

927,963.

Patented July 13, 1909.

Fig. 1.

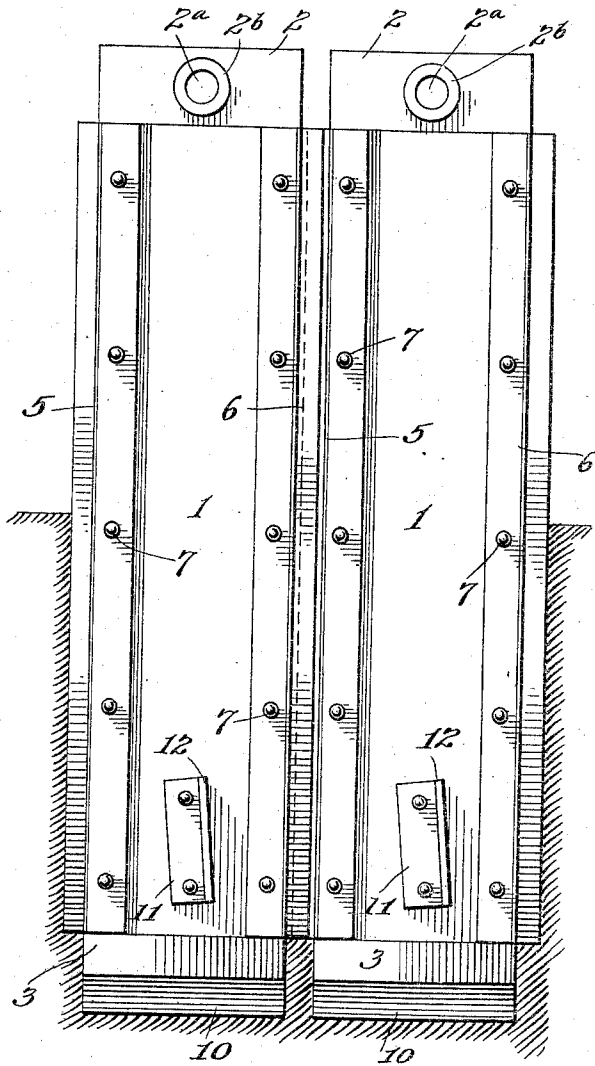


Fig. 2.

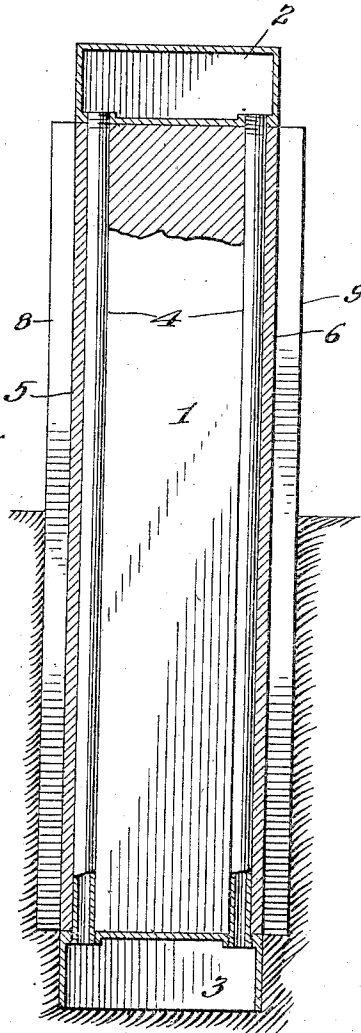
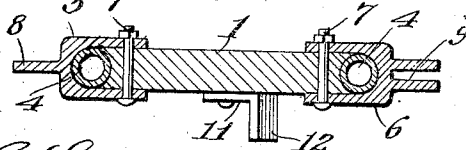


Fig. 3.



Witnesses

M. C. Lyddane,
J. D. L. Mulhall.

By

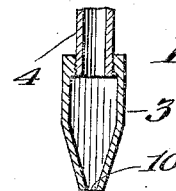


Fig. 4.

Inventor

William L. Gibb

Joshua R. Potts,

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM L. GIBB, OF OCEAN CITY, NEW JERSEY.

SHEET-PILING.

No. 927,963.

Specification of Letters Patent.

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Application filed November 27, 1908. Serial No. 464,742.

To all whom it may concern:

Be it known that I, WILLIAM L. GIBB, a citizen of the United States, residing at Ocean City, in the county of Cape May and State of New Jersey, have invented certain new and useful Improvements in Sheet-Piling, of which the following is a specification.

My invention relates to improvements in sheet piling, an object of the invention being to provide an improved construction of pile, into which water under hydraulic pressure is admitted and discharged from the lower end of the pile to displace the sand and dirt and allow the pile to settle into position.

A further object is to provide an improved pile in which the water enters at the top, passes down through pipes to the bottom of the pile, into an outlet chamber having an elongated narrow outlet or nozzle, to discharge the water and facilitate the settling of the pile.

A further object is to provide an improved pile with improved tongue and groove formation enabling the piles to be assembled in a solid wall, and provide each pile with an inclined guiding flange or lip to direct the lower end of a newly inserted pile toward the piles already in place and insure a tight juncture of the piles throughout their lengths.

With these and other objects in view the invention consists in certain novel features of construction, and combinations, and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1, is a view in side elevation illustrating my improvements. Fig. 2, is a view partly in longitudinal section. Fig. 3, is a view in cross section, and Fig. 4, is a view in vertical cross section of the lower or outlet chamber.

1 represents a board or timber having its edges concaved or of general semi-cylindrical curvature as clearly shown in Fig. 3. The inlet chamber 2 is located on the upper end of timber 1 and provided with an internally screw threaded inlet opening 2^a enlarged and strengthened by a boss 2^b, and an outlet chamber 3 is located against the lower end of timber 1. These chambers 2 and 3 are elongated, and but slightly thicker in cross section than is the timber 1.

4, 4, represent pipes which are provided with right and left screw threads at their opposite ends and are screwed into threaded openings in the chambers 2 and 3, connect-

ing said chambers and securing them at the respective ends of the pile. Metal inclosing strips 5 and 6 respectively are provided at the side edges of the pile and are of semi-cylindrical form to fit against the outer face of the pipes 4, and are secured to the timber 1 by bolts 7, or other suitable securing devices, thus effectually inclosing the pipes and strengthening the pile. The strip 5 is provided with a tongue 8 and the strip 6 with a groove 9 so that the tongue of one pile will enter the groove of another to construct a solid wall. The sides of the lower chamber 3 incline toward each other forming a comparatively sharp edge to easily enter the ground and provide an elongated narrow discharge opening or nozzle 10 through which the water escapes as will be explained. On one face of the pile, an angle bar 11 is secured at an angle or incline. The outwardly projecting flange 12 of said angle iron, by reason of its engagement with the ground will exert a cam action against the ground to guide the new pile toward the pile already in place, and thus insure the tight fit of the newly inserted pile with the prior inserted piles throughout the entire length.

The operation of my invention is as follows. When a pile is to be driven, it is inserted in position with its grooved edge 9 over the tongue 8 of the pile already in place. Water under hydraulic pressure is admitted through the inlet 2^a into chamber 2, where it divides, flows down through the pipes 4 into chamber 3 and out through the nozzle 10 to displace the sand and dirt and allow the pile to sink, the angle iron guide 11 serving to maintain the groove and tongue connection throughout the sinking of the pile.

A great many slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In combination with a pile, an inlet chamber across the top thereof, an outlet chamber at the bottom thereof, and a pipe connecting said chambers.

2. In combination with a pile, an inlet chamber on the upper end of the pile, an

outlet chamber on the lower end of the pile, and pipes located at the side edges of the pile and screw threaded at their ends into said chambers.

5 3. In a device of the character described, the combination with a board or timber, pipes at the side edges of said board or timber, an inlet chamber at the top of the board having screw threaded engagement with said
10 pipes, an outlet chamber at the lower end of the board having screw threaded engagement with the pipes, and said lower chamber made with an elongated narrow discharge nozzle.

15 4. In a device of the character described, the combination with a board or timber

having semi-cylindrical grooves in its edges, pipes in said grooves, an inlet chamber at one end of the pile, an outlet chamber at the other end of the pile, both of the said chambers secured to said pipes, strips secured to the pile at opposite edges and inclosing the pipes, a tongue on one of said strips, and a groove on the other of said strips. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 25

WILLIAM L. GIBB.

Witnesses:

R. H. KRENKEL,
J. A. L. MULHALL.