

A. E. SMITH.  
JETTY OR JETTY WALL.  
APPLICATION FILED MAY 29, 1908.

919,788.

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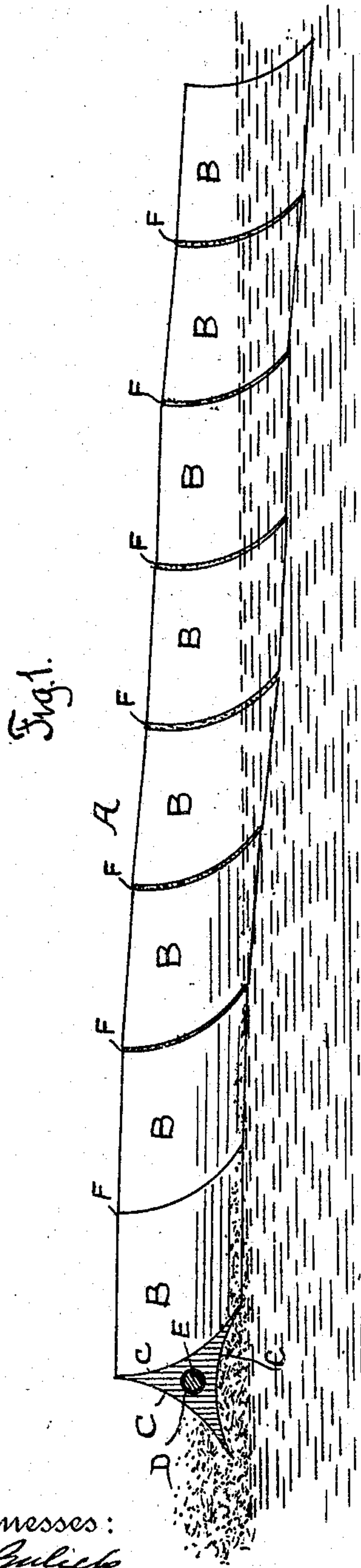


Fig. 4.

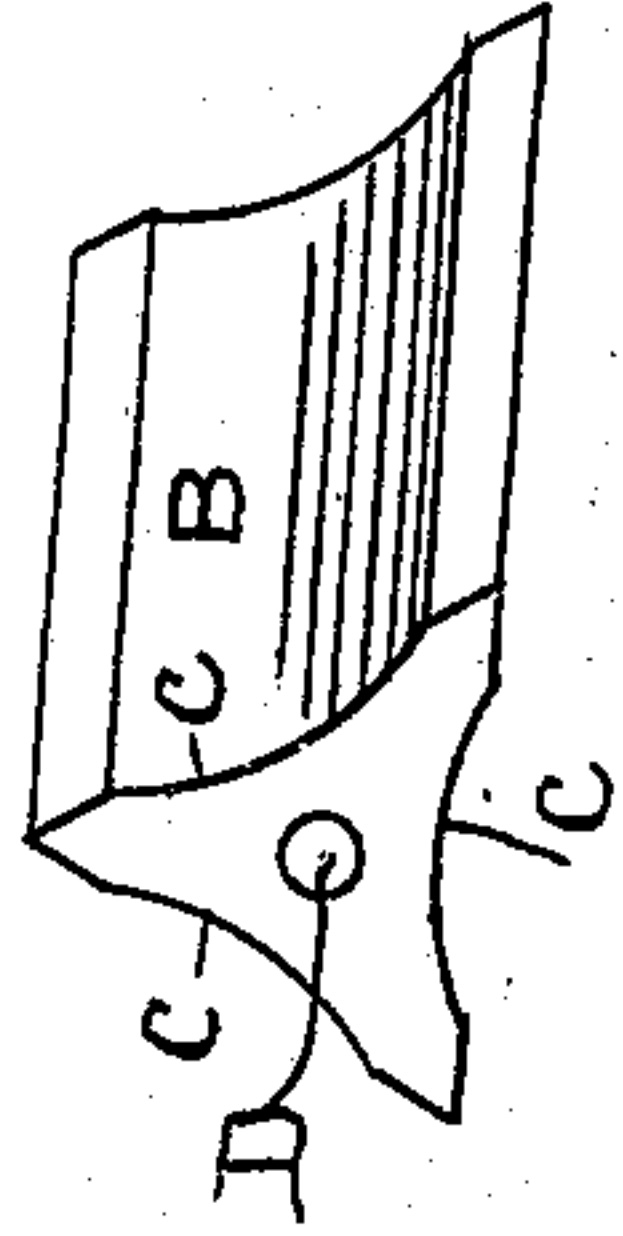


Fig. 2.

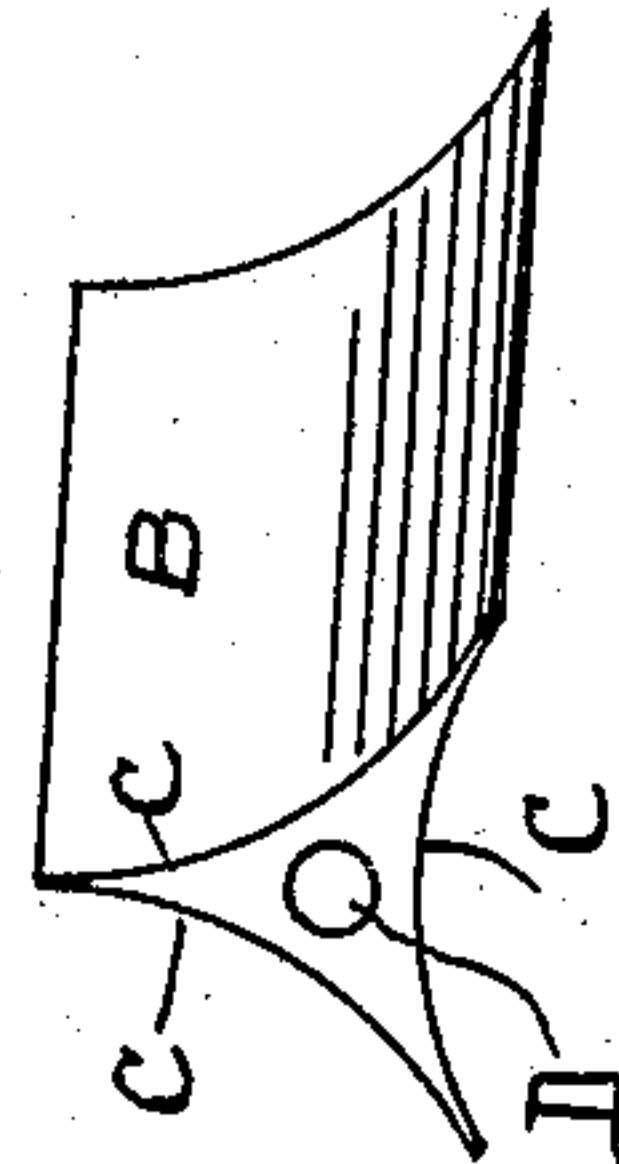
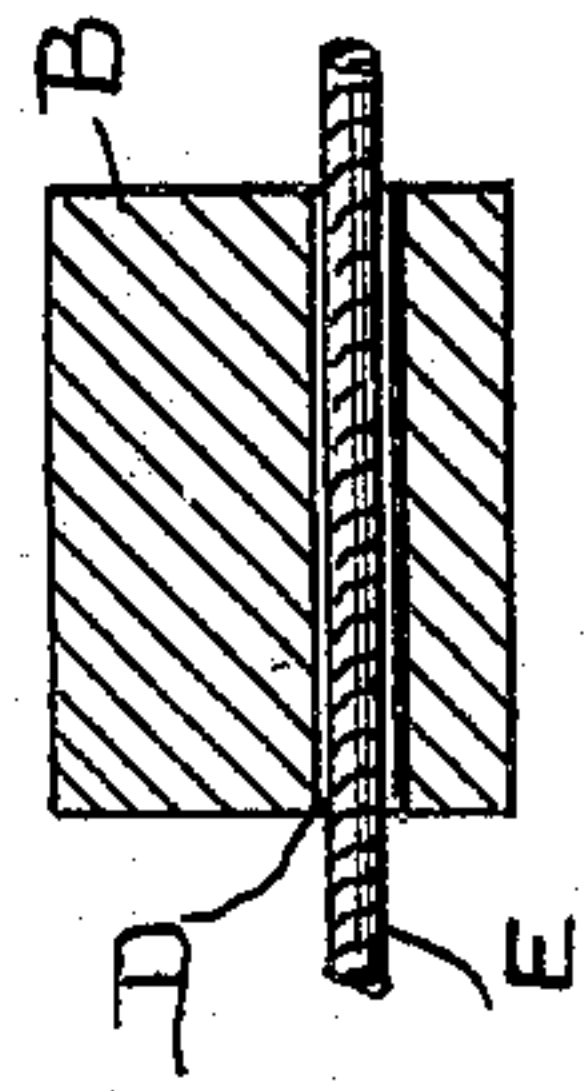


Fig. 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## JETTY OR JETTY-WALL.

No. 919,788.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed May 29, 1908. Serial No. 435,677.

*To all whom it may concern:*

Be it known that I, ALONZO E. SMITH, citizen of the United States, and resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Jetties or Jetty-Walls, of which the following is a specification.

My invention relates to jetties or jetty walls such as are used to change the direction of and restrain the action of water in motion upon shores, beaches, or upon formations under water.

The principal objects of this invention are, first, to divert or change the flow of the water in motion from a substantially horizontal to a substantially vertical direction, thereby breaking or destroying the destructive force of the water; second, to cause the materials which may have been suspended in the water to be deposited at the location where the protection is to be effected; third, to utilize the mixture of sand and water in motion to replace wash-outs and fill in low spots adjacent to the place where the water flows; fourth, to prevent undermining or inundation of the jetty wall utilized for any purpose by the action of the water in motion; and fifth, to construct a jetty wall which may be either continuous or in sectional parts which shall provide a channel under the bottom of the wall for the escape of the water which may find entrance to the same.

A subordinate object of the invention is to provide or produce a jetty wall which may be easily and conveniently located at any desired point, to extend in the desired direction, and which will be easy and cheap to construct and to properly locate in place.

To accomplish all of the foregoing objects and to secure other and further advantages in the matters of construction, operation, location and use, I make a jetty wall either continuous or sectional, of concrete or cement mixture, with or without reinforcement, in general triangular form, of which the sides are concaved or embody a concaved and a straight portion.

In the accompanying drawings forming part of this specification, Figure 1 is a perspective view showing a jetty wall constructed and arranged for operation in accordance with my invention and involving my improvements, the view showing a plurality of jetty sections and representing the wall as in use. Fig. 2 is a perspective view of

one of the jetty sections. Fig. 3 is a longitudinal, sectional view of one of the jetty sections, showing a cable passing through it. Fig. 4 is a perspective view of a jetty section, showing the curved or concaved faces terminated by straight or plain portions.

In these several figures, wherein like letters of reference are employed to indicate corresponding parts, A represents a jetty wall consisting of a series of sections, B, which are made in general triangular shape having the three sides, C, concaved. For convenience and cheapness the sections are molded of concrete or of cement mixtures of reinforced concrete construction in the proper forms.

Each section is provided with a central longitudinal opening, D. The several sections are held together by a cable, rope or chain, E, which is passed through the central opening in each part or section. The seams, F, between the sections when the latter are in place, are filled with any suitable materials or calked to check or prevent the water from passing between the sections.

The object in concaving the sides of the jetty sections is two-fold, namely, so that the side of the jetty wall which rests upon the beach or bed shall form an air-space with its foundation which prevents the undermining or washing away of the ground by affording a passage or means of escape for the water which may have passed under one of the legs or edges of the wall, thus preventing destructive action on the wall or its foundation, and second, so that the other two sides of the jetty wall, because of their inclination and concavity, shall present a deflecting surface to the water moving against either of them, sending the same in a vertical direction, thus breaking the force of the water and depositing the sand or other materials which may be held in suspension at the base of the wall. Thus the jetty wall becomes reinforced and strengthened and the protection intended to be secured by it increased by the action of the water and the material held in suspension.

The sides of the jetty sections, instead of being continuously curved or concaved as in Figs. 1 and 2, may be composed of concaved and straight portions, as shown in Fig. 4, but this variation in shape will not change the principle of my invention.

A jetty wall constructed and arranged to operate as above explained has the novelty



and advantages of being not only flexible, but of accomplishing the two-fold object of preventing the washing away of the coast or channel line and the building up of ground at the points desired to be protected.

From the general shape and construction of the jetty wall sections, it will be apparent that they may be easily and quickly located end to end throughout the desired line and securely fastened in the desired place. The sides being similar, it is immaterial which particular side may rest upon the foundation, as the other two sides will always be in position to deflect the impinging water currents from a horizontal to a vertical direction.

Having now fully described my invention, what I claim as new herein and desire to secure by Letters Patent, is:

1. In jetty walls, a plurality of concrete sections having concaved sides, said sections being arranged end to end, to deflect the water in a vertical direction.

2. In jetty walls, a concrete section having concaved sides combined with plain portions and arranged to deflect the water in an upward direction.

3. In jetty walls, a plurality of concrete sections, each having concaved sides and provided with a longitudinal opening, combined

with a rope or chain passed through said opening, said sections being arranged end to end, for the purpose set forth.

4. In a jetty wall of triangular cross-section, the concaved sides, one of which sides forms a channel with the foundation of the wall for escape of water which may enter said channel, for the purpose set forth.

5. In a jetty wall, a plurality of cement composition sections, each having concaved faces and a longitudinal opening, combined with means for uniting said sections end to end, and means for calking the abutting ends of the sections.

6. In a jetty wall, a plurality of cement composition sections, each section having concaved sides and a longitudinal opening, combined with means for uniting said sections end to end and means for calking the abutting ends of the sections, a passage or channel for water being provided by the wall and located between it and its foundation.

Signed at New York in the county of New York and State of New York this 22nd day of May A. D. 1908.

ALONZO E. SMITH.

Witnesses:

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