

No. 606,694.

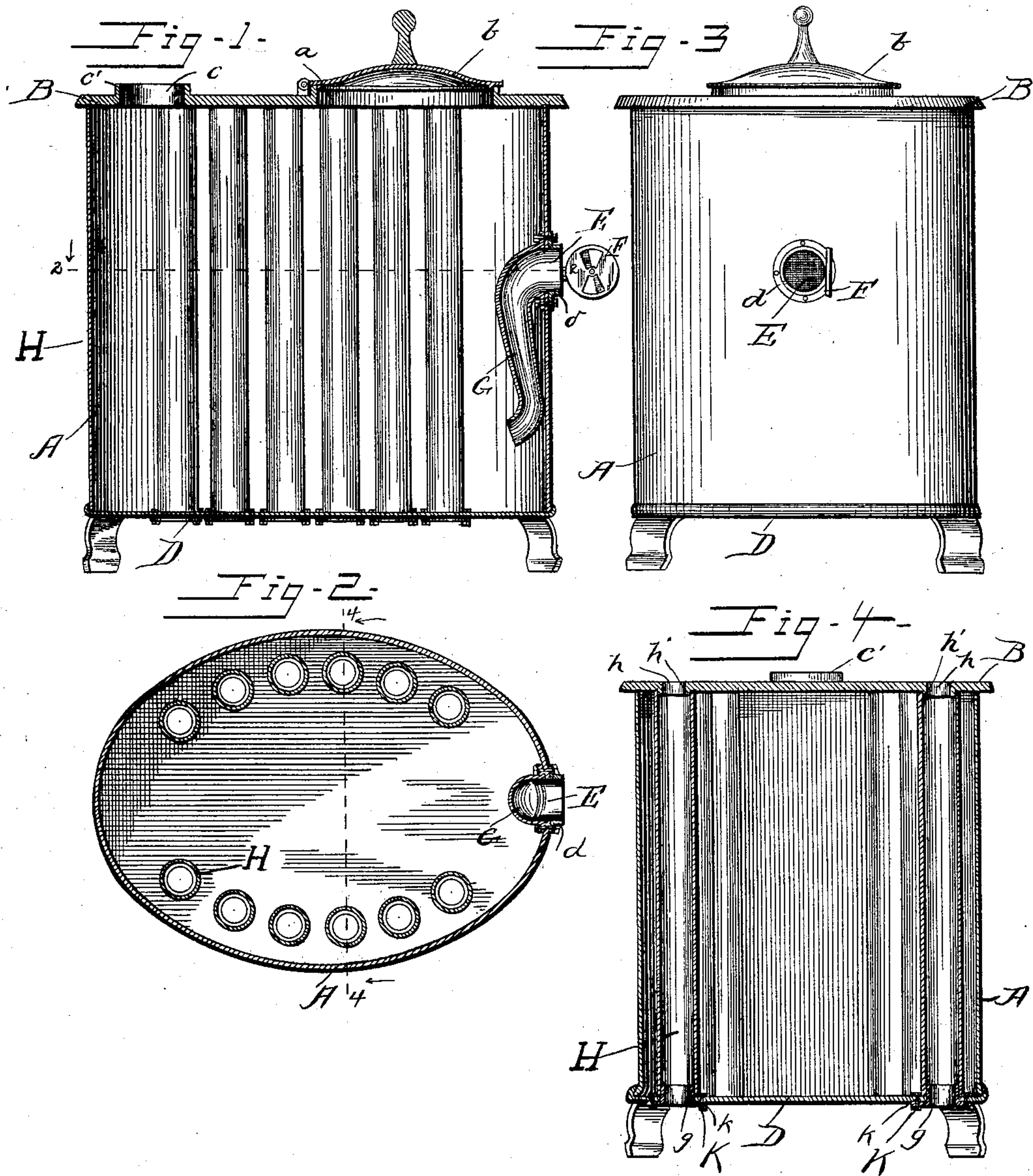
Patented July 5, 1898.

A. C. TERRELL & S. McCLURE.

STOVE.

(Application filed Feb. 11, 1897.)

(No Model.)



Witnesses:
Louis S. Thompson,
Chas. J. Murray

Inventors:
Albert C. Terrell and
Silas McClure
By Frank D. Thompson atty

UNITED STATES PATENT OFFICE.

ALBERT C. TERRELL AND SILAS McCLURE, OF OSKALOOSA, IOWA.

STOVE.

SPECIFICATION forming part of Letters Patent No. 606,694, dated July 5, 1898.

Application filed February 11, 1897. Serial No. 622,982. (No model.)

To all whom it may concern:

Be it known that we, ALBERT C. TERRELL and SILAS McCLURE, of Oskaloosa, Mahaska county, Iowa, have invented certain new and useful Improvements in Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Our invention relates particularly to wood-burning stoves; and its object is to provide the same with a series of easily-removable hot-air flues and with a hot-air draft so constructed and so located that the combustion and heat-conserving qualities of the stove are greatly improved. This we accomplish by the employment of removable devices in the bottom of the stove which anchor the lower ends of said air-flues, and by means of a hot-air draft-tube of peculiar construction which takes the air from a point at the side of the stove above the fire-bed and conducts it to a point at or below the fuel and discharges it in a heated condition into said fire-bed, substantially as hereinafter fully described, and as illustrated in the drawings, in which—

Figure 1 is a vertical central section of said improved stove. Fig. 2 is a horizontal section therethrough, taken on dotted line 2 2, Fig. 1. Fig. 3 is an elevation of the same, and Fig. 4 is a vertical section on the line 4 4, Fig. 2.

Having reference to the drawings, A represents the exterior shell of our improved stove, which in the drawings is shown to be elliptical, but which may be cylindrical or square or any other shape desired. This shell is provided with a suitable cast or pressed steel top B, more or less ornamented, substantially as shown, and provided with a fuel-opening *a* in the forward portion which is closed by a suitable cover *b*, and provided with a stovepipe-opening *c* in the rear portion, into the upwardly-projecting annular flange *c'* of which the stovepipe C is telescoped in the usual manner. The shell A is also provided with a suitable sheet-steel bottom D, which is fastened thereto by a double seam or otherwise, as desired. In the side of the shell, at a point preferably nearer the top of the stove, is a draft-opening E, which has a cast-metal rim *d* riveted to the margins thereof on the outer side, and is

closed by a door F, having a common form of oscillatory register made therein, so as to regulate the ingress of air. Secured to the margins of the inner side of opening E, preferably by the same rivets used to secure rim *d*, passing through its flange, is a draft-tube G. The draft-tube leads from the draft-opening E, and its shape is such that it bends downward and extends toward and terminates at a point a short distance above the bottom of the stove. At the top the diameter of the said tube G corresponds to or is slightly greater than the draft-opening; but it gradually decreases in diameter as it extends toward its lower end, which latter is turned toward and discharges the heated air from its lower opening toward the center of the fire-bed of the stove.

It is well known that heated air projected into burning fuel promotes combustion and does not condense the heated products of combustion as does cold air. The draft-tube G is an economical improvement to the stove and is provided for this very purpose. It is made tapering toward its lower end, so as to make it forcibly expel the heated air in a manner greatly exceeding the force of the natural draft, were the tube of the same diameter throughout its entire length.

The top B of the stove and its bottom D are each provided with a series of openings *h* and *g*, respectively, and each of the series of openings *h* in the said top is arranged in vertical alinement with some one of the openings *g* in the bottom and are connected thereto by sheet-metal tubes H. In order to removably secure these tubes in the stove, so that should they burn or rust out they could be removed and replaced, we provide each opening in the top B with a downwardly-depending integrant annular flange *h'*, over which the upper end of said tubes telescope. For each opening in the bottom of the stove we provide an angle-iron ring K, the vertical portion of which is slightly tapering toward its end edges and is of a maximum diameter corresponding to that of the bore of said tubes H.

In use we insert the tubes H into the stove and telescoping or fitting their upper ends over the flanges of the opening *h* (with reference to which it is used) bring it vertically

into concentric alinement with the fellow opening in the bottom D. We then insert the tapering vertical portion of the angle-iron ring K up through the opening *g* into the
5 bore of tube H and then bolt or otherwise removably secure the rings to the bottom D by bolts *k*, as shown, or in any suitable manner. In this way should any of said tubes require removal all that it is required to do is to re-
10 move ring K, and by pulling the lower end of the said tube laterally it can be removed without disturbing the other tubes and another tube inserted to replace it and be secured in place, as hereinbefore described.

15 We lay no claim to the particular arrangement of tubes H, although for convenience we have, as shown in the drawings, placed six of said tubes on each side of the fire-bed. Any other arrangement, however, would an-
20 swer.

What we claim as new is—

A stove consisting of a top having a suitable stovepipe-opening and fuel-opening

therein, and provided with a series of open- 25
ings *h* therein, each having an annular flange made homogeneous with the top and extend-
ing down into the stove from its edges, a
shell to the top edges of which said top is se-
cured, and a bottom having a series of open- 30
ings *g* therein, each of which is in vertical alinement with some one opening *h* in said
top, in combination with a series of tubes ar-
ranged in vertical alinement between com-
panion openings in said top and bottom, and
with their upper end telescoping over said 35
flanges, and angle-iron rings K having their vertical portions slightly tapered and inserted
up through openings *g* and into the lower
ends of tubes K and removably secured to
said bottom, as set forth.

ALBERT C. TERRELL.
SILAS McCLURE.

Witnesses:

T. W. TERRELL,
FRANK D. THOMASON.