

No. 785,423.

PATENTED MAR. 21, 1905.

J. HOPKIRK.
STAVE WOODEN PIPE.

APPLICATION FILED SEPT. 28, 1904.

Fig. 1.

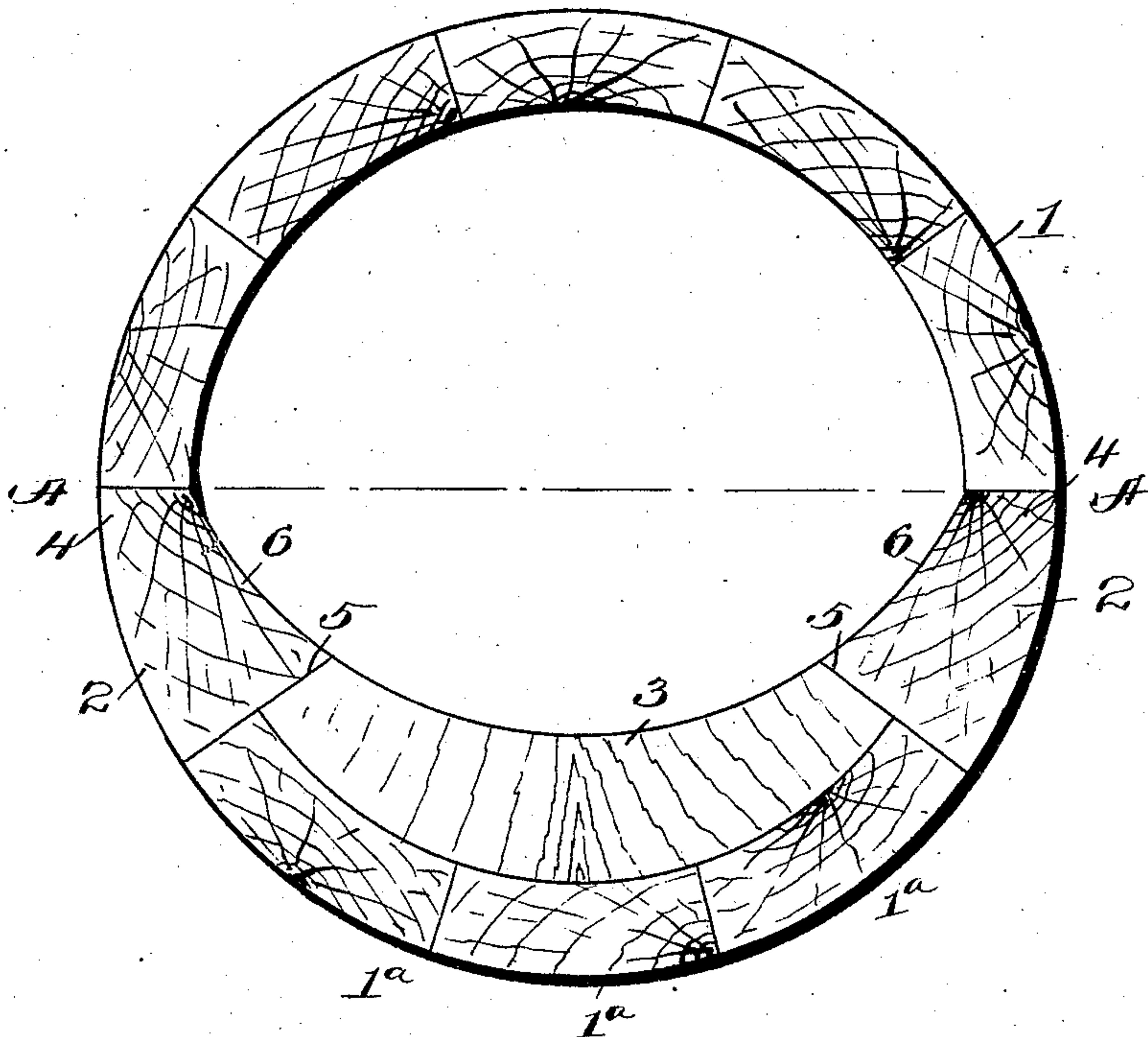
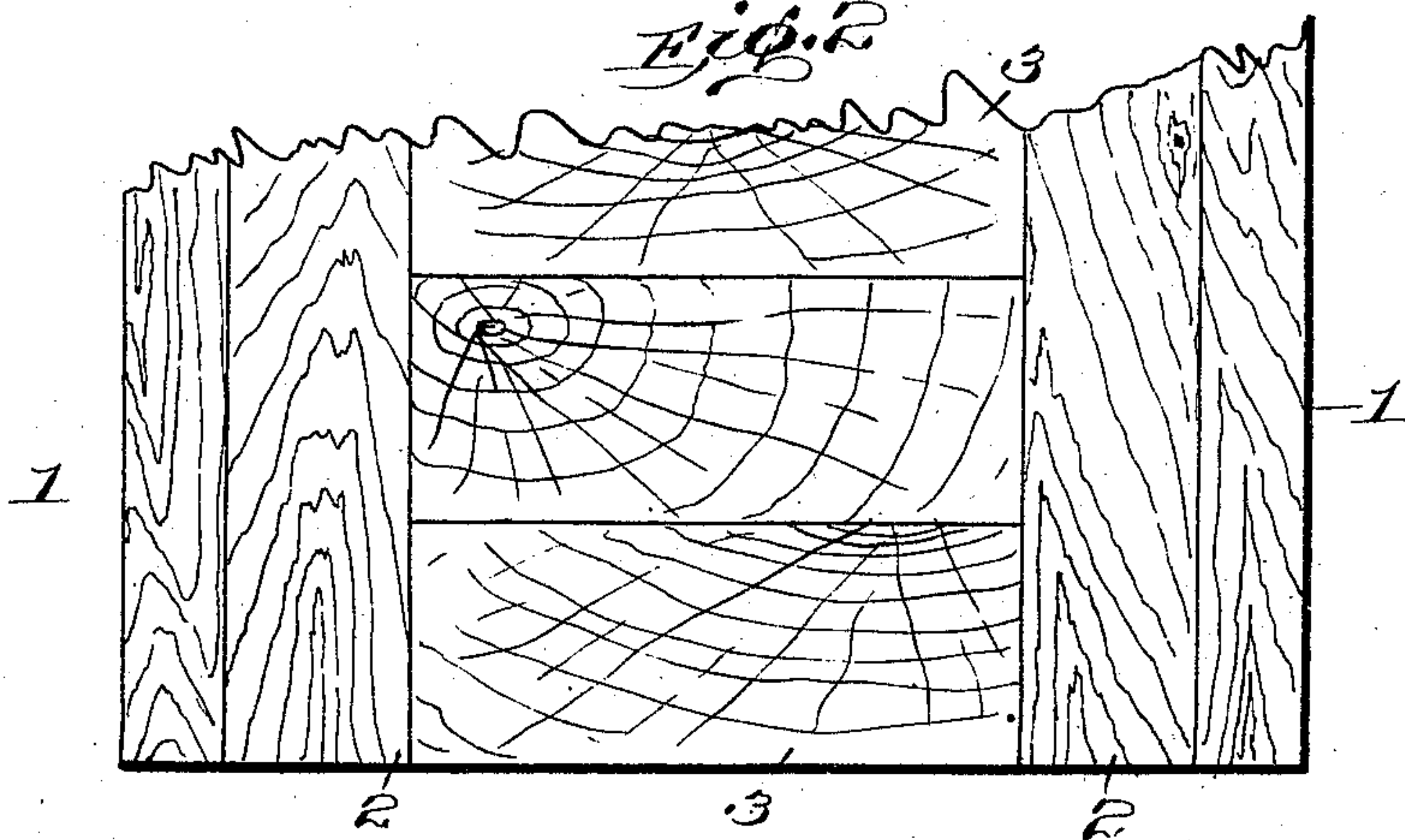


Fig. 2.



Witnesses

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STAVE WOODEN PIPE.

SPECIFICATION forming part of Letters Patent No. 785,423, dated March 21, 1905.

Application filed September 28, 1904. Serial No. 226,408.

To all whom it may concern:

Be it known that I, JAMES HOPKIRK, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Stave Wooden Pipes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in sectional tubing, and more particularly to stave wooden pipes.

The object of the invention is to improve the construction of a tubing which is to be used where earth is to be carried in water for some distance through piping in hydraulic grading.

A further object of the invention is to construct a pipe or tubing which is provided with a reinforcing wearing-surface.

A still further object of the invention is to improve the construction of a sectional piping or tubing which is provided with a removable auxiliary section for the purpose of increasing the thickness of a portion of the tubing.

With these and other objects in view the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the claims hereto appended.

In the drawings, Figure 1 is a transverse sectional view of a tubing or piping constructed in accordance with the present invention. Fig. 2 is a fragmentary plan view of a tubing taken on line A A, Fig. 1.

In the employment of stave wooden pipes, which are known to the patented art, for the purpose of transferring earth in water through piping in hydraulic grading it has been found that the sand, gravel, and earth which is passed through the piping wears away a portion thereof in a short time, and thereby materially increasing expense involved in using the ordinary pipe or tube. To obviate this difficulty, I have produced a tubing or piping which comprises a plurality of sections, one

of which forms a reinforced portion for the tubing.

Referring to the drawings by numerals, 1 designates a plurality of segmental sections or strips which are preferably of the same construction. Said strips or sections 1 are secured together with the other sections 2, 2, and 3, which are employed in the construction of a completed pipe or tube. The sections or strips 2 2 are of the same width at their upper edge 4 as the contiguous edge of the engaging sections or strips 1. The lower longitudinal edge of sections 2 2 are increased in thickness to approximately twice that of their upper edges 4 4. When the lower or bottom sections 1^a are secured in position with the other sections 2, 2, and 1, as is illustrated in the drawings, Fig. 1, there will be provided between the edges 5 5 of the sections 2 2 a space within which there is adapted to be positioned an auxiliary or reinforcing strip or section 3. It will be apparent that the edges 5 5 provide a locking-surface against which the edges of reinforcing-strips 3 is adapted to engage, thereby positively securing the same in position with the other sections or strips. The reinforcing-strips 3 are preferably blocks of wood cut across the grain, so as to expose the end of the grain against which the sand, gravel, and earth is adapted to engage. It will be obvious that by exposing the end of the grain so as to take the wear the durability of the tubing or piping is greatly increased over the construction of a device which has the auxiliary or reinforcing strip or section 3 formed of a piece of material having the grain running approximately longitudinally thereof. It will be obvious that the space between the edges 5 5 of sections 2 2 which is filled by section or strip 3 may be filled by other means than that of a wooden strip or section.

The reinforced portion of the pipes which are constructed in accordance with my invention obviate the unsatisfactory results obtained by using an ordinary hollow tubing or piping for the purpose as heretofore specified, and, furthermore, I produce by my construction a simple tubing or piping which is composed of a minimum number of parts and which is comparatively inexpensive in construction.

Upon referring to the drawings, Fig. 1, it will be obvious that the reinforcing strip or section 3 is preferably of a greater thickness near the central portion thereof than at its edges, although, if it is desired, the same thickness of said strip could be maintained throughout its width. However, if this strip or filling means 3 should be of the same diameter throughout its entire width an undesirable result would be obtained—to wit, the construction of a hollow or concaved portion which is not formed in the same arc of a circle as the inner surfaces 6 of the sections 2 2.

By diverging the sections 2 2 toward their lowest edge and the assembling with said sections of sections 1^a, as shown in Fig. 1, the sections 2 2 form a beveled side for the longitudinal groove which is formed by sections 1^a and 2 and within which filling means is placed.

While I have described in the foregoing description and illustrated in the accompanying drawings the preferred construction of my invention, it will be obvious that certain alterations, modifications, and changes may be made, and I therefore reserve the right to make such alterations, modifications, and changes as shall fairly fall within the spirit and scope of the present invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A device of the character described, comprising a plurality of sections, some of said sections provided with inwardly-projecting portions and a removable section secured between the projecting portion of said sections to form a continuous wearing-section of increased thickness.

2. In a device of the character described, the combination of a casing provided with ex-

tensions projecting from the sides thereof, and reinforcing means secured between said extensions to form a wearing-section of increased thickness.

3. A device of the character described, comprising a casing, longitudinal extensions projecting inwardly from the sides thereof, and filling means secured longitudinally within said casing between said projections to form a wearing-section of increased thickness.

4. A device of the character described, comprising a plurality of sections, one section upon each side of greater width near its lower end than the remaining sections, and filling means positioned between said sections of greater width.

5. In a device of the character described, the combination of a tubular casing, comprising a plurality of sections, a section upon each side provided with a longitudinal extension, and a removable auxiliary section positioned between the extended portion of said side sections to form a wearing-section of increased thickness.

6. A device of the character described, comprising a casing, a removable reinforcing member positioned in the bottom thereof, and beveled extensions formed upon the sides of said casing and positively retaining said reinforcing member in a fixed position therewith, said reinforcing member and the extensions extending throughout the length of the casing to form a wearing-section.

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

JAMES HOPKIRK.

Witnesses:

L. T. TURNER,
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