

(No Model.)

J. BOND.
RADIATOR.

No. 376,766.

Patented Jan. 24, 1888.

Fig. 1.

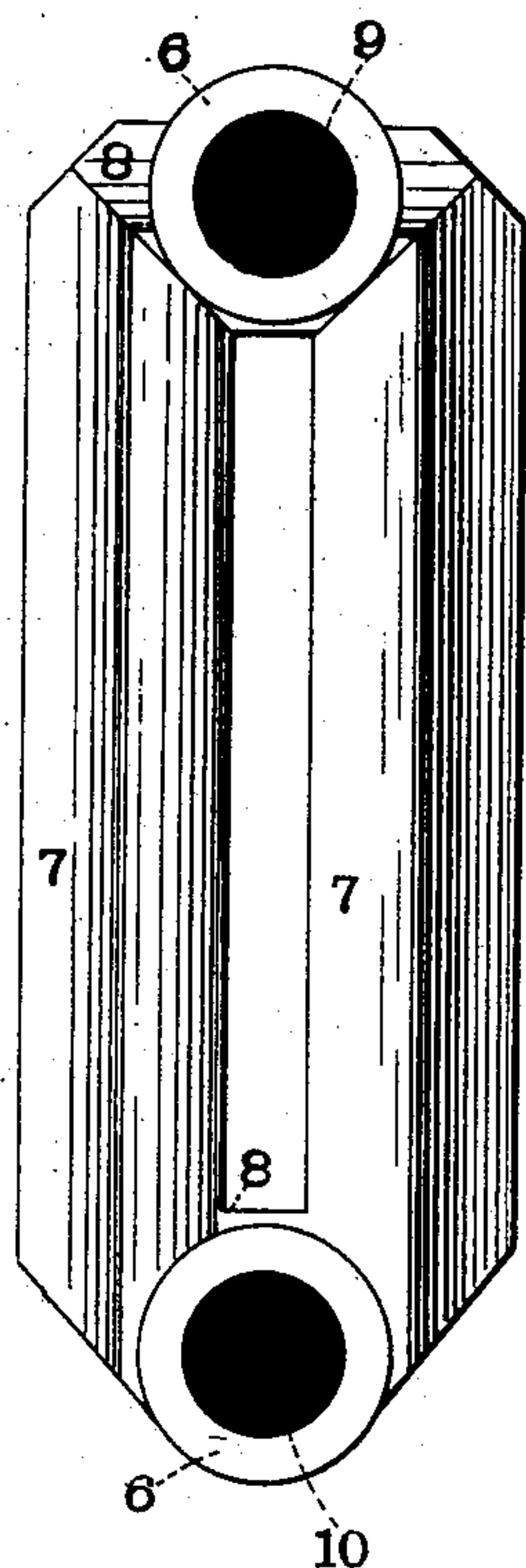


Fig. 2.

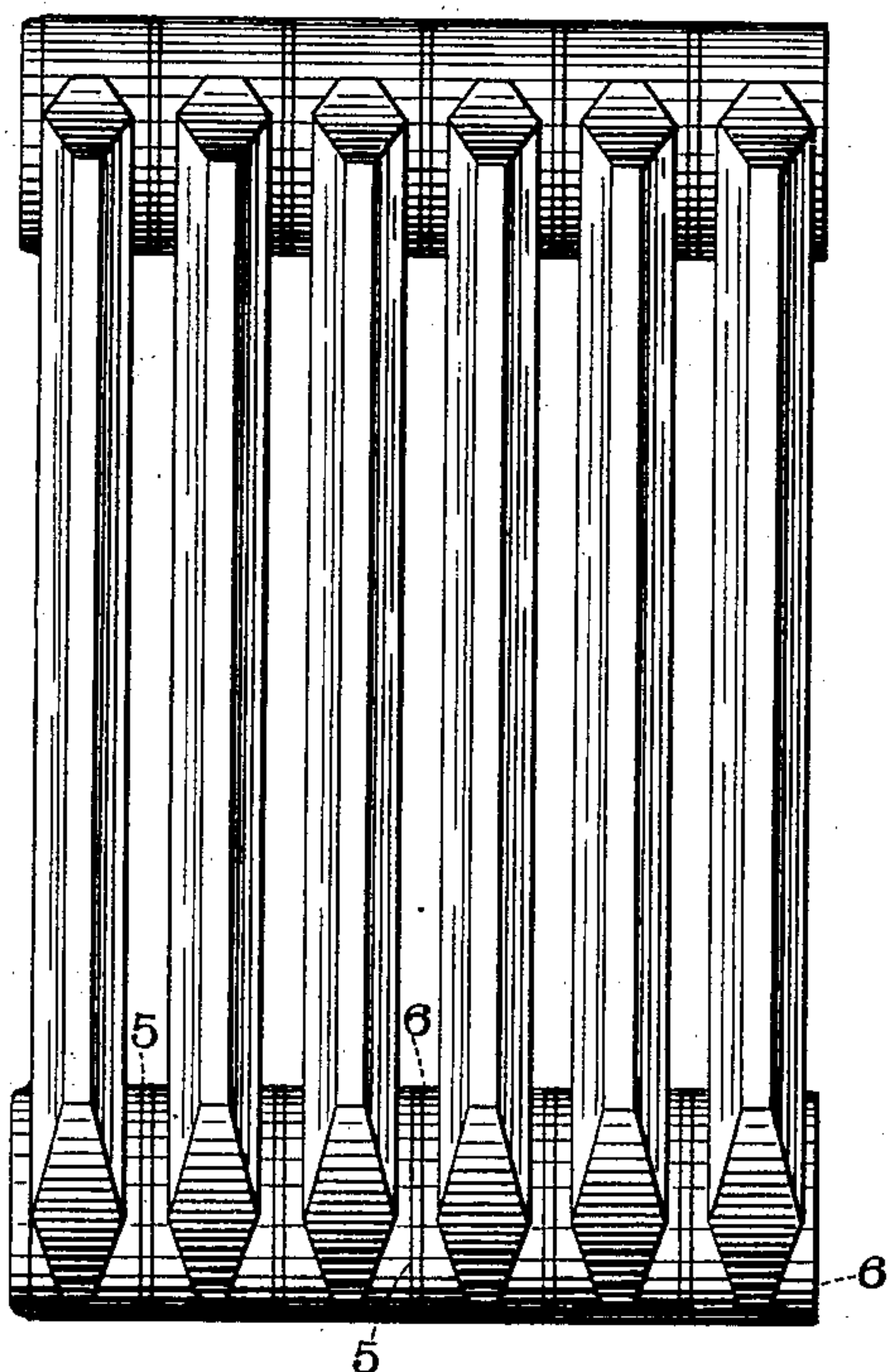


Fig. 3.

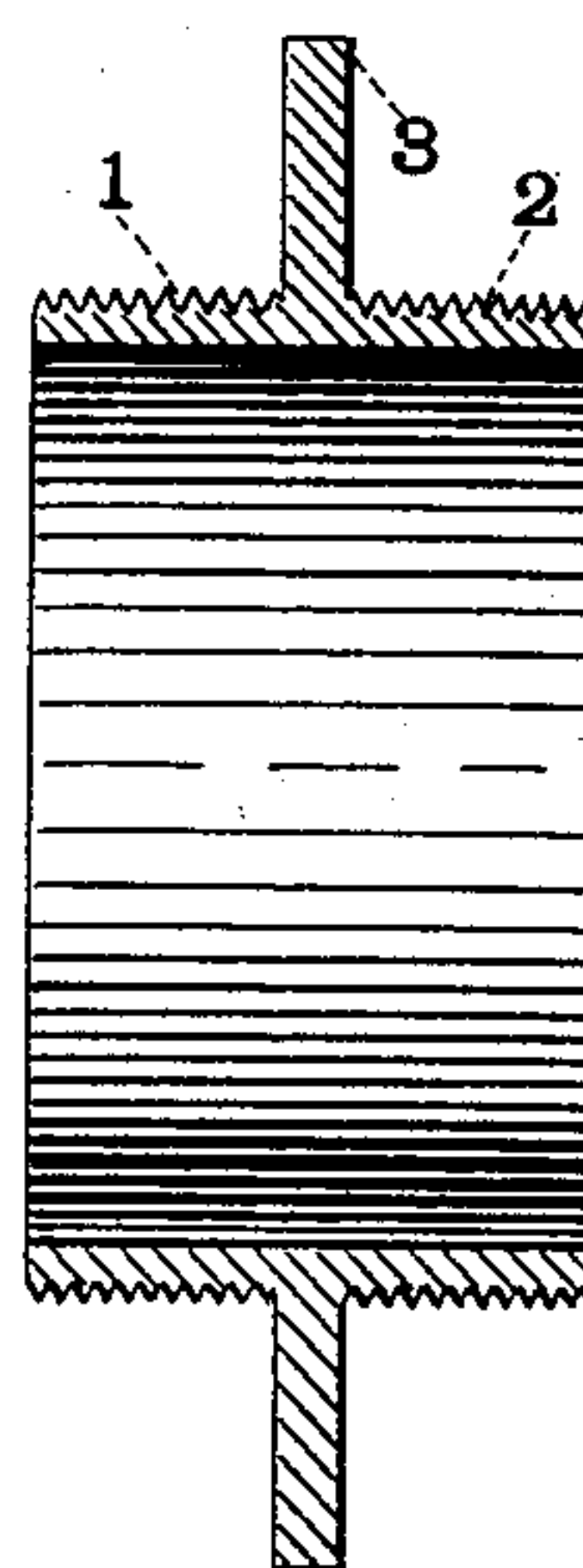


Fig. 4.

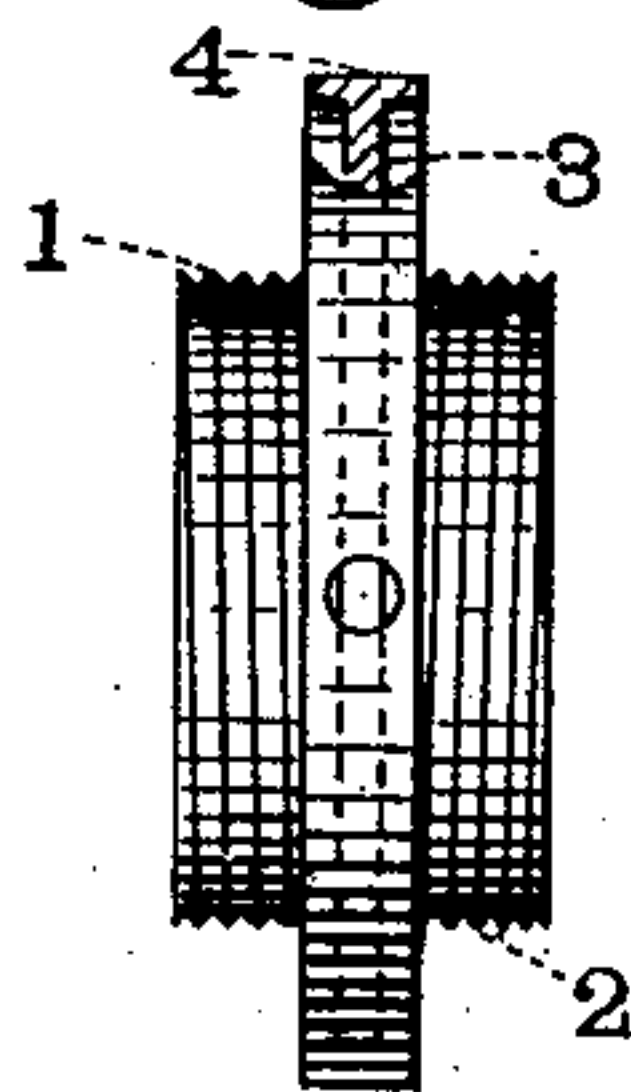


Fig. 5.

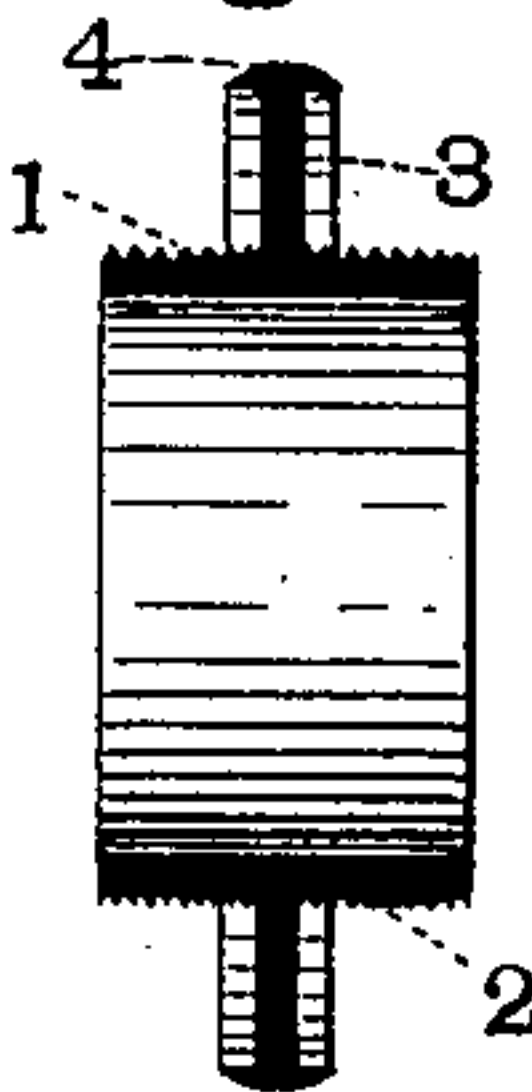


Fig. 6.

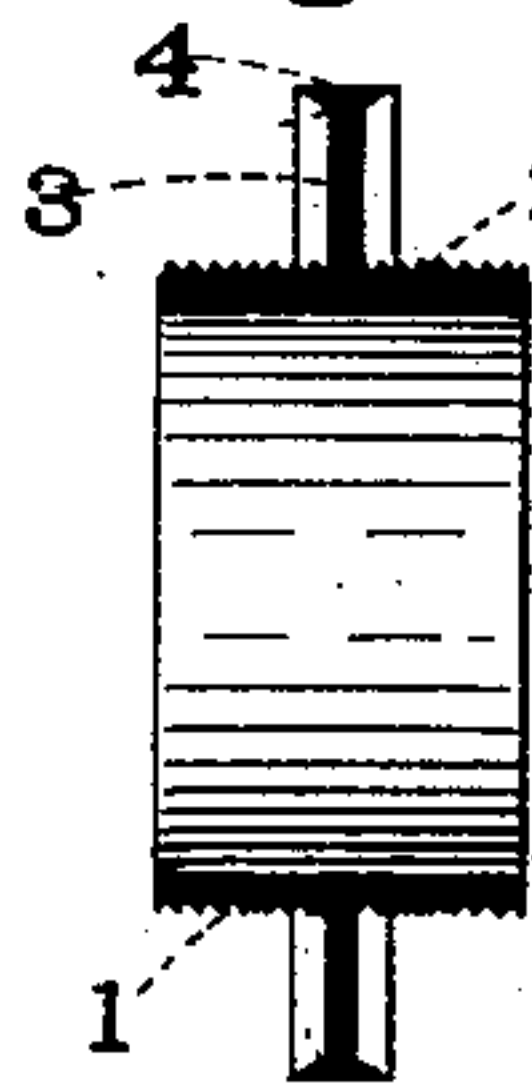
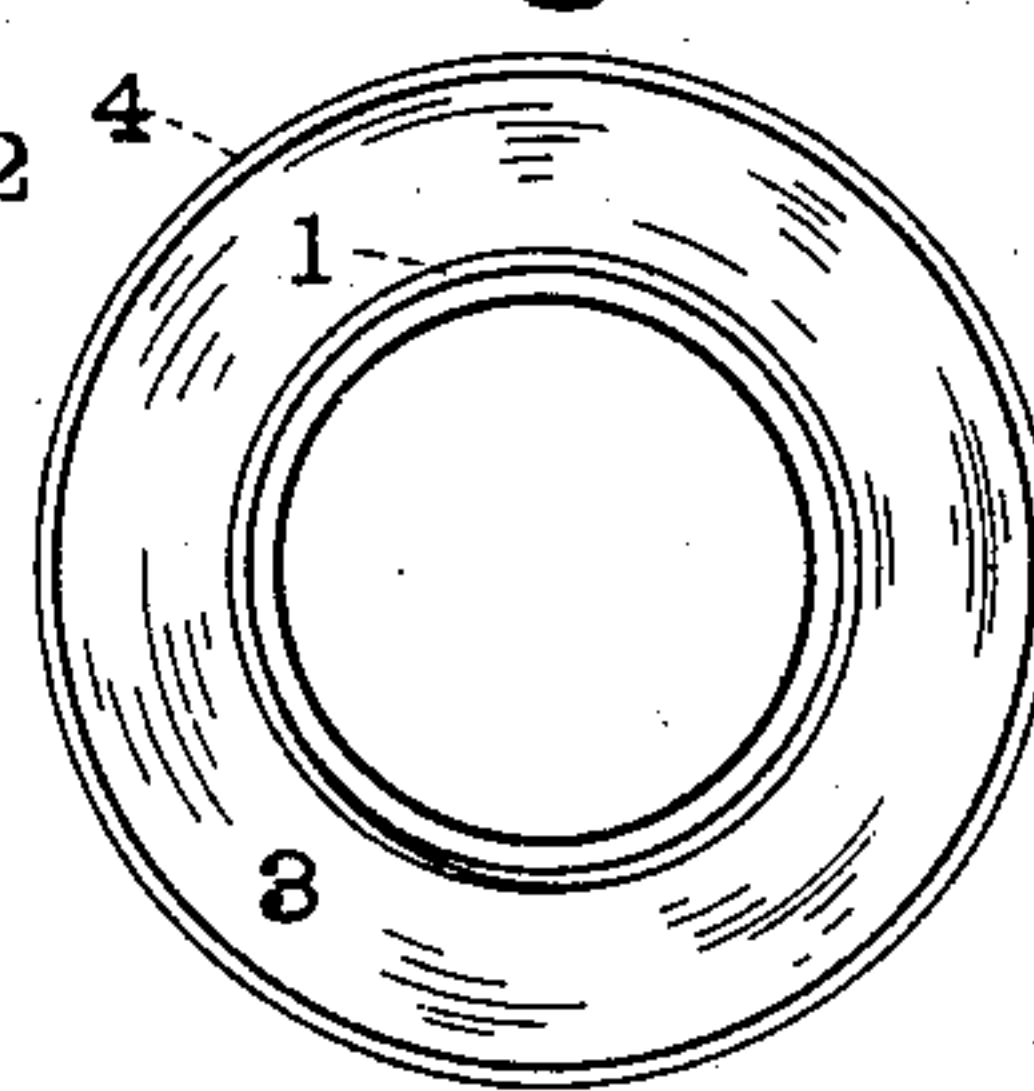


Fig. 7.



Witnesses.

A. C. Phayer
J. G. Johnson

Inventor .

Joseph Bond,
By James Sangster
atty.

UNITED STATES PATENT OFFICE.

JOSEPH BOND, OF BUFFALO, NEW YORK.

RADIATOR.

SPECIFICATION forming part of Letters Patent No. 376,766, dated January 24, 1888.

Application filed March 2, 1887. Serial No. 229,378. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BOND, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Radiators, of which the following is a specification.

This invention relates to certain improvements in the construction of screw-threaded nipples and the mode of connecting direct radiator-sections therewith; and it consists of a series of upright radiator-sections with screw-threaded openings in each section for connecting the next adjacent section, and of right and left-hand-screw-threaded nipples, each having a holding surface or surfaces flush or even with the outside of the bosses, or nearly so, for turning the nipples into the openings, and thereby connecting the sections together, as will be more clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of one of the sections. Fig. 2 represents a side elevation of a series of the sections put together. Fig. 3 is a vertical longitudinal central section through a full-sized nipple. Fig. 4 is a side elevation of one of the nipples having a small portion broken away to show a section through the flanged rim, showing a slight modification. Figs. 5 and 6 are vertical longitudinal sections, showing modified forms of the rim on the turning flanges; and Fig. 7 is an end view of one of the nipples.

From the outside of the screw-threaded portions 1 and 2, forming the nipple, is extended a flange, 3. This flange 3 may or may not be provided with a rim, 4, which rim may be of any suitable form, or similar to those shown in Figs. 4, 5, 6, and 7, the object being to form a flange or rim on each side of the flange 3 to lap over or cover the seams where the faces of the bosses 5 and 6 and the faces or sides of the flange 3 meet when the sections are put together. The side flanges, 4, also cover any openings or imperfections that may be between the faces of the bosses and flanges,

and thereby improve the appearance of the joint and render it more easily made, more secure, and the radiator-sections less liable to get loose or out of place by careless handling. The sections are made in any of the usual ways, and consist of the hollow portions 7 and 8, and are provided with the screw-threaded openings 9 and 10 at the top and bottom. These sections are preferably made of cast-iron, and the nipples may be made of either malleable, wrought, or cast iron; but any other suitable material may be used. Stacks of radiator-sections connected in this way may be disconnected at any point and one or more sections added or taken away from the stack while the radiator is set up for use without disturbing or disconnecting the supply-pipe connected to the stack or series of sections. They are easily put together or taken apart by a tool adapted for that purpose—for instance, the ordinary pipe-tongs with the jaws made sufficiently narrow to act only on the rim or periphery of the flange 3.

I claim as my invention—

1. A right-and-left-hand-screw-threaded nipple having a narrow circular flange extending outward from between the right and left hand screw-threaded portions, in combination with the circular bosses 6 of the radiator-section, having their peripheries of the same diameter, or substantially so, as the periphery of the flange, and the faces of which come flush together, and thereby form a continuous pipe at the upper and lower portions of the radiator, substantially as described.

2. A right-and-left-hand-screw-threaded nipple having a circular flange, 3, extending outward from between the right and left handed screw-threaded portions 1 and 2, and provided with a rim, 4, extending from each side of the periphery of the flange 3, for the purposes described.

JOSEPH BOND.

Witnesses:

A. C. THAYER,
JAMES SANGSTER.