No. 629,028. Patented July 18, 1899.

G. L. CUDNER.

DAM.

(Application filed Mar. 3, 1898.)

(No Model.)

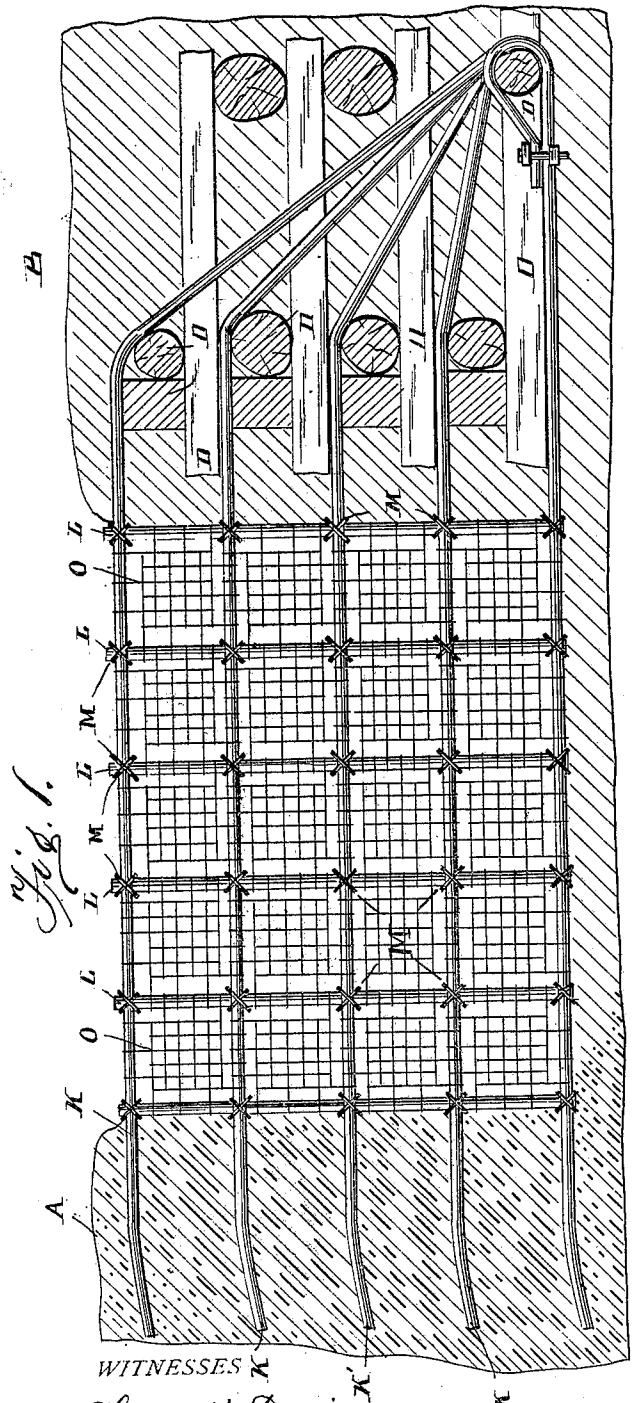


Fig. 1.

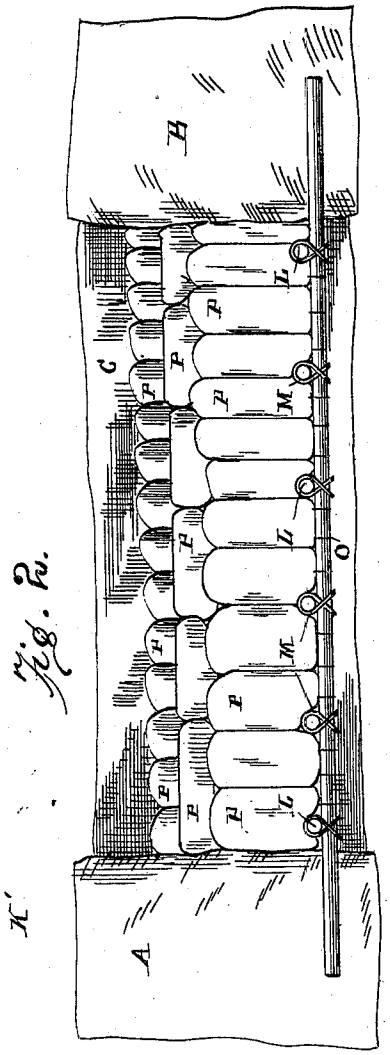


Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

GUSTAVIS LORRIMER CUDNER, OF NEW YORK, N. Y., ASSIGNOR OF SEVEN-EIGHTHS TO EDMUND L. ZALINSKI AND H. TWEDDLE, OF SAME PLACE.

DAM.

SPECIFICATION forming part of Letters Patent No. 629,028, dated July 18, 1899.

Application filed March 3, 1898. Serial No. 672,372. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVIS LORRIMER CUDNER, a citizen of the United States, residing at No. 326 East Sixteenth street, New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Dams, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to dams for the purpose of retarding the flow of water.

The object of the invention is to make a dam which may be quickly and cheaply constructed, and especially to make a dam, with a basis of wire or wire cables, which can be used as long as the wire lasts in water.

Figure 1 is a rear or "downstream" view of the elementary parts of a dam according to this invention, showing means for securing the cables in section. Fig. 2 is a plan of such a dam with bags of sand or earth applied to the face.

The figures are indicative, but not intended to show precise constructions.

Let A indicate one bank of a stream and B the other bank and C the bed of a stream between. If the bank A be rock, the cables K, preferably of galvanized steel wire, may be anchored in holes in the rock in manner well known to mining engineers and constructors. These cables, at least two in number and as many more as the situation requires, extend across the bed of the creek or river or to other position in which the dam is constructed. B indicates the other bank of the stream, whereon a crib, frame, or "dead-man," composed of timbers or logs D D, is erected, the crib or frame being of any usual or suitable construction to serve as an anchorage for cables and the timbers being placed at the proper height to properly support the cables. Any competent engineer knows how to build a crib or frame to serve as an anchorage. The crib may be filled in with earth forming the bank B or in any other usual way may be made strong and secure against strains and leakage. Both ends of the dam may be anchored to rocks or both to cribs, as circumstances require. The cables K K having been drawn as taut as possible, the ends being supported as described or in any other suitable manner, vertical wire cables L L are connected to the horizontal cables K K. These vertical cables may be held to the horizontal cables by wire ties M M or in other convenient manner. The drawings show these wires cut to short lengths, as this is a convenient mode for attachment; but the cables may be in long strips and zigzagged, although the right angular arrangement is preferred. The cables having been secured in position, sections, squares, or other pieces of woven or mesh wire O O, preferably galvanized, are attached to the cables forming the support of the dam. These woven-wire or wire-cloth strips are of a size to cover the spaces between cables and are secured in place by loops, ties, or staples, thus forming a wire and cable network across the stream or body of water to be dammed.

On the front or upstream side of the wire network bags P P, filled with sand or earth, are placed in position to close the channel, the downstream side or end of the bags lying against the wire-netting. The bottom row of bags should lap onto the lower edge of the wire, and as many rows of bags may be placed as found needful. These bags will be firmly supported by the wire on the lower side and will be pressed against the wire by the water on the upper side of the dam. The wire will generally last longer than one set of bags, and new bags may be readily substituted, as can also new sections of wire. Of course other filling may be added to the bags of earth or sand.

Among the important advantages of this dam is its great strength in proportion to cost and the simplicity, which enables it to be constructed with but little skilled labor.

What I claim is—

1. A dam for watercourses, &c., consisting essentially of transverse wire cables securely anchored, and supported at the anchorage at a distance one above another, vertical supports connected to the cables, wire-mesh sections between cables and supports and secured thereto, and a suitable facing or filling, all combined.

2. The dam described, consisting essentially of a plurality of substantially horizontal cables extending across the stream and suitably anchored in approximately parallel position, one above another, vertical cables tied to said horizontal cables, wire filling between said cables, and a facing of bags of earth resting against the upstream side, and on the lower edge of such cable and wire, all substantially as described.

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

GUSTAVIS LORRIMER CUDNER.

Witnesses:
O. D. HALL,
HENRY T. HOWELL.