

UNITED STATES PATENT OFFICE.

JOHN M. STOKOE, OF CANANDAIGUA, NEW YORK, ASSIGNOR OF ONE-HALF
TO CHARLES B. HILL, OF SAME PLACE.

DRUM AND CHIMNEY FOR OIL-STOVES.

SPECIFICATION forming part of Letters Patent No. 474,782, dated May 10, 1892.

Application filed December 14, 1891. Serial No. 415,005. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. STOKOE, of Canandaigua, in the county of Ontario and State of New York, have invented a new and
5 useful Improvement in Drums and Chimneys for Oil-Stoves, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

This invention relates more particularly to
10 the matter of supplying air to the flames of the burners; and the object of the invention is mainly to construct the parts so as to render the combustion more perfect.

The invention consists in novel forms of the
15 parts and devices for effecting the desired improvements in the means for enhancing combustion, and to effect other improvements, all of which are hereinafter fully described, and particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a
20 front elevation of my improved device in part vertically sectioned, as on the dotted line 1 1 in Fig. 2. Fig. 2 is a plan of the device partly broken away. Fig. 3 is a side elevation, partly
25 in vertical section, on the dotted line 3 3 in Fig. 1, the chimney being partly sectioned on the dotted line 3', viewed as indicated by arrow in Fig. 1. Fig. 4 is a cross-section on the dotted line 4 4 in Fig. 1, parts of the second
30 floor being broken away. Fig. 5 is a section on the dotted line 5 5 in Fig. 4.

Referring to the parts shown in the drawings, A is the drum for an oil or other similar
stove, made of tin or other sheet metal.

35 B B are the cones, which are of common construction.

D D are the chimneys.

The drum is formed, in addition to the side
40 walls, with a top plate or sheet *d* and bottom plate or sheet *h* and a middle imperforate partition *a*, joining both said top and bottom plates and dividing the interior of the drum into two equal compartments, each containing a chimney. The top and the bottom
45 plates *d* and *h* are each continuous and airtight and made imperforate except as to openings *s* in the former to constitute the outlets of the chimneys and the openings *n* in the latter up through which the cones project.

The bottom plate fits closely around the bases 50 of the cones, as shown.

The drum is preferably provided with a cast-iron base-piece *b* and a similar cap *c*, both being continuous and imperforate except as to the openings in the former for the
55 cones and in the latter for the outlets of the chimneys. The drum is further formed with a horizontal partition or second floor *g* on a level a little below the tips of the cones, as shown. This floor is made fast to the interior
60 surfaces of the walls or sides of the drums and to the vertical partition *a* and is also imperforate save as to two oblong openings *l* immediately over the cones. The air to supply the upper portions of the flames is admitted to the interior of the drum through
65 openings *f* in the walls of drum beneath the second floor *g*, and its only means of escape is upward through the openings *l* around and above the tips of the cones and the flames.
70

The chimneys, which are of sheet metal, are made rigid with the top plate or sheet *d* of the drum by ordinary means, and this plate is formed with downturned flanges *e* to inclose the upper end of the drum and is detachable
75 therefrom. The chimneys, as shown, do not extend downward to the bases of the cones to inclose the latter, but terminate at their lower ends some distance above the cones. This allows a free circulation of the air admitted
80 through the openings *f* to and about the upper portions of the flames, which results in a more perfect combustion and a consequent increased intensity of the heat than if the chimneys extended to and inclosed the cones
85 and the flames. The cones and the parts of the stove below them are of common construction, and that portion of the air that is admitted to the flames from beneath comes upward through the cones in the usual manner. The
90 plate *d*, being tight and without perforation excepting those mentioned, prevents an outflow or escape of the heat of the flames except through the chimneys, which is concentrated under the bottom of the vessel or other
95 devices to be heated, the vessel being placed upon the open support *o*, which is of common construction.

The partition *a*, as has been stated, is imperforate, so that either flame may be used alone. When both flames are used, this partition is inoperative, save that it constitutes
5 at all times a stiffener for the drum.

The parts of the drum are held together by the ordinary vertical central bolt *p*, the partition *a* being formed with a detour *r* around the bolt.

10 In constructing this improved drum, I usually prefer to place a layer of asbestos upon the floor *g* around the cones.

This drum is preferably made with opening *k* at the front and at two sides, as shown, the
15 openings being covered by sheets *i* of mica.

What I claim as my invention is—

In combination with the cones of a stove, a drum formed with side walls and air-tight top

and bottom plates, and an imperforate vertical partition and pendent chimneys within
20 the drum over the cones, the drum being further formed with a horizontal partition or floor near the tips of the cones, with openings over the latter forming air-passages around
25 the tips of the cones and draft-openings through the sides of the drum beneath said horizontal partition, substantially as shown and described.

In witness whereof I have hereunto set my hand, this 28th day of November, in the pres-
30 ence of two subscribing witnesses.

JOHN M. STOKOE.

Witnesses:

ENOS B. WHITMORE,
M. L. McDERMOTT.