

(No Model.)

C. E. WRIGHT.
DAM OR LEVEE.

No. 479,543.

Patented July 26, 1892.

Fig. 1

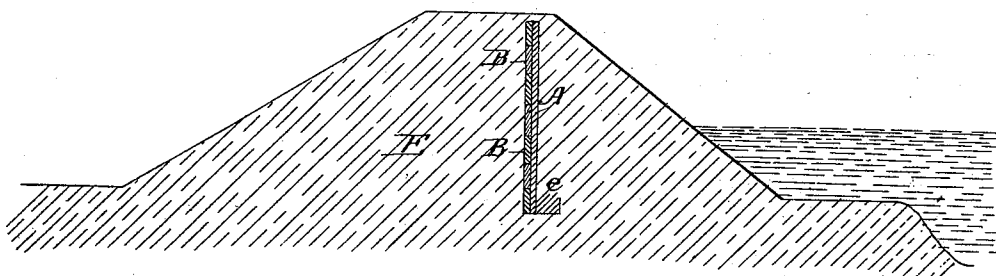


Fig. 2.

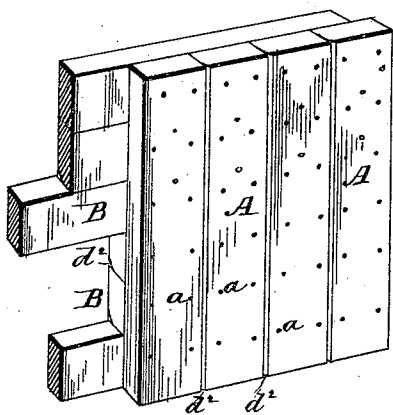


Fig. 3

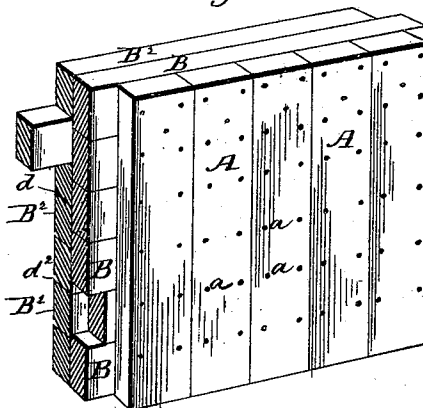
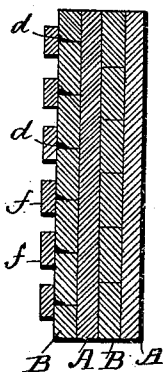


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES E. WRIGHT, OF VICKSBURG, MISSISSIPPI.

DAM OR LEVEE.

SPECIFICATION forming part of Letters Patent No. 479,543, dated July 26, 1892.

Application filed June 15, 1892. Serial No. 436,840. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. WRIGHT, a citizen of the United States, residing at Vicksburg, in the county of Warren, State of Mississippi, have invented certain new and useful Improvements in Dams or Levees, of which the following is a specification, reference being had therein to the accompanying drawings.

The objects of my improvement are to construct in a dam or levee a comparatively inexpensive bulk-head of great strength and capable of resisting seepage or percolation and the perforating power of crawfish, and also to prevent the evil effects of bad or fraudulent construction of levees and to add greatly to their strength and power to resist pressure and wave-wash. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a transverse vertical section of a dam or levee having a safety-wall or bulk-head therein constructed in accordance with my invention. Fig. 2 is a perspective view of a portion of said bulk-head. Fig. 3 is a perspective view of a modification of the same, showing three thicknesses of planks used in its construction. Fig. 4 is a transverse vertical section of a modification of the same, showing four thicknesses of planks and cleats used in its construction.

This invention can be applied to dams and levees already constructed to strengthen them or to insure their safety or to extend them to a higher level. It may be called "a plated safety-wall for dams and levees," as each board entering in its construction has at least one side of its surface plated or covered by and secured to another board having its grain extended in a direction at right angles to the first. A series of said boards A is placed vertically side by side, with their edges touching each other, as in a close standing fence, and on the back thereof a series of boards B is placed horizontally with their edges resting on each other and at least one of their faces in contact with one of the faces of the vertical boards A and secured thereto by nails *a*, preferably clinched thereto.

The vertically-set boards A are of a length corresponding with the proposed height of the dam or levee, if said dam or levee is not

already standing, or of the height of a dam or levee already made and intended to be strengthened or repaired; or they may be longer than said height if it is intended to add to the height of said standing levee. The horizontal boards B are as long as possible and are arranged to break joint at their ends with the boards above and under them. By this construction the wooden wall or bulk-head constitutes, substantially, a beam of great strength, capable of retaining its form even if its supports were hundreds of feet apart. To add to the impermeability of said wall or bulk-head, a thin coating of Portland cement *d* is placed between the edges of each board, and to facilitate its introduction after the boards A are united to the boards B each board has one corner of one of its edges preferably beveled, as shown at *d*².

When a new dam or levee is to be constructed, a narrow trench or ditch *e* is made on the proposed line of the levee, and the bottom board B is placed on its edge in said ditch with one of its faces bearing against the vertical face of said ditch farthest from the water in the river. A series of standing boards A have their lower portion placed against said board and securely nailed thereto, and a cleat is used to unite them temporarily together at a higher point, with their edges substantially in close contact with each other the whole length thereof. Another board B is then placed with its edge upon the first board B and nailed to a series of boards A and Portland cement pressed into the joint between them. The trench or ditch *e* is then filled with clay or muck well compacted therein. Additional boards B are then placed upon the lower two and well secured to each board A with nails or screws until the top one is substantially on a level with the top of said boards A. In the meantime the earth embankment, dam, or levee E is built on each side of the wooden wall and bulk-head, so that by its weight it will insure the stability of the bulk-head and the latter will render a new levee as impermeable as one of great age. Said embankment is made to extend up so as to cover the top of the bulk-head and protect it from the action of the air and sun. The boards used in its construction are preferably of cypress

wood, which when so buried may last for a hundred years. When this safety-wall is to be applied to an old levee that may be unsound on account of the perforations of crawfish and of the roots of trees, a trench of the desired width and depth is made and the wooden wall above described, is built therein and the trench filled again with the extracted material.

When it is desired to build a safety wooden wall or bulk-head of additional strength in sandy or treacherous soil or in sinking quagmire, an additional layer of horizontal boards B² are added to the back of the boards B, as shown in Fig. 3. The construction shown in Figs. 1 and 2 may also be duplicated, as shown in Fig. 4, and cleats *f* may also be used to insure the retention of the cement within the grooves between the boards of the wooden wall.

Having now fully described my invention, I claim—

1. In combination with an earthen embankment, a bulk-head buried therein and consisting of a series of standing boards having their edges in close contact with each other and a series of horizontally-laid boards having their edges superposed and in contact and

nailed to the standing boards, substantially as described. 30

2. In combination with an earthen embankment, a bulk-head buried therein and consisting of a series of standing boards having one of their edges beveled and laid against the adjacent standing board, with cement along said beveled edge, and a series of horizontally-laid boards having their edges superposed and nailed to the standing boards, substantially as described. 35

3. In combination with an earthen embankment, a bulk-head buried therein and consisting of a series of standing boards having their edges in close contact with each other, a series of horizontally-laid boards having their edges superposed and one of said edges beveled, cement along said edge, and cleats inclosing said cement, with nails or their described equivalents uniting the standing boards to the horizontal boards, substantially as described. 40 45 50

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

CHARLES E. WRIGHT.

Witnesses:

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