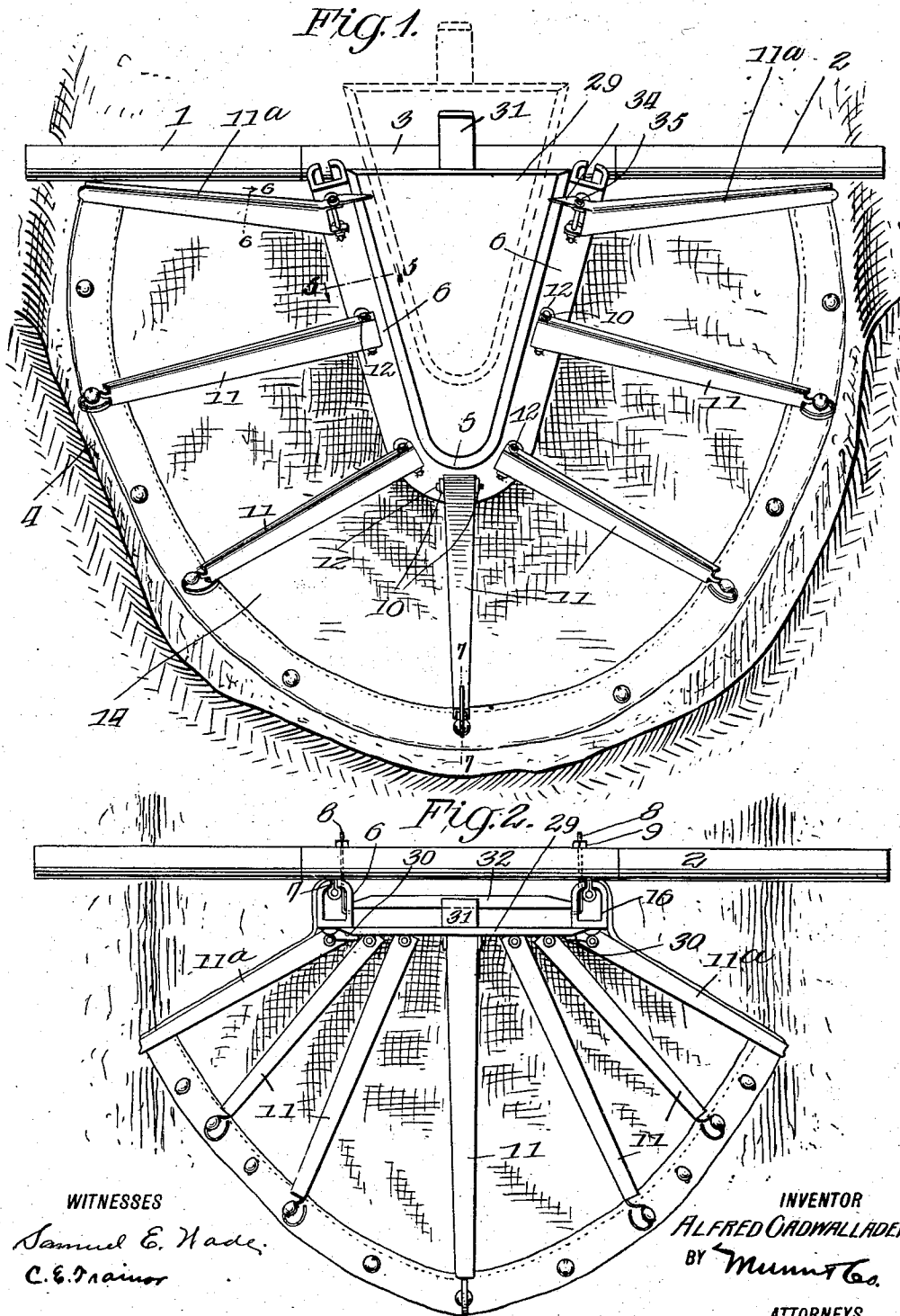


A. CADWALLADER.
 PORTABLE DITCH DAM.
 APPLICATION FILED JUNE 27, 1911.

1,027,235.

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2 SHEETS—SHEET 1.



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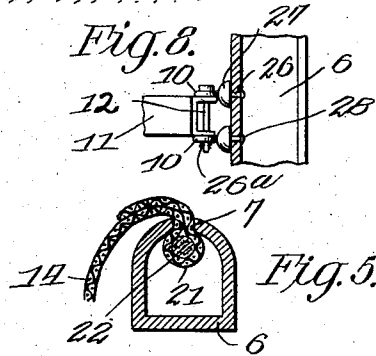
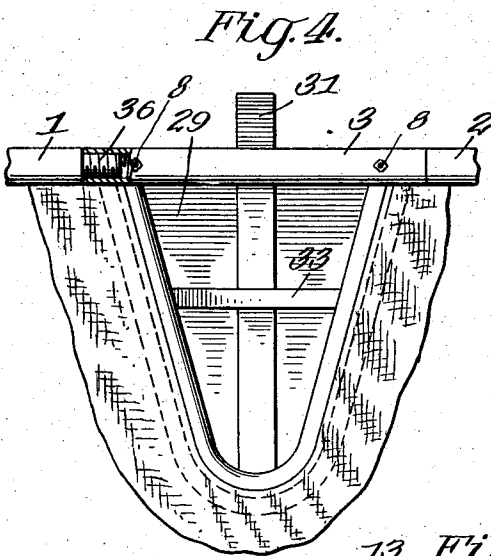
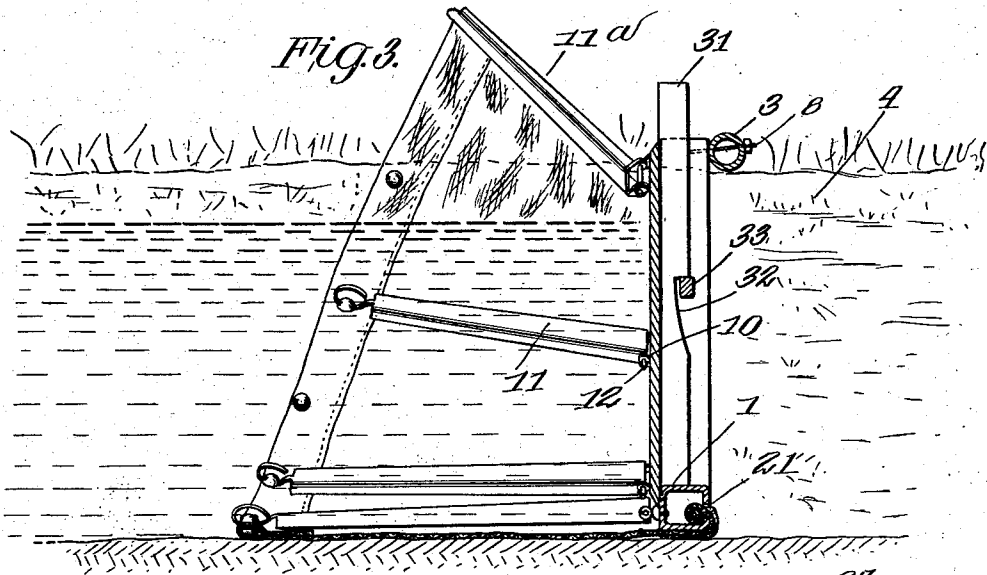
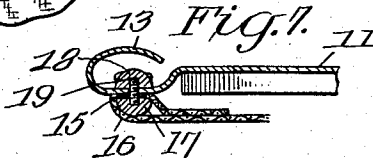
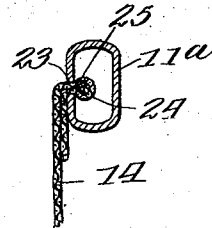


Fig. 6.



WITNESSES

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PORTABLE DITCH-DAM.

1,027,235.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed June 27, 1911. Serial No. 635,560.

To all whom it may concern:

Be it known that I, ALFRED CADWALLADER, a citizen of the United States, and a resident of Bushnell, in the county of McDonough, State of Illinois, have invented a new and useful Improvement in Portable Ditch-Dams, of which the following is a specification.

My invention is an improvement in portable ditch dams, and has for its object the provision of a simple, inexpensive, easily transported, and easily set and knocked down device of the character specified, especially adapted for use in irrigating, or in other conditons when a temporary dam is required which will effectually prevent the passage of the water.

In the drawings: Figure 1 is a rear view of the improved dam; Fig. 2 is a top plan view; Fig. 3 is a transverse vertical section; Fig. 4 is a partial front view; Figs. 5, 6 and 7 are sections on the lines 5—5, 6—6 and 7—7, respectively, of Fig. 1; and Fig. 8 is a partial section of the frame.

The present embodiment of the invention comprises a pipe or tubular bar composed of sections 1, 2 and 3 which is of a length to extend across the ditch 4 to be dammed, so that the ends of the pipe or bar may rest upon the banks at each side of the ditch. A substantially V-shaped frame, comprising a body 5 and integral arms 6 diverging from each other at an acute angle, is connected to the bar 3. The frame is tubular, having one side curved or convex, and the said side is provided with a longitudinal slot. The arms of the frame are connected to the bar 3 by means of bolts 8, passing through the arms on one side of the slot 7, and through the bar. A nut 9 is threaded on to each bolt, and the rear side of each arm, that is, the side opposite the convex side is provided with spaced pairs of spaced lugs 10. Swinging bars 11 and 11^a are hinged to the pairs of lugs, the end of each bar being received between the members of a pair of lugs and connected thereto by a bolt 12. Each of the bars 11 (Fig. 7) is provided at its outer end with an integral hook 13, and a wing 14 in the form of a sheet of fabric material is supported by the frame and bars 11 and 11^a. The bars 11 are preferably channel bars, and each of the hooks is provided with a transverse opening 15. The material of the wing is doubled at its free edge in the manner of a hem, as indi-

cated at 16, Fig. 7, and one section 17 of a fastening device is arranged between the respective thicknesses of the doubled portion adjacent to each hook. The other section 18 of the fastener is arranged on the opposite side of the hook, and a threaded stem 19 engages both sections, passing through the opening 15.

The bars 11^a are at the ends of the arms 6 of the frame and differ somewhat from the bars 11, being tubular in form, and each has a longitudinal slot 23 in the face adjacent to the wing (Fig. 6). The ends of the wing are doubled at 24 and the doubled end is inserted in the slot of the adjacent bar, and a rod 25 is inserted between the sides of the doubled portion. The inner edge of the strip is also doubled upon itself at 21 (Fig. 3) and the edge of the doubled portion is inserted in the slot 7 of the frame 5—6. A flexible rod 22 is passed between the sides of the doubled portion inside the tubular bar forming the frame to hold the covering in place.

The lugs 10, Fig. 8, have stems 26 separated from the lugs by semi-spherical washers or collars 27; and the stems are passed through openings in the arms 6 of the frame 5—6 and are headed on the inside of the said arms, as indicated at 28. Bolts 12 are passed through the lugs and the bar, and cotter pins 26^a are passed through the bolts to hold them in place. The respective thicknesses of doubled portion 15 of the wing are secured together between adjacent bars 11 and 11^a by means of other fasteners 17—18—19.

A gate 29 is provided for closing the frame 5—6, the said gate being substantially V-shaped to fit the frame and having its edges sharply beveled, as indicated at 30. A handle 31 is arranged in vertical position on the gate intermediate the side edges thereof and projecting above the upper edge with a notch 32 intermediate its ends. A cross bar 33 is arranged transversely of the frame 5—6 at the level of the notch when the gate is closed, and the notch is of such depth that when the gate is in closed position the cross bar will enter the notch, permitting the edge of the gate to rest flat against the frame. When the cross bar is out of the notch the gate is held away from the frame. The notch has its upper side perpendicular and the lower side inclined,

as shown in Fig. 3. Latches 34 are provided for holding the gate 29 in place during transportation. The latches are pivoted to the arms 6 of the frame 5—6 near the upper ends of the said arms, as indicated at 35.

The pipe or bar 1—2—3 is, as before mentioned, sectional for convenience in transportation, and the sections are detachably connected by means of a reduced stem 36 on the sections 1 and 2 threaded into the adjacent end of the section 3 (Fig. 4).

In operation, the bar 3 is placed transversely of the ditch with the ends thereof resting on the banks. The V-shaped frame is placed with the bottom thereof resting on the bottom of the ditch, as shown in Fig. 1. The wing is then spread so that the covering rests against the sides and bottom of the bank, after which the gate 29 is closed. The water presses the covering closely against the walls of the ditch and holds the edges of the said covering tightly enough to prevent the water flow. The bars 11^a prevent the covering being pushed past the frame, and it will be evident that the improvement will fit a large number of different size ditches.

The device will fit any ditch large enough to receive the frame, and not of greater width than the distance between the ends of bars 11^a. That is, the ditch must be somewhat narrower than the distance between the free ends of the bars when alined.

When worn out the covering may be easily replaced by a new one, since every part thereof is easily disengaged.

I claim:

1. In a device of the character specified, a sectional cross bar, a substantially V-shaped frame comprising a body adapted to rest against the bottom of a ditch, and arms detachably connected at their respective inner ends with the cross bar, a wing of flexible material and of substantially V-shape having its inner edge connected to the frame, and rigid bars hinged to the frame and radiating therefrom, said wing having its outer edge connected to the respective outer ends of the bars, each of the inner bars having a transverse opening at its outer end, the edges of the wing being doubled, a fastener for securing the wing to each inner bar, each fastener consisting of two sections, one section between the respective thicknesses of the doubled portion of the wing and the other section on the opposite side of the bar, and a threaded stem passing through the opening and engaging both sections, said frame and the outermost bars being tubular and having a longitudinal slot, the adjacent doubled portion of the wing being received in the slot, and a rod passing between the said portions in the frame and arms, a gate for closing the

frame, said gate being vertically slidable, a cross bar between the arms of the frame, and a vertical bar on the gate having a notch for receiving the cross bar when the gate is closed.

2. In a device of the character specified, a sectional cross bar, a substantially V-shaped frame comprising a body adapted to rest against the bottom of a ditch, and arms detachably connected at their respective inner ends with the cross bar, a wing of flexible material and of substantially V-shape having its inner edge connected to the frame, and rigid bars hinged to the frame and radiating therefrom, said wing having its outer edge connected to the respective outer ends of the bars, each of the inner bars having a transverse opening at its outer end, the edges of the wing being doubled, a fastener for securing the wing to each inner bar, each fastener consisting of two sections, one section between the respective thicknesses of the doubled portion of the wing and the other section on the opposite side of the bar, and a threaded stem passing through the opening and engaging both sections, said frame and the outermost bars being tubular and having a longitudinal slot, the adjacent doubled portion of the wing being received in the slot, and a rod passing between the said portions in the frame and bars, a gate for closing the frame, and means for preventing the gate from fitting against the frame when out of register therewith.

3. In a device of the character specified, a cross bar, a substantially V-shaped frame comprising a body adapted to rest against the bottom of a ditch, and arms detachably connected at their respective inner ends with the cross bar, a wing of flexible material and of substantially V-shape having its inner edge connected to the frame, and rigid bars hinged to the frame and radiating therefrom, said wing having its outer edge connected to the respective outer ends of the bars, each of the inner bars having a transverse opening at its outer end, the edges of the wing being doubled, a fastener for securing the wing to each inner bar, each fastener consisting of two sections, one section between the respective thicknesses of the doubled portion of the wing and the other section on the opposite side of the bar, and a threaded stem passing through the opening and engaging both sections, said frame and the outermost bars being tubular and having a longitudinal slot, the adjacent doubled portion of the wing being received in the slot, and a rod passing between the said portions in the frame and bars, and a gate for closing the frame.

4. In a device of the character specified, a cross bar, a substantially V-shaped frame comprising a body adapted to rest against

the bottom of a ditch, and arms detachably connected at their respective inner ends with the cross bar, a wing of flexible material and of substantially V-shape having its inner edge connected to the frame, and rigid bars hinged to the frame and radiating therefrom, said wing having its outer edge connected to the respective outer ends of the bars, each of the inner bars having a transverse opening at its outer end, the edges of the wing being doubled, a fastener for securing the wing to each inner bar,

each fastener consisting of two sections, one section between the respective thicknesses of the doubled portion of the wing and the other section on the opposite side of the bar, and a threaded stem passing through the opening and engaging both sections, and a gate for closing the frame.

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Witnesses:

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J. B. BURGETT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."