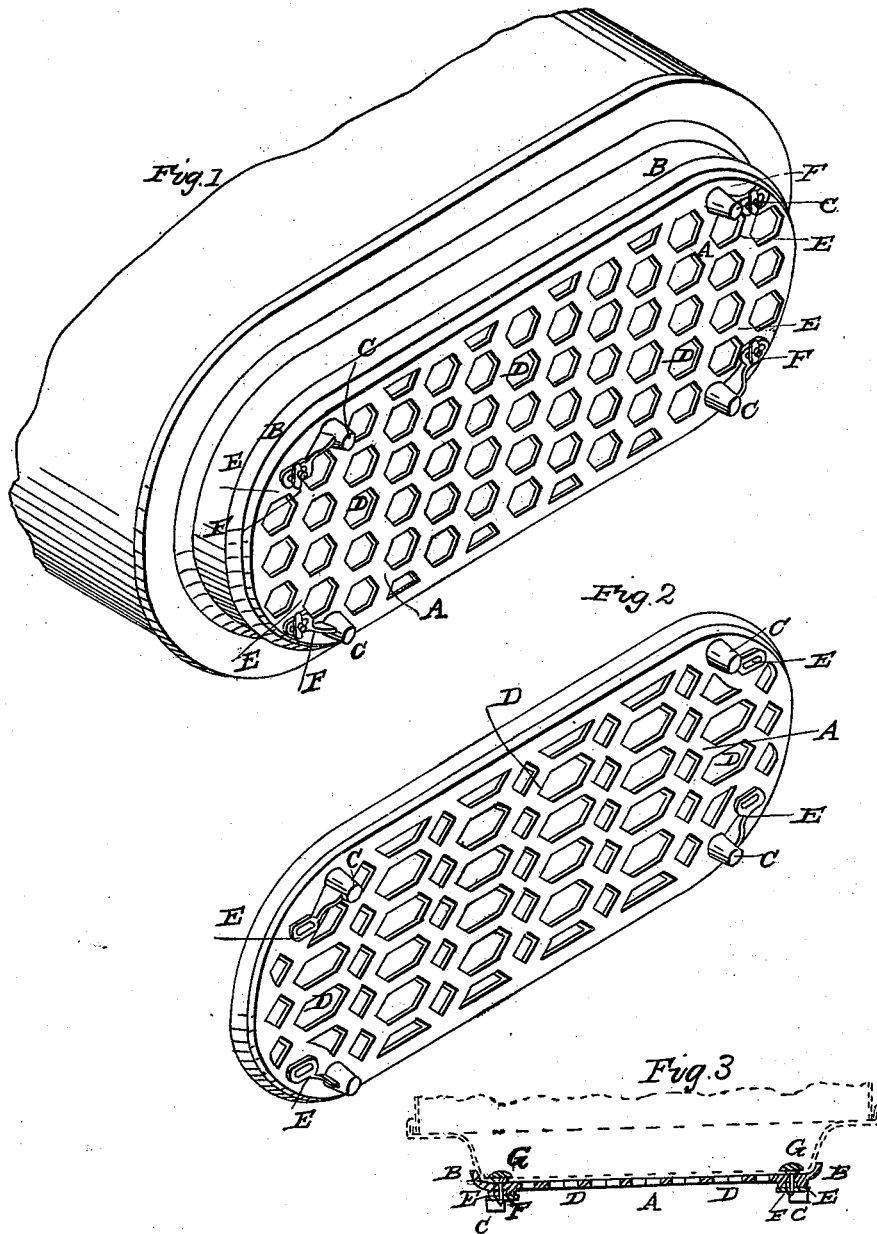


A. O'NEILL.  
Guard Plate for Boilers.

No. 52,806.

Patented Feb. 20, 1866.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

ANDREW O'NEILL, OF PORTSMOUTH, OHIO.

## GUARD-PLATE FOR BOILERS.

Specification forming part of Letters Patent No. 52,806, dated February 20, 1866.

*To all whom it may concern:*

Be it known that I, ANDREW O'NEILL, of Portsmouth, Scioto county, Ohio, have invented a new and useful Guard-Plate for Sheet-Metal Boiling-Vessels; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to the provision of a cast-iron shield or guard-plate, adapted to be fastened beneath the bottom or pit of a sheet-metal boiling-vessel for the several purposes of protecting said bottom from becoming dented and battered either from without or from within, and of holding said bottom to its flat or plane form, and of enabling the vessel always to stand square and plumb, and of preventing the soiling or smutting of a table or other surface upon which the vessel may be set.

A represents a casting, which I call the "guard-plate," having the form of a flat-bottomed shallow pan, having a rim or marginal elevation, B, feet C, and numerous openings or apertures, D, to afford access of the fire to the bottom, as well as to lighten the plate and give it a more pleasing appearance.

Slots E receive rivets F by which the guard-plate is secured to the bottom, the said slots being so much larger than the shanks of the rivets as to permit the expansion and contraction of the bottom and of the guard-plate independently of each other. The inner ends of the rivets F are covered by solder G.

The feet C enable the vessel at all times to stand firmly without rocking or wobbling, and without smutting up of the stove-top, or table, or floor, or other object upon which it may be set. They also enable the vessel to be set clear of the flame or of the hot plates of the stove-top, so as to simmer for any length of time without scorching such articles as sirup, apple-butter, milk, &c.

My guard prevents the denting and battering of the bottom from below by projecting points of coal or other fuel in the fire-box, and as effectually preserves the bottom from the same class of injury from stirring-sticks or other implements employed within the boiler. It also prevents the sagging or bellying down of the bottom when lifted in a full condition. The bottom, being preserved equally from indentations, inducing oxidation, and from salient points liable to excessive wear, may be of lighter material and yet outlast those not thus protected. My guard also preserves the bottom from being indented and even pierced by projecting angles of fuel, as well as by pebbles, nail-heads, &c., on floors and other places.

The casting A may be rendered malleable in the customary way.

I claim herein as new and of my invention--

1. A cast-metal guard-plate or shield for attachment to the bottoms of boilers, either with or without the openings, feet, or marginal flange, substantially as described and represented.

2. The cast-metal guard-plate, in combination with the feet C, for the purpose described.

3. In combination, with the cast-metal guard-plate, the rim or marginal elevation B, embracing the shoulder of the pit or drop, of a sheet-metal boiling-vessel.

4. In combination with the guard-plate, the slot E for the passage of the rivets in case of the unequal expansion of the vessel and plate.

In testimony of which invention I hereunto set my hand.

ANDREW O'NEILL.

Witnesses:

GEO. H. KNIGHT,  
JAMES H. LAYMAN.