

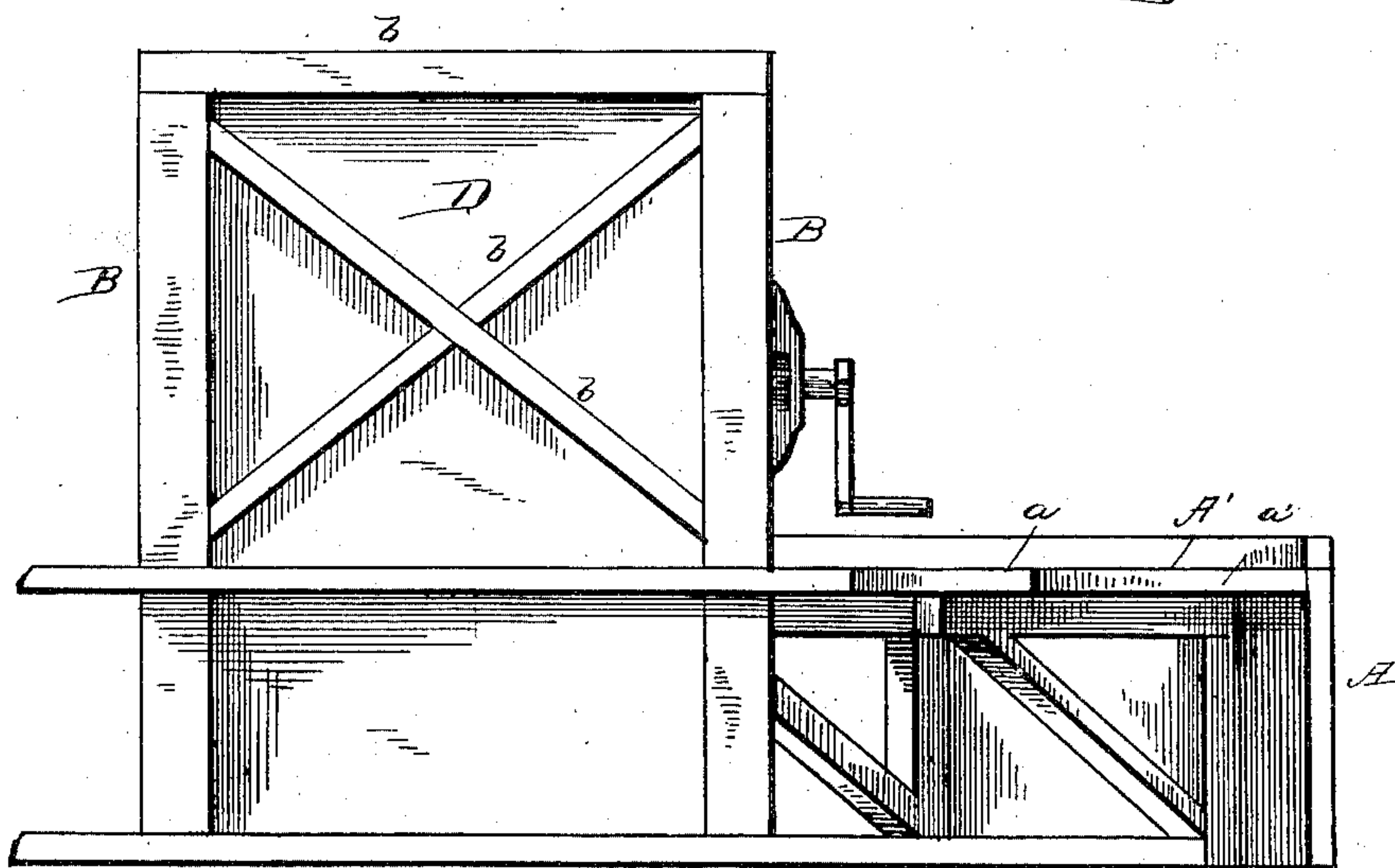
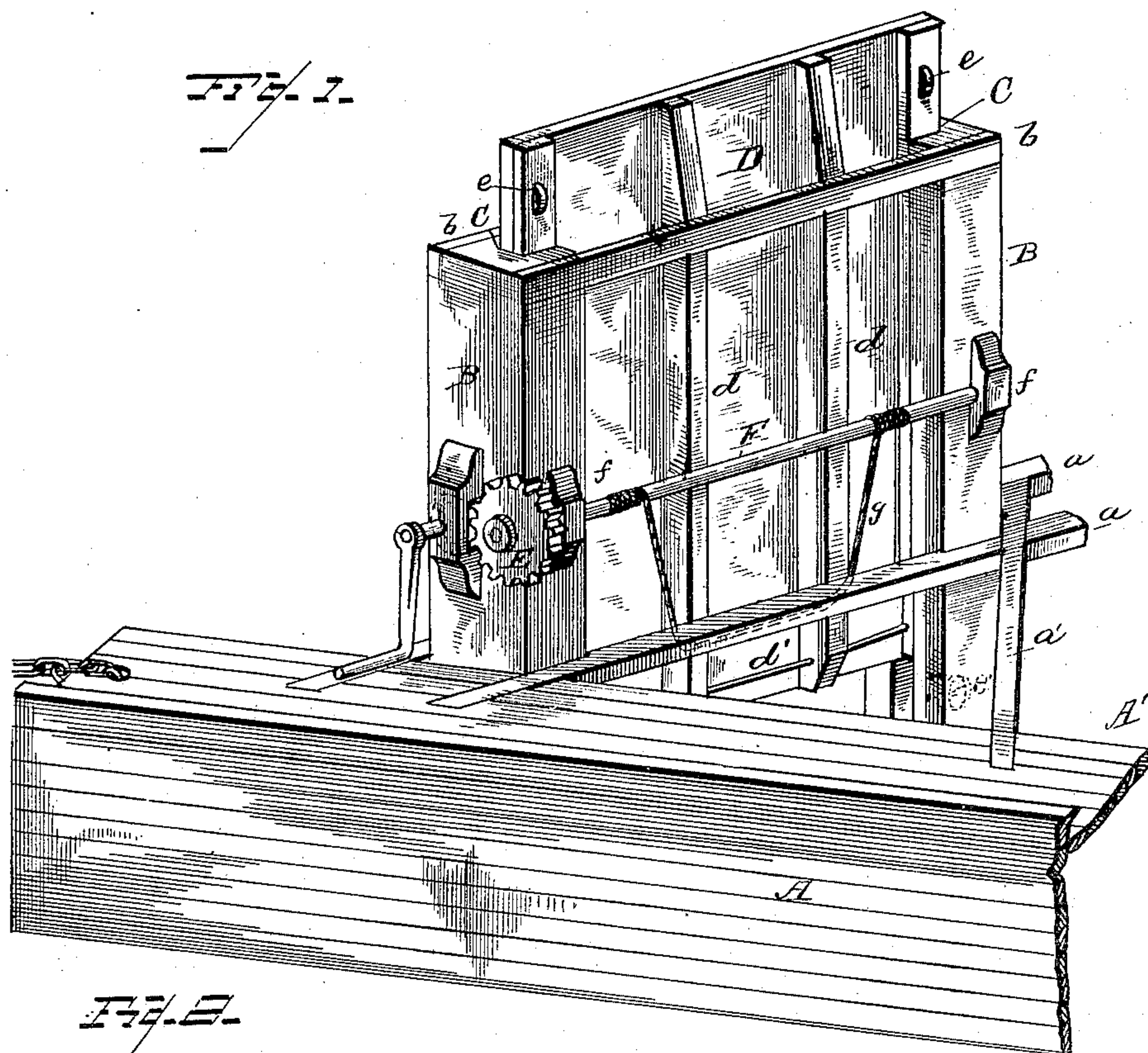
(No Model.)

2 Sheets—Sheet 1.

H. P. MARVIN & A. ARNOLD.
FLOATING WING DAM.

No. 313,747.

Patented Mar. 10, 1885.



WITNESSES
 Frank L. Ourand.

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Henry Pharrus and Allen Arnold
INVENTORS

Attorney

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Fig. 3.

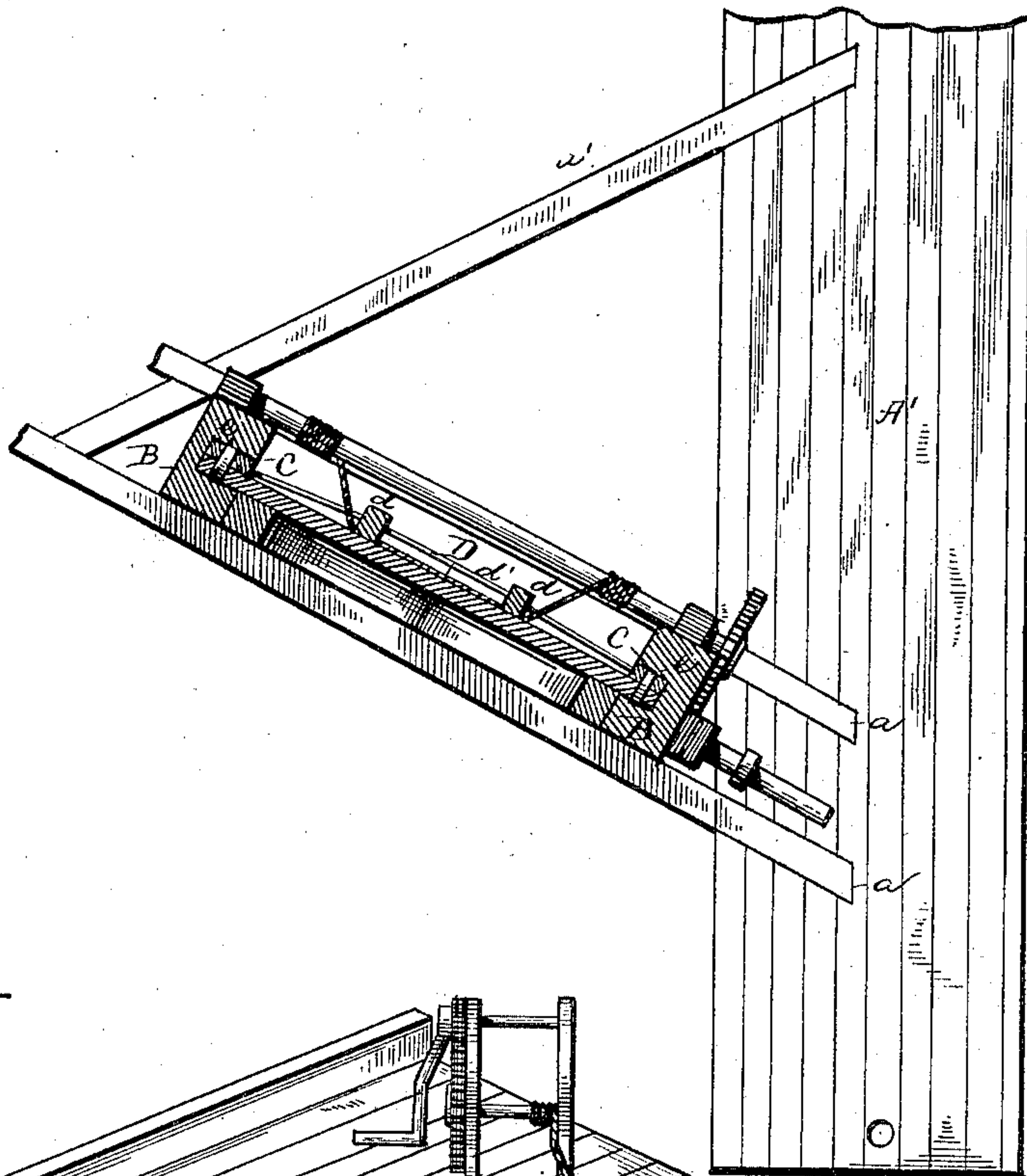
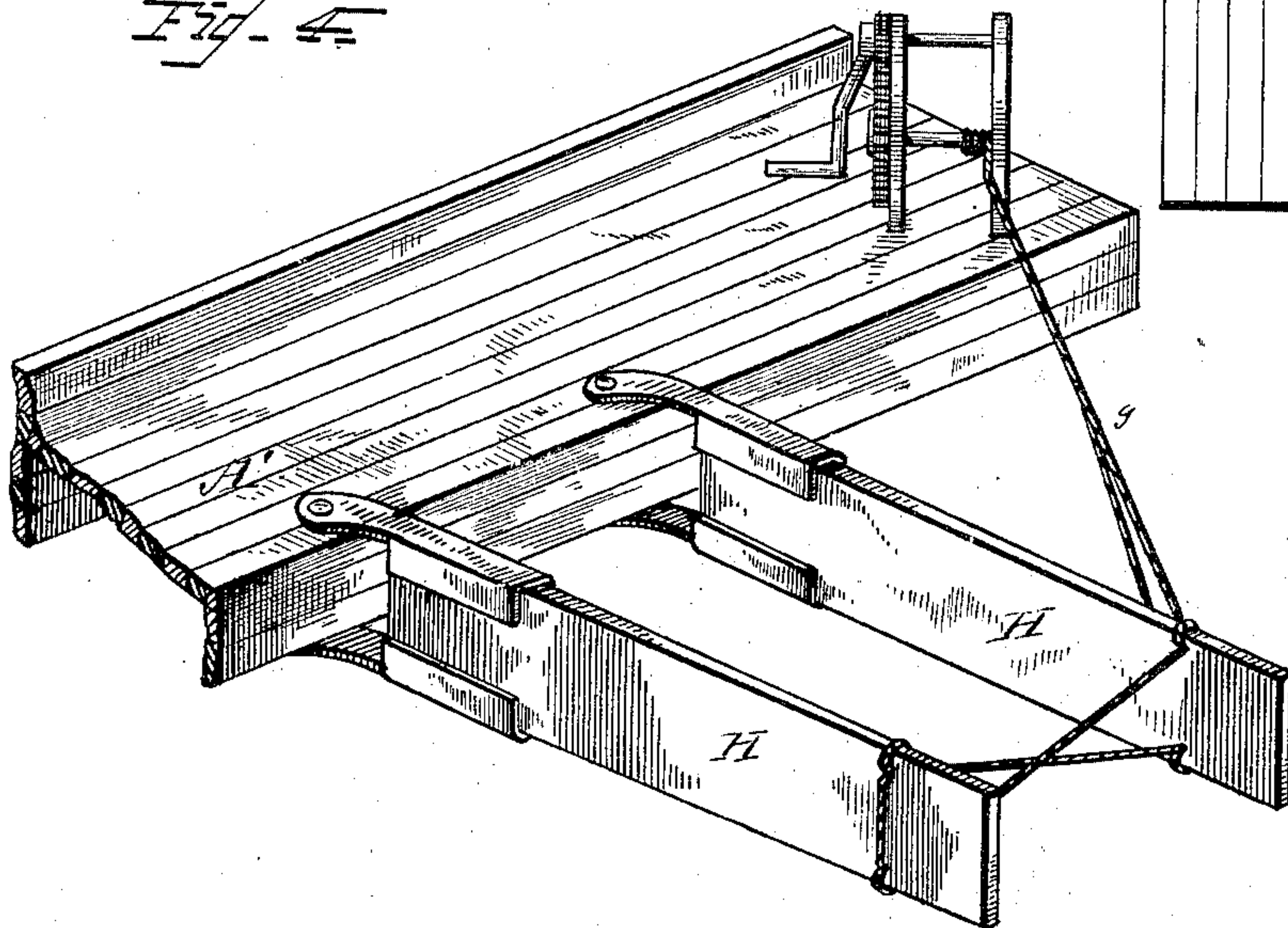


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY P. MARVIN AND ALLEN ARNOLD, OF CHIPPEWA FALLS, WISCONSIN.

FLOATING WING-DAM.

SPECIFICATION forming part of Letters Patent No. 313,747, dated March 10, 1885.

Application filed June 14, 1884. (No model.)

To all whom it may concern:

Be it known that we, HENRY P. MARVIN and ALLEN ARNOLD, citizens of the United States of America, residing at Chippewa Falls, in the
5 county of Chippewa and State of Wisconsin, have invented certain new and useful Improvements in Floating Wing-Dams; and we do hereby declare the following to be a full, clear, and exact description of the invention,
10 such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

15 This invention relates to wing-dams, its object being to provide a means for deepening the channels of rivers and protecting the banks of the same; and to this end our invention consists in a portable structure which is provided with movable gates and means for adjusting the same to and from the structure, as
20 will be hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view. Fig. 2 is a front view. Fig. 3 is a horizontal section, and Fig. 4 is a perspective view of a modification of our invention.

A represents a suitable structure, which is
30 adapted and provided with means for securing the same to a pier, wharf, or other permanent structure in a river or stream, or the aforesaid structure may be a float or a scow which is adapted to be sunk and secured in such portions of a river or stream at or near
35 such points as it is desired to deepen the same. The structure A is provided with a projecting portion, A', which is braced by suitable supports, and serves directly as a supporting
40 means for the wings.

In Figs. 1, 2, and 3 of the accompanying drawings, *a a'* represent beams which project at angles from the portion A' of the structure and serve as braces and supports for the vertical beams B, which are braced to each other
45 by the beams *b*. The vertical beams B are provided with longitudinal recesses C, within which slides vertically the gate D. The gate D is provided on its rear face with vertical battens *d* and horizontal truss-rods *d'*, and carries at its upper end rollers *e*. The lower portion of the vertical standards B, within the

rear portion of the recess C, is also provided with rollers *e'*. The rollers hereinbefore described allow the gate to be raised and lowered. 55

To each of the standards B B are secured bearings *f*, within which is journaled a transverse rod, F, which carries at one end a gear-wheel, E, with which meshes a pinion secured to the end of a crank-shaft, as shown. A flexible connection, *g*, is secured to the shaft F
60 and to the lower portion of the sliding gate D, and upon turning the crank-shaft the gate will be raised or lowered. This structure is intended to be employed in deep water where it is desired to direct the current toward a central point for the purpose of deepening the channel. 65

In Fig. 4 of the accompanying drawings we have shown a modification of our invention which is essentially adapted to be employed
70 in shallow places, and, instead of providing a vertically-sliding gate, horizontal folding gates are substituted therefor. In this figure, H H represent the folding wings, which are pivoted to the portion A' of the structure, and are arranged so that they may be folded to lie against the sides of the same. These wings H H are flexibly connected to each other, and are adapted to be operated by a windlass attached to
80 the structure. 75

The hereinbefore-described device is particularly adapted to be used to prevent the banks of streams or rivers from washing in such localities where brush and rock cannot
85 be made to stay, and where there is quicksand, which makes it impossible to construct a permanent bank or fixture. The direction of the current can be controlled and regulated by raising and lowering or extending the gates or
90 wings to cause the current to flow farther from the banks, or cause streams having quicksands as a bottom to fill up back of the wings, and thus confine the current to the channel when the current is injuring the bank of the
95 stream or approaches to bridges, &c.

The device hereinbefore described can be readily moved from one point of a stream or river to another.

We claim—

1. In a wing-dam, a portable and buoyant structure provided with laterally-horizontal projecting supports, to which is attached a movable section or wing, flexible connections
100

secured near the end of the wing and to the drum of a windlass located near or upon the structure for adjusting the wing, the parts being constructed and combined substantially as shown, and for the purpose set forth.

2. In a wing-dam, the buoyant and portable structure A A', provided with brace-beams *a a'*, and vertically recessed beams B B, a vertical adjustable gate, D, the gate and beam *rc* having rollers *e e'* and connected by a flexible

connection to a windlass, the parts being combined and organized substantially as set forth.

In testimony whereof we affix my signatures in presence of two witnesses.

HENRY P. MARVIN.
ALLEN ARNOLD.

Witnesses:

W. H. STAFFORD,
W. H. BOWE.