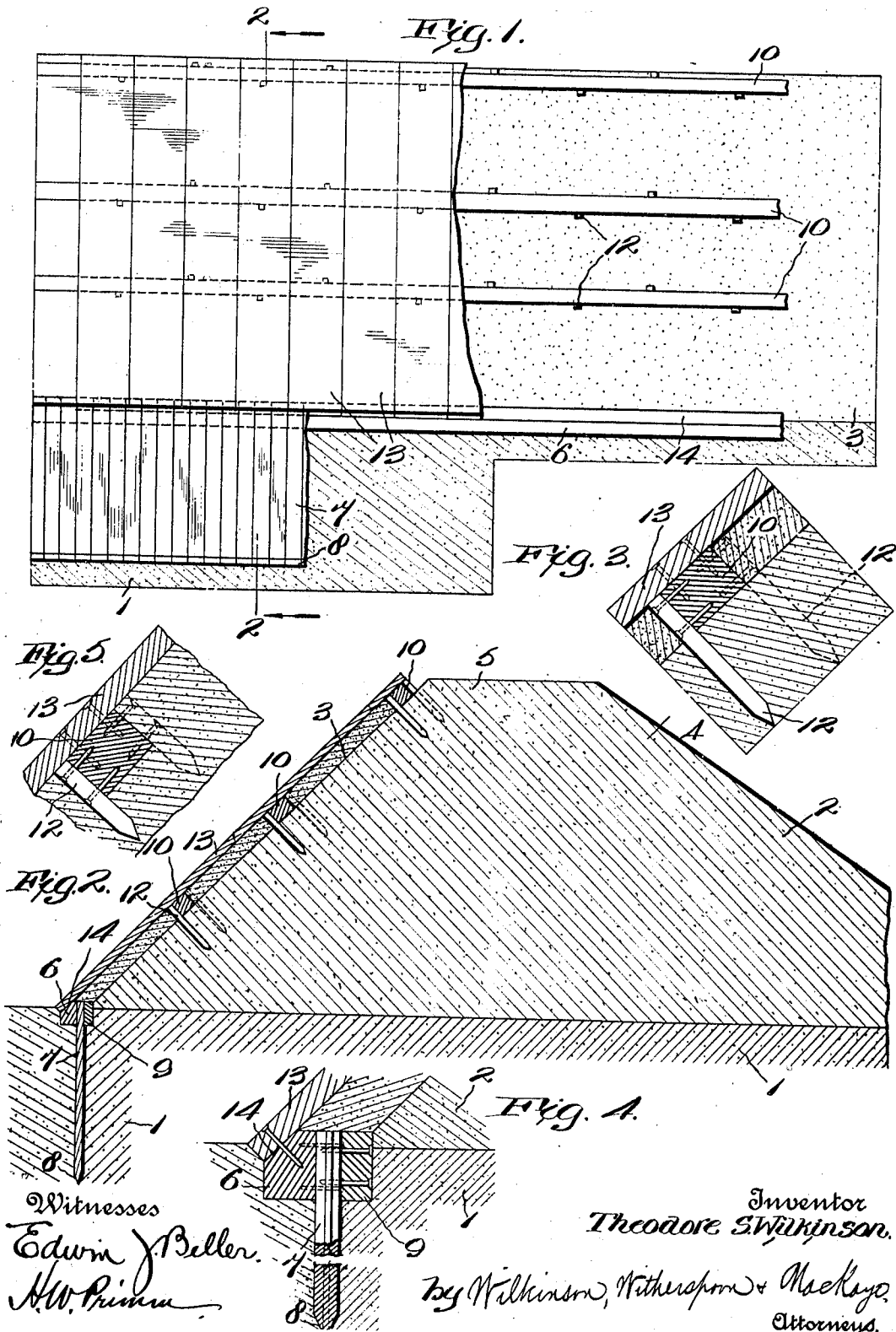


T. S. WILKINSON.
 REVETMENT FOR LEVEES OR OTHER EMBANKMENTS.
 APPLICATION FILED OCT. 11, 1912.

1,048,251.

Patented Dec. 24, 1912



Witnesses
 Edwin J. Beller.
 H. W. Primm.

Inventor
 Theodore S. Wilkinson.
 By Wilkinson, Witherspoon & Mackay,
 Attorneys.

UNITED STATES PATENT OFFICE.

THEODORE S. WILKINSON, OF MYRTLE GROVE, LOUISIANA.

REVTMENT FOR LEVEES OR OTHER EMBANKMENTS.

1,048,251.

Specification of Letters Patent.

Patented Dec. 24, 1912.

Application filed October 11, 1912. Serial No. 725,327.

To all whom it may concern:

Be it known that I, THEODORE S. WILKINSON, a citizen of the United States, residing at Myrtle Grove, in the parish of Plaquemines and State of Louisiana, have invented certain new and useful Improvements in Revetments for Levees or other Embankments; 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.

My present invention relates to improvements in revetments for levees or other embankments.

Levees used to protect riparian lands from overflow are generally provided with gradually sloping sides and a flat top, and to protect the outer face of the levee from erosion or wave wash, a revetment of some kind is desirable.

The more common method is to drive a series of vertical boards spaced away from the levee, nailed on to one or more longitudinal timbers with braces notched into the revetment and projecting on the top of the levee, and fastened by stakes driven into the levee. A serious objection to this form of revetment is that not only does it require bracing, but also, when the wind is high and up-stream, the waves are apt to break over the top of the revetment, and as the water falls on the outside the braces are dislodged or pulled out, and the revetment is apt to bulge outward and become loose and finally wash away.

Another method of tried excellence, but great cost, is to reinforce the exposed face of the levee with a sheet, or layer, of concrete, which is held in place by its own weight, there being no fastening of the concrete to the levee itself.

According to my invention, I provide a wooden revetment shielding the inclined face of the levee and attached thereto, as will be hereinafter described, and a revetment projecting down into the earth below the base of the levee in a vertical or inclined direction, but at a different angle from the revetment on the face of the levee itself.

My invention will be understood by reference to the accompanying drawing, in which:—

Figure 1 is a front view showing the revetment; Fig. 2 is a transverse vertical section, along the line 2—2 of Fig. 1 and

looking in the direction of the arrows; and Figs. 3, 4, and 5 are details showing the mode of fastening the woodwork to the levee.

1 represents the main body of the ground on which the levee is built, and 2 shows the earthwork embankment constituting the levee and having inclined faces 3 and 4 and a flat top 5, the inclined face 4 being broken away at the right of Fig. 2.

6, shown in detail in Fig. 4, is a longitudinal timber having its face beveled to suit the slope of levee, as at 14, parallel with the front face of the levee. To this timber, the boards 7 are nailed, as shown, or the timber is nailed on the boards. These boards are preferably made of heavy tongue and groove lumber sharpened at the bottom end, as at 8, and driven in the ground to form an impervious timber wall that will keep out crawfish, or vermin. This timber wall is preferably creosoted not only for protection, but also to prevent its being eaten into by muskrats, or the like, which are great enemies to earth levees. Back of this beveled timber 6 the longitudinal board 9 is preferably secured, and which is nailed to the timber wall, as shown most clearly in detail in Fig. 4. One or more horizontal timbers 10 are laid on the face of the levee, as shown in Figs. 2 and 4, or let into said face, as shown in Fig. 5. Alongside these horizontal timbers, pins are driven and nailed on to these timbers. The boards 13 are then attached, forming an inclined wooden apron, which will effectually prevent the erosion of the face of the levee. Before putting the boards 13 in place, the spaces or chambers between the horizontal timbers 10 should preferably be filled in flush with earth, and thus there will be little, if any, opportunity for the water to wash over the top of the revetment and get in between it and the face of the levee.

It will be noted that the upper longitudinal timber 10 will also prevent the water from flowing down between the face of the levee and the inner face of the boards 13.

In practice, it would be preferable to have all of the wooden portion of the revetment creosoted, not only to protect it from decay, but also to keep vermin from gnawing through the same, as before stated.

The number of horizontal timbers would obviously vary with the height of the levee and local conditions, such as greater or less

exposure to wash, or the like, as the distance apart of the horizontal timbers should be preferably not over 8 feet.

It will thus be seen that I provide a wooden revetment which projects down into the ground at the base of the levee, and above the ground forms an inclined apron which is securely attached to the levee, and which is not likely to be displaced therefrom by wash of waves, or the like; the effect of the complete revetment being at the same time to withstand the attacks of earth-borers of all kinds through the base, but also to protect the levee from the onward force of the waves, the protecting apron being fastened to timbers resting directly on the earthwork river face; and the revetment also serves as a protection against the force caused by the recession of the waves, preventing the access of water, except in a trifling amount, behind the timber-work.

It will be obvious that various modifications might be made in the herein described construction and in the combinations and arrangements of parts, which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

1. A revetment for levees, or other earth embankments, comprising a substantially vertical wooden wall projecting down into the earth at the base of the embankment, and an inclined wooden revetment fastened to horizontal timbers amply secured in position forming an inclined apron, protecting both the base and the face of said levee, substantially as described.

2. A revetment for levees, or other earth embankments, comprising a substantially vertical wooden wall driven into the earth at the base of the embankment, a continuous timber having a beveled face secured to the head of said wooden wall, one or more horizontal timbers secured to the face of the levee, earth filling up the pockets formed by said horizontal timbers, and planking nailed over said horizontal timbers and said beveled timber, and forming a wooden apron for the outer face of the levee, substantially as described.

3. A revetment for levees, or other earth

embankments, comprising a substantially vertical wooden wall driven into the earth at the base of the embankment, a continuous timber having a beveled face secured to the head of said wooden wall, one or more horizontal cross timbers secured to the face of the levee by means of pins driven into said levee and nailed to said cross timbers, earth filling up the pockets formed by said timbers, and planking nailed over said cross timbers and said beveled timber, and forming a wooden apron for the outer face of the levee, substantially as described.

4. A revetment for levees, or other earth embankments, comprising a wooden wall projecting down into the earth at the base of the embankment, and an inclined wooden revetment comprising a frame secured to the levee, and planking secured on said frame and forming an inclined apron protecting the face of said levee, substantially as described.

5. A revetment for levees, or other earth embankments, comprising a wooden wall driven into the earth at the base of the embankment, a continuous timber having a beveled face secured to the head of said wooden wall, longitudinal timbers attached to said beveled timber, and secured to the face of the levee, and planking nailed over said longitudinal timbers and said beveled timber, and forming an inclined wooden apron for the outer face of the levee, substantially as described.

6. A revetment for levees, or other earth embankments, comprising a wooden wall embedded in the earth at the base of the embankment, a continuous timber having a beveled face secured to the head of said wooden wall, longitudinal timbers mounted on the face of the levee, wooden pins driven into the levee and nailed to said longitudinal timbers, and planking nailed over said timbers and forming an inclined wooden apron for the outer face of the levee, substantially as described.

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

THEODORE S. WILKINSON.

Witnesses:

EUG. A. GARCIA,
A. O. HARANG.