

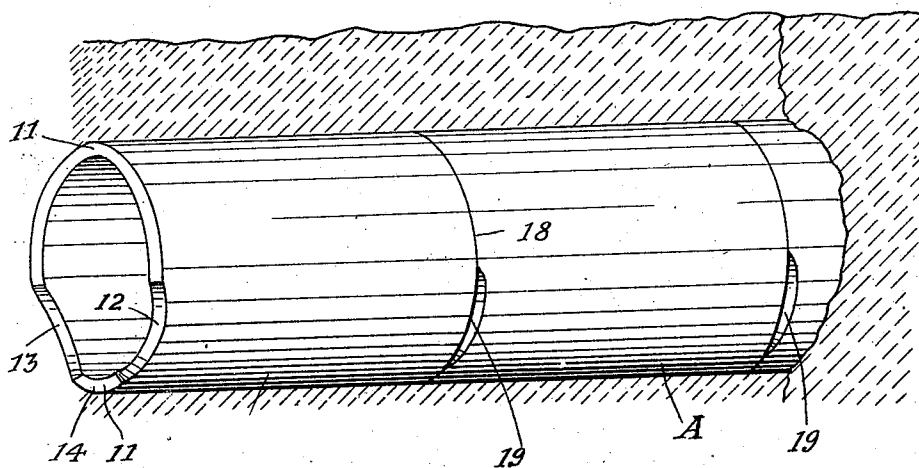
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O. OKLAND

DRAINAGE TILE

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UNITED STATES PATENT OFFICE.

OLAF OKLAND, OF GLYNDON, MINNESOTA.

DRAINAGE TILE.

Application filed June 6, 1921. Serial No. 475,252.

To all whom it may concern:

Be it known that I, OLAF OKLAND, a subject of the Kingdom of Norway, residing at Glyndon, in the county of Clay and State of Minnesota, have invented a new and useful Improvement in Drainage Tiles, of which the following is a specification.

My invention relates to drainage tile and has for its object to provide means for permitting the water to readily enter the tile at the same time providing a continuous passageway for the flow of water within the same.

In carrying out my objects I provide a mold which is adapted to form the tile of my invention with a pair of apertures in the lower portions of the ends of the tile so that when the tile are laid a continuous passageway for the flow of water is provided along the bottom of the tile while openings are formed therein without weakening the walls of the tile whereby water may enter the tile through the bottom thereof.

Another object of my invention is to provide an opening in the end of the tile through which water may enter the same when the tile are abutted such that the tile will readily become detached from the mold when the same is formed.

The full objects and advantages of my invention will appear in connection with the detailed description thereof and are particularly pointed out in the claims.

In the drawing illustrating the application of my invention in one form:—

The figure is a perspective view of a number of sections of tile of my invention laid in place.

My tile comprises a tubular member A of uniform internal and external diameter which may be of any desired length. Each of the tile sections A are constructed of either a porous or a glazed material or of cement such as is already in use in the manufacture of drainage tile. The sections are provided with square ends as indicated at 10 and are laid end to end with the respective ends abutting each other. In the figure I show the end of one of the sections of tile for indicating the manner of constructing the same. It will be noted that the lower half 11 of the end of the section of tile A is formed with a pair of arcuate notches or grooves 12, and 13 which extend radially across the edges 10 of the tile and

which are positioned below a horizontal diameter of the circular end of the tile. These notches as clearly shown have gradually sloping sides and terminate short of each other to provide a short shoulder 14 which is in the plane of the remainder of the end 11 of the tile proper so that when the tile are laid in proper position the shoulder 14 abuts against the smooth end of the following tile thereby properly positioning the various sections so that the same will be laid in perfect alinement. When the tile are laid together with their ends abutting as indicated at 18 it will be noted that the said tile meet to form a continuous surface along the upper half of the tile while the notches 12 and 13 form apertures 19 extending from the exterior of the tile to within the same. It can hence be clearly comprehended that water may penetrate through the apertures 19 and into the tile which after the same arrives within the tile may flow along the bottom of the tile and be discharged wherever required. It can be clearly seen that due to the weight of the earth surrounding the tile that only a small amount of earth would be apt to enter the tile and be deposited along the bottom of the same inasmuch as the openings are positioned on the underside of the tile where the earth would have to be lifted into the same by a substantial current of water. Due to the fact that the tile are smooth and tight on the upper surface no earth can drop directly into the same and the amount of earth entering said tile is hence reduced to a minimum.

The advantages of my invention are manifest. The tile are given a greater capacity for receiving and discharging water than is the case with tile made in the ordinary manner. The tile can be made with a machine such as is now in use for the purpose without affecting the operation of the same, at the same time permitting the tile to be withdrawn without breaking off corners or otherwise affecting the shape of the same.

In accordance with the patent statutes I have described the principles of operation of my invention together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied to uses other than those above

set forth within the scope of the following claims.

I claim:—

1. A hollow drainage tile of circular cross section having a square end, said end being smooth along the upper portion thereof and having notches in the lower portion thereof.
2. A hollow drainage tile of circular cross section having a square end, said end being smooth above a horizontal diameter thereof and having notches in the lower portion of said end below the horizontal diameter.
3. A hollow drainage tile of circular cross section having a square end, said end being smooth above a horizontal diameter thereof and a pair of arcuate notches formed in said end, said notches extending from said horizontal diameter to the bottom thereof.
4. A hollow drainage tile having an open end, said end being smooth along the upper portion thereof and having notches in the lower portion thereof.

In testimony whereof I affix my signature.

OLAF OKLAND.