

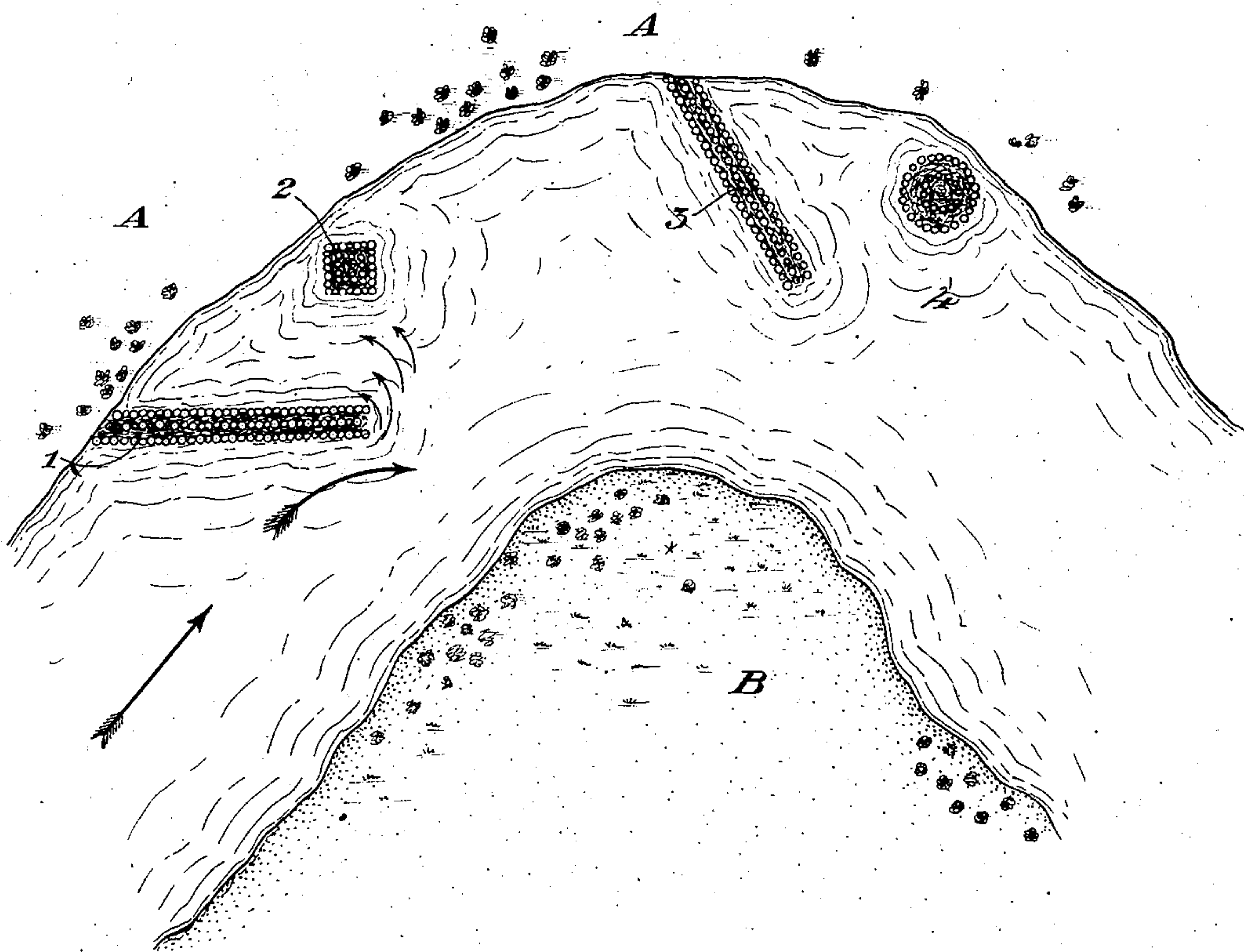
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R. B. MCGREGOR.

MEANS FOR PROTECTING RIVER BANKS.

APPLICATION FILED NOV. 9, 1907.



Witnesses

R. C. Claflin
F. J. Veihmeyer

By

Inventor
Robert B. McGregor
Chas. Bros.
Attorneys

UNITED STATES PATENT OFFICE.

ROBERT B. MCGREGOR, OF SHERARD, MISSISSIPPI.

MEANS FOR PROTECTING RIVER-BANKS.

No. 880,390.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed November 9, 1907. Serial No. 401,441.

To all whom it may concern:

Be it known that I, ROBERT B. MCGREGOR, a citizen of the United States, residing at Sherard, in the county of Coahoma and State of Mississippi, have invented certain new and useful Improvements in Means for Protecting River-Banks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the protection of river banks from caving in and being worn away by the current particularly at bends in the stream.

The invention is particularly useful in connection with swift running rivers or water-courses and serves to form a bar along the caving bank and to turn off the current towards the other side of the stream where it is often of utility in removing sand bars which have formed along said opposite bank.

The invention involves the construction of a breakwater out into the stream from the caving bank to deflect the current and create an eddy which will carry sand and other deposits around behind it. The material thus deposited back of the breakwater is retained and held together by a bar former or structure built in the river near the caving bank and behind said breakwater. In this way a bar is formed in front of the caving bank and further wearing away of said bank is prevented. When the bar is complete, a dredge should be operated on the opposite bank to start the current, which has been turned in that direction by the breakwater, to wash said bank away. When the stream is as wide as it should be, another bar should be formed on that side as along the first caving bank. Then both banks will be uniform and natural and the current will wash the channel deeper.

The accompanying drawing illustrates my invention used at the bend of a river, to protect the caving bank A and remove the sand bar B on the opposite side. The breakwater 1 is constructed preferably of a plurality of rows of pile between which is filled in brush and rock. Said breakwater extends well out into the river and is arranged obliquely pointing down stream. The bar former 2 is constructed by driving two rows of pile in squares and filling the inner one and between it and the outer one with brush and rock. The pile in both the breakwater and bar former are suitably braced and bound together to make

them firm and solid. Another breakwater 3 and bar former 4 are arranged further around the bend of the river and they may be repeated at proper intervals as may be necessary. The breakwater 3 is constructed in the same manner as the breakwater 1. The bar former 4 is made round instead of square but in other respects is constructed like the bar former 2.

In the drawing, heavy arrows are used to indicate the direction of the current before and after it strikes the breakwater 1 and light arrows show how the eddies are formed around said breakwater. It will be observed that when the current is deflected from said breakwater it will strike against the opposite bank and tend to wear away or remove the sand bar B while the eddying currents will carry sand and other deposits behind said breakwater and form a bar around the bar former in front of the caving bank A. It will thus be seen that by constructing breakwaters and bar formers as herein described, first on one side and then on the other side of a water-course, the banks may be made regular and straight and the channel be deepened.

I claim:

1. Means for protecting river banks consisting of a breakwater built out from the bank to be protected, and a bar former constructed behind said breakwater for the purpose specified.

2. Means for protecting river banks consisting of a breakwater built out from the bank to be protected, said breakwater being arranged obliquely and pointing down stream, and a bar former constructed behind said breakwater for the purpose specified.

3. Means for protecting river banks consisting of a plurality of breakwaters built out at intervals from the bank to be protected and a bar former constructed behind each of said breakwaters for the purpose specified.

4. Means for protecting river banks consisting of a plurality of breakwaters built out at intervals from the bank to be protected, each of said breakwaters being arranged obliquely and pointing down stream, and a bar former constructed behind each of said breakwaters for the purpose specified.

5. Means for protecting river banks consisting of a breakwater built out from the bank to be protected, said breakwater being constructed of rows of pile filled in between

with brush and rock, and a bar former erected behind said breakwater for the purpose specified.

- 5 6. Means for protecting river banks consisting of a breakwater built out from the bank to be protected, and a bar former constructed behind said breakwater for the purpose specified, said bar former comprising

endless rows of pile filled in with brush and rock. 10

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

ROBT. B. MCGREGOR.

Witnesses:

I. K. LOCKE,
J. A. RODMAN.