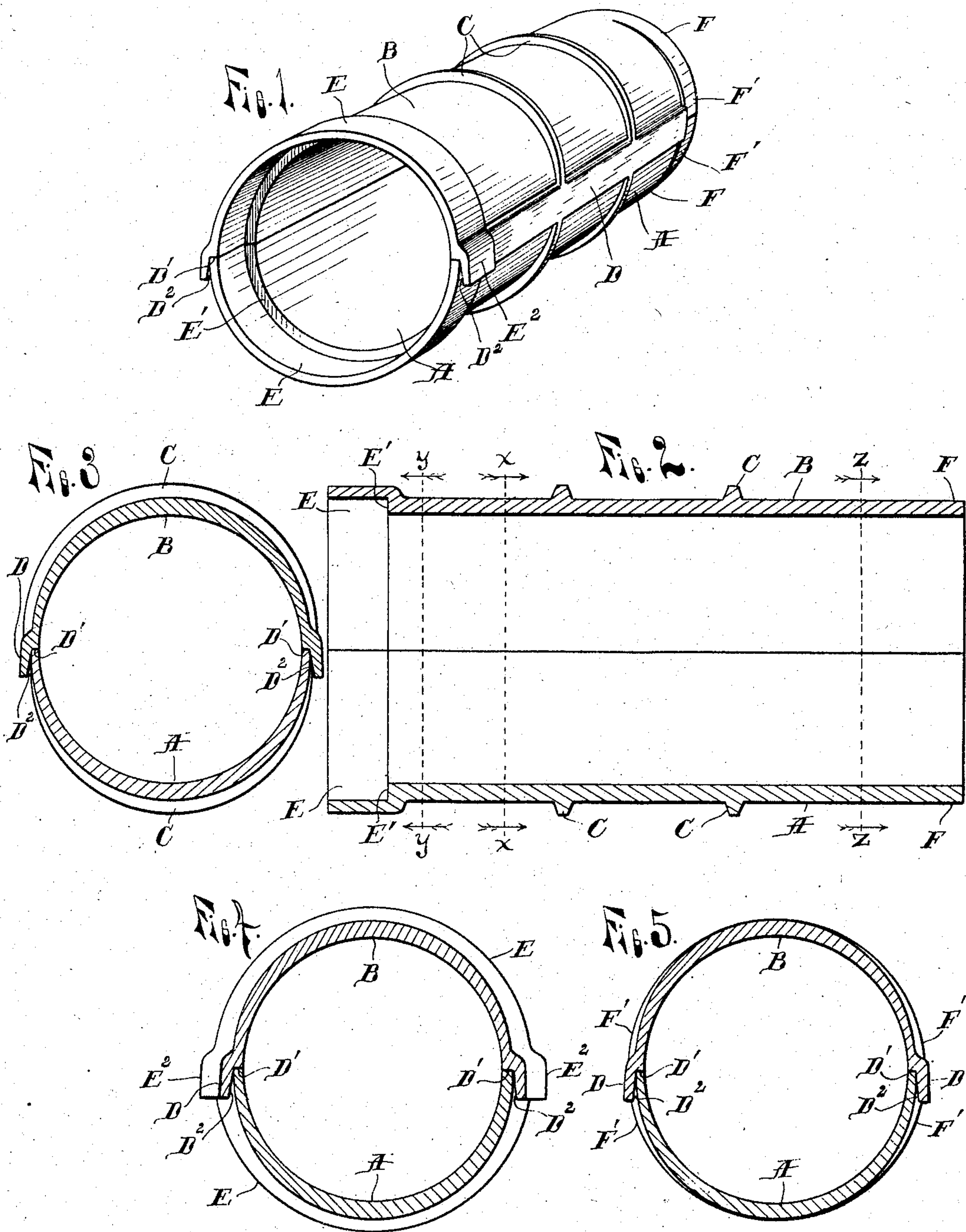


No. 780,981.

PATENTED JAN. 31, 1905.

W. J. DAGGETT.
CULVERT, SEWER, OR OTHER DRAIN PIPE.
APPLICATION FILED JULY 8, 1904.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM J. DAGGETT, OF ST. JOHNS, MICHIGAN.

CULVERT, SEWER, OR OTHER DRAIN PIPE.

SPECIFICATION forming part of Letters Patent No. 780,981, dated January 31, 1905.

Application filed July 8, 1904. Serial No. 215,764.

To all whom it may concern:

Be it known that I, WILLIAM J. DAGGETT, a citizen of the United States of America, residing at St. Johns, in the county of Clinton and State of Michigan, have invented certain new and useful Improvements in Culvert, Sewer, or other Drain Pipes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in tiles for drains, sewers, culverts, conduits, &c.; and its object is to provide a sectional tile which is so constructed that when the contents thereof freeze and the upper section is lifted thereby the dirt will not fall in and prevent the section from going back to place when the contents thaws and which is provided with strengthening-ribs so arranged as to not only add the greatest strength, but to prevent the dirt from being washed away from the tile.

It is also an object of the invention to so construct the tile that a very accurate close-fitting joint is secured and to provide a tile of minimum weight having a maximum of strength and especially adapting it to be made of cast metal.

To this end the invention consists in the particular construction, arrangement, and combination of parts, all as more fully hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a tile embodying the invention. Fig. 2 is a longitudinal vertical section of the same; Fig. 3, a section on the line *xx* of Fig. 2 looking in the direction indicated by the arrows; Fig. 4, a similar section on the line *yy*, and Fig. 5 a section on the line *zz*.

As shown in the drawings, A is the lower and B the upper section, the tile being divided longitudinally into two halves. The line describing the inside surface in cross-section when the halves are in position describes a perfect circle; but each half is made thicker along its middle or crowning portion than at the edges, so that the line describing the outside surface in cross-section is in the form of an ellipse, and therefore maximum strength is secured with the minimum weight of mate-

rial. The body of the tile is further strengthened by providing each half with circumferential ribs C, which on the lower section A taper away or run out at the upper edges of the section and on the upper section B are of lesser thickness where they meet the longitudinal flange D than at the center, thus providing the greatest strength where needed, and these ribs extending around the tile hold the dirt and prevent its being washed away by a stream of water which might otherwise find a course along the outer surface of the line of tiling.

Extending along each side of the upper section B is a downwardly-extending flange D, which is offset outwardly from said edge, thus forming abrupt shoulders D' at the inner side of said flanges to engage the upper edges of the lower section A, and the inner surface D² of said flanges slants outward to engage the edges of the lower section and guide the same to their seat on the shoulders D'. These flanges are made of such a width that the upper section may be lifted a considerable distance before there will be any opening between; but should it be lifted far enough to make an opening the dirt will not fall in and prevent the reseating, as the dirt is lifted and forced away from the sides by the flange as the section is lifted. The shoulder formed on the outer surface of the upper section by the flange is rounded off, so that the tendency of the flange will be to force the dirt laterally and compact it when the section is lifted.

On one end of each section is a flange E, offset outwardly, the thickness of the metal forming the body and forming a socket to receive the opposite end of the next tile, a shoulder E' being formed at the inner side of the flange against which the inwardly-projecting end of the next adjacent tile in the line abuts. Said flange E on the upper section is carried outward and down at E² at each edge of the section to form a continuation of the flange D and to receive the upper end of the flange E on the lower section. At the opposite end of the tile the portions F of the sections which are adapted to project into the socket of the next tile are reinforced at F' on their outer surface at the sides to fill out the

elliptical form of the body portion into a round or circle, so that said end will fit closely within the circular socket formed by the flanges E on the next tile in the line, the longitudinal flanges D being omitted from said portions F.

The advantages of a tile made in halves other than those set forth are apparent, and

Having set forth the advantages of this particular construction, and thus fully described the invention, what I claim is—

1. In a sectional tile, the combination of an upper and a lower section each formed with a flange on one end offset outwardly the thickness of the body portion to form a socket, a continuous longitudinal flange on each edge of the upper section offset outwardly to form seats for the upper edges of the lower section and extended downward at the outer side of said edges, said flanges being outwardly curved at one end to form offset downwardly-extending end portions of the end flange forming a continuation of the longitudinal flange on the upper section to receive the upper ends of the end flange on the lower section said longitudinal flanges being cut away at their opposite ends to form a reduced portion adapted to engage the socket formed by the end flanges.

2. In a sectional tile, the combination of an upper and a lower section each formed thicker along its longitudinal center than at its edges, circumferential ribs on each section, a flange on one end of each section which is offset outwardly the thickness of the body portion to form a socket, a longitudinal flange on each edge of the upper section offset outwardly to form seats for the upper edges of the lower section and extended downward at the outer side of said edges and each provided with an outwardly and downwardly inclined face to engage and form a guide for said edges, said flanges being outwardly curved at one end to form offset downwardly-extending end portions of the end flange on the upper section to receive the upper ends of the end flange on the lower section and an end adapted to engage the socket formed by the end flanges, reinforced at each side to form a circular exterior surface.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. DAGGETT.

Witnesses:

EDWIN H. LYON,
E. J. MARIET.