

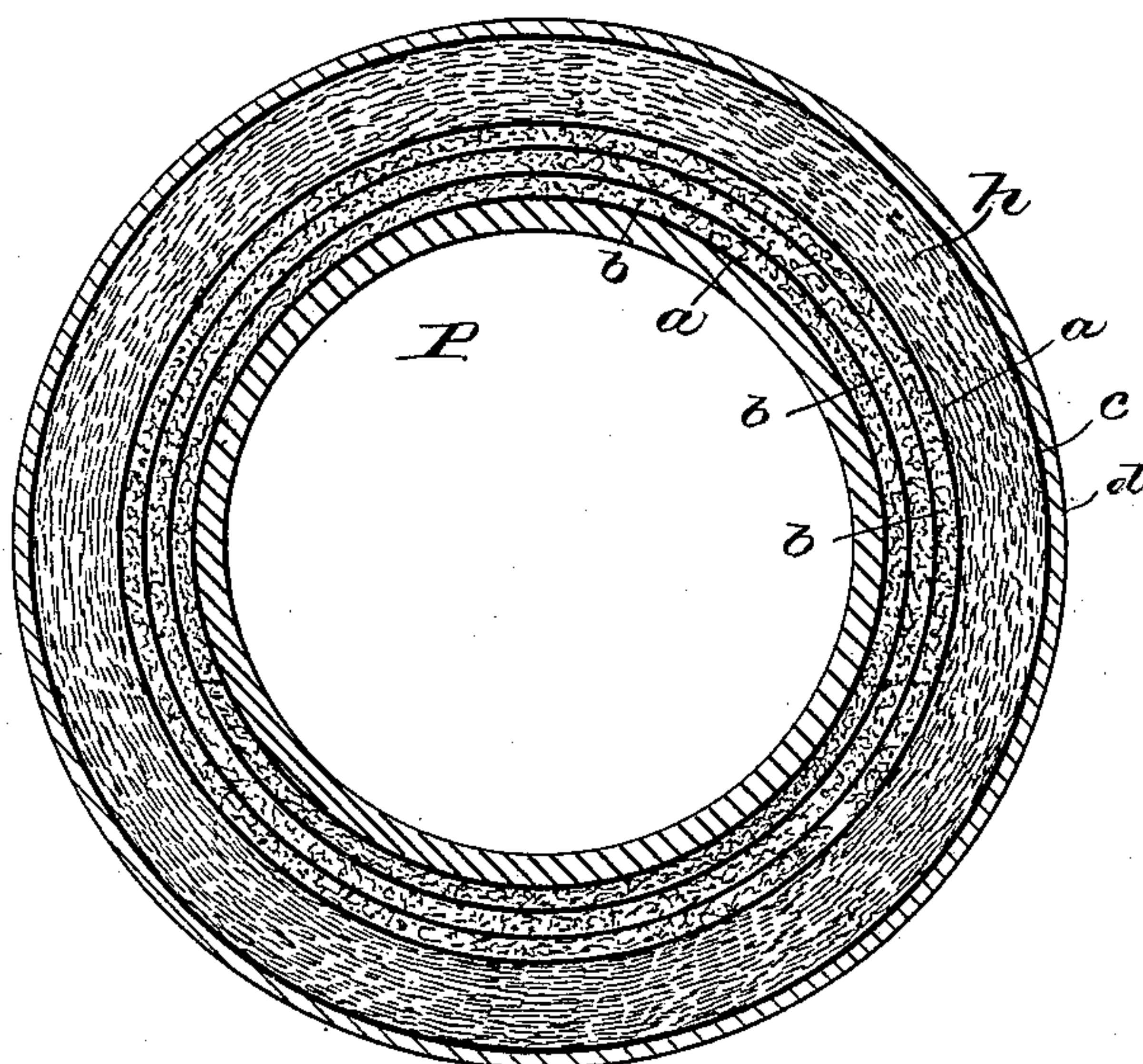
(No Model.)

H. M. SMALL.

COVERING FOR PIPES, BOILERS, &c.

No. 353,981.

Patented Dec. 7, 1886.



Witnesses,

John F. C. Prinkesh

Thos L. Emery.

Inventor,

Herbert M. Small

by Crosby & Gregory attys.

UNITED STATES PATENT OFFICE.

HERBERT M. SMALL, OF BALDWINSVILLE, MASSACHUSETTS.

COVERING FOR PIPES, BOILERS, &c.

SPECIFICATION forming part of Letters Patent No. 353,981, dated December 7, 1886.

Application filed April 30, 1886. Serial No. 200,658. (No model.)

To all whom it may concern:

Be it known that I, HERBERT M. SMALL, of Baldwinsville, county of Worcester, and State of Massachusetts, have invented an Improvement in Coverings for Pipes, Boilers, &c., of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

10 This invention has for its object to provide a serviceable covering to protect steam and other pipes or articles containing gases or fluids, to prevent loss of heat by radiation.

My improved covering is composed, essentially, of one or more layers of sponge felt combined with one or more layers of asbestos. These layers may have incorporated with them, if desired, one or more layers of hair felt and one or more layers of paper, the latter being employed chiefly as an external finishing surface; but, if desired, this external paper surface may be protected externally by asbestos.

The drawing, in section, represents a covering embodying my invention, the covering being of suitable shape to surround a pipe which it is desired to protect.

In the drawing, P represents the pipe which it is desired to protect. Surrounding this pipe and next to it is a layer, *a*, of asbestos, prepared preferably as a paper; or it may be made from flocky asbestos, together with a suitable cementitious material, preferably silica. Outside of this layer is a layer or sheet of what is known as "sponge felt," the same consisting of paper or suitable pulp having mixed with it small pieces of sponge, substantially as described in United States Patent No. 130,222, to which reference may be had.

Herein I have shown four layers, *a*, of asbestos with three layers, *b*, of sponge felt. 40

Outside of the outermost layer, *a*, of asbestos I have placed a layer, *h*, of hair felt, of usual construction, and outside of the hair felt I have added a layer, *c*, of asbestos and a layer, *d*, of paper or paper-board. 45

The sponge felt may have incorporated with it either asbestos or asbestine, or infusorial earth, or other usual extender.

I have found the sponge felt *b* especially desirable as a covering for pipe, because the sponge holds the air, thus making the felt very porous and light, the air contained in the felt being a most effectual non-conductor of heat and cold. 50

I claim—

1. A covering for pipes, &c., it being composed of one or more layers of asbestos and of one or more layers of sponge felt, substantially as described. 55

2. A covering composed of one or more layers of asbestos and one or more layers of sponge felt, and a layer of hair felt, substantially as described. 60

3. A covering consisting of one or more layers of sponge felt, one or more layers of hair felt, and one or more layers of paper, substantially as described. 65

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERBERT M. SMALL.

Witnesses:

D. A. BROWN,
J. M. MOORE.