Oct. 3, 1939. H. W. SMALL 2,174,845

IRRIGATION DAM

Filed July 15, 1938

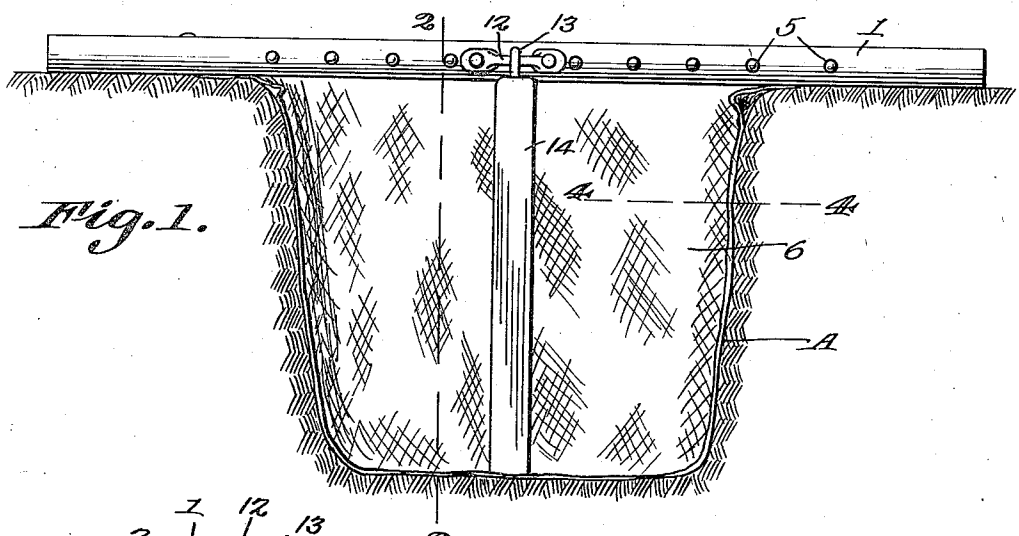


Fig. 1.

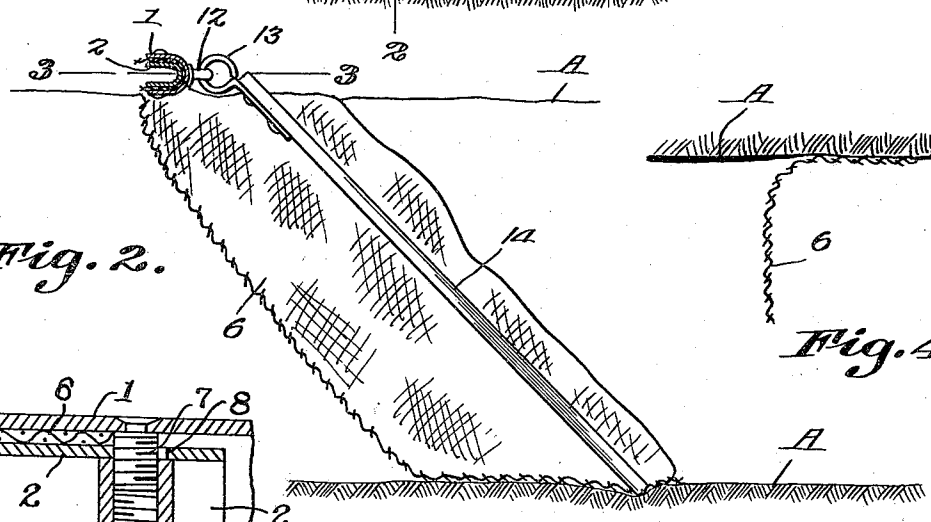
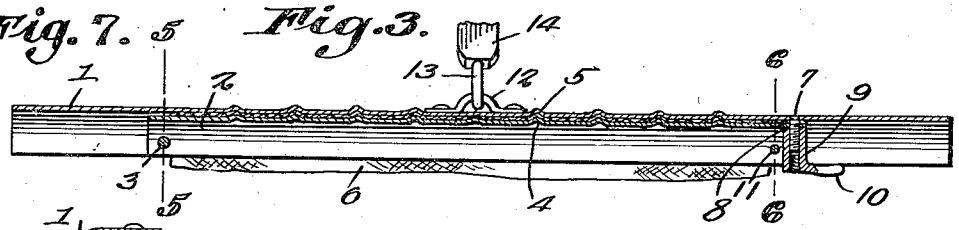


Fig. 2.

Fig. 4.

Fig. 7.

Fig. 3.



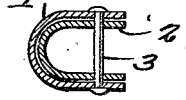


Fig. 5.

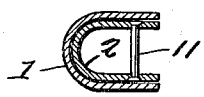


Fig. 6.

Hervey W. Small
INVENTOR.

BY C. A. Snow & Co.

ATTORNEYS.

Patented Oct. 3, 1939

2,174,845

UNITED STATES PATENT OFFICE

2,174,845

IRRIGATION DAM

Hervey W. Small, Small, Idaho

Application July 15, 1938, Serial No. 219,446

2 Claims. (Cl. 61—29)

This invention relates to portable dams to be used for irrigation purposes where it is desired to obstruct a ditch and thereby divert the stream of water into lateral ditches for distribution over the land to be irrigated.

An object of the invention is to provide a device of this character which can be easily carried and readily set up for use, it being unnecessary to employ any special fastening means for holding the dam in position.

Another object is to provide a dam which is cheap to manufacture and which utilizes a fabric apron which is detachably mounted in a simple but efficient manner.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawing the preferred form of the invention has been shown.

In said drawing

Figure 1 is a front elevation of the dam set up for use.

Figure 2 is a section therethrough on the line 2—2, Figure 1.

Figure 3 is a section on line 3—3, Figure 2, the anchoring strip being broken away and its connection with the cross bar being shown in plan.

Figure 4 is a section on line 4—4, Figure 1.

Figure 5 is a section on line 5—5, Figure 3.

Figure 6 is a section on line 6—6, Figure 3.

Figure 7 is an enlarged section through portions of the interfitting bars and showing, partly in section and partly in elevation, the means employed for clamping the bars on an interposed fabric.

Referring to the figures by characters of reference, 1 designates a cross bar formed preferably of copper or other metal capable of withstanding the action of air and moisture, this strip being of such length as to bridge a ditch A in which the dam is to be located. The bar is preferably channelled as shown and is adapted to receive a longitudinally channelled clamping bar 2 pivotally connected at one end to the bar 1 by a transverse pivot pin 3.

The clamping bar 2 is formed preferably with a series of nodes 4 struck therefrom and the bar 1 can be formed with depressions 5 positioned to receive the nodes. Thus the two bars can tightly grip and hold one edge portion of an apron 6 formed of canvas or other suitable fabric.

For the purpose of fastening bar 2 in clamping position, a screw-threaded stud 7 is extended from the supporting bar 1 and projects loosely within an opening 8 provided in clamping bar 2 at that end remote from pin 3. A nut which can be in the form of a sleeve 9 having a wing 10, is removably mounted on stud 7 and by tightening it, the bars 1 and 2 can be drawn together so as to properly grip the interposed fabric.

That end of the clamping bar adjacent to the opening 8 can be braced and stiffened by a transverse pin 11 secured to opposed walls of the channel in the bar.

A small loop or bracket 12 is secured to the supporting bar 1 at the center thereof and preferably at a point equidistant from the longitudinal edges of the bar and is loosely engaged by an eye 13 at one end of an anchoring strip 14 which can be a stick of wood of suitable strength. The length of this strip 14 is greater than the depth of the ditch A and the length and the width of apron 6 is greater than the depth and width of the ditch in which the dam is to be placed.

Obviously when the dam is not in use the strip 4 can be placed against and lengthwise of the bar 1 after which the apron 6 can be wrapped therearound, thus forming a compact device which can be conveniently carried and stored.

When it is desired to use the dam, the supporting bar 1 is placed across the ditch A where the water is to be obstructed. The apron is then lowered into the ditch so that its bottom portion will extend along and rest upon the bottom of the ditch while the side portions will extend along and rest against the sides of the ditch. Strip 14 is swung downwardly within the ditch so as to rest on the apron at a point where it contacts with the bottom of the ditch. Thus the apron is securely anchored at the bottom and will form a pocket-like abutment against which the water will thrust, the pressure exerted by the water being sufficient to cause the bottom and side portions of the apron to hug tightly against the adjacent surfaces of the ditch.

Should it be desired to replace the apron with a new one, it would be necessary merely to unscrew nut 9, swing clamping strip 2 away from strip 1, replace the old apron with a new one, and return the clamping strip to its initial gripping position.

It has been found in practice that a dam constructed as herein described is very efficient in

operation and is also desirable because it is not necessary to use nails for fastening the fabric to a wooden member as heretofore but, on the contrary, the fabric is gripped evenly throughout its width and can easily be removed and replaced without requiring special tools likely to become lost at remote points where installations are being made.

What is claimed is:

1. A portable irrigation dam including a supporting bar, a clamping bar pivotally connected at one end thereto, a flexible apron having one edge removably seated between the bars, means detachably engaging the clamping bar at its other end and carried by the supporting bar for clamping the bars upon the interposed portion of the apron, and an anchoring bar connected at one end to the supporting bar for swinging movement realtive thereto.

2. A portable irrigation dam including a channelled supporting bar, a channelled clamping bar therein and pivotally connected thereto at one end, a flexible apron having one edge portion removably seated between the bars, cooperating means on the bars and within the channels for clamping the bars upon the apron, and an anchoring strip connected to the supporting bars for swinging movement in any direction relative thereto.

HERVEY W. SMALL.