H. E. DOREN.

JETTY.

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1,199,878. Patented Oct. 3, 1916.

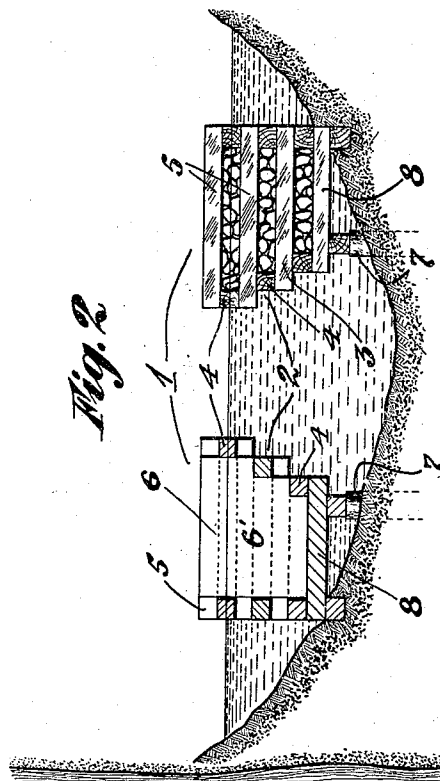


Fig. 2.

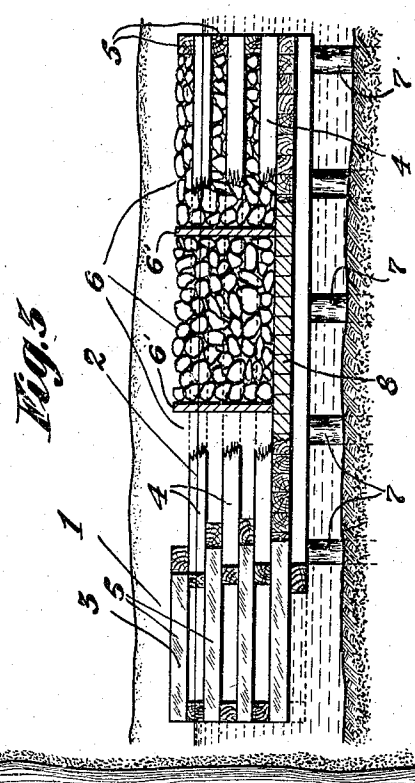


Fig. 3.

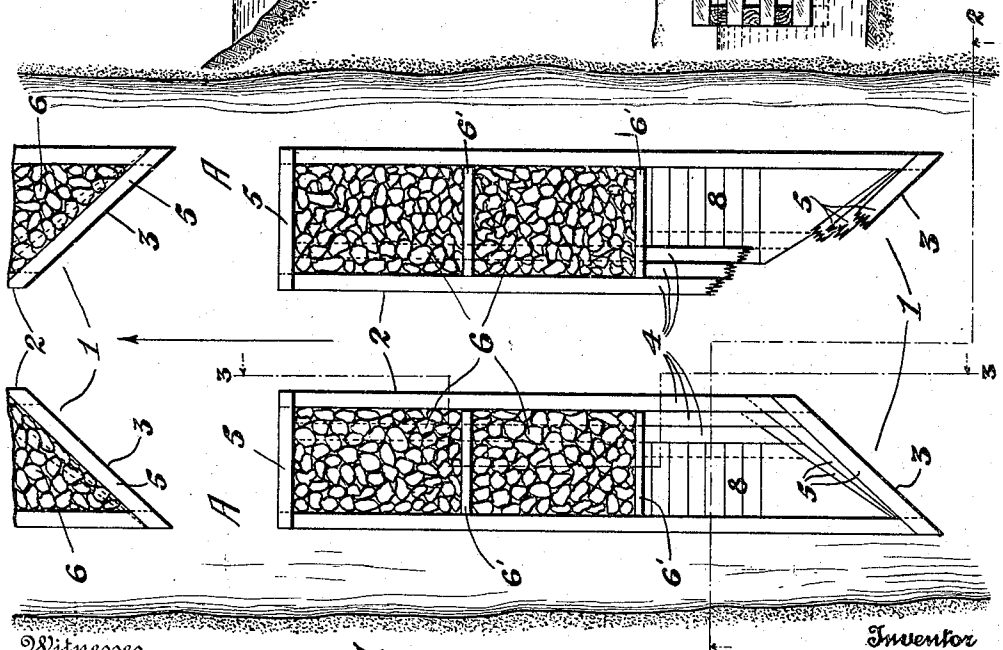


Fig. 1.

Witnesses

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UNITED STATES PATENT OFFICE.

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JETTY.

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To all whom it may concern:

Be it known that I, HENRY E. DOREN, a citizen of the United States of America, and a resident of the city of Edmonds, in the county of Snohomish and State of Washington, have invented certain new and useful Improvements in Jetties, of which the following is a specification.

My invention has for its primary aim to provide a jetty whereby the current of a stream may be directed toward the bed for removing and preventing a deposit and thereby maintain a defined channel. In navigable streams or rivers, it has been found that the major force or velocity of the current is located a considerable distance above the bed and for this reason large deposits of sand, and the like, are easily made, eventually forming sand-bars which obstruct the channel as well as rendering navigation unsafe. It has further been found that the "center" of the current is closer to the bed in a deep stream than in a shallow one owing to the fact that the banks of the stream are closer in proportion to the increased depth and thereby confine the waters into a smaller path than in a wide, shallow stream. I have found that, by constructing a jetty formation having overhanging walls whereby a conduit of more or less confinement is formed in conjunction with the bed of the stream, the "center" of the current may be directed and held down in proximity to the stream's bed and will remove sand-bars, and other deposit, and maintain the bed free from deposit.

My invention therefore has for a further object to provide a jetty construction which will be efficient in performing the above functions.

These and other objects I attain by the construction illustrated in the accompanying drawing and specified in the following description, and those features of construction and arrangements of parts on which I desire protection will be succinctly defined in the appended claims.

In the drawing: Figure 1 is a plan view of my improved jetty in use. Fig. 2 is a view on line 2—2 of Fig. 1, and Fig. 3 is a sectional view taken on line 3—3 of Fig. 1.

Referring by similar characters of reference to corresponding parts throughout, 1 denotes my improved jetty which I arranged in opposing relation to one another, the opposing side walls 2 being inclined downwardly and inwardly from the channel between the opposing jetties, while the forward wall 3 of each jetty is disposed at an angle to the direction of current and is formed to present a surface resembling a warped plane wherein its inclination gradually increases in a rearward direction and is connected to the side wall 2. The angular disposition of wall 3 will be varied more or less in accordance with the decrease or increase of the velocity of the current. The current entering between the jetties encounters the walls 3, which are inclined downwardly and inwardly in a rearward direction, and is thereby directed down toward the bed of the stream. The current is held down adjacent the bed of the stream by the side walls 2, which form in conjunction with the bed of the stream a conduit, and therefore maintain a defined channel by cleaning the bed of and preventing a deposit of silt or other material.

The construction of the jetty, as illustrated, is formed of longitudinal frame members 4 and interposed transverse or angularly disposed frame members 5, said frame members being arranged to project beyond the immediate lower ones to provide the corrugated inclined walls 2 and 3. The jetty is preferably composed of sections 6 to facilitate the positioning thereof on the supporting piles 7, and in sinking the jetty, rock or other suitable material is filled in the compartments defined by the section walls 6′, the frame members and the flooring 8.

In lieu of a continuous jetty, a series of longitudinally spaced, short jetties, as shown in Fig. 1, will efficiently serve in holding the current down toward the bed. The spacing of these jetties will vary according to the current, but shall be close enough to direct the current downwardly as it commences rising after leaving the preceding jetty. The space, as A, between the jetties permits of free lateral flow of the waters, which is desirable when the tide returns, by eliminating the confinement of the waters found by rising continuous jetties.

I have shown my jetty constructed of timbers, but I am aware the same may be constructed of concrete or other suitable material without departing from the spirit of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Let-

ters Patent of the United States of America, is:—

1. Spaced parallel rows of jetties having the upper portions of their faces which are toward the channel and below the water level projecting materially beyond its lower portions.

2. Spaced parallel rows of jetties having the upper portions of their faces which are toward the channel projecting materially beyond the portions which are below the water level, the upstream end of the jetties being pointed to present faces inclined to the channel course to deflect the water toward the channel and also warped to cause their upper parts which are near the water level to overhang the lower toward their downstream ends.

Signed at Seattle this 28 day of May, 1914.

HENRY E. DOREN.

Witnesses:
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CLARA A. HARM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."