

(No Model.)

J. E. LEADLEY.
Sheet Metal Water Pipe.

No. 239,514.

Patented March 29, 1881.

FIG. 1.

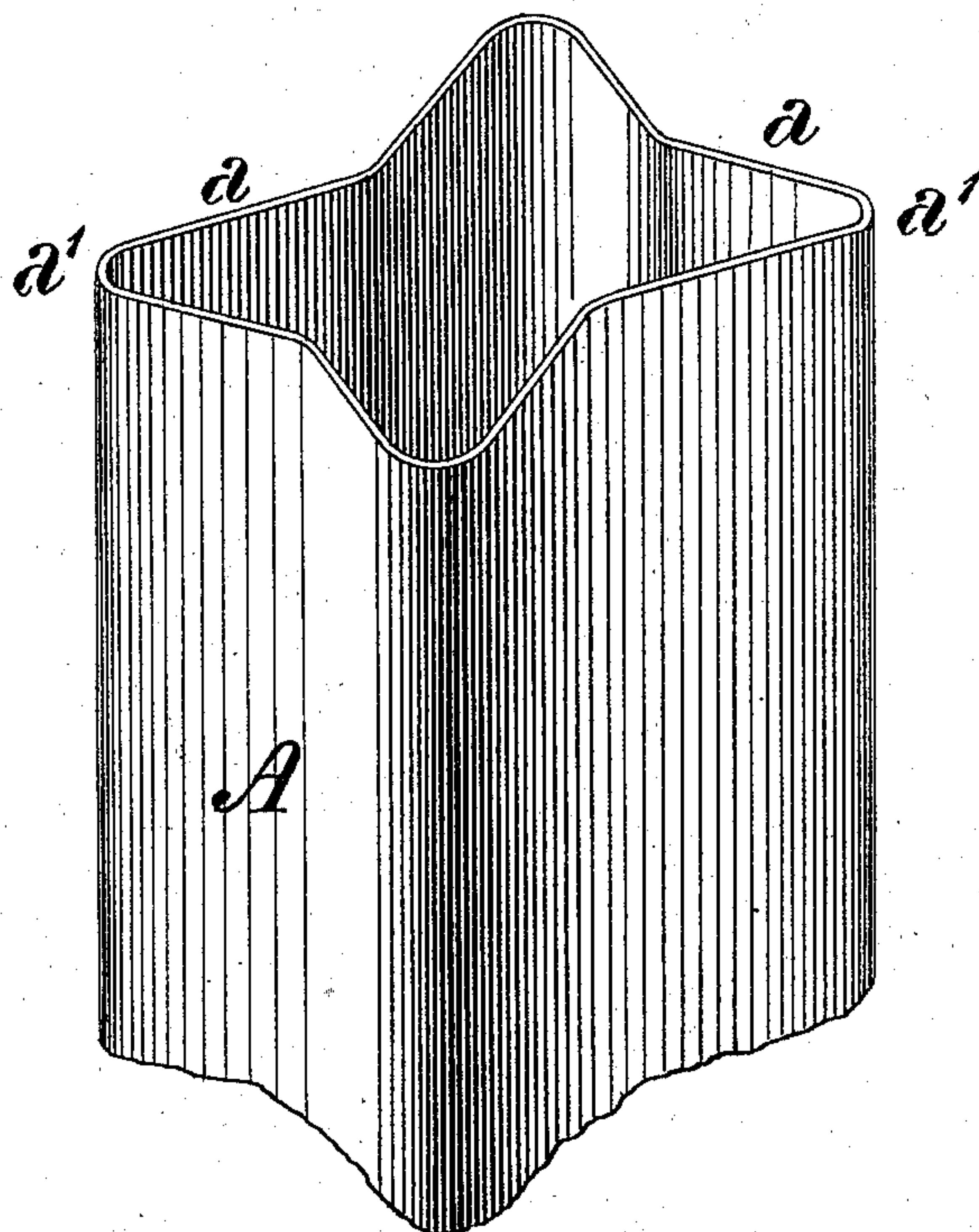
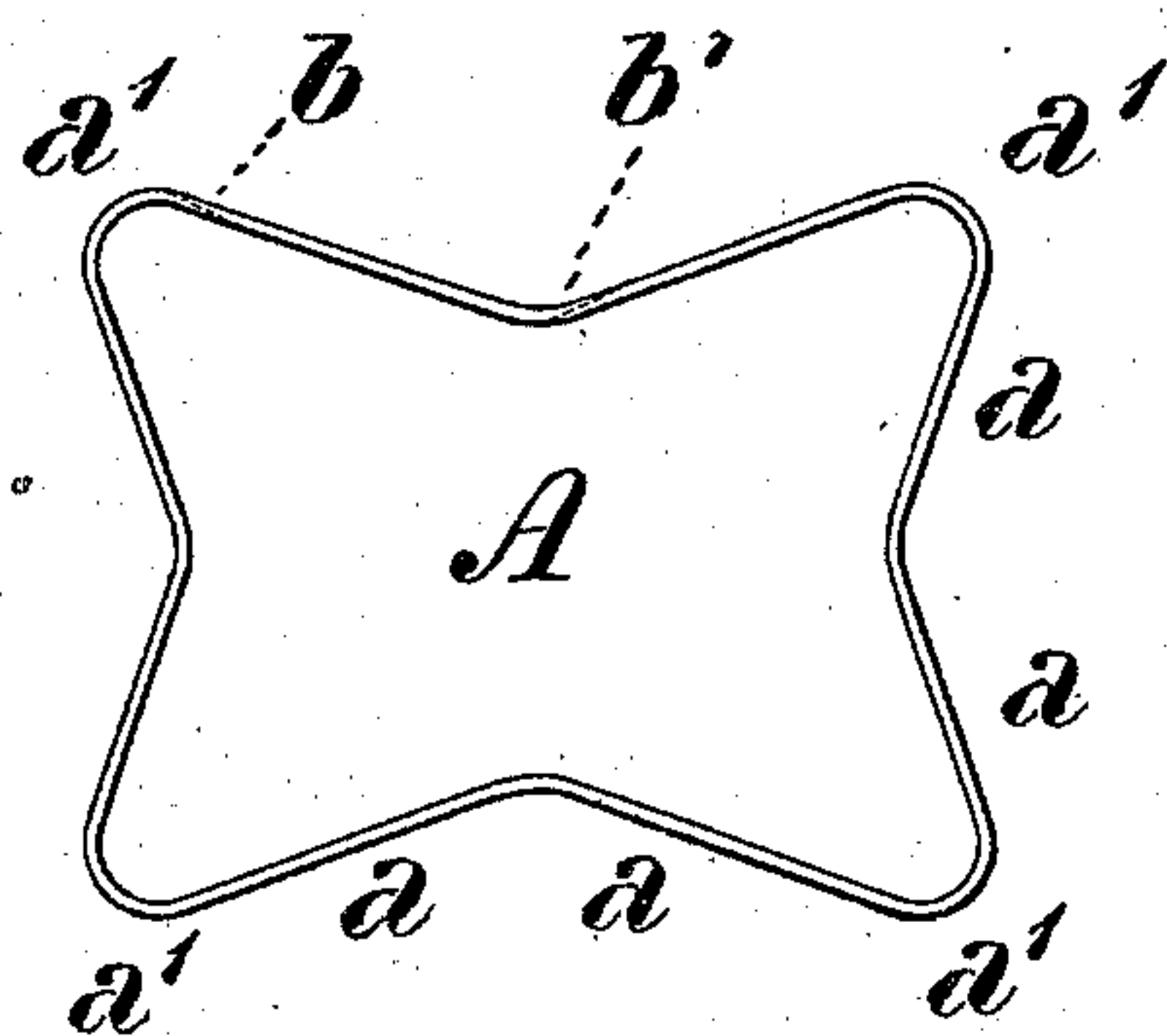


FIG. 2.



WITNESSES.

Geo. B. Collier.
Geo. T. Kelly.

INVENTOR.

James E. Leadley.
By Collier & Bell,
Attys.

UNITED STATES PATENT OFFICE.

JAMES E. LEADLEY, OF CAMDEN, NEW JERSEY.

SHEET-METAL WATER-PIPE.

SPECIFICATION forming part of Letters Patent No. 239,514, dated March 29, 1881.

Application filed January 31, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. LEADLEY, of the city and county of Camden, in the State of New Jersey, have invented a certain new and useful Improvement in Sheet-Metal Water-Pipes, of which improvement the following is a specification.

The object of my invention is to provide a sheet-metal water-pipe or conductor embodying the features of strength without undue weight, capacity to resist internal pressure, convenient adaptability for attachment to buildings or structures upon which it is to be used, and propriety of form as an architectural element.

To this end my improvement consists of a pipe composed of a sheet of metal seamed and bent to a form in transverse section, hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a view in perspective of a water-pipe embodying my invention, and Fig. 2 an end view of the same.

To carry out my invention I take a sheet of metal and bend the same, by the use of rolls or other mechanism suitable for the purpose and known in the art of sheet-metal working, into a pipe or conductor, A, of the form in transverse section shown in the drawings, uniting the two longitudinal edges of the sheet by a seam, either adjacent to one of the corners of the pipe, as at *b*, or midway between two corners, as at *b'*. Where the pipe is composed of comparatively heavy sheet metal—large pipes formed of which may, by reason of the strength imparted by the inclined bracing sides which I employ, be rendered reliable for use—I prefer that the seam shall be a lap-welded one, as shown, and contemplate performing the welding operation coincidentally with the bending of the sheet into the form for the finished pipe. A folded seam of any desired construction, made tight by soldering, may be used in pipes of lighter metal.

In transverse section my improved pipe presents a figure (the nearest circumscribing regular figure to which is a quadrilateral) having eight inwardly-inclined sides arranged in pairs symmetrically about a common center, each of

the flat sides *a* being at one end tangential to and a prolongation of a curve, *a'*, at one of the four corners of the pipe, and at the other end uniting with an adjacent flat side similarly related to another curved corner, *a'*, each pair of flat sides *a a* forming a longitudinal angular or V recess extending from end to end of the pipe A, between two of its corners. The section of my pipe might be equivalently described in somewhat briefer terms as being a quadrilateral having a short curve at each corner and having each of its sides inwardly bent into the form of a flattened or obtuse V. The periphery of the pipe is thus composed of a series of continuous inclined members, which perform the function of braces to stiffen and give strength to the structure, and also impart to it the capability of expanding outwardly when subjected to internal pressure, as by the freezing of water within it, such capacity of expansion obviating the liability to bursting under such strain which exists in the ordinary pipe. Further, the presence of an angular recess between two corners enables devices for affixing the pipe to the wall of a building to be conveniently attached, and affords a broad and firm bearing for the pipe upon the wall. Finally, the construction described, while satisfactorily conforming to the mechanical functions it is desired to perform, is rendered additionally desirable for adoption by architects, from the fact that in presenting almost entirely rectilineal boundaries it accords more appropriately with the general architectural design of buildings than do the ordinary round pipes or the corrugated pipes which have been heretofore employed.

I claim as my invention and desire to secure by Letters Patent—

As a new article of manufacture, a sheet-metal water-pipe having in transverse section the form of a quadrilateral with curved corners and sides inwardly bent into the form of an obtuse V, substantially as and for the purposes set forth.

JAS. E. LEADLEY.

Witnesses:

J. SNOWDEN BELL,
WALTER S. GIBSON.