Feb. 22, 1949. S. M. PONTIERE 2,462,775

SELF-ADJUSTING SEA WALL

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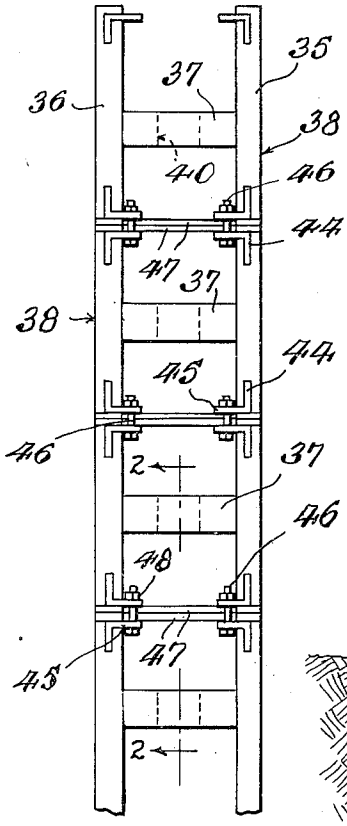


Fig. 1.

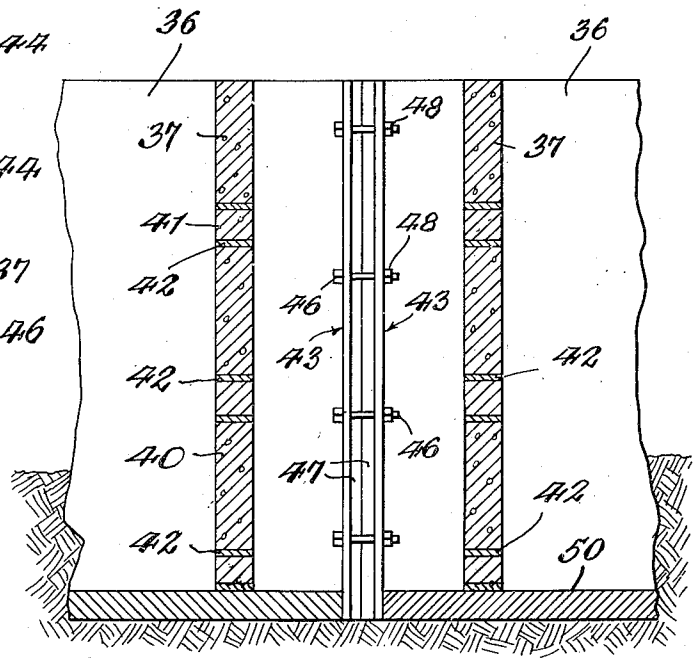


Fig. 2.

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SELF-ADJUSTING SEA WALL

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2 Claims. (Cl. 61—39)

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This invention relates to sea wall structures.

An object of the invention is the provision of a sea wall structure which may be fitted readily together in sections to form a solid front to the waves.

Another object of the invention is the provision of a concrete structure which may be employed in the building of bridges, coffer dams, piers and sea walls for protecting harbors, coast lines and inlets against erosion by the waves, in such a manner that the major elements forming the structure may be manufactured inland and then fitted together in sections at the point desired.

A further object of the invention is the provision of a concrete structure which may be employed for building sea walls and similar marine structures in which the wall is formed by connecting a series of concrete units in end to end relation, each unit consisting of spaced parallel panels and a concrete connecting member midway between the ends of the panels, forming chambers, said connecting members being provided with passages therethrough so that a concrete mixture may pass into said chambers, thus binding the panels and the connecting members into a solid mass.

The invention consists in the novel construction, arrangement and combinations of parts hereinafter more particularly described and claimed.

In the drawing,

Figure 1 is a fragmentary plan view of a modified form of sea wall, and

Figure 2 is a vertical section taken along the line 2—2 of Figure 1.

Referring to Figures 1 and 2, it will be seen that a sectional sea wall is provided, consisting of two panels 35 and 36 connected intermediate the ends thereof by a vertically disposed bridging piece 37. The two panels and the bridging piece are cast as a unit 38 in a mold at an inland point and then conveyed to the waterfront and placed in position. The units are formed of a concrete mixture.

Passages 40 are formed in the bridging members 37 and said passages are closed by plugs 41 which may be formed of wood, cork or other fibrous materials and which are employed in connection with the mold when the units are cast so that a number of the openings will be provided for a purpose which will be presently explained. The plugs may be formed entirely of fibrous materials or they may be formed as a metal collar 42 filled with fibrous materials.

A vertically disposed angle iron 43 has one

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flange 44 embedded in an end of each of the panels 35 and 36 while the other flange 45 projects inwardly and is provided with a plurality of perforations along the length thereof. Bolts 46 received by the passages draw pairs of the flanges together for connecting the units 38 in vertical alinement. Gaskets 47 formed of cork, asphalt or other suitable materials are placed between the adjacent edges of the units before the nuts 28 on the bolts 46 are drawn up tight.

A bottom portion 50 may be included in each unit or the units may be placed upon a foundation built especially for the purpose. As shown in Figure 2 the units 38 and the bottoms 50 extend below the upper surface of the soft materials of the marine bed.

After the units are placed in end to end position, a workman will bolt the connecting flanges 45 together. Before he leaves the chambers formed by at least two associated units he will drive the plugs 41 out so that when the chambers are filled with a concrete mixture, said mixture will flow from one chamber through the openings 42. Thus, the units 38 when the concrete has set will be bound together as a solid mass.

The bottoms of the panels 35 and 36 and the bridging members 37 may be cast with sharp edges so that when the base members 50 are not employed, the units 38 will adjust themselves automatically in the marine bed.

Although a preferred and practical embodiment of the invention is disclosed herein, it is to be understood that various modifications may be made within the scope of the appended claims.

I claim:

1. A sea wall comprising a plurality of sectional units, each unit comprising a pair of spaced parallel panels formed of concrete, a concrete connecting member formed integrally with the panels midway between the ends of said panels, a vertically disposed angle iron at the end of each panel and having one flange embedded in said end, the other flange being free and projecting inwardly from said panel, and means connecting the free flanges on the adjacent ends of pairs of panels.

2. A sea wall comprising a plurality of sectional units, each unit comprising a pair of spaced parallel panels formed of concrete, a concrete connecting member formed integrally with the panels midway between the ends of said panels, said concrete connecting members being provided with passages, means connecting the edges of adjacent panels together forming chambers, and a concrete filling in the chambers and the pas-

sages for binding the panels and connecting means into a solid mass.

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