## UNITED STATES PATENT OFFICE.

ALONZO J. SIMMONS, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN PACKINGS FOR STEAM-ENGINES, GAS-PIPES, WATER-PIPES, &c.

Specification forming part of Letters Patent No. 120,003, dated October 17, 1871.

To all whom it may concern:

Be it known that I, Alonzo J. Simmons, of Indianapolis, county of Marion and State of Indiana, have invented certain Improvements in Steam, Hydraulic, and Gas-Packing, of which the

following is a specification:

The object of this invention is to make a packing which, while very cheap and durable, is efficient as a steam, hydraulic or gas-packing. The nature of the invention consists in manufacturing or preparing a compound of sawdust, tallow, plumbago, and spermaceti for use in a steam, hydraulic, and gas-packing, as is hereinafter more

fully described and set forth.

To prepare my said packing take eight (8) parts sawdust, two (2) tallow, and (1) part spermaceti and heat or bake the same until the sawdust is well charred and thoroughly impregnated with the oils. While heating, the above compound should be well stirred in order that the sawdust may be evenly and well charred. After the sawdust is sufficiently charred or baked take two parts plumbago and mix it thoroughly with the other ingredients while they are still warm. When thoroughly mixed press the compound in any convenient press until nearly all of the oils are pressed out. It is then ready for use.

My said packing is to be used as any other ordinary packing. When used as a steam-pack-

ing, for which it is well adapted, it will be found upon trial that the action of the piston upon my said packing will form a perfectly smooth or enameled surface; therefore there is very little or no friction, and that it will prevent the escape of steam much more effectually than any other known packing. Also, that it is much more durable and easier to retain in its proper position, as after my said packing becomes well set it will retain its position and work effectually even after the compression of the gland has been removed. My said packing is especially adapted for use as gas-packing, as the chemical action of the ammonia, which is so injurious to ordinary packing, has but little or no effect upon its composition, and for that reason it is more durable and cheaper than ordinary packing.

I claim as my invention, and desire to secure

by Letters Patent-

The manufacture or preparation of a compound to be used as steam, hydraulic, or gas-packing, of the ingredients in the proportions, and for the purposes set forth.

In testimony that I claim the foregoing as mine I hereto set my hand this 20th day of July, 1871.

ALONZO J. SIMMONS.

Witnesses:

GEO. H. SEIGLER,

D. C. DONNELLAN.

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