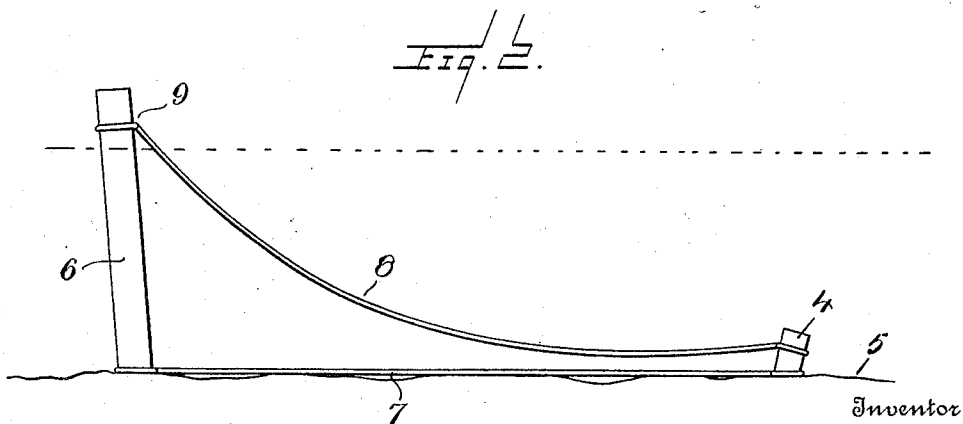
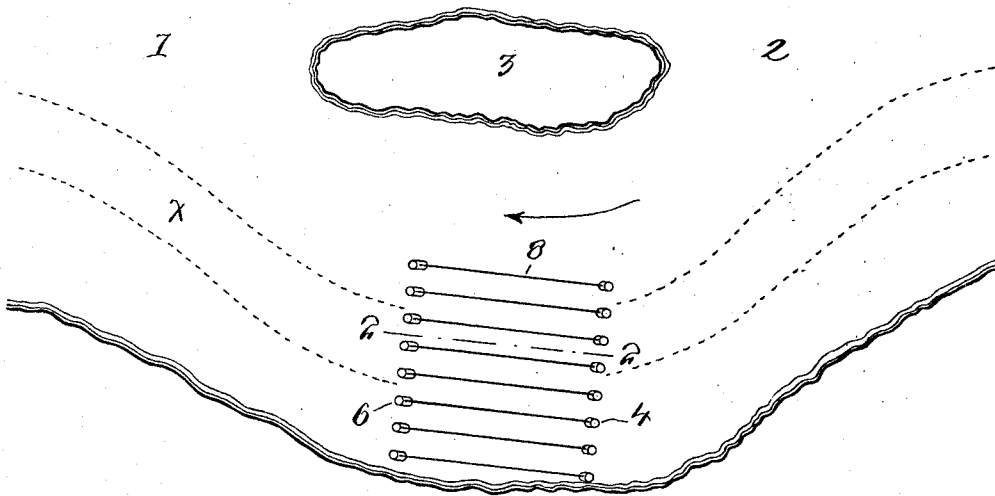
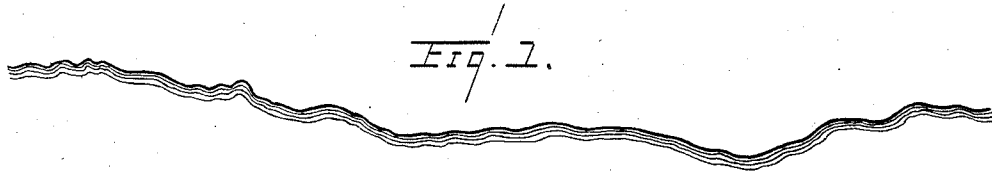


A. GREEN.
 MEANS FOR PROTECTING RIVER BANKS.
 APPLICATION FILED DEC. 10, 1910.

1,005,113.

Patented Oct. 3, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

ALBERT GREEN, OF WESTALTON, MISSOURI.

MEANS FOR PROTECTING RIVER-BANKS.

1,005,113.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed December 10, 1910. Serial No. 596,627.

To all whom it may concern:

Be it known that I, ALBERT GREEN, a citizen of the United States, residing at Westalton, in the county of St. Charles and State of Missouri, have invented new and useful Improvements in Means for Protecting River-Banks, of which the following is a specification.

This invention relates to a means for protecting river banks from corrosion and for diverting the channel of streams.

The object of the invention is to accomplish the proper protection of land on either stream bank with simple, efficient and inexpensive means.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawing, which forms a part of the present application, and in which:—

Figure 1 is a top plan view. Fig. 2 is a vertical section through a portion of the river and river bed taken on the line 2—2 of Fig. 1.

Referring more particularly to the drawing, 1 represents the stream, 2 the bank to be protected, the present channel of the river being indicated by the dotted lines *x*. In order to divert the channel to a point closer to the island 3 or to a point more central in the stream, a row of piles 4 is driven at intervals extending outwardly from the shore into the river as far as is desired and these piles have their tops arranged slightly above the bottom 5 of the river. Immediately below the row of piles 4 and separated therefrom a suitable distance is a second row of piles 6 arranged in a similar manner and having their tops projecting above the water. Each pile of the series 4 is connected with its coacting pile in the series 6 by a cable 7 and this cable 7 in each instance lies upon the bottom of the river. Cables 8 are connected to each of the piles in the series 4 and extend slightly above the bottom 5 and are connected at their opposite ends to the tops of the piles of the series 6, as shown at 9. The cables

7 are simply used as reinforcing members while the cables 8 are adapted to receive the drift or debris carried down the river and collect the same until it is sufficiently heavy to sink to the bottom and form a jetty extending from the shore into the stream. When this jetty is of sufficient density, a sand bar is formed back of the same and the bank 2 properly protected and the channel diverted to a point farther away from the shore.

In practice the series of piles 4 and 6 are arranged so that each pile from the shore pile outwardly is arranged slightly farther upstream than the preceding pile, thus making the series as a unit slightly inclined upstream.

Having thus described the invention, what I claim as new is:—

1. Means for protecting river banks comprising a series of piles driven into the river bottom and extending slightly thereabove, said piles being arranged with the offshore pile of the series farther up the stream than the shore pile of said series, a second series of piles extending above the water and arranged parallel with the first series, reinforcing cables connecting said piles and debris supporting cables connected to the first series and to the top of the second series.

2. Means for protecting river banks comprising a series of piles driven into the river bottom and extending slightly thereabove, a second series of piles separated from the first series and extending above the water, said second series being arranged parallel with the first series, reinforcing cables connecting said series of piles, and lying substantially on the bottom of the river, and debris supporting cables connected to the first series and to the top of the second series.

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

ALBERT GREEN.

Witnesses:

FRANK E. JOHNSON,
O. T. COTTLE.