(No Model.)

G. S. BAILLIE.

ANCHOR FOR SECURING JETTIES, &c.

No. 601,407. Patented Mar. 29, 1898.

FIG 1

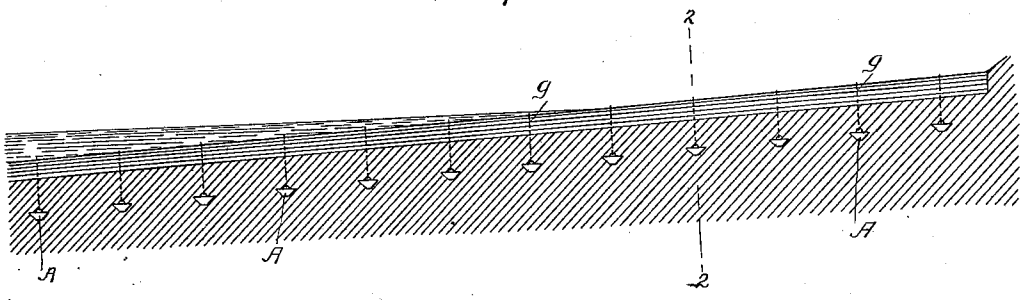


FIG. 2

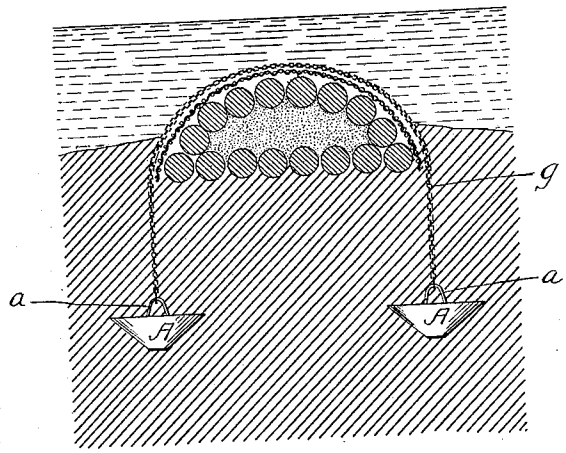


FIG. 3

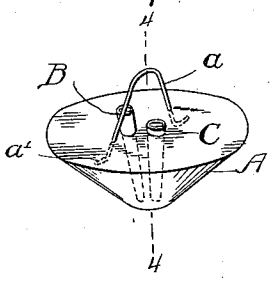
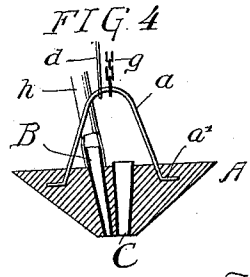


FIG. 4



Witnesses:
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J. Henderson.

Inventor:
Gertrude Stuart Baillie
by her Attorney.
Howard Pellett.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GERTRUDE STUART BAILLIE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE SEACOAST JETTY COMPANY, OF NEW JERSEY.

ANCHOR FOR SECURING JETTIES, &c.

SPECIFICATION forming part of Letters Patent No. 601,407, dated March 29, 1898.

Application filed October 5, 1896. Serial No. 607,824. (No model.)

To all whom it may concern:

Be it known that I, GERTRUDE STUART BAILLIE, a citizen of the United States, and a resident of the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Anchors for Securing Jetties, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of the specification.

My invention has relation to anchors for securing jetties, buoys, piers, dykes, light-ships, and like constructions which require permanent fixed anchors for holding them in position.

My improvement consists in the devices hereinafter described constructed to accomplish the ready sinking of the anchor and the retaining its desired position when sunk to the proper depth.

In the accompanying drawings, Figure 1 is a partially-sectional side elevation representing a jetty or breakwater held in position in the bottom of the sea or river-bed by a series of my improved anchors. Fig. 2 is a cross-sectional view on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of my anchor with hose attached. Fig. 4 is a sectional view of the anchor on the line 4 4, Fig. 3.

A represents the main body of the anchor, preferably wedge or cone shaped to allow it to more readily bury itself as the sand or earth is loosened or displaced from beneath it. In the upper portion of the body A is provided a staple *a*, secured from displacement by the hooked ends *a'* or by other suitable means. Perpendicularly through the anchor is provided a pipe B, preferably near the center, the upper end of which protrudes above the top of the anchor and is adapted to receive the end of a flexible water-supply pipe secured thereto by any desirable means, as by being stretched over the mouth of the pipe B or by other suitable means. When the anchor is settled to its desired position, the flexible hose is pulled off by main force or cut off at the water's edge, dropped, and thus disposed of. A waste-escape pipe C is also provided perpendicularly through the anchor adjacent to the water-supply pipe B. The supply-pipe B is preferably tapered and narrower at the lower surface of the anchor, so that the supply of water may be ejected against the sand or other material composing the bottom with greater force. The escape-pipe C is likewise preferably larger at the upper end to prevent clogging and to more readily allow the sand or earth which is mixed in with the water driven up through the pipe C to more easily flow out.

In operation the anchor, fitted with a lowering-cord *d* and the securing-chain attached to the staple *a* and with the supply-hose *h* properly attached to the pipe B, is dropped overboard at the desired point from a boat or platform. When bottom is reached, the water-supply from a pump or water-main is turned on. The force of the water as it is ejected from the lower end of the pipe-nozzle B at the bottom of the anchor forces away the sand or earth immediately below and about it. The weight of the anchor being of iron or other desirable heavy material settles it in the cavity left by the displaced sand or earth. The stream continuing, the anchor buries itself gradually deeper and so much of the escaping sand or earth which does not pass up along the sides of the anchor as it settles is forced up through the escape-pipe C and falls on top of the anchor, helps to bury it, and as the anchor keeps on descending and burying itself as the hose plays until the desired depth is reached, when the water is turned off and the flexible hose *h* is pulled off, abandoned, or released by any desired construction and drawn to the surface.

When two anchors are desirable for securing the object—such, for instance, as a jetty or breakwater, as shown in Figs. 1 and 2—a second anchor of like construction with the other end of the chain *g* of the proper length attached to it is in a similar manner dropped to its position and sunk to the desired depth by the same operation and the jetty firmly secured to the bottom, as illustrated. When the anchor is once in position, it will be firmly and securely held there by the sand or earth above and below it and a most secure anchorage formed for whatever purpose desired.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An anchor for securing jetties, &c., adapted to be buried below the bed of a body of water, said anchor comprising a block having a conical lower face and a substantially flat upper face, there being in said block two openings one of which is adapted to permit of the upward flow of material from beneath the anchor to cover the upper flat surface of the same, and the other being arranged at its upper end for connection with a water-supply tube, and means for connecting the anchor to the object to be held in place, substantially as specified.

2. A jetty-anchor having a conical lower face provided with a centrally-disposed opening through the anchor, a pressure-supply pipe leading to said opening in the anchor, a second opening larger in diameter at its upper than at its lower end, and a staple or eye, *a*, secured to said anchor, substantially as specified.

3. A jetty-securing device consisting of two or more cone-shaped anchors each having a centrally-disposed opening adapted for communication with a pressure-supply pipe for directing a jet of water on the material below the anchor, and each anchor having a second opening to permit of the flow of water and soil therethrough to a point above the anchor in the process of settling, a securing-staple on each anchor and a chain or cable connecting the said anchors in pairs, the anchors of each pair being adapted to be buried on opposite sides of the jetty with the chain or cable passing over and binding down said jetty to prevent lateral and vertical movement of the same, substantially as specified.

In witness whereof I have hereunto set my hand this 24th day of September, A. D. 1896.

GERTRUDE STUART BAILLIE.

Witnesses:
EDMUND S. MILLS,
HORACE PETTIT.