

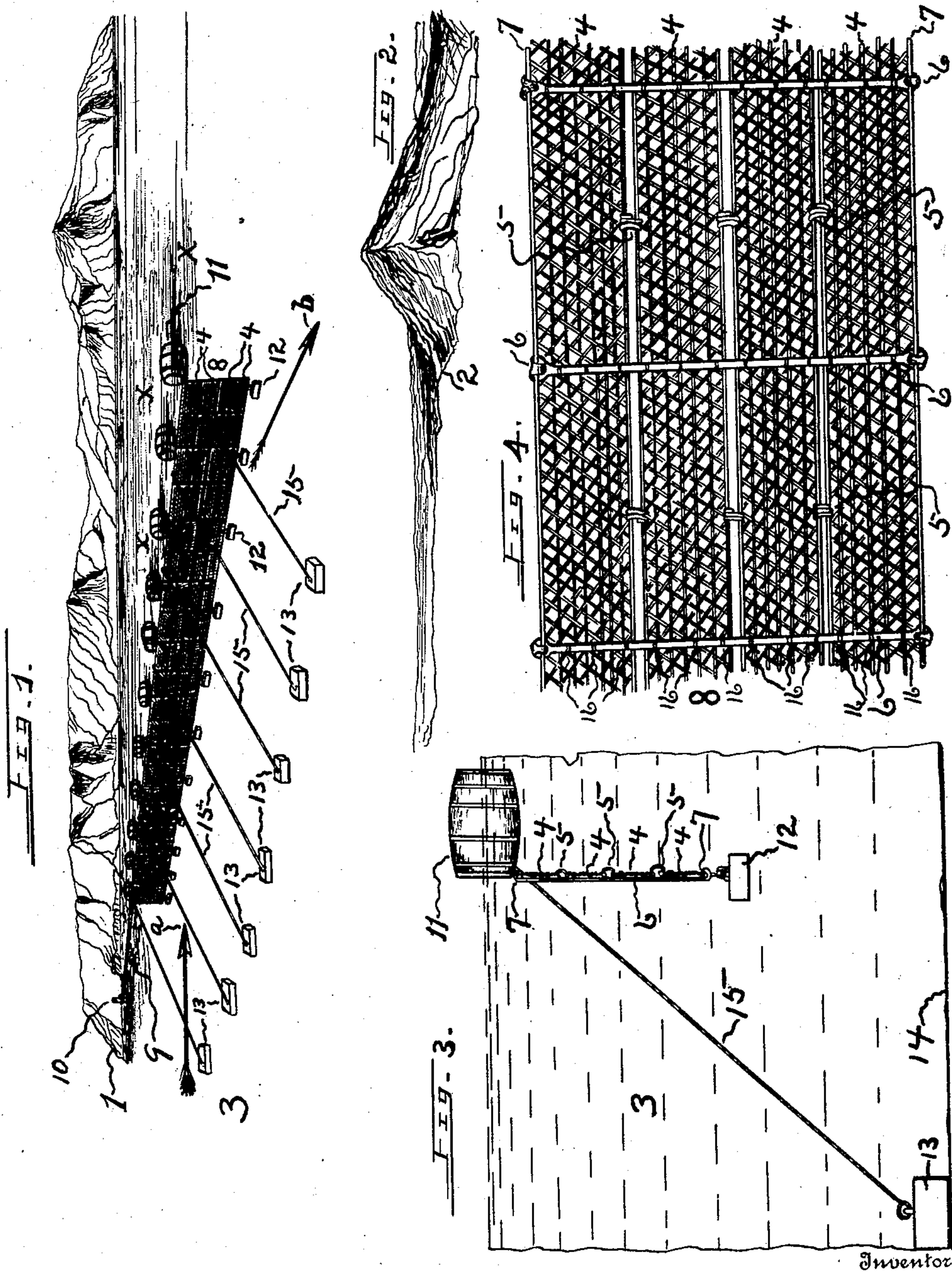
No. 877,201:

PATENTED JAN. 21, 1908.

A. F. KELLNER.

CURRENT DEFLECTOR.

APPLICATION FILED APR. 4, 1907.



UNITED STATES PATENT OFFICE.

ANTON F. KELLNER, OF OMAHA, NEBRASKA.

CURRENT-DEFLECTOR.

No. 877,201.

Specification of Letters Patent.

Patented Jan. 21, 1908.

Application filed April 4, 1907. Serial No. 366,276

To all whom it may concern:

Be it known that ANTON F. KELLNER, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, has invented certain new and useful Improvements in Current-Deflectors, of which the following is a specification.

This invention relates to improvements in current deflectors of the class designed for turning the current of a stream.

The present invention has reference to a means for causing a gradual change in the course of a stream, especially of streams whose waters are charged with sand, this change often being of use for navigation purposes, or for protecting land or buildings by preventing erosion of the banks of streams.

The means employed and herein shown are for the purpose of obstructing the current by use of lengths or layers of wire mesh each of a length equal to that part of the channel to be obstructed, secured edge-to-edge and held by transverse-disposed spreading-members to prevent collapsing of the web; one end of the web to be secured to the shore of a stream and to be extended down-stream and diagonally toward the opposite shore, its weight being sustained by a series of buoys and held to substantially a vertical position by weights secured upon its lower edge, the web being sustained in substantially a straight line and in a manner to resist the current by a series of anchors and connecting cables. By this construction water may pass the wire mesh but will be partly deflected from its former straight course, and sand bars will be gradually formed down-stream in the rear of the mesh, and the navigable channel, therefore, formed or changed, or the bank of the stream protected, as desired.

With these objects in view, the invention presents a new construction and arrangement of parts as described herein and as illustrated in the drawing, wherein: Figures 1 and 2 are perspective views and represent opposite shores of a stream, my invention being therein shown in operative position. Fig. 3 represents a vertical presentation of the invention, immersed in a body of water, to clearly show relative position of parts. Fig. 4 is a vertical elevation of the web, composed of lengths or sections of wire mesh, secured and held in a manner hereafter described.

Referring now to the drawing for a more particular description, numerals 1 and 2 indicate the shores of a stream 3. I employ

lengths or sections of wire mesh 4 and secure them edge-to-edge by any convenient means, as by rings or clasps 5, and by means of spreading-members 6 secured upon the outer rims 7 of the outer lengths of wire mesh, these sections are spread in a manner to form a single web 8. Spreading-members 6 are preferably formed of wood so that the wire mesh may be secured thereon by means of staples 16, thereby furnishing a more rigid construction, and a more positive obstruction to moving water. Web 8 is then immersed in a stream so that it will traverse, diagonally a current to be deflected, one end being secured as by cable 9 to post 10 upon shore 1, its free end extending downward with the current. I employ a series of buoys 11 secured to the upper edge of web 8, and a series of weights 12 secured upon the lower edge of the web, and as thus arranged buoys 11 are adapted to sustain the gravity of weights 12, web 8 and also any downward force imparted by a water current, and by this arrangement web 8 is sustained in the water substantially in a vertical position. In order that the web may be extended and maintained in substantially a straight line and sustained to resist a current of water I employ a series of anchors 13 which rests upon the bottom of the stream and connected to the upper edge 7 of web 8 by cables 15.

In operation, water coming as a current, in the direction indicated by arrow-*a* will encounter web 8 at an obtuse angle, and will pass through the meshes of web 8 and will cause, eventually, the formation of a sand bar at X, after which the current will pass between the free end of web 8 and shore 2, as indicated at arrow *b*.

The operation of wire mesh in connection with a water current is such that there is a slight but constant deflection of the water. The slight eddy caused by this movement is such that the gravity of particles of sand carries it to the bottom, so that the sand bar is formed.

The function for spreading-members is shown in the fact that sections of wire mesh could not be economically formed of a width required for the web, but if this were possible the spreaders would be necessary to add rigidity to the web; by use of sections of wire mesh joined edge-to-edge and held extended by the spreaders, a rigid web is formed of any desired width to attain the objects of the invention; the further use of staples for con-

necting the mesh and spreaders tends to resist lateral strain or sagging of the web.

What I claim as my invention is,—

1. A water-current deflector comprising a series of sections of wire mesh substantially of equal lengths secured edge-to-edge as a web, a series of spreading members having their ends secured upon the outer edges of and transversely traversing said web; a series of holders connecting each of said sections of wire mesh of said web with each of said spreading-members; said web being vertically-disposed by means of a series of buoys secured to its upper edge and a series of weights secured upon its lower edge; and a series of anchors having connections with the upper edge of the web to maintain said web in a diagonal position with reference to a water current, substantially as shown and described.

2. A water-current deflector comprising a series of sections of wire mesh substantially of equal lengths secured edge-to-edge as a

web; a series of spreading members having their ends secured upon the outer edges of the web; and means to maintain said web in an upright position transversely with reference to a water current.

3. A water-current deflector, comprising a series of sections of wire mesh substantially of equal lengths secured edge-to-edge as a web; a series of spreading members disposed between and having their ends secured upon the outer edges of the web; a series of holders connecting each of said sections of wire mesh of said web with each of said spreading members; and means to maintain said web in an upright position transversely with reference to a water current.

In testimony whereof he has affixed his signature in presence of two witnesses.

ANTON F. KELLNER.

Witnesses:

ARTHUR STURGES,
HIRAM A. STURGES.