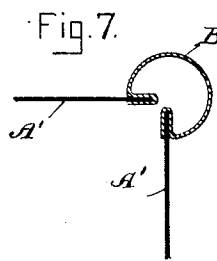
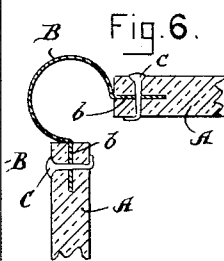
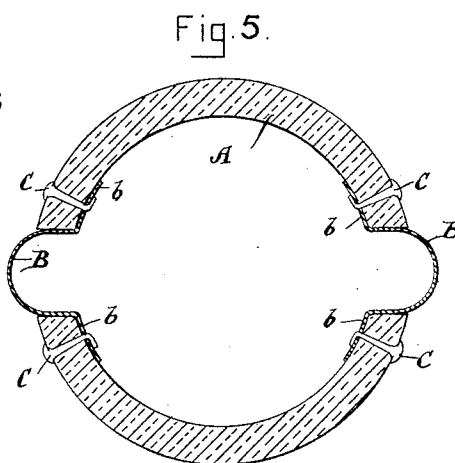
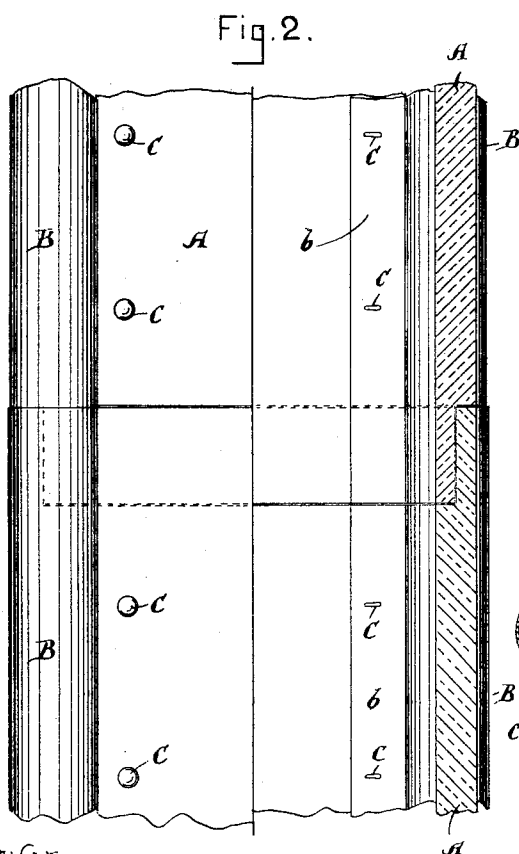
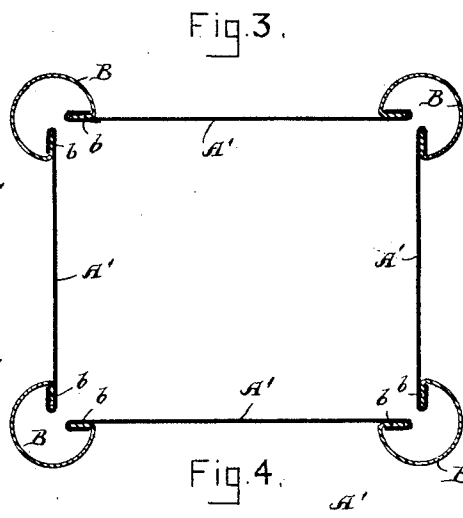
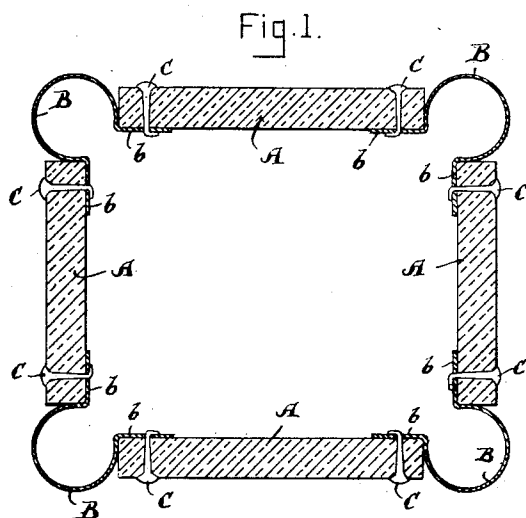


(No Model.)

F. H. MOORE.
EXPANDING CONDUCTOR.

No. 474,563.

Patented May 10, 1892.



Witnesses.

W. P. Ricker
F. D. Withrill

Inventor.

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UNITED STATES PATENT OFFICE.

FREDERIC H. MOORE, OF BOSTON, MASSACHUSETTS.

EXPANDING CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 474,563, dated May 10, 1892.

Application filed April 6, 1888. Serial No. 269,805. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC H. MOORE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Combination Expanding Conductors, of which the following is a specification.

The object of my invention is to produce a conductor-pipe for rain-water which will not be injured by ice forming therein, but will be free to expand and contract, and which will be cheap, effective, and durable.

The invention consists in constructing the conductor-pipe with hollow metallic beads at the corners or points of junction, which beads will allow the pipe to expand should water freeze therein, all as hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a horizontal section through a combined wood and metal conductor-pipe embodying my invention. Fig. 2 is a half elevation and half vertical section of the same. Fig. 3 is a horizontal section through a conductor-pipe made entirely of metal. Fig. 4 shows one of the metal sides detached. Fig. 5 is a horizontal section of a round conductor-pipe composed of wood and metal. Figs. 6 and 7 show modifications of the means of connecting the metallic beads at the corners.

In Figs. 1 and 2, A A represent flat boards comprising the sides of a conductor-pipe; B B, metallic beads arranged at each corner and secured to the sides A by nails C. These metallic beads are bent into a circular form, as shown, and provided with lips or flanges b, by which they are secured to the sides A. To connect two sections of conductor-pipes together I halve the sides of the upper and lower ends of the sides A, as shown in section in Fig. 2, so that one will fit within the other, and I also make the lower ends of the metallic beads slightly smaller than the upper ends, so that the upper ones will fit into the lower ones.

In Fig. 3 I have shown a conductor-pipe composed entirely of metal. In this case the lips or flanges b of the metallic beads are bent inward and the ends of the plates A', forming

the sides, are bent over, as shown, (see also Fig. 4,) to embrace the lips or flanges b. After the flanges b have been slipped into the recesses in the ends of the plates A' the joints are hammered or otherwise forced together to make a tight joint.

In Fig. 5 I have shown a circular conductor-pipe. In this case the pipe is composed of two semicircular pieces of wood A, connected together by two metallic beads, as described with reference to Figs. 1 and 2. Of course a circular metal conductor could be formed by using semicircular metal plates instead of wood and connecting them to the metallic beads in a similar manner to that described with reference to Fig. 3.

In Fig. 6 I have shown the flanges b of the metallic beads B embedded in the wooden sides A and secured by nails C, as before described, and in Fig. 7 I have shown the metallic beads B bent over in a similar manner to that described with reference to the plates A' in Fig. 3, so as to embrace the ends of the plates A', which are straight.

Other arrangements of securing the metallic beads to the sides A may be employed without departing from my invention.

It will be seen that by the employment of the metallic beads the pipes are free to expand and contract, as required, can be made very cheaply, and will be light and durable.

What I claim as my invention is—

1. In a conductor-pipe, the combination, with a series of longitudinal wooden pieces adapted to form the sides of the pipe, of longitudinal metallic beads for joining the edges of said pieces, each of said beads being arc-shaped in cross-section and having each edge flanged outward at an angle to the arc portion, and means, as nails, for securing the flanges to the wooden pieces, substantially as set forth.

2. In a conductor-pipe, the combination, with two longitudinal wooden pieces semi-cylindrical in cross-section, of two longitudinal metallic beads for joining the edges of said pieces, each bead being arc-shaped in cross-section and having each edge flanged outward at an angle to the cross-section, and means, as nails, for securing the flanges to the wooden pieces, substantially as set forth.

3. In a conductor-pipe, the combination, with
a series of longitudinal wooden pieces, each
piece having its edge provided with a longi-
tudinal slot or kerf, of longitudinal metallic
5 beads, each bead being arc-shaped in cross-
section and having each edge flanged outward
at an angle to the arc portion, said flanges be-
ing adapted to fit in the kerfs in the wooden
pieces, and means, as nails, for securing the

flanges within the kerfs, substantially as set 10
forth.

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

FREDERIC H. MOORE.

Witnesses:

L. W. HOWES,
E. PLANTA.