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Z. E. FOBES.

Improvement in Alloy for Lining Water Coolers, Tanks, etc.

No. 122,716.

Patented Jan. 16, 1872.

FIG. 1

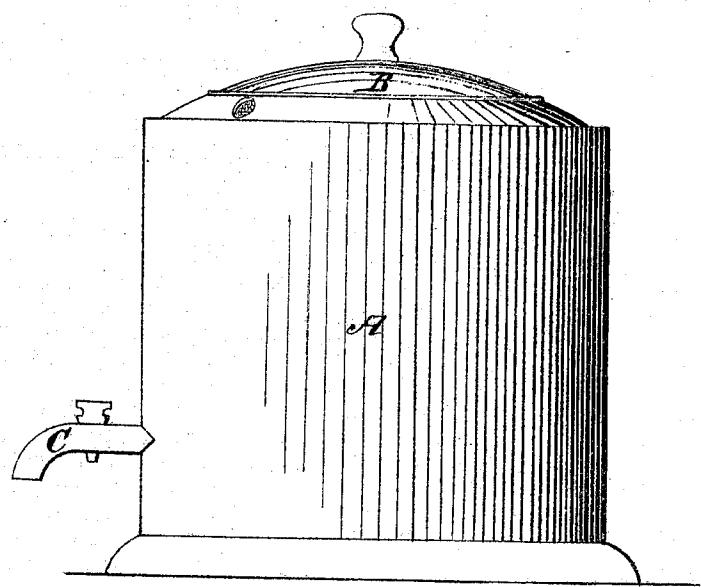
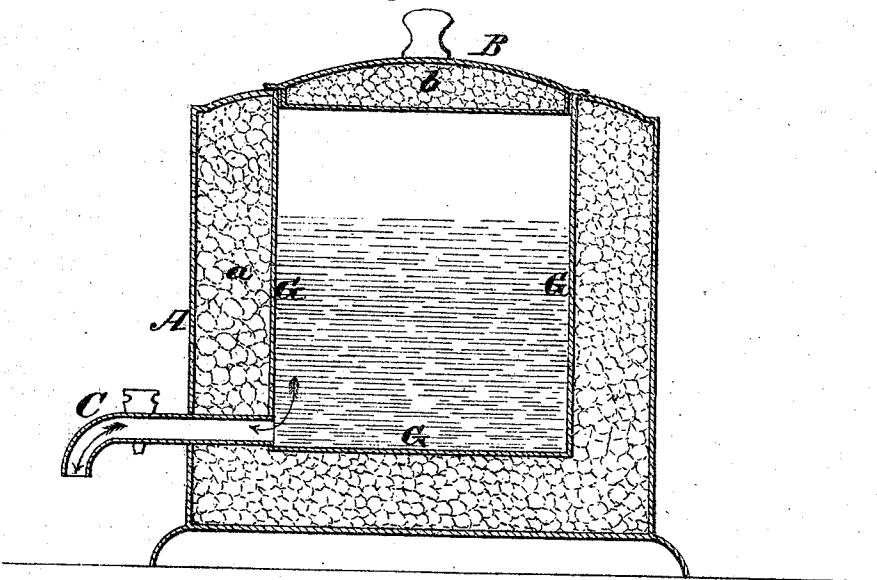


FIG. 2



Witnesses:  
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Inventor  
Z. E. Fobes  
by  
Marion, Faustelle & Lawrence

## UNITED STATES PATENT OFFICE.

ZEBINA E. FOBES, OF TROY, NEW YORK, ASSIGNOR TO HIMSELF AND HENRY PATCHIN, OF BENNINGTON, VERMONT.

## IMPROVEMENT IN ALLOYS FOR LINING WATER-COOLERS, TANKS, &amp;c.

Specification forming part of Letters Patent No. 122,716, dated January 16, 1872.

*To all whom it may concern:*

Be it known that I, ZEBINA E. FOBES, of Troy, in the county of Rensselaer and State of New York, have invented an Improvement for Preserving Water Pure in Metallic Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is an external view of a water-cooler improved. Fig. 2 is a diametrical section through the same.

Similar letters of reference indicate corresponding parts in both figures.

The object of this invention is to preserve water for drinking purposes in metallic vessels without its becoming contaminated with poisonous metallic salts, such as the salts of lead, zinc, tin, copper, and other metals usually employed in the construction of portable water-receptacles.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawing, I have represented my invention applied to a water-cooler as a lining for the same; but it will be obvious from what follows that the invention is equally applicable to all known varieties of portable vessels designed for containing water for drinking purposes. The vessel shown in the drawing consists of an outer wall, A, an inner wall, G, with an interposed material, *a*, of cork or other poor conductor of heat and cold. The cover B is also of two walls with a non-conducting filling. C is a draw-off cock.

The general form and construction of this cooler do not differ from coolers which are at present in use. It is represented merely as one

useful form of water-vessel to which my invention is applicable.

The lining G, as well as the internal plate of the cover B, are composed of an alloy of two metals, (zinc and tin,) both of which communicate to water more or less poisonous properties when separately exposed to the oxidation of the acids contained in the water; but it has been found after thorough tests that these two metals, zinc and tin, when combined in the proportions of about (8) eight parts of the former and (2) two parts of the latter, as will be presently explained, will not oxidize when subjected to drinkable water, nor even when the water is perceptibly acid.

The zinc is first melted in a reverberatory-furnace and run into slabs or ingots, which are rolled down to the proper thickness. The tin is also melted and rolled into sheets to the proper thickness, as above proportioned. Each sheet of zinc is then inserted between two sheets of tin and the sheets are passed between rollers, which thoroughly amalgamate the zinc and tin and reduce the same to sheets of the proper thicknesses. The sheets thus formed are worked up into vessels for containing water, or into linings for such vessels, and will not oxidize under ordinary circumstances.

I do not claim, broadly, an alloy composed of zinc and tin as this is not new.

What I do claim as new, and desire to secure by Letters Patent, is—

Portable vessels for containing water or other alimentary liquids, composed in whole or in part of zinc and tin, combined in about the proportions set forth.

Witnesses: ZEBINA E. FOBES.

N. DAVENPORT,  
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