

# UNITED STATES PATENT OFFICE.

LOUIS N. WILBUR AND ALBERT TYLER, OF FITCHBURG, MASSACHUSETTS.

## IMPROVEMENT IN LINING METAL ICE-PITCHERS.

Specification forming part of Letters Patent No. 128,690, dated July 2, 1872.

*To all whom it may concern:*

Be it known that we, LOUIS N. WILBUR and ALBERT TYLER, both of Fitchburg, in the county of Worcester and State of Massachusetts, have invented an Improvement in Lining Metal Ice-Pitchers and other Vessels; and we do hereby declare that the following is a description of our invention sufficient to enable those skilled in the art to practice it.

In the manufacture of metal ice-pitchers it is always the practice, so far as we know, to have a metal inner surface, and in the use of such pitchers it is customary to keep them supplied with water, by which practice the taste of the water is more or less impaired or changed, and, what is of more consequence, the quality of the water is often seriously deteriorated. It is with particular reference to the correction of this defect in metal ice-pitchers that we have made our invention; but the invention is also particularly applicable to all metal and liquid-containing vessels used for drinking purposes or for containing liquids to be drunk. Our invention consists in lining such vessels with a hard-rubber composition, the rubber composition being directly vulcanized to the metal inner surface of the vessel to be lined by the action of heat and pressure.

In practicing the invention we take the vessel to be lined, (which, with the exception of applying the lining, may be finished,) and spread over the inner surface sheets, strips, or pieces of properly-prepared rubber. We then introduce into the vessel a die or plunger, the outer surface of which is of the shape to be imparted to the inner surface of the vessel, or the surface which the inner coating of the ves-

sel will have when the vessel is finished, the said outer surface of the die or plunger nearly corresponding to the inner surface of the metal, or to such approximation thereto as shall leave between the inner surface of the metal and the outer surface of the plunger a thin section of the rubber compound, the plunger being introduced into the vessel or forced against the rubber compound by pressure, and such pressure and the action of heat being continued until the composition, having first become semi-liquid and homogeneous, is subsequently brought to a sufficiently hard or vulcanized condition. The plunger is then withdrawn, leaving upon the inner surface of the vessel a thin skin or lining, of one perfect or unbroken surface, and irremovably attached to the metal. Such surface not only forms an impervious lining which will not break, crack, leak, or tarnish, but also makes a lining which cannot impair by exposure or by use, and which imparts no change of any kind to liquid contained in the vessel.

The cost of thus lining ice-pitchers and other vessels is not great, and the lining is superior both as to its being impervious, with no joints susceptible of leakage, and as to its being free from deleterious action upon liquids contained within it.

We claim—

The improvement in lining metal ice-pitchers and other metal vessels for containing liquid, substantially as described.

LOUIS N. WILBUR.  
ALBERT TYLER.

Witnesses:

JAMES P. DERBY,  
F. E. CLEAVER.