

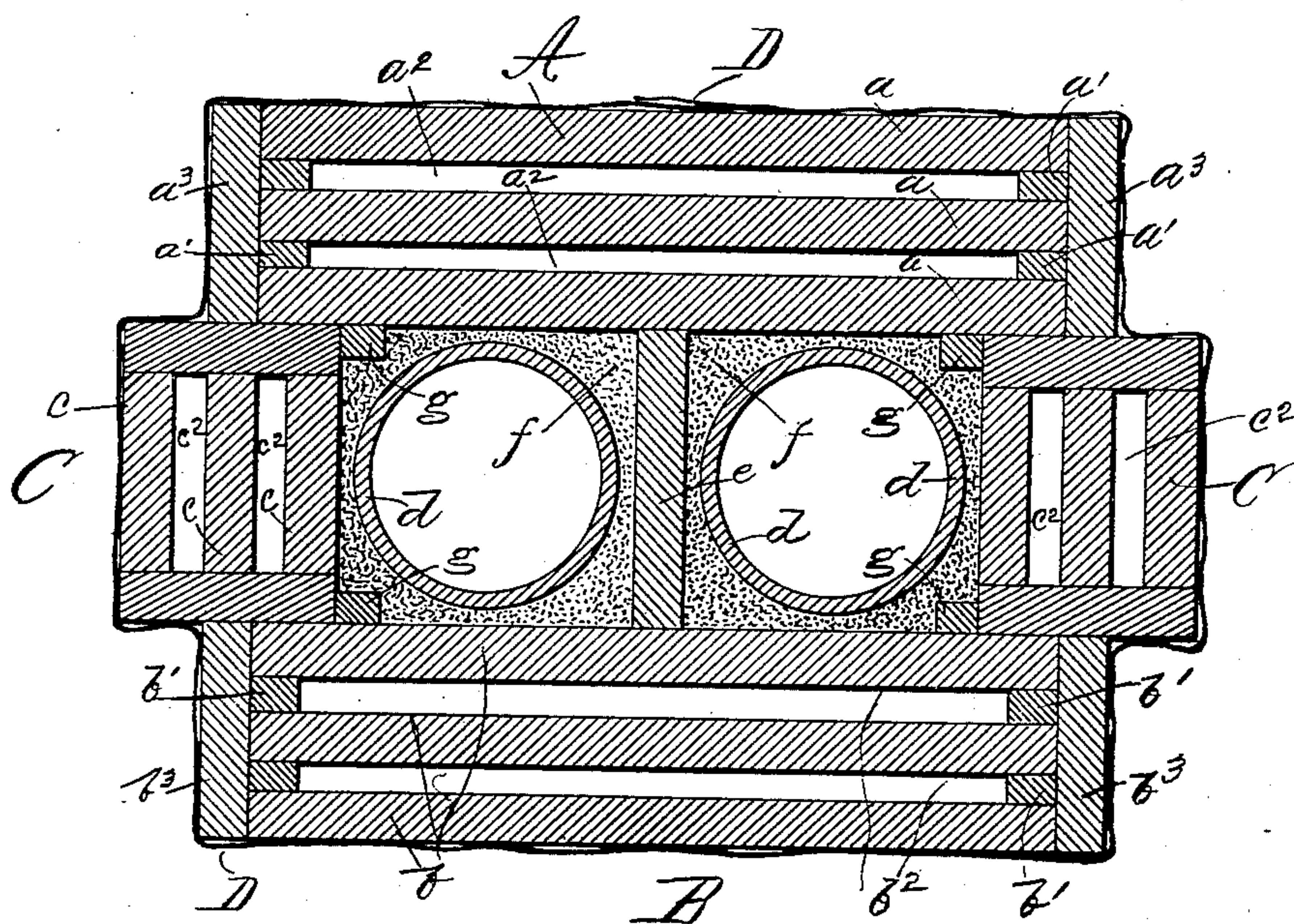
No. 677,109.

Patented June 25, 1901.

H. T. YARYAN.
HOT WATER PIPE CONDUIT.

(Application filed Mar. 25, 1901.)

(No Model.)



WITNESSES:

David C. Walter,
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UNITED STATES PATENT OFFICE.

HOMER T. YARYAN, OF TOLEDO, OHIO.

HOT-WATER-PIPE CONDUIT.

SPECIFICATION forming part of Letters Patent No. 677,109, dated June 25, 1901.

Application filed March 25, 1901. Serial No. 52,685. (No model.)

To all whom it may concern:

Be it known that I, HOMER T. YARYAN, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Hot-Water-Pipe Conduits; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms a part of this specification.

In distributing and circulating hot water in underground pipes over long distances for house-heating and other purposes a serious difficulty has been encountered in providing a conduit for the hot-water pipes which will prevent undue loss of heat by radiation, which will protect the pipes from external moisture, and which will not be excessively expensive. The ordinary jacketing and heat insulation for underground pipes is found to be so expensive for long distances as to almost preclude their use.

My invention relates to and its objects are to provide means for overcoming the difficulties and objections here indicated and to provide a conduit for underground hot-water pipes which shall be economical, durable, efficient, simple, and easily assembled, renewed, and repaired. I attain these objects by means of the devices and arrangement of parts hereinafter described, and shown and illustrated in the accompanying drawing, in which the single figure represents my conduit in transverse section with two hot-water pipes in place therein.

My conduit is composed of four distinct separable parts—to wit, the top A, the bottom B, and the sides C C. Each of these parts or sections is composed of three parallel boards $a\ b\ c\ c$, slightly separated by blocks or strips, as at $a'\ b'$, forming air-spaces $a^2\ b^2\ c^2$ between the middle board and the two outer ones. The three parallel boards of each of the sections are united at their margins by side pieces $a^3\ b^3\ c^3$. This side piece is of the width of the thickness of the section to which it belongs. Each of the sections is assembled by nailing its boards together.

While my invention is not of course limited to any dimension, I find in practice that the cheapest and most desirable construction is found in the use of lumber an inch thick separated by blocks or strips half an inch thick. The boards may be of any desired or convenient width and length.

My conduit is assembled and constructed as follows: In the bottom of the trench, which has been previously prepared, are placed sheets of stout tarred paper D. Upon this paper is placed horizontally the section B. The sides consisting of the sections C are placed with their three parallel pieces in vertical position upon the top margin of the bottom section, as shown. The pipe or pipes d are now placed upon the top of the bottom section between the two side sections. When there are two pipes, a board e the width of the two side sections is placed upon its edge midway between the two pipes, forming a longitudinal partition. A non-heat-conducting granular or fibrous substance is packed around the pipes, as at f , filling the chamber or hollow of the conduit. This substance may be of mineral wool, shavings, or the like. I find in practice that a bale of shavings treated with a mixture of one part of paraffin-oil and three parts of benzin, to prevent the absorption of moisture and decay, answers the purpose admirably. The top section, with its three parallel boards disposed horizontally, is now placed with its margins resting upon the side pieces and the partition-piece e . To facilitate the assembling of the parts and to retain them in proper relation, strips or blocks g are nailed to the top of the bottom section and to the bottom of the top section, forming stops for the inner faces of the side sections C. The margins of the sheets of tarred paper D are now brought together and caused to overlap on the top of the conduit. The earth is now returned to the trench and tamped in place and the work is complete.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A hot-water-pipe conduit, comprising a top section, a bottom section, and two side sections, each section consisting of a plurality of separated parallel boards, and boards at a right angle to and covering the margins of

the parallel boards whereby said sections are formed with interior air-spaces.

2. In a conduit for hot-water pipes, walls consisting of parallel separated boards having between them air-spaces and a covering therefor consisting of tarred paper.

3. In a conduit for hot-water pipes, a wall-section comprising three parallel boards, separating blocks or strips between the middle and outer boards, two boards covering the side margins of said three parallel boards, and means for securing said boards and separating members in fixed relation to each other.

4. A hot-water-pipe conduit, comprising four separable sections, to wit, a top section, a bottom section, and two side sections, said

sections having therethrough air-spaces, and a longitudinal partition between said two side sections.

5. In a hot-water-pipe conduit, four elongated hollow separable wood sections which form the bottom, top and sides of the conduit, a pipe in the interior of said conduit, and a packing of non-heat-conducting material around said pipe.

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

HOMER T. YARYAN.

Witnesses:

M. D. MERRICK,
L. E. BROWN.