

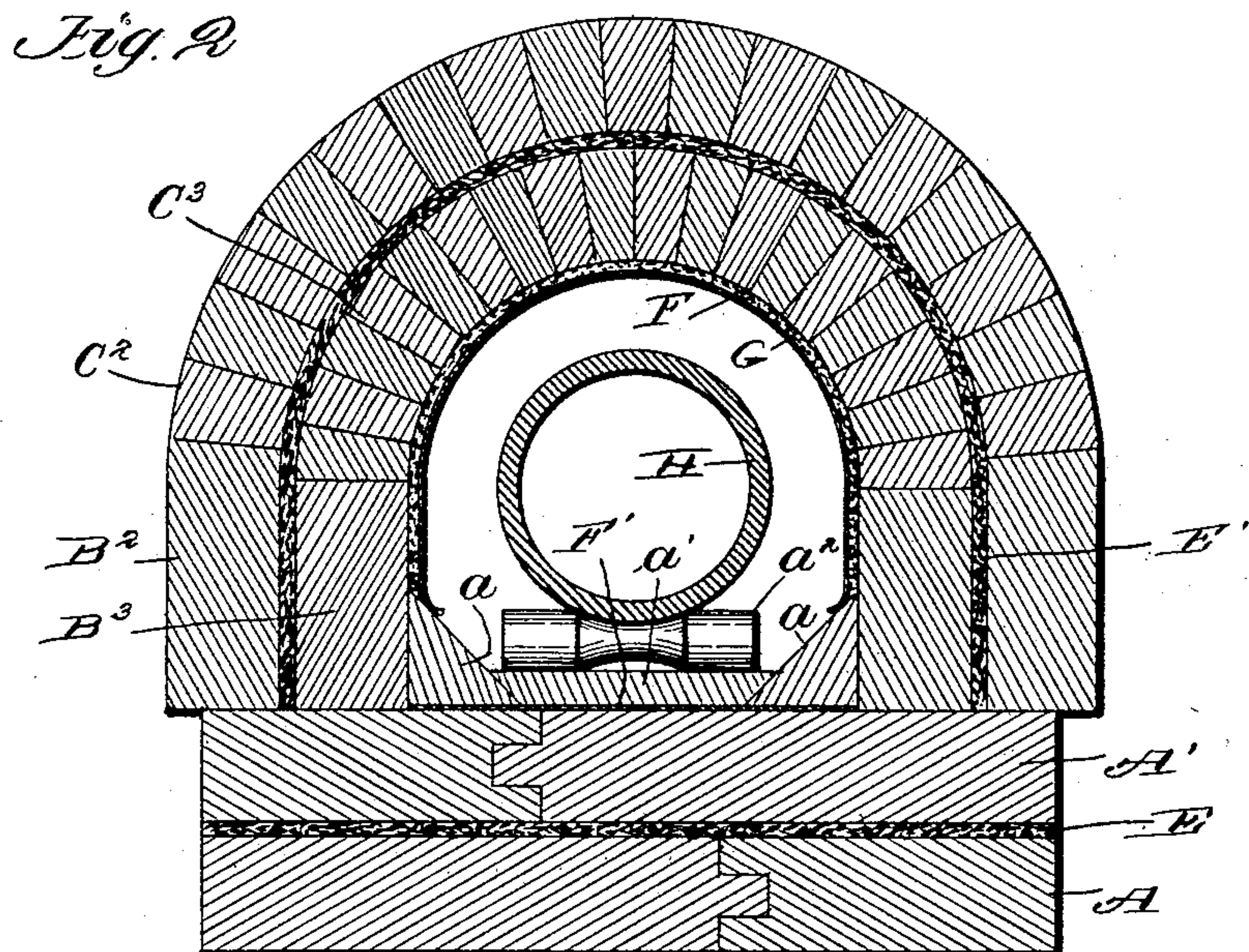
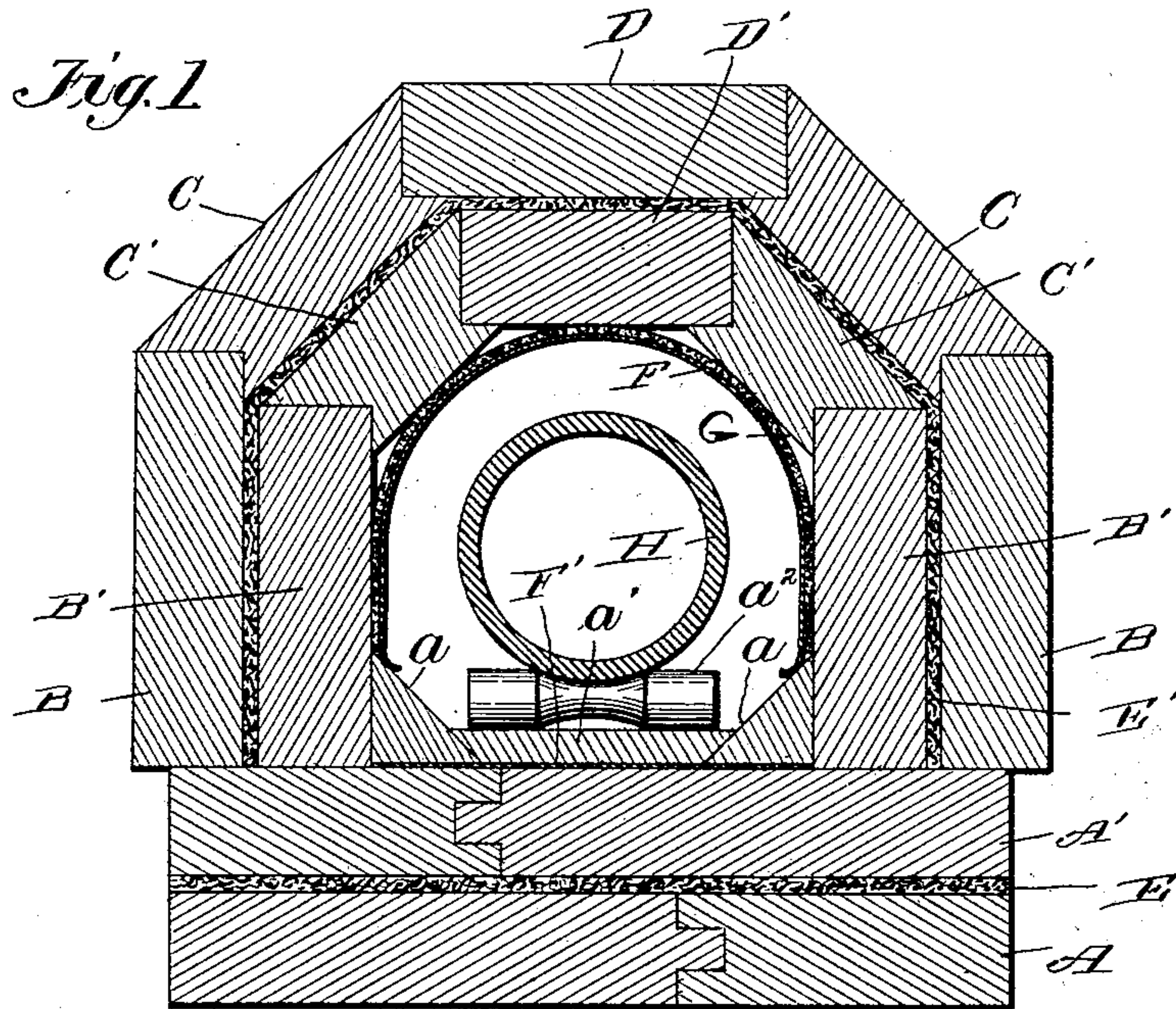
No. 702,991.

Patented June 24, 1902.

W. H. PEARCE.
COVERING FOR HEAT DISTRIBUTING MAINS.

(Application filed Jan. 23, 1902.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM H. PEARCE, OF CHICAGO, ILLINOIS.

COVERING FOR HEAT-DISTRIBUTING MAINS.

SPECIFICATION forming part of Letters Patent No. 702,991, dated June 24, 1902.

Application filed January 23, 1902. Serial No. 90,904. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PEARCE, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have
5 invented a certain new and useful Improvement in Coverings for Heat-Distributing Mains; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to
10 which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates in general to heat-distributing systems, and more particularly to a covering within which the service-pipes are located.

In systems for distributing heat in the form of steam, hot water, or hot air from a central
20 station or generating plant the heating medium is delivered to the different houses or other points of use through service pipes or mains located beneath the surface of the ground. In order to protect the main from
25 radiation and loss of heat as much as possible, the main is preferably inclosed in a lagging or covering, an air-space being left between the exterior surface of the main and the inner surface of the covering.

30 Heat-distributing mains have heretofore been provided with a protecting-covering of octagonal cross-section which has proved unsatisfactory in use, as its base is less in width than its horizontal diameter, and consequently
35 incapable of withstanding the downward strain to which it is subjected.

The object of my invention is to provide a covering or lagging for service-mains which will effectively protect the same, so as to minimize the radiation of heat, and which will be
40 of sufficient strength not only to support the weight of the superimposed earth, but also the weight of vehicles passing over the surface of the ground above the main.

45 A further object of my invention is to provide a covering for heat-distributing mains which will be simple and durable in construction, inexpensive in manufacture, and efficient in use.

50 My invention, generally stated, consists in a horizontal base, above which vertical side walls extend, an arched cover supported upon

the side walls, and suitable packing to prevent heat radiation interposed between sections of the base, side walls, and cover. 55

My invention will be more fully described hereinafter with reference to the accompanying drawings, in which the same is illustrated as embodied in two convenient and practical forms, and in which— 60

Figure 1 is a transverse sectional view through one embodiment of my invention, and Fig. 2 a similar section through a modified form of my improved covering for heat-distributing mains. 65

Similar reference characters are used to designate similar parts in the two figures of the drawings.

Referring particularly to Fig. 1, reference letters A and A' indicate the two parallel sections of the base, which is preferably horizontal and is provided with an interposed layer E of packing material—such, for instance, as woolfelt. The side walls, which are supported upon the upper surface of the section A' of the base, are preferably formed in two sections B and B', between which is placed any suitable packing material E'. Located between the adjacent faces of the upper section A' of the base and the inner sections B' of the side walls are reinforcing or strengthening strips a. 70 75 80

Supported upon the upper ends of the sections of the side walls are inwardly-inclined walls C and C', which, together with the horizontal top wall comprising sections D and D', constitute an arch-shaped cover. The sections C and C' of the inclined walls may be secured to the sections of the vertical side walls and the sections of the horizontal top in any suitable manner—such, for instance, as by right-angular grooves fitting the inner top edges of the sections of the side walls and the lower outer edges of the sections of the top. The packing material E is preferably extended between the sections C and C' of the inclined walls and between sections D and D' of the horizontal top. 85 90 95

The interior surface of the side walls and cover are preferably protected by means of the sheet of asbestos G, which may be lined with a sheet of tin or other metal F. The asbestos G and sheet metal F preferably rest upon the strengthening-strips a a. A sheet of metal (preferably tin) F' is located upon 100

the upper surface of the base and may extend beneath the strengthening-strips *a a*.

Referring to the modification of my invention illustrated in Fig. 2, reference-letters A and A' indicate the sections of the base, and letter E designates the interposed packing material. Reference characters B² and B³ indicate the sections of the vertical side walls, which rest upon the upper surface of the base and which support the arched cover, which is shown as comprising two layers C² and C³ of wedge-shaped strips, so arranged as to approximately form a semicircle. E' indicates interposed packing material, which preferably extends between the sections B² and B³ of the vertical side walls and also between the sections C² and C³ of the arched cover. Strengthening-strips *a a* may be provided, as in Fig. 1, and interior lining material, such as asbestos G and sheet metal F, may be employed, as well as a metallic lining F', upon the upper surface of the base.

The main H is preferably supported within the covering by means of rollers *a*². These rollers are formed concave at the point where they engage the main and are mounted upon a wear-plate *a'*, interposed between the same and the upper interior surface of the base. The wear-plate *a'* preferably engages the strengthening-strips *a a* at either side and is thereby retained in proper position beneath the main. The rollers *a*², while constituting a substantial support for the main, permit the same to move relatively to the covering when changes in temperature cause the main to expand and contract.

From the foregoing description it will be obvious that I have devised an improved covering or lagging for protecting heat-distributing mains which possesses the requisite strength to withstand a strain to which the covering is necessarily subjected owing to the weight of the earth above the same and the weight of passing vehicles and which is also well adapted to reduce to a minimum the loss of heat through radiation.

While I have described more or less precisely the details of construction, I do not wish to be understood as limiting myself thereto, as I contemplate changes in form, the proportion of parts, and the substitution of equivalents, as circumstances may suggest or render expedient, without departing from the spirit of my invention.

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

1. In a covering for heat-distributing mains, the combination with a horizontal base, of vertical side walls resting upon said base, an arched cover supported by said side walls, a lining of asbestos on the inner surface of said side walls and cover, and a sheet-metal covering on the upper surface of said base and on the inner surface of said asbestos lining, substantially as described.

2. In a covering for heat-distributing mains, the combination with a horizontal base, of vertical side walls resting upon said base, an arched cover supported by said side walls, said base, side walls and cover comprising parallel sections, packing material interposed between said sections, a lining of asbestos on the inner surface of said side walls and cover, and a sheet-metal covering on the upper surface of said base and on the inner surface of said asbestos lining, substantially as described.

3. In a covering for heat-distributing mains, the combination with a horizontal base, of vertical side walls resting upon said base, an arched cover supported by said side walls, said base, side walls and cover comprising parallel sections, packing material interposed between said sections, strengthening-strips engaging the adjacent surfaces of said base and side walls, a lining of asbestos on the inner surface of said side walls and cover, and a sheet-metal covering extended from said strengthening-strips around the inner surface of said asbestos lining, substantially as described.

4. In a covering for heat-distributing mains, the combination with a horizontal base, of vertical side walls resting upon said base, an arched cover supported by said side walls, strengthening-strips engaging the adjacent surfaces of said base and side walls, a wear-plate resting upon said base and engaging at its sides said strengthening-strips, and rollers for supporting said main mounted upon said wear-plate.

In testimony whereof I sign this specification in the presence of two witnesses.

W. H. PEARCE.

Witnesses:

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