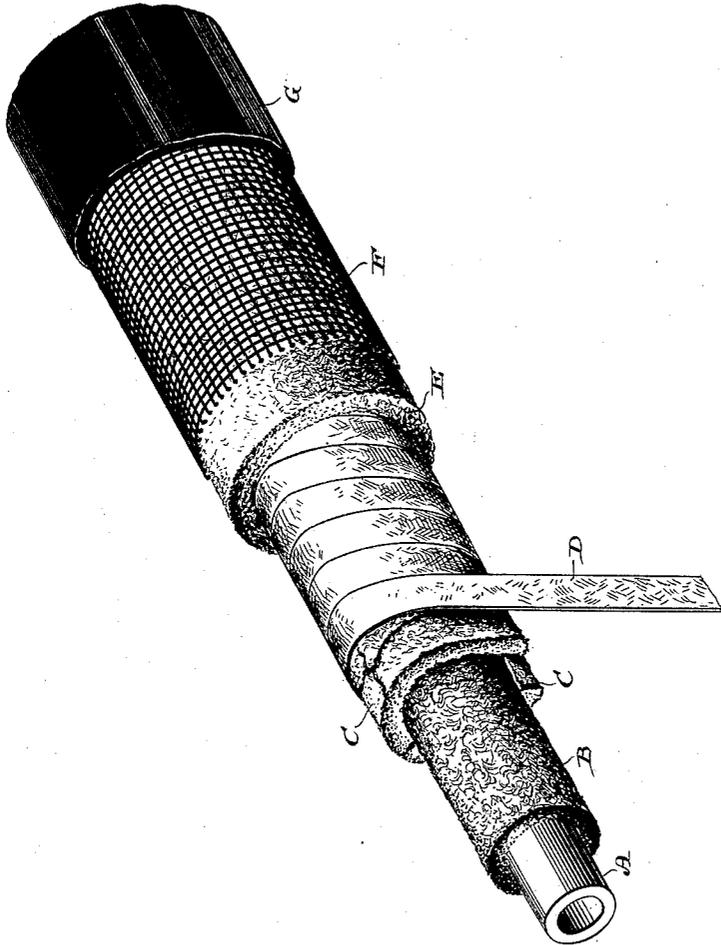


(No Model.)

C. B. MANVILLE.
PIPE COVERING.

No. 465,701.

Patented Dec. 22, 1891.



Witnesses
Geo W. Young
Anna Faust

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UNITED STATES PATENT OFFICE.

CHARLES B. MANVILLE, OF MILWAUKEE, WISCONSIN.

PIPE-COVERING.

SPECIFICATION forming part of Letters Patent No. 465,701, dated December 22, 1891.

Application filed August 11, 1890. Serial No. 361,655. (No specimens.)

To all whom it may concern:

Be it known that I, CHARLES B. MANVILLE, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Pipe-Coverings, of which the following is a description, reference being had to the accompanying drawing, which is a part of this specification.

My invention relates to a covering particularly adapted for enveloping steam-boilers, steam-pipes, or hot-blast pipes to prevent the radiation of heat therefrom.

The single drawing accompanying this specification represents a pipe with my improved covering, the layers of the covering being severally broken away so as to show the construction of interior portions.

A is a pipe adapted for carrying steam or for hot-blast use.

B is the first or inner layer or coat of my covering.

C is the second layer or coat of my covering.

D is a strip of cloth wound about the second layer of the covering to secure it permanently on the pipe.

E is a third layer or coat, which is used only in connection with hot-blast pipes, as the two inner coverings are quite sufficient alone with steam-pipes.

F is a wire or metal screen drawn about the covering on the outside to retain it permanently in place, this metal wire or screen being required and used only in case of the covering of hot-blast pipes.

G is a thin outside finishing-coat over the wire or screen, and in case only two main coats of the covering material are used with a cloth bandage around them, then a similar finishing-coat is put on over the cloth bandage.

The main or principal material which I use in the construction of my covering is graphite or plumbago in a pulverized form. I also use some clay, wool-shoddy dust, and a small amount of dextrine or glue mingled with the graphite for a body or binding material. The clay and dextrine or glue are preferably used in the composition; but graphite with proper binding material, as wool shoddy or wool-shoddy dust, can be used alone if properly secured to the protected pipe or boiler. The composition of the inner or first coat is made

up of the materials and preferably in about the proportions following: pulverized graphite, two barrels; pulverized clay, one barrel; dextrine or glue, one-half pound; wool-shoddy dust, one hundred pounds. For the second coat the composition includes the same material as in the composition for the first coat, but in the following proportions: pulverized graphite, one barrel; pulverized clay, one barrel; dextrine or glue, two pounds; wool-shoddy dust, four hundred pounds. When a third coating is put on, which is only necessary on hot-blast pipes, I use the same materials and in the same proportions as for the first coat.

The materials mentioned for the covering are prepared by thoroughly mixing them together, adding sufficient water to make the mass somewhat plastic, and in such condition the material is applied first to the surface of the pipe in sufficient quantity to form a layer of such thickness about the pipe as is desired. This coat will dry or set in a comparatively short time when the second coat, prepared in a similar manner, is put on, which second coat is preferably covered by winding about it in spiral form a strip of cloth D to secure the mass of material permanently about the pipe. With steam-pipes two coats of this material put on and secured in the manner described are all that is required to properly cover the pipe and prevent radiation of heat therefrom; but in hot-blast pipes, where the heat is so great as to raise the pipe itself to a red heat, I add a third and outer coat prepared in substantially the manner hereinbefore described, which is secured in place by wire or wire screen placed about the covering and secured thereto, so as to retain the covering in place on the pipe.

A thin outer finishing coat G, of the same material as is used for the first coat, is put on over the cloth bandage. When in case of steam-pipes or boilers two main coats only of the covering are used and when on hot-blast pipes three main coats and a wire or metal screen bandage are put on, a similar finishing coat is put over the wire or screen. In covering hot-blast pipes the cloth bandage over the second coat is omitted.

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

1. A composition of matter for pipe and boiler covering, consisting of graphite, clay, wool-shoddy dust, with glue or dextrine, combined in the proportions and manner substantially as described. 5
2. In a composition of matter for pipe and boiler covering, the combination of graphite, wool-shoddy dust, and glue or dextrine, in the proportions and manner substantially as described. 10

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES B. MANVILLE.

Witnesses:

C. T. BENEDICT,
ANNA FAUST.