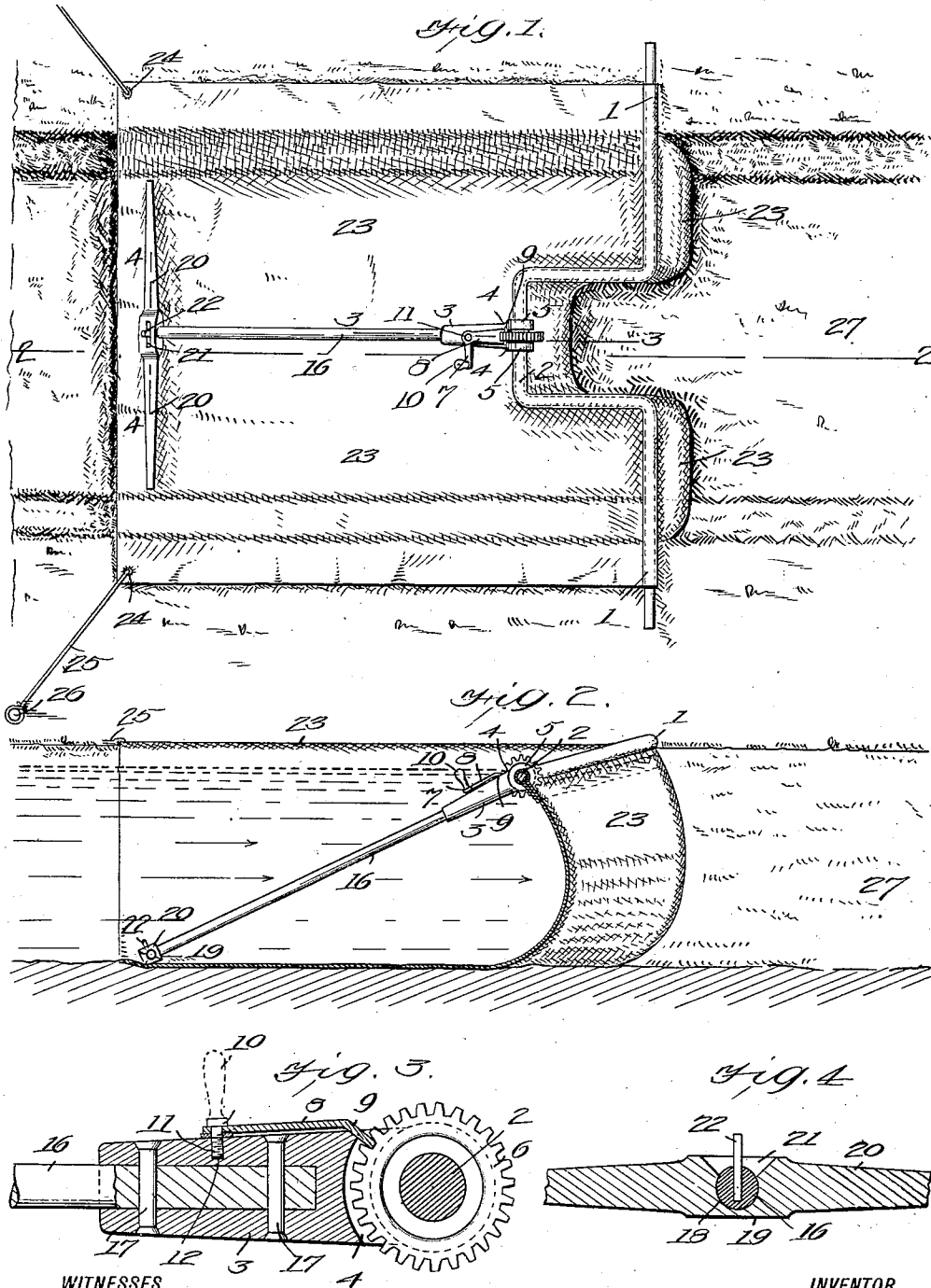


A. CADWALLADER.
PORTABLE DITCH DAM.
APPLICATION FILED MAY 4, 1912.

1,058,289.

Patented Apr. 8, 1913.



WITNESSES
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ALFRED CADWALLADER, OF BUSHNELL, ILLINOIS.

PORTABLE DITCH-DAM.

1,058,289.

Specification of Letters Patent.

Patented Apr. 8, 1913.

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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 and 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 operated dam for use especially in irrigating ditches, for taking a specified amount of water from the ditch, regardless of the amount of water passing through the ditch.

In the drawings:—Figure 1 is a plan view of the improved dam in place; and Figs. 2, 3 and 4 are sections on the lines 2—2, 3—3 and 4—4 of Fig. 1.

The present embodiment of the invention comprises a shaft 1, having at its center a laterally offset portion 2, forming a species of crank arm, and a fork comprising a body 3 and arms 4, is connected with the offset portion or crank arm. The arms are spaced apart laterally, and each arm has a bearing 5, embracing the crank arm. A toothed wheel 6 is secured to the crank arm between the arms of the fork and one of the arms 8 of an elbow lever 7—8 is provided with an angular portion 9 for engaging the teeth of the wheel. The other arm 7 of the elbow lever is provided with a knob or handle 10, and the elbow lever is pivotally connected to the fork body, by means of a screw 11, which passes through an opening at the junction of the arms of the elbow lever, and engages a threaded recess 12 in the fork body. The catch 9 of the elbow lever may be swung into and out of engagement with the teeth of the wheel by means of the knob or handle.

The outer end of the fork body is longitudinally recessed to receive one end of a rod 16, and the fork is secured to the rod by means of rivets 17. The opposite end of the rod is received in an opening 18, in a hub or enlargement 19, at the center of a bar 20. The opening 18 is a recess in one side of the bar, and does not extend through the bar. A slot 21 connects the opening or recess with the upper face of the bar, the said slot being arranged longitudinally of the bar, and being of greater length at the face of the bar than at the opening. That is the slot gradually increases in length from the recess or

opening to the face of the bar, and a pin 22 is passed through the slot into an opening in the end of the rod. The pin permits the rod to rotate with respect to the bar, within limits prescribed by the length of the slot, but prevents withdrawal of the rod. The ends of the slot are beveled to fit the pin, so that the rod may oscillate the full length of the slot at the opening. The dam is completed by an apron or covering 23, which has one end secured to the shaft 1, and to the crank arm, as shown in Fig. 1. The other end of the covering has an eyelet 24, at each corner, for receiving one end of a rope or cord 25, having its other end secured to a stake 26. The frame, consisting of the shaft, rod and bar is arranged in the ditch 27, with the ends of the shaft resting on the opposite banks, and with the shaft transverse to the ditch. The stakes 26 are set at the proper distance up stream from the shaft, and the covering 23 is laid in the bed of the ditch with the bar 20 on the upper end thereof. The covering is of such width that it will cover the bottom of the ditch, the slope of each bank, and will extend for a short distance outwardly over the top of each bank.

The bar 20 is of such length that it will extend across the bottom of the ditch and will constrain the covering at the upper end of the dam to follow the cross sectional outline of the ditch. The crank arm forms the sluice or waste way of the dam, and permits all above a predetermined amount of water to pass.

When the dam is placed as above described, the pressure of the water holds it firmly in place, and the greater the pressure, the more firmly the dam will be held. The crank arm may be adjusted to any desired angle with respect to the body of the shaft, and it will be obvious that when the crank arm is below a horizontal plane through the shaft some water will pass provided that the said arm is below the level of the water.

When the crank arm is level or in the same horizontal plane with the shaft, the dam is of equal height throughout. The crank arm may be set at any desired height with respect to the shaft, by means of the elbow lever. When the catch 9 is in engagement with the wheel, the shaft cannot turn, and is held in adjusted position.

The slot 21 and pin 22 permit the shaft 1 to occupy a position at an angle to the cross

bar 20 in case one bank should be higher than the other, or in case the ditch bottom should not be level.

I claim:—

5 1. A portable ditch dam, comprising a shaft provided at its approximate center with a laterally offset portion forming a crank, a toothed wheel secured to the shaft on the offset portion, a fork comprising a
10 body and arms having bearings engaging the offset portion on opposite sides of the wheel, an elbow lever pivoted to the body and having one arm provided with a catch for engaging the teeth of the wheel and the other
15 arm provided with a handle for swinging the lever, said body having a socket or recess in the end remote from the arms, a rod having one end received in the socket and secured thereto, a cross bar having a central
20 recess for receiving the other end of the rod, and a slot leading upwardly from the inner end of the recess and increasing in length toward its upper end, a pin passing through the slot and engaging the rod, and
25 an apron of flexible material having one end secured to the shaft at points including the offset portion thereof and the other end adapted to rest beneath the cross bar, said apron having a width approximately equal
30 to the length of the shaft, the cross bar being of less length than the shaft, said apron having eyelets at its corners at the end remote from the shaft.

35 2. A portable ditch dam, comprising a shaft provided at its approximate center with a laterally offset portion forming a crank, a toothed wheel secured to the shaft on the offset portion, a fork comprising a
40 body and arms having bearings engaging the offset portion on opposite sides of the wheel, an elbow lever pivoted to the body and having one arm provided with a catch for engaging the teeth of the wheel and the other arm provided with a handle for swing-
45 ing the lever, a rod secured at one end to the body, a cross bar having a central recess for receiving the other end of the rod, and a slot leading upwardly from the inner end of the recess and increasing in length toward
50 its upper end, a pin passing through the slot and engaging the rod, and an apron of flexible material having one end secured to the shaft at points including the offset portion thereof and the other end adapted to
55 rest beneath the cross bar, said apron having a width approximately equal to the length of the shaft, the cross bar being of less length than the shaft, said apron having eyelets at its corners at the end remote from the
60 shaft.

65 3. A portable ditch dam, comprising a shaft provided at its approximate center with a laterally offset portion forming a crank, a toothed wheel secured to the shaft on the offset portion, a fork comprising a

body and arms having bearings engaging the offset portion on opposite sides of the wheel, an elbow lever pivoted to the body and having one arm provided with a catch for engaging the teeth of the wheel and the other arm provided with a handle for swing- 70
ing the lever, a rod secured at one end to the body of the fork, a cross bar at the other end of the rod, means for connecting the rod to the center of the bar and for permitting a
75 limited rotary movement of the bar with respect to the rod, and an apron of flexible material having one end secured to the shaft at points including the offset portion thereof and the other end adapted to rest beneath
80 the cross bar, said apron having a width approximately equal to the length of the shaft, the cross bar being of less length than the shaft, said apron having eyelets at its corners at the end remote from the shaft. 85

4. A portable ditch dam, comprising a shaft provided at its approximate center with a laterally offset portion forming a crank, a toothed wheel secured to the shaft on the offset portion, a fork comprising a
90 body and arms having bearings engaging the offset portion on opposite sides of the wheel, means on the fork for engaging the teeth of the wheel to prevent rotation of the shaft, a rod secured at one end to the fork
95 body, a cross bar connected to the other end of the rod and having a limited rotative movement with respect to the rod, and an apron of flexible material having one end secured to the shaft at points including the
100 offset portion thereof and the other end adapted to rest beneath the cross bar, said apron having a width approximately equal to the length of the shaft. 105

5. A portable ditch dam, comprising a shaft adapted to be arranged transversely of a ditch with the ends thereof resting on the banks, said shaft having intermediate its
105 ends a laterally offset portion, an apron secured at one end to the shaft, at points including the offset portion thereof, and adapted to be arranged in the ditch with its side edges on the bank, a rod journaled
110 at one end on the offset portion of the shaft, a cross bar at the opposite end of the rod adapted to rest on the end of the apron remote from the shaft, said bar being of less length than the shaft to fit the bottom of the
115 ditch, means for connecting the rod and the bar to permit a limited rotation between the rod and the bar, and means for preventing rotation of the shaft with respect to the rod, said means being adjustable and compris-
120 ing a toothed wheel secured on the offset portion of the shaft, and a catch on the rod for engaging the teeth of the wheel. 125

6. A portable ditch dam, comprising a shaft adapted to be arranged transversely of a ditch with the ends thereof resting on the banks, said shaft having intermediate 130

its ends a laterally offset portion, an apron secured at one end to the shaft at points including the offset portion thereof, and adapted to be arranged in the ditch with its side edges on the bank, a rod journaled at one end on the offset portion of the shaft, a cross bar at the opposite end of the rod adapted to rest on the end of the apron remote from the shaft, said bar being of less length than the shaft to fit the bottom of the ditch, means for connecting the rod and the bar to permit a limited rotation between the rod and the bar, and means for preventing rotation of the shaft with respect to the rod, said means being adjustable.

7. A portable ditch dam, comprising a shaft adapted to be arranged transversely of a ditch with the ends thereof resting on the banks, said shaft having intermediate its ends a laterally offset portion, an apron secured at one end to the shaft at points including the offset portion thereof, and adapted to be arranged in the ditch with its side edges on the bank, a rod journaled at one end on the offset portion of the shaft, a cross bar at the opposite end of the rod adapted to rest on the end of the apron remote from the shaft, and releasable means

on the rod for engaging the shaft for preventing rotation of the shaft with respect to the rod.

8. A portable ditch dam, comprising a shaft, an apron of flexible material having one of its ends secured to the shaft, said shaft having a laterally offset portion intermediate its ends, a rod journaled at one end on the offset portion, a cross bar connected to the other end of the rod and adapted to rest on the end of the apron remote from the shaft, and means for preventing the offset portion from rotation with respect to the rod.

9. A portable ditch dam, comprising a shaft, an apron of flexible material having one of its ends secured to the shaft, said shaft having a laterally offset portion intermediate its ends, and means engaging the off-set portion of the shaft for preventing rotation of the shaft, said means being adjustable angularly with respect to the offset portion.

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Witnesses:

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