(No Model.) 2 Sheets—Sheet 1.

C. H. BOECK.

OIL HEATING STOVE.

No. 592,273. Patented Oct. 26, 1897.

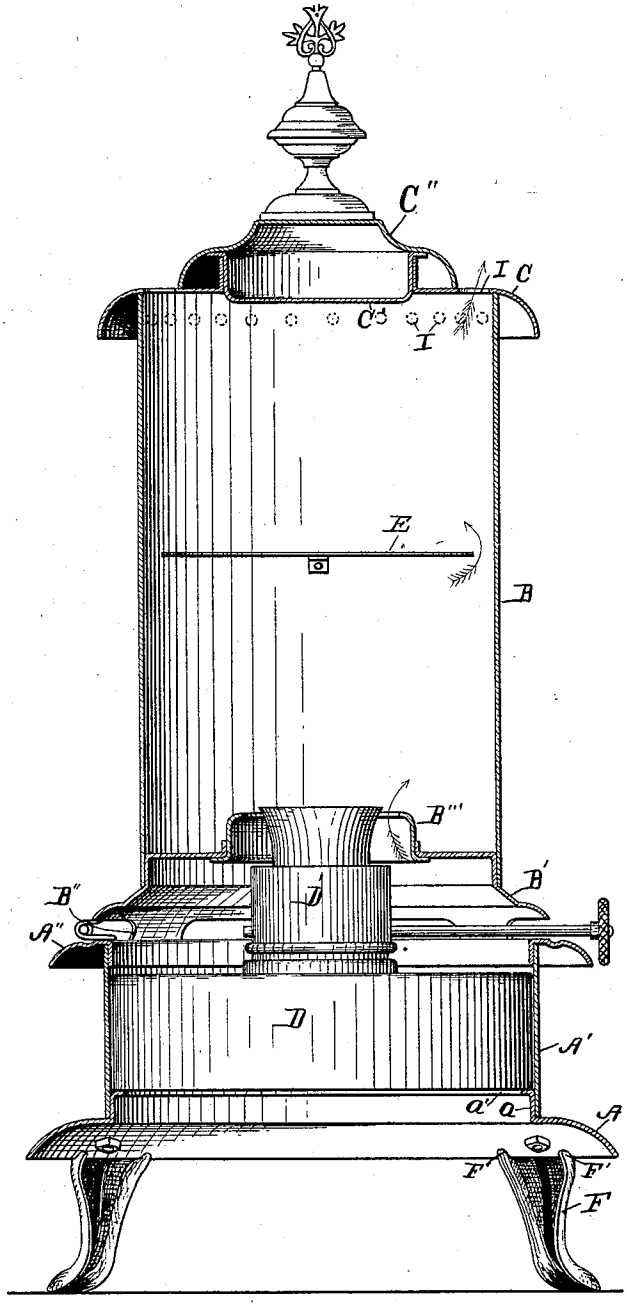

Fig. 1

Witnesses:
Carrie Hollowell
Vene E. Chappell

Inventor,
Charles H. Boeck
By Fred L. Chappell
Att'y.

(No Model.) 2 Sheets—Sheet 2.

C. H. BOECK.

OIL HEATING STOVE.

No. 592,273. Patented Oct. 26, 1897.

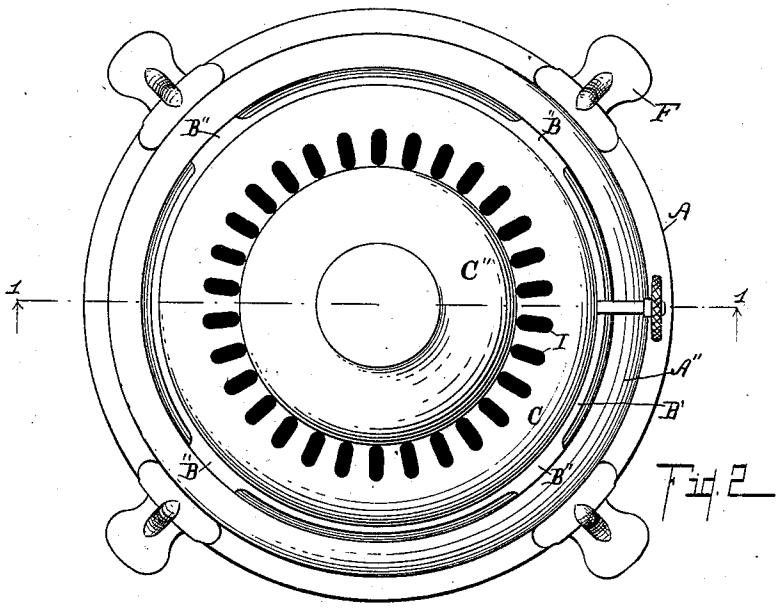

Fig. 2

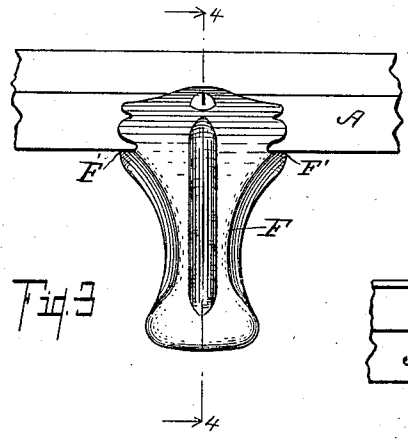

Fig. 3

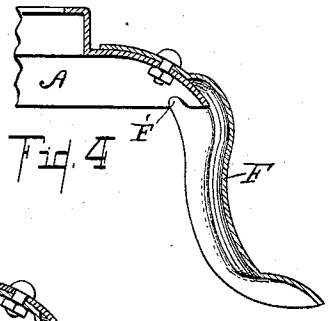

Fig. 4

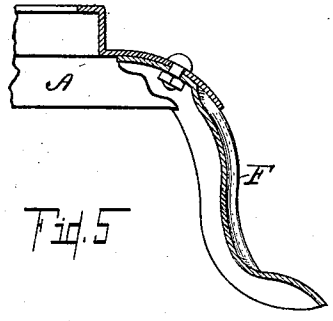

Fig. 5

Witnesses:
Carrie Hollowell
Vene C. Chappell.

Inventor,
Charles H. Boeck
By Fred L. Chappell
Atty.

UNITED STATES PATENT OFFICE.

CHARLES H. BOECK, OF JACKSON, MICHIGAN, ASSIGNOR TO THE NOVELTY MANUFACTURING COMPANY, OF SAME PLACE.

OIL HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 592,273, dated October 26, 1897.

Application filed April 24, 1896. Serial No. 588,959. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. BOECK, a citizen of the United States, residing at the city of Jackson, in the county of Jackson and State of Michigan, have invented a certain new and useful Oil Heating-Stove, of which the following is a specification.

My invention relates to improvements in portable oil heating-stoves. As heretofore constructed these oil heating-stoves have been made up of considerable portions of cast metal, which necessarily adds very greatly to their weight, which is a serious objection in a portable stove of this class.

The objects of my invention are to so construct the stove that all of its parts can be made of sheet metal, thus greatly reducing the weight; second, to produce a new and improved base for a heating-stove; third, to produce a new and improved top for a heating-stove, and further objects appearing definitely in the detailed description. I accomplish these objects of my invention by the devices and means described in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view on line 1 1 of Fig. 2, the fount being shown in full line. Fig. 2 is a top plan view of the stove with the urn removed. Fig. 3 is an enlarged detail front elevation view of one of the legs F, attached to the base-rim A. Fig. 4 is a sectional view on line 4 4 of Fig. 3. Fig. 5 is a similar sectional view of a modification.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A represents the base rim or ring of the stove, which is stamped out convex on its upper surface with a vertical portion *a* at the center and an inwardly-projecting flange *a'* at the top. Supported on this is a drum A', of sheet metal, which projects upwardly and forms the body of the base of the stove. Resting on the top of this is another rim or ring A'', which is convex on its upper surface, with a slight annular depression toward the inside. A vertical downward flange is formed to the inside, which fits in the drum A', which strengthens and finishes the top of the same. Within this base is supported the fount D, having a large circular burner D' at the top. The fount is supported by the inwardly-projecting flange *a'*, before referred to. Supported upon the ring A'' is a plate B', which has suitable legs B'' resting in the annular depression on rim A'', which separates the bottom of it from the ring A'' and affords an opportunity for the admission of air to sustain combustion in the burner. The bottom part of this rim is convexed to correspond to the rings below. It is conical toward the center with a vertical portion to receive and fit into the heating-drum B above. It is then formed as a flat plate extending toward the center, where an opening is formed for the passage of the flame of the burner. Here a sheet-metal "cone" B''' is inserted to properly deflect the flame and introduce air to induce complete combustion. The heating-drum B is placed upon the plate B', fitting over the vertical portion of the same and extends upwardly a suitable height to secure proper proportions to the stove and provide sufficient radiating-surface to deliver the heat. A suitable deflector E is supported within the drum B to compel the heated gases to be delivered to and carried along the outside of the drum B.

The top C, stamped from sheet metal, is placed directly on the upper edge of the drum B, and is formed convex at the outer edge to correspond with the rings below. A suitable aperture with a vertical flange around it is formed at the center. A cover C'', of suitable contour, stamped from sheet metal, is placed over the aperture and is guided and secured in place by the dish-shaped portion C', which fits into the opening at the center of top C. Between the outer edge of the cover C'' and the upper edge of the drum B suitable apertures I are formed to permit the escape of the heated gases to maintain circulation to support the combustion. These apertures I might be formed in the upper edge of the drum (indicated by the dotted lines at that point of Fig. 1) and serve their purpose very well.

The legs F for supporting the stove are

stamped from sheet metal and conform to the base-rim A at their upper part and are secured there by a bolt or other means. These legs are similar in contour to the cast legs of a stove, with vertical strengthening-rib at the center. They are made ornamental in contour at the top and placed outside the rim A, and suitable ears F′ project under the edge of the rim to locate the same positively and afford additional support. This is the preferred construction. The outside of the leg can be conformed to the inner side of the rim A and secured there with a bolt or otherwise and make a very serviceable leg, though not so strong as the construction first indicated. This modified construction is definitely illustrated in Fig. 5.

Having thus described my improved stove, I desire to state that it can be considerably varied in its details without departing from my invention, as has already appeared to a considerable extent in the detailed description.

All of the main parts of my improved stove could be supported on cast-metal legs, which would of course dispense with the advantage of the light sheet-metal legs, but would still secure a very light stove. On the other hand, the sheet-metal legs, as I have illustrated, could be used for supporting other varieties of stoves and secure the advantages of reducing the weight that much.

The method of connecting the parts together can be considerably varied. The flange A′ could be dispensed with and the fount be supported by other means, though the flange serves its purpose best. The cone B‴ might be made integral with the bottom plate B′ of the drum instead of being made in a separate piece, as shown, and the conformation of the bottom plate of the drum could also be considerably varied and answer its purpose, though the exact form I have shown it secures a finished appearance and the greatest possible strength for the construction. It is also obvious that the formation of the cover might be varied as well as the means of locating it on the top; but the means I have chosen will be found to secure the greatest strength and preserve the contour of the parts best from accidental injuries. The form of the deflector E is not material. Other variations would no doubt readily occur to those skilled in the art to which my invention pertains. The construction exactly as I have shown it possesses the greatest merits.

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

1. In a portable oil heating-stove the combination of the sheet-metal base-rim A, with an upwardly-projecting vertical portion *a*, and the inwardly-projecting flange *a′*, at the top; sheet-metal drum A′, resting on the said rim A, and fitting the vertical portion thereof; the sheet-metal rim A″, convex on its upper surface with an annular depression and downwardly-projecting vertical flange fitting inside the drum A′; the fount D, with burner D′, supported on the flange *a′*; sheet-metal bottom plate B′, the burner-cone B‴, at the center of said bottom plate the radiating-drum B, resting on the plate B′, and fitting the vertical portion thereof; a suitable deflector E, within the drum to deliver the heated gases to the outside thereof and the top C, with suitable perforations at the top of the drum to insure circulation for the purpose specified.

2. In a portable oil-stove the combination of a suitable base portion; a radiating-drum B, a sheet-metal bottom plate B′ for the drum having legs B″, to support it on the base portion and afford a draft-passage for the burner the said plate being formed with a vertical portion to fit within the drum B, and projecting inwardly with the burner-cone B‴, at the center coacting as specified.

3. In a portable oil heating-stove the combination of the heating-drum B, the sheet-metal top C, convex toward its outside with a vertical flange at the center the sheet-metal cover C″, with a dish-shaped portion C′, secured to the under side thereof to fit within the vertical flange and locate the cover and strengthen the same as specified.

4. In a portable oil-stove the combination of the rims and plates stamped from sheet metal convex toward their outside to strengthen and ornament the same, with flanges at the inside; sheet-metal drums between the various rims and fitted to the flanges thereof to form necessary compartments in the stove and a sheet-metal top convex on its upper surface and fitted to the top of the stove to form a light and strong stove as specified.

5. In a heating-stove the combination of the sheet-metal base-rim A, convex toward its outside; the sheet-metal stove-leg F, having a central strengthening-rib therein with its upper end conformed to the base-rim A, with ears F′, projecting under the rim to locate the same and engage the edge securely and a suitable means for joining the two together for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

CHARLES H. BOECK. [L. S.]

Witnesses:
D. A. TARBELL,
U. L. BADGLEY.