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1,961,824

MOLDED ARTICLE

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Fig. 1

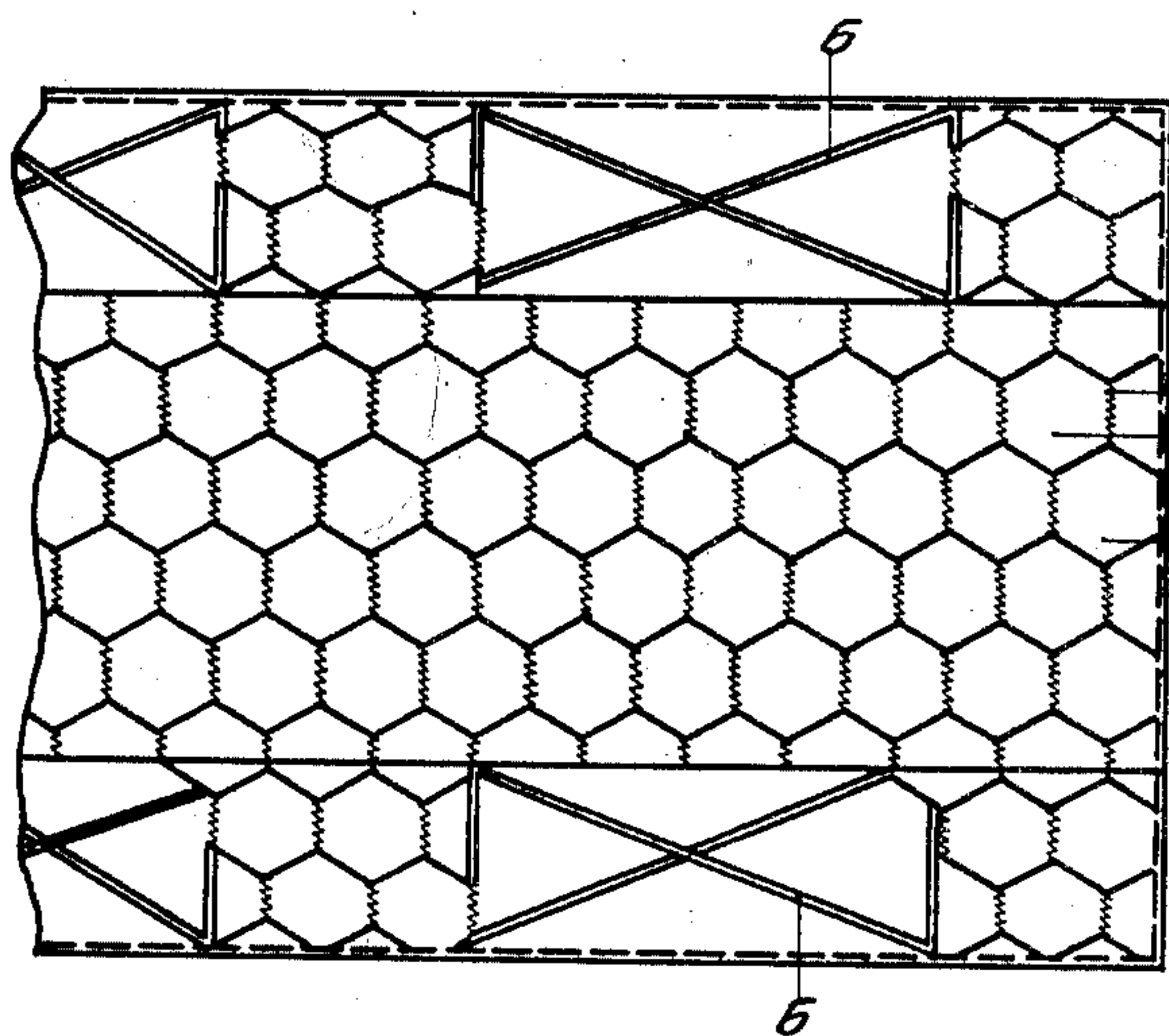


Fig. 2

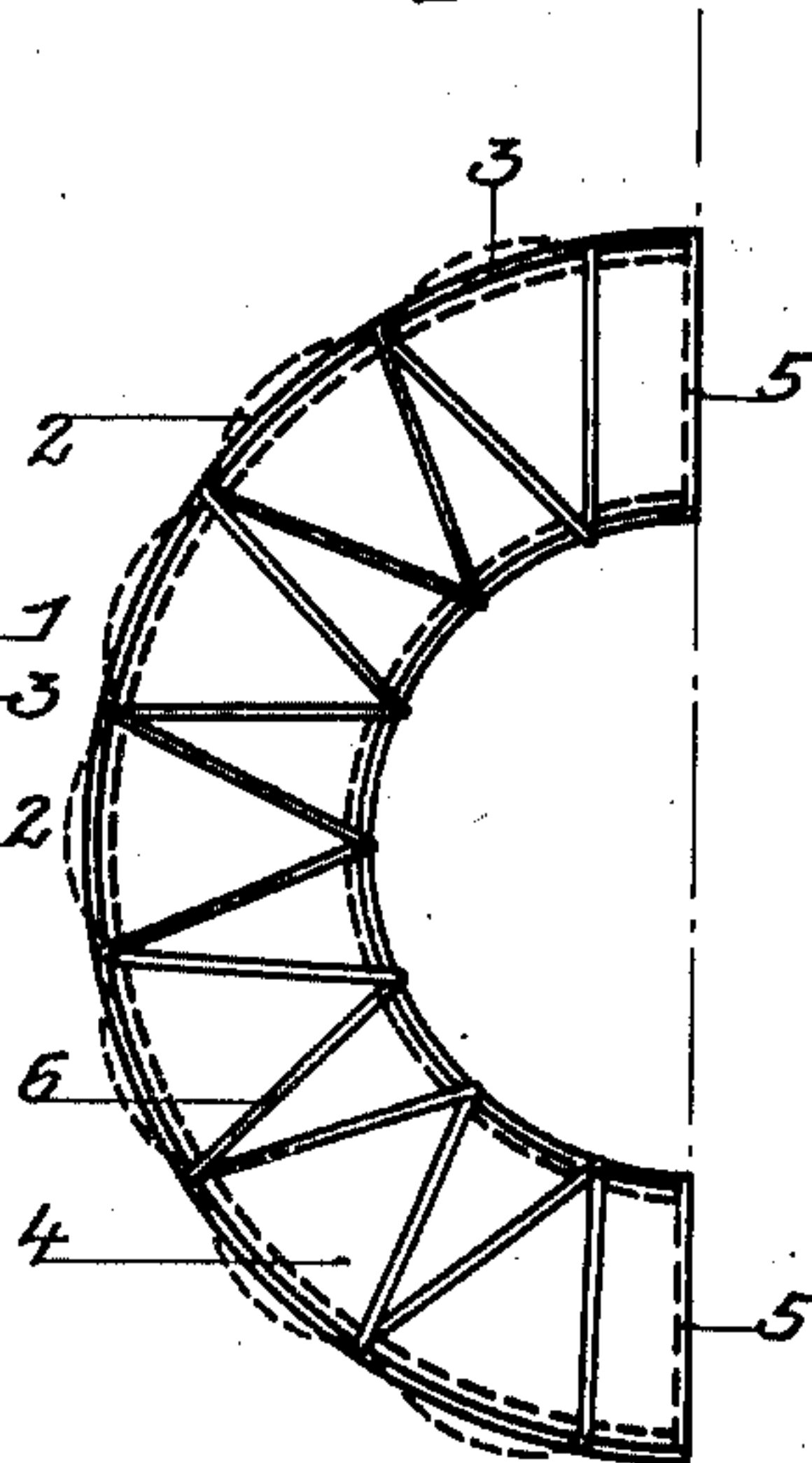
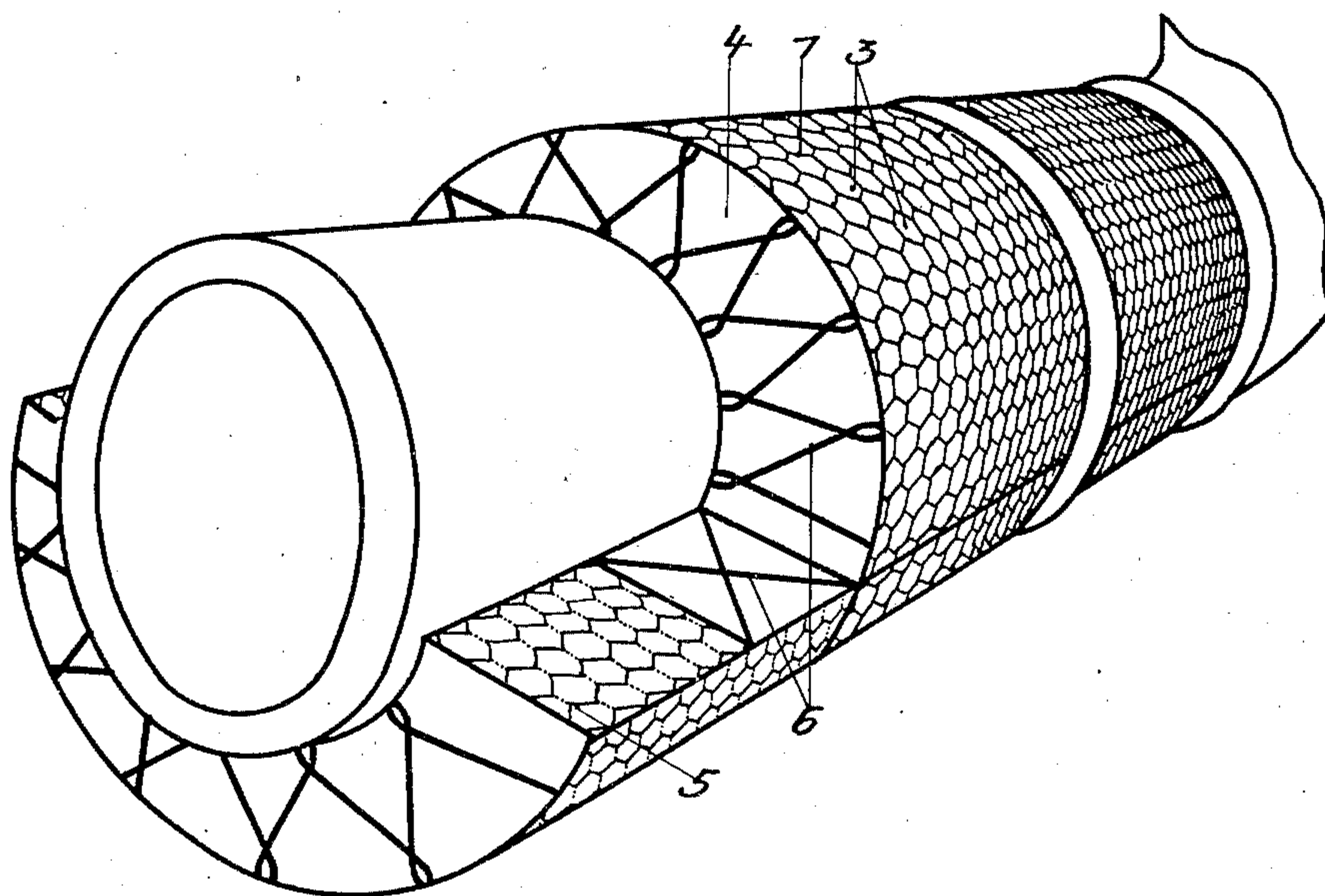


Fig. 3



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UNITED STATES PATENT OFFICE

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MOLDED ARTICLE

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4 Claims. (Cl. 154—45)

This invention relates to molded insulating articles which are used particularly for preventing losses of heat or cold and which adapt themselves to the object to be insulated.

5 Molded articles of this class are often formed like a segment of a basin or the like. The employment of mineral wool or spun glass for insulating purposes is well known, the substances being applied to the objects to be insulated according to the dry process, and the density of application and thus the insulating effect depending entirely on the skill of the operator. This method requires furthermore much time.

15 Insulations consisting of finished basins are known also. They consist of wire netting and are filled with the substances mentioned above. Although special skill of the operators is not required in their manufacture, these articles have poor insulating properties, and the fillers are not protected against moisture and stray vapors which may destroy them. The poor insulating properties are due to the fact that the fillers are stuffed into the wire frames in long-fibred form so as to prevent them from protruding through the netting. Moreover, the wire frame is a good conductor and in direct communication with the heat-conducting surface of the object to be insulated, so that a considerable amount of heat is carried off from the front and side surfaces and in the joints between the insulating bodies.

25 According to the invention, these drawbacks are eliminated by interposing between the filler and the wire netting a metal foil. The wire netting pressing against the foil provides air cells under the foil formed by the meshes of the wire netting, so that short-fibred insulating fillers might be used also. The invention proposes further to employ lacings of yarn that is a poor conductor for holding the fillers and the foil together.

40 By way of example, the invention is illustrated in the accompanying drawing, in which Figure 1 is a top view of one-half of a basin of the type mentioned; Fig. 2, a side view thereof; and Fig. 3, a diagrammatic view of a molded insulating article placed around a pipe.

55 Referring to the drawing, the molded article consists in the main of the wire frame 1 between which and the filler a metal foil 2 is interposed which surrounds the filler and forms the air cells 3 by means of the meshes of the wire netting so as to improve the insulating effect. The metal foil has the effect that the escaping radiated heat is reflected back, and the air cells partly prevent the escape of the heat of conduction. Stationary air layers have an insulating effect. The fillers

are held by the foil and also protected thereby against moisture and stray vapors.

To prevent losses of heat due to the connection of the wire frame on its front faces 4 and side faces 5 with the bare heat-conducting surface, or to reduce them to a minimum at least, the surfaces 4 and 5 are partly covered with the yarn 6, which is a poor conductor and may consist, for example, of asbestos.

The molded article thus produced has absolutely uniform density of stuffing adapted to the temperature of the object to be insulated, and can be readily transported when finished to any place where it can be applied without the aid of trained fitters.

I claim:—

1. A molded insulating article comprising three parts including an inner filler of mineral wool, slag wool and spun glass, a metal foil loosely placed over said first part and a netting covering said foil so as to form air cells between said metal foil and on said filler.

2. A molded insulating article comprising three parts including an inner filler of mineral wool, slag wool and spun glass, a metal foil loosely placed over said first part and a wire netting covering said foil so as to form air cells between said metal foil and on said filler.

3. A molded insulating article comprising three parts including an inner filler of mineral wool, slag wool and spun glass, a metal foil loosely placed over said first part and a netting covering said metal foil and consisting partly of metal wires and partly of poorly conducting yarns so as to form air cells between said metal foil and on said filler.

4. A molded insulating article according to claim 3, in which the front faces and also partly the side faces of the molded articles are laced with poorly conducting yarns, the remaining surface of the articles being surrounded by a wire netting.

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