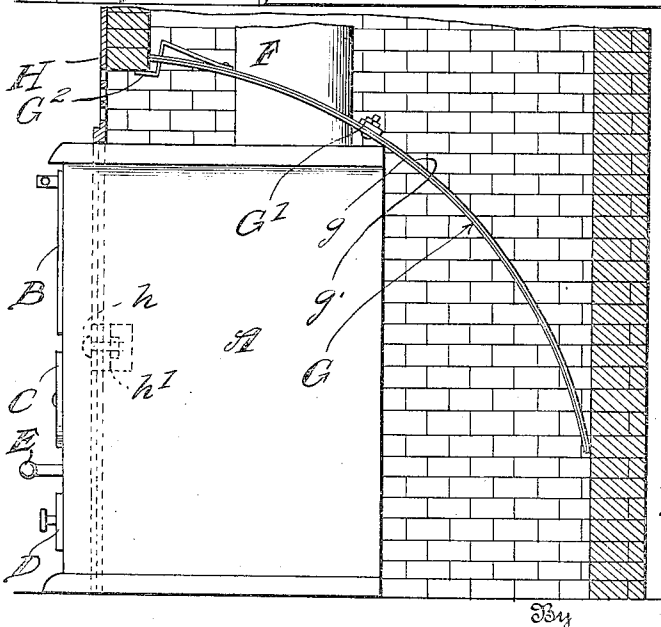


Fig. 2.



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Fig. 5.

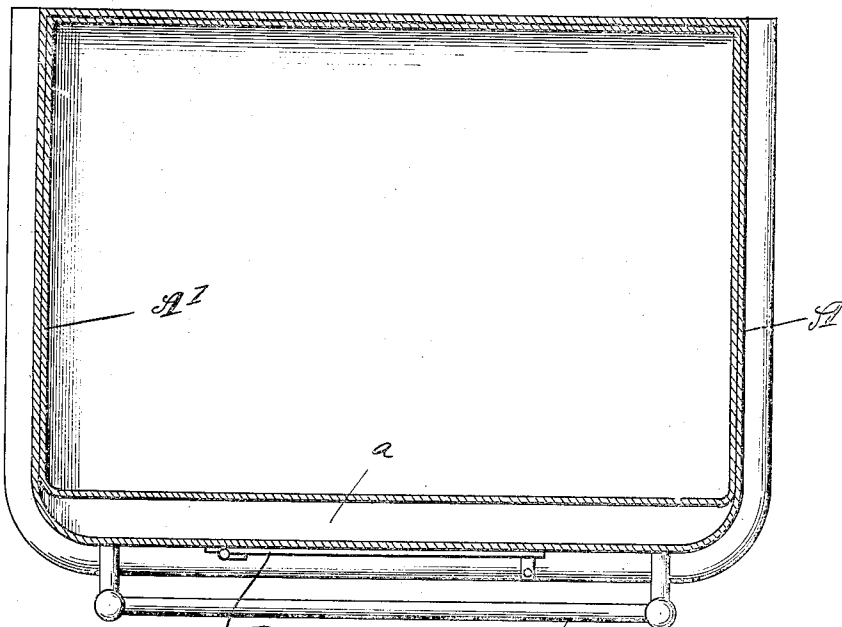


Fig. 6.

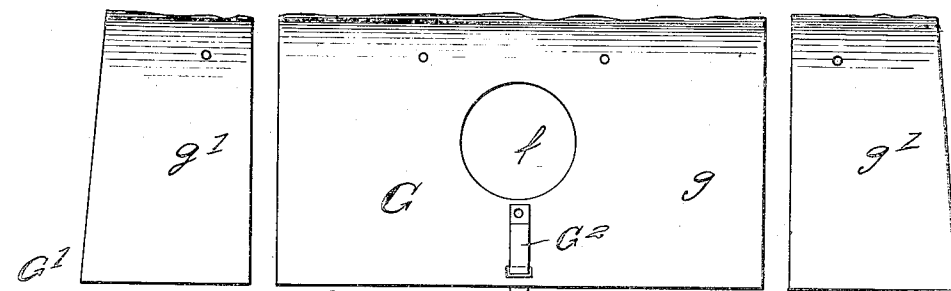
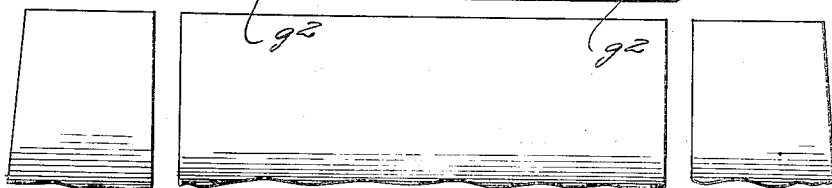
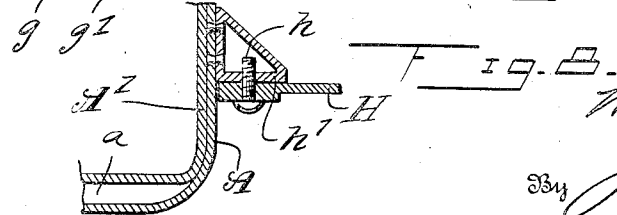


Fig. 7.



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UNITED STATES PATENT OFFICE.

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PORTABLE FIREPLACE HEATING-STOVE.

1,336,700.

Specification of Letters Patent.

Patented Apr. 13, 1920.

Application filed August 16, 1919. Serial No. 317,916.

To all whom it may concern:

Be it known that I, WILLIAM H. JOHNSTON, a citizen of the United States, residing at Raleigh, in the county of Wake and State of North Carolina, have invented certain new and useful Improvements in Portable Fireplace Heating-Stoves; and I do hereby 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 appertains to make and use the same.

This invention relates to stoves, and more particularly to portable hearth stoves, designed and adapted to be set in a chimney fire-place for heating purposes.

The objects of the invention are to provide a simple, efficient and inexpensive portable heating stove which may be readily set up in a fire-place for burning wood or similar fuel, and which is adapted to be easily removed and used in other fire-places of different sizes or widths without requiring any alterations; also to provide a chimney flue stop or fire-place closing board for closing the chimney or draft flue therein and forcing the hot air that rises from the stove into the room instead of allowing it to escape up the flue, and which will automatically adjust itself to the slant or angle of the sides of a fire-place, which are slanting usually from front to back; also to provide a forced down draft at the front of the stove for conducting the air downwardly to the fire in the fire box or chamber, and distributing the air in such manner as to effect more complete combustion and prevent waste of the fuel and to increase the heat produced from a given quantity of fuel, as compared with stoves heretofore ordinarily used in fire-places.

The invention will first be hereinafter more particularly described, with reference to the accompanying drawings, which form a part of this specification, and then pointed out in the claims at the end of the description.

In said drawings—

Figure 1 is a front elevation of a portable stove embodying my invention set in a fire-place ready for use;

Fig. 2 is a side elevation of the same arranged within or partly within the fire-place of the chimney, which is shown in vertical section;

Fig. 3 is a top or plan view of the stove set in the fire-place, which is shown in cross section;

Fig. 4 is a vertical sectional elevation of the stove removed from the fire-place;

Fig. 5 is a cross section taken on the line 5—5 of Fig. 4;

Fig. 6 is a detail view of the flue stop detached and taken apart;

Fig. 7 is a detail fragmentary sectional view illustrating the connection between the main portion and a side plate or adjustable member of the flue stop; and

Fig. 8 is a detail sectional view taken on the line 8—8 of Fig. 1.

Referring to said drawings, in which the same reference letters are used to denote corresponding parts in different views, the letter A denotes the stove which may be constructed of sheet metal, or mainly of sheet metal with cast metal parts and of oblong form with slightly rounded corners as shown; one of the longer sides being the front. In said front there is a fuel door B, which is preferably hinged so as to open downwardly, and a damper or draft regulating device C, and a cleanout door D, the latter being preferably hinged to swing open sidewise. Between the draft device and cleanout door may be placed a foot-rail E of any desired design. The stove is provided in its top with a draft opening and surrounding annular flange *a*, on or over which is fitted a smoke pipe F, for conducting the smoke and waste products of combustion up the chimney flue. The interior of the stove has a lining A¹ of sheet metal which extends around its sides and front and back, and at the front this lining is set off or spaced from the inner side of the stove so as to provide an air space which preferably extends entirely across the front of the stove, below the fuel door, forming a forced down draft, which also serves to distribute the air along and over the fire, thereby effecting complete combustion of the fuel and the consumption of more air and less fuel than is usually required in fire-place stoves to produce the same amount of heat. The letter G denotes a sheet metal flue stop or device for closing the chimney flue so as to force the heat that rises from the stove into the room and keep the air in circulation. The flue stop G has an opening

therein through which the smoke pipe F passes, said smoke pipe being made to closely fit said opening so as not to interfere with the draft and being attached in a vertical position so as to produce a perfectly straight flue. This pipe may extend a greater or less distance above the flue stop, as desired, for connection with the chimney flue. The flue stop G, as shown, is constructed of sheet metal, and consists of a main body portion or plate *g*, and side plates or wings *g*¹ which are preferably tapering to conform to the slanting sides of the chimney or fire-place and are adjustably secured to said main portion, in telescopic fashion, by means of fastening bolts which extend through the two parts *g* and *g*¹, and through an elongated slot *g*² in a connecting bar *G*¹ to provide a slidable and pivotal connection and permit lateral adjustment. The bar *G*¹ is rigidly secured to the main body portion *g* by rivets or otherwise. In its original shape the flue stop is flat but takes the curved shape shown in Figs. 2 and 4 when pressed into the chimney or fire-place, as shown in Fig. 2. A spring actuated latch *G*² is provided at the front edge of the main portion *g* of the flue stop to take under the usual cross-bar or supporting plate at the front of the fire-place so as to hold the flue stop in proper position.

The letter H denotes an ornamental front or border, which extends across the top of the stove and downwardly on each side to its bottom, so as to close or cover the space at the front between the inner sides of the fire-place and the outer sides of the stove. It may however be dispensed with. It is secured to the stove by bolts *h* passing through interiorly threaded registering apertures in the margins of the upright portions thereof and laterally projecting flanges or brackets *h*¹ on opposite sides of the stove. As shown it consists simply of a sheet metal plate having rows of diamond-shaped openings therein to give a neat and attractive appearance. When attached to the stove in the manner indicated, it becomes a part thereof, and is movable with the stove, but may be readily removed for the substitution of a similar front piece of larger or smaller size as desired for use in fire-places differing in width and height from the particular fire-place in which the stove may be set at the time.

The stove is designed to rest partly inside of the fire-place and partly on the hearth, usually about one half or a little more than one half being inside of the fire-place, although as shown more than one-half is inside of the fire-place.

It will be understood of course that various changes may be made in the details and

arrangement of parts without departing from the spirit and scope of my invention. 65

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A portable fire-place stove comprising a sheet metal body having a fire box therein, a fuel door, a cleanout door, and an opening for a smoke pipe in its top, together with an air space extending across the front of the stove, below said fuel door, and forming a forced down draft, and a draft regulating device controlling the admission of air into said space. 75

2. A portable fire-place stove comprising a sheet metal body having a fire box therein, a fuel door, a cleanout door, and an opening in its top for a smoke pipe, together with an air space extending across the front of the stove, below said fuel door, and forming a forced down draft, a draft regulating device controlling the admission of air into said space, and a flue stop for closing the chimney above the stove structure. 85

3. A portable fire-place stove comprising a sheet metal body having a fire box therein, a fuel door, a cleanout door, and an opening for a smoke pipe in its top, together with an air space extending across the front of the stove, below said fuel door, and forming a forced down draft, a draft regulating device controlling the admission of air into said space, a flue stop for closing the chimney above the stove structure; said flue stop being adapted to automatically adjust itself to the slant of the sides of the chimney. 95

4. In a portable fire-place stove having a fire box, a smoke pipe, and fuel and cleanout doors, a forced down draft space extending across the front of the stove below the fuel door and a damper controlling the admission of air into said space. 100 105

5. In combination with a portable fire-place stove, a flue stop composed of a plurality of sheet metal plates adjustably secured together in telescopic fashion; the adjusting means consisting of a connecting bar having elongated slots therein and a bolt passing through each slot and through overlapping portions of an intermediate and a side plate to adapt the side plates to automatically adjust themselves to chimneys or fire-places of different widths and forms; said flue stop being placed over the stove for closing the flue thereabove and having an opening therein for the passage of the smoke pipe. 110 120

6. A portable fire-place stove having a smoke-pipe thereon and means carried thereby for closing the chimney flue, said means comprising sheet metal plates having overlapping portions pivotally and slidably secured together so as to adapt the 125

side plates to automatically adjust themselves to conform to the width and slant of chimneys or fire-places of different sizes; one of said plates having an opening there-
5 through for the passage of the smoke pipe.

7. A portable fire-place stove comprising an oblong sheet metal body having a fire box therein, a smoke pipe opening in its top, a fuel door in front, a cleanout door at the
10 bottom thereof, a damper between said doors, a down draft space adjacent said damper extending entirely across the front of the stove, and means on the rear of the stove for closing the chimney flue around the
15 smoke pipe.

8. In combination with a portable fire place stove a flue stop placed thereon for closing the chimney flue around the smoke pipe; said flue stop being composed of an
20 intermediate and side plates of sheet metal adjustably secured together; said side plates being tapered and having a pivotal connec-

tion with said intermediate plate to adapt them to automatically adjust themselves to the slant of the sides of the chimney or fire
25 place, and to fit chimneys or fire places of different widths.

9. A chimney flue closure for portable fire-place stoves comprising an inner plate and outer tapering plates slidably secured
30 together for varying the width thereof with provision for pivotal or rocking movement of the outer plates to adapt them to automatically adjust themselves to the slant of the chimney or fire place with which the
35 device is used; said inner plate having an opening therein for the passage of a smoke pipe.

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

WILLIAM HENRY JOHNSTON.

Witnesses:

CARY K. DURFEY,
E. A. THOMPSON.