

UNITED STATES PATENT OFFICE.

THOS. HODGSON, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND
W. E. DOUBLEDAY, OF SAME PLACE.

IMPROVED COMPOSITION FOR LINING LEAD PIPES AND OTHER PURPOSES.

Specification forming part of Letters Patent No. **39,615**, dated August 18, 1863; antedated
May 12, 1862.

To all whom it may concern:

Be it known that I, THOMAS HODGSON, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Compound for Coating the Interiors of Lead and other Metallic Pipes and Cisterns; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of this invention is to obtain a cheap coating for the interior of lead and other metallic pipes or cisterns for conveying or containing water for drinking or culinary purposes which shall at the same time be innocuous in itself, protect the water from the metal of the pipe or cistern, and preserve the pipe; and to this end the invention consists in a composition of beeswax, resin, (colophony,) carbon, and silicic acid. The carbon which I prefer to use is either bituminous (coke) or anthracite. The silicic acid may be obtained in the form of sand. The carbon and silicic acid are to be separately ground to fine powder previous to use. The proportions of the several ingredients and the method of compounding them are as follows: Take of beeswax two (2) pounds; resin, five (5) pounds; carbon, half ($\frac{1}{2}$) a pound; silicic acid, half ($\frac{1}{2}$) a pound. First break the beeswax and resin in small pieces and put them into a suitable pan or vessel, which is placed in a water-bath over a fire, and stir them until they are melted and thoroughly mingled together. Then add the carbon and silicic acid, and stir them well into the mixture till the whole is thoroughly incorporated, when it is fit for use.

To apply the mixture to the interior of a pipe there should be provided for warming the pipe an oblong box of, say, from four to eight feet long, one foot wide, and from fifteen to eighteen inches deep, filled with dry sand, and heated by a fire below or by other suitable means, and the pipe should be bent near the end at which the coating is to be first applied in such manner as to allow it to be em-

bedded in the sand with the aforesaid end a few inches above the surface thereof. The hot mixture should then be poured with a ladle or other utensil into the mouth of the aforesaid end, and the whole length of the pipe should be drawn in a bent form through the hot sand, by which means the fluid mixture is caused to run along the pipe toward its opposite end, from which the surplus may be poured back into the melting pan or vessel. The pipe is fit for use as soon as it is cool.

In applying the compound to a cistern there is not the same necessity for warming the vessel, as the application may be made to every part of the surface by a brush without difficulty.

I have found by experiment that any vessel coated with the said compound will contain water for a very long period sweet and pure and free from that peculiar green vegetation so common to stagnant water. The compound is so indestructible that, except in the slight discharge of coloring-matter, it is not affected by the strongest acids, and, owing to the presence in it of the carbon and silicic acid, it has a strong attraction for inorganic matter that may be suspended or held in solution in the water.

The composition may be also used as a coating for roofs.

I do not limit myself to the use of the precise proportions herein specified of the several ingredients, as they may be considerably varied without materially deteriorating the composition; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The composition, for the purposes set forth, composed of the several ingredients herein specified, combined substantially as herein described.

T. HODGSON.

Witnesses:

M. M. LIVINGSTON,
WM. E. DOUBLEDAY.