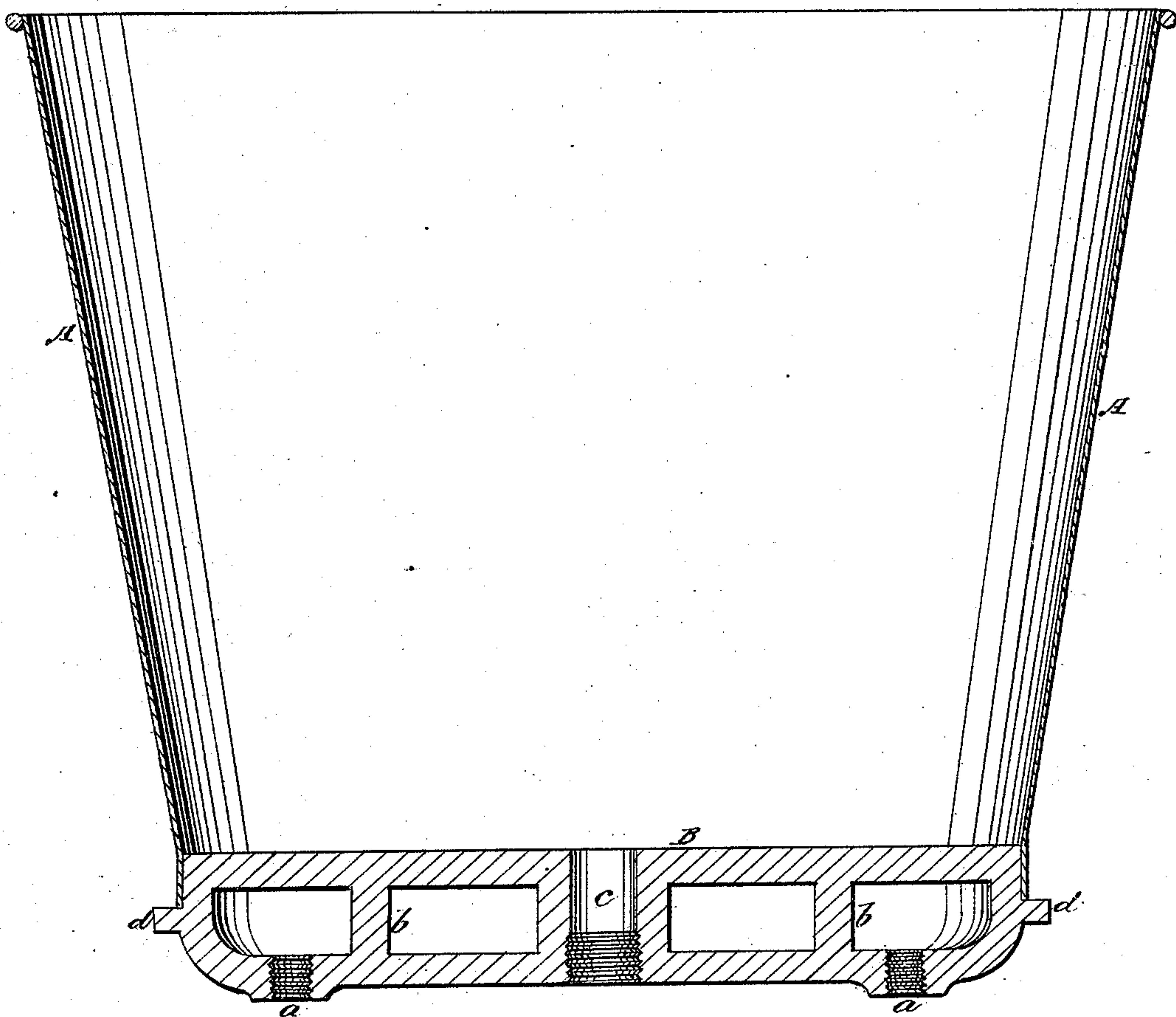


MORSE & HISCOX.

Kettle.

No. 94,907.

Patented Sept. 14, 1869.



WITNESSES:

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JAMES O. MORSE, OF ENGLEWOOD, NEW JERSEY, AND GARDNER D. HISCOX, OF BROOKLYN, NEW YORK.

Letters Patent No. 94,907, dated September 14, 1869.

KETTLE FOR BOILING BY STEAM.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JAMES O. MORSE, of Englewood, in the county of Bergen, and State of New Jersey, and GARDNER D. HISCOX, of Brooklyn, in the county of Kings, and State of New York, have invented a new and useful Improvement in Kettles for Boiling by Steam; and we do hereby declare that the following is a full, clear, and exact description thereof, and of its mode or manner of operation, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and making a part of this specification.

Our invention consists essentially in the combination of a body, made of any suitable sheet-metal, with a hollow cast bottom, around the upper portion of which it is closely fitted, the hollow bottom being fitted to receive and contain steam, and having or being capable of having its upper surface tinned, or otherwise protected against corrosion, by any chemical action of the contents of the vessel.

In the figure, which is a vertical section, taken through the centre of the vessel—

A represents the body or containing portion, and B, the hollow cast bottom.

The former may be made of copper, tin, tinned sheet-iron, or other sheet or thin metal.

The upper edge of the bottom B is dressed off in cylindrical, or any other convenient form. Its upper horizontal surface is then coated with tin, by any suitable process, or with any other covering or preparation, which will protect the iron against the chemical action of the contents of the vessel, without interfering with the transmission of heat.

The lower portion of the body A is accurately fitted to the dressed portion of the edge of the hollow bottom B, so as to shut down around it, resting on the projecting ledge or flange *d*.

The joint between them is made permanently tight by soldering or other appropriate means.

Steam is taken in at one of the openings *a*, while the drip from its condensation escapes through the other, suitable connections being applied to both.

Any number of stays, *b*, connecting the upper and lower surfaces, may be introduced, according to the diameter of B, and the pressure of steam under which it is to be used.

The central stay, *c*, if enlarged and made hollow, may have a pipe and faucet applied to it, and be used for drawing off the contents of the vessel.

Instead of the sheet-metal composing the body A of the vessel, as hitherto assumed, wood may be used, in the form of staves, put together with hoops, forming a hollow-bottomed cistern or vat, which, for

many purposes, may be employed with peculiar advantage.

There are various forms of steam-jacketed kettles well known and in common use, by means of which steam-heat is applied for boiling-purposes.

Of these, that which approaches nearest to the form here described, is one, for many years, made and sold by one of the undersigned, in which the kettle is cast whole, the body part A and the bottom part B together, but otherwise substantially as above represented.

Where there is nothing objectionable in the contact of the liquid or other contents of the vessel with the iron, this hollow-bottomed cast kettle answers every purpose of a steam-jacketed or bottomed kettle better perhaps than any other known to the public, being strong, safe, convenient in use, efficient in the application of steam, and comparatively inexpensive.

But where such contact is injurious, as it is in very many processes in the culinary, and in various manufacturing arts, it has been found unavailable, with any modification as yet applied to it; the principal difficulty being found in the fact that in the process of tinning, porcelain lining, and other like processes that had been employed for protecting the surface of the iron, the different parts are subject to materially different conditions, and as a consequence, to unequal expansion and contraction in the heating and cooling required.

The special object of our invention is to remedy this difficulty, and thus to make this peculiar form of vessel available with equal advantage, for all the purposes of a steam-jacketed kettle.

This object we accomplish, simply by making the body or sides A, and the hollow bottom B, in the first instance, separate, thus allowing the former to be made of any thin or sheet-metal, or other material, not liable to be corroded, as for example, of wood, as already suggested, while the latter, presenting a comparatively small surface, over an equal or very nearly equal thickness of metal, and subject to uniform conditions throughout, under the operations above indicated, may be readily subjected to any of these processes for protecting it against corrosion.

Whether for the special purpose above indicated, or any other, we are not aware that this method of forming a hollow-bottomed kettle, by making the body part separate from the hollow bottom, and putting them together in the manner here described, has ever before been known or used.

What therefore we claim, and desire to secure by Letters Patent, is—

1. The combination, for the purpose of forming a kettle for boiling by steam, of a hollow cast bottom, fitted to receive and contain steam, with a body or sides of sheet-metal, or other thin metal, formed separately, and fitted and put together, substantially as herein described.

2. The combination, for a like purpose, of such a hollow cast bottom, having its upper surface tinned, or otherwise protected against corrosion, by the chemi-

cal action of the contents of the vessel, with a body or sides formed of sheet-metal, or other material, of a kind not liable to be so corroded.

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Witnesses:

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