Oct. 29, 1963 R. N. ANDERSON 3,108,440

TRAVELLING DAM

Filed Nov. 29, 1961

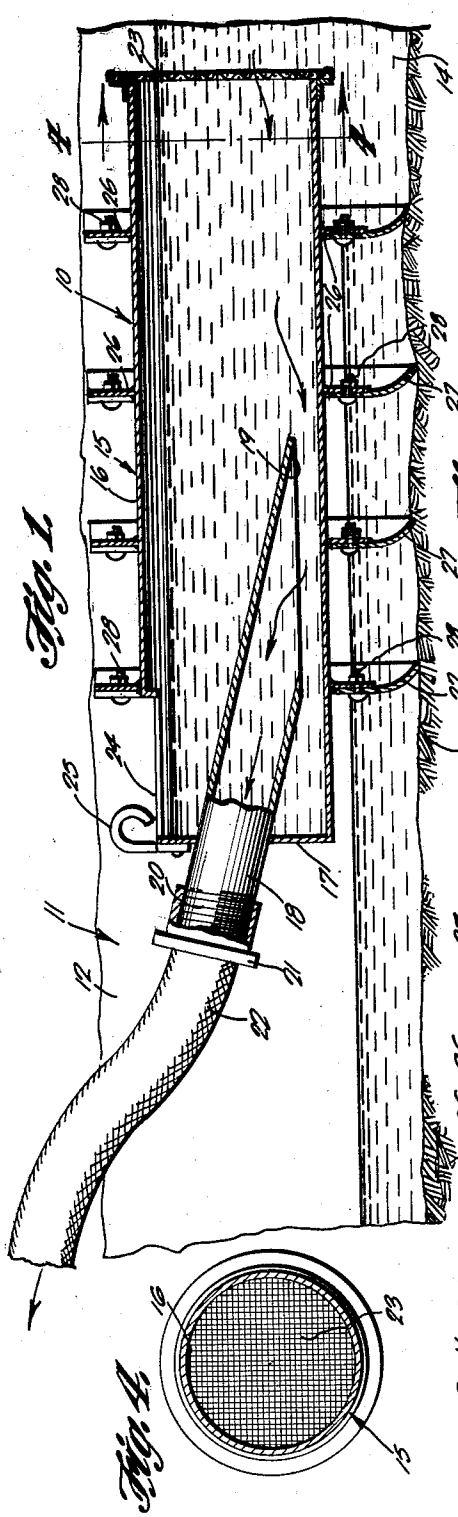


Fig. 1

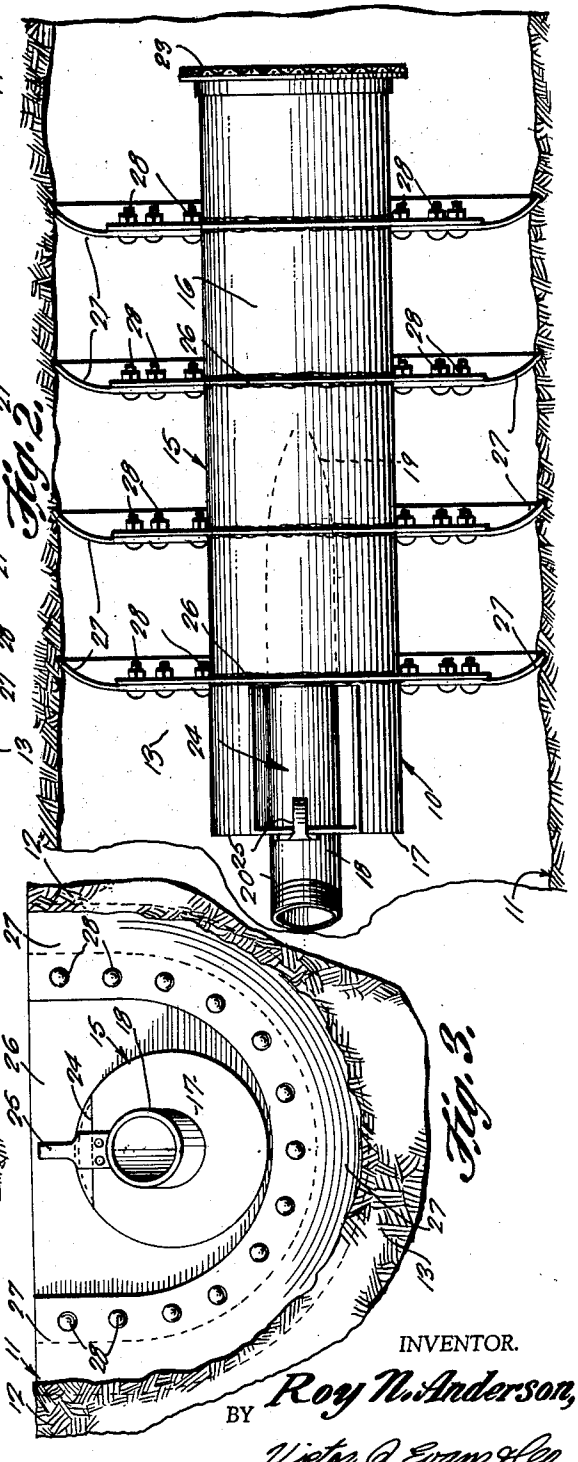


Fig. 2

Fig. 3

Fig. 4

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United States Patent Office 3,108,440 Patented Oct. 29, 1963

3,108,440

TRAVELLING DAM

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Filed Nov. 29, 1961, Ser. No. 155,667
3 Claims. (Cl. 61—29)

The present invention relates to irrigation equipment, and more particularly to a travelling dam for an irrigation ditch, open stream, bar pit or the like.

The primary object of the present invention is to provide a travelling dam for use in an open ditch, stream, bar pit along the side of a road or the like, and wherein the travelling dam of the present invention is adapted to provide a reservoir from which water may be pumped while the dam is travelling or being moved along the open ditch or stream.

Another object is to provide a travelling dam which is adapted to function either as a movable or stationary obstruction in any suitable open ditch so that water can be backed up from a reservoir from which large volumes of water can be pumped from an open ditch without losing very much water ahead.

Another object is to provide an apparatus of the character described that may be utilized speedily and with precision by even inexperienced operators.

Further objects and advantages are to provide improved elements and arrangements thereof in a device of the character described that is economical to produce, durable in form, and conducive to the most economical use of material and uniformity of members formed therefrom.

Still further objects and advantages will become apparent in the subsequent description and specification.

In the drawings:

FIGURE 1 is a longitudinal sectional view taken through the travelling dam of the present invention.

FIGURE 2 is a top plan view thereof.

FIGURE 3 is an end elevational view thereof.

FIGURE 4 is a sectional view taken on the line 4—4 of FIGURE 1.

Referring in detail to the drawings, the numeral 10 indicates the travelling dam of the present invention, and the dam 10 is adapted to be used in a ditch such as the ditch 11, FIGURE 1, and the ditch 11 may include a bottom portion 13 as well as side portions 12, FIGURE 3, and in FIGURE 1 the numeral 14 indicates water in the ditch or stream 11.

According to the present invention there is provided the travelling dam 10 which is shown to comprise a tubular casing 15 which embodies or comprises a cylindrical wall member or wall portion 16, and an end wall 17 closes one end of the casing 15. The numeral 18 indicates an inclined tube which extends through the end wall 17 which is secured thereto in any suitable manner, for example, by welding, and the lower end portion of the tube 18 is bevelled as at 19. The upper end portion of the tube 18 is threaded externally as at 20, and the numeral 21 indicates a fitting for releasably or detachably connecting a hose or conduit 22 to the tube 18, and the fitting 21 is adapted to be arranged in threaded engagement with the threaded portion 20 of the tube 18, FIGURE 1.

Mounted at the opposite end of the casing 15 from the end wall 17 is a screen or filter 23. As shown in the drawings, the upper portion of the cylindrical wall member 16 is cutaway adjacent the end wall 17 so as to define or provide an overflow opening 24 for a purpose to be later described. The numeral 25 indicates a hook or bracket which may be suitably secured as by welding to the end wall 17 whereby a towing line, cable or the like may be arranged in engagement with such a hook 25 so that the dam 10 may be moved from place to place as

desired as for example by connecting such a towing line or cable to a vehicle such as a tractor.

The travelling dam 10 of the present invention further includes a plurality of spaced parallel similar flanges 26 which are secured to or formed integral with the cylindrical wall member 16, and as shown in the drawings, fins or seals 27 are connected to the flanges 26 as for example by means of securing elements or bolts 28. The fins 27 each have a generally U-shape, as shown in FIGURE 3, so as to conform to the configuration of the ditch 11, and outer edge portions of the fins 27 are adapted to become slightly embedded in the mud or dirt in the bottom and side portions of the ditch so as to help provide the desired sealing action.

From the foregoing, it is apparent that there has been provided a travelling dam which is especially suitable for use in an irrigation ditch, stream or the like, and in use with the parts arranged as shown in the drawings, it will be seen that water such as the water 14 can enter the tubular casing 15 through the screen 23, and the screen 23 will help keep out debris, foreign matter, trash or the like so that such foreign matter will be kept out of the interior of the casing 15. The flexible or yieldable fins 27 are secured as at 28 to the flanges 26 so that the present invention will form an obstruction in the ditch such as the ditch 11, and the outer edge portions of the fins 27 are adapted to embed themselves slightly in the mud or dirt of the sides and bottom portions of the ditch in order to help form a tight seal at this point. The hose 22 may be connected to a suitable pump or the like, and the fitting 21 is adapted to be used for connecting the hose 22 to the upper end of the inclined tube 18, and the lower end of the tube 18 is bevelled as at 19 so as to provide an enlarged inlet opening so that with the pump operating at a remote location spaced from the dam 10, it will be seen that the water from the interior of the casing 15 will be pumped up through the opening 19, and this water will flow through the tube 18, and then through the hose or conduit 22 to the desired location and this water can be used for any desired purpose. The hook 25 can be engaged by a suitable towing line or cable so that for example with a tractor or the like connected to such a towing line or cable, the dam 10 of the present invention can be shifted to different positions as desired or required.

The parts can be made of any suitable material and in different shapes or sizes.

The present invention is adapted to be used as a permanent dam to be used in connection with a travelling irrigation system. However, it can be picked up and moved or pulled with a suitable propulsion means from one end of an open ditch to the other, so as to insure that a supply of water will be kept above it suitable for pumping large volumes of water from an open ditch. The present invention is adapted to be used in irrigation ditches in connection with a travelling irrigation machine, or it can be used as a movable dam for ditch irrigation wherein a movable dam is desired or required. The casing 15 receives the water and acts as a reservoir so that the water can be pumped up to the travelling irrigation system. The purpose of the flanges 26 is to provide a means for attaching the water fins or water seals 27 to the tube or reservoir casing. The water fins or water seals 27 can be made of any suitable flexible material such as rubber covered canvas, cord, or belting, or sections cut from old or new truck or tractor tires, or these fins or water seals can be made of a suitable plastic or rubber like material or any other suitable material. The number of water fins or seals can be varied as desired or required in order to form a perfect seal in an open ditch, depending upon the type of soil and size of the open ditch. A water pump is adapted to be mounted in front of the device so that the water can be pumped out of the reser-

voir to the travelling irrigation system. The travelling dam of the present invention is adapted to hold the water so as to prevent the water from getting ahead of it as it travels along an open irrigation ditch and the water is adapted to be held at a suitable depth or height, and for example it may be held at a depth of fifteen to twenty inches at all times, and this makes it possible for a travelling irrigation system to take water from an open ditch and either spray, spread, sprinkle, or throw the water for a considerable distance on either or both sides of an open ditch so as to prevent any loss of tail water, or to prevent any water from being lost by getting past the dam and being lost in the open ditch ahead.

The opening 24 functions as an overflow so that surplus or excess water can flow out from the casing 15 through the opening 24 as for example when there is a surplus water over and above the amount that can be handled by the pump.

The travelling dam of the present invention may be placed in any open ditch or stream or bar pit along side of a road or in an irrigation ditch and it is adapted to provide either a closed or open top reservoir from which water may be pumped while the dam is travelling or being moved along the open ditch. The travelling dam is adapted to provide either a movable or stationary obstruction in any open ditch so that water can be backed up to form a reservoir from which large volumes of water may be pumped from an open ditch without losing very much water ahead. With the present invention, all of the water is required to pass into casing or tube, due to the provision of the seals 27, and the suction or intake pipe or tube 18 is adapted to provide a means for supplying the water to a pump or suction tube. The fins or seals 27 stop the flow of water around the dam, and the outer edges of these fins are adapted to be pressed firmly against the soil as the travelling dam is being pulled along by an irrigation machine, tractor or the like.

The fins or seals 27 serve to insure that water will not flow around the travelling dam so that the water will be backed up to provide an ample supply of water which can be pumped from the device for any desired or required purpose.

Minor changes in shape, size and rearrangement of details coming within the scope of the invention claimed may be resorted to in actual practice, if desired.

What is claimed is:

1. In a device of the character described, a tubular casing including a cylindrical wall member, an end wall closing one end of said casing, a screen mounted in the opposite end of the casing from said end wall, an inclined tube extending through said end wall and affixed thereto, the upper portion of the wall member adjacent said end wall having an overflow opening therein, a plurality of spaced parallel flanges affixed to the outer surface of said wall member, and a plurality of resilient fins secured to said flanges.

2. The structure as defined in claim 1 wherein the upper end of said tube is threaded externally, a fitting arranged in threaded engagement with the threaded portion of said tube, and a hose connected to said fitting.

3. In a device of the character described, a tubular casing including a cylindrical wall member, an end wall closing one end of said casing, a screen mounted in the opposite end of the casing from said end wall, an inclined tube extending through said end wall and affixed thereto, the upper portion of the wall member adjacent said end wall having an overflow opening therein, a plurality of spaced parallel flanges affixed to the outer surface of said wall member, and a plurality of resilient fins secured to said flanges, a hose operatively connected to the upper end of said tube, a hook member affixed to said end wall, and said fins being generally U-shaped in configuration to conform to the configuration of a ditch in which the device is positioned.

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