

# UNITED STATES PATENT OFFICE.

WILLIAM H. HAIGHT AND THOMAS S. GLADDING, OF LEAVENWORTH, KANS.

## IMPROVEMENT IN COMPOSITIONS FOR DRAIN-PIPES.

Specification forming part of Letters Patent No. **161,084**, dated June 8, 1875; application filed May 17, 1875.

*To all whom it may concern:*

Be it known that we, WILLIAM H. HAIGHT and THOMAS S. GLADDING, of the city of Leavenworth, county of Leavenworth and State of Kansas, have invented a Metallic Composition, of which the following is a specification:

The nature of the invention of the said HAIGHT and GLADDING consists in mixing oxide of iron, plaster-paris, brimstone, coal-tar, distillate of crude coal-oil, and sand and gravel, in the following proportions, to wit: To twenty-five gallons coal-tar and twenty-five gallons distillate reduced to a hard pitch, add twenty-five pounds oxide of iron, twenty pounds of brimstone, fifteen pounds of plaster-paris, dry sand and gravel, equal parts, sufficient to make the proper consistency. Boil the coal-tar and distillate pitch, and to this gradually add the other ingredients, continually stirring to make a thorough mixture. When a small quantity will harden under a heat of 110° the compound is ready for use.

This invention is intended especially as a

substitute for other materials in the manufacture of drain-pipes for sewerage purposes, water-pipes, mains for gas, and such purposes as clay, concrete, or iron pipes are used; also, for the manufacture of caps for fire-walls of buildings; also, for street-paving and sidewalks.

We claim for our material strength, elasticity, extreme durability, power to resist heat and cold, that it can be easily molded or laid in any shape and adapted to suit the purposes mentioned.

We claim as our invention—

A compound composed of oxide of iron, plaster-of-paris, brimstone, coal-tar, distillate of coal-oil, and sand and gravel, substantially in the proportions and for the purposes above set forth.

W. H. HAIGHT.  
THOMAS S. GLADDING.

Witnesses:

A. J. THOMPSON,  
G. W. BARKER.