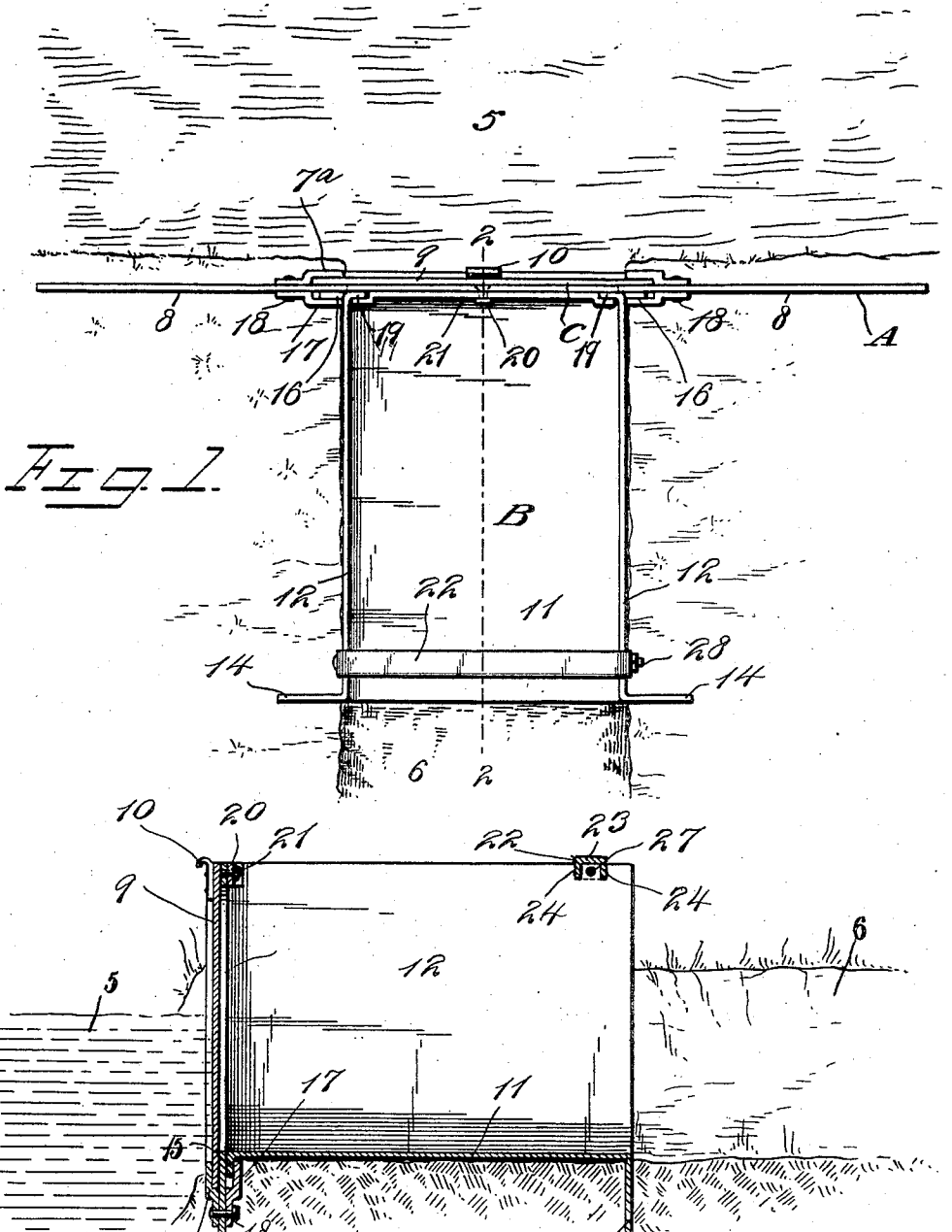


J. R. & T. A. LUDIKER.
 HEAD GATE.
 APPLICATION FILED JAN. 30, 1912.

1,047,423.

Patented Dec. 17, 1912.

2 SHEETS—SHEET 1.



WITNESSES
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Fig. 2

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Fig. 3.

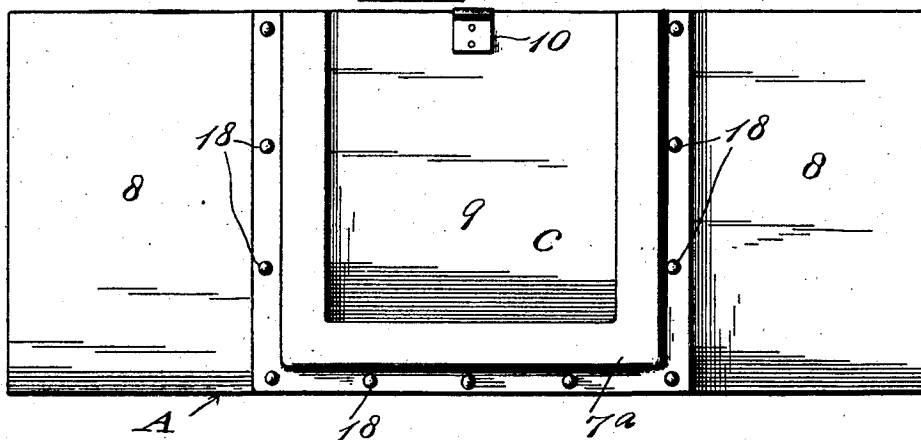


Fig. 4.

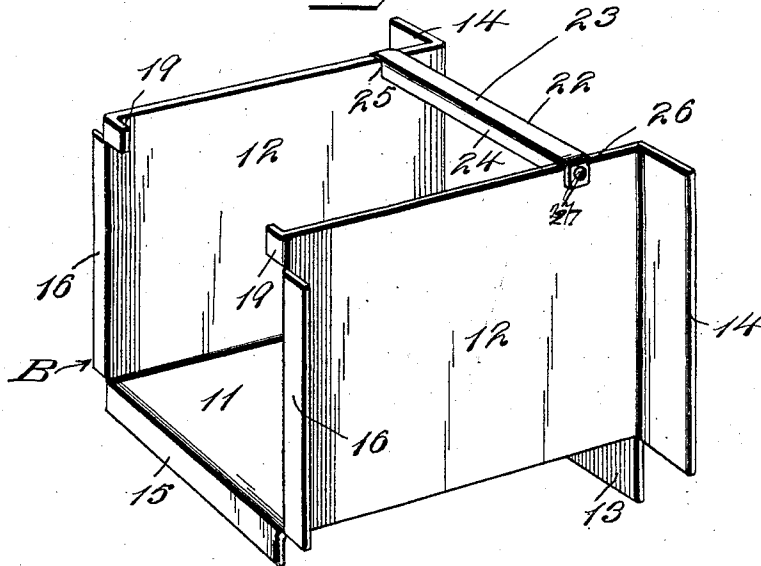
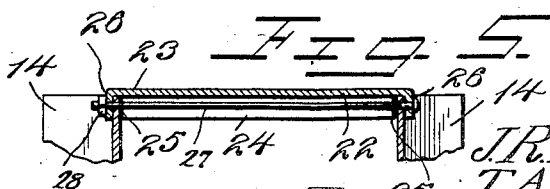


Fig. 5.



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JOHN R. LUDIKER AND THOMAS A. LUDIKER, OF KUNA, IDAHO.

HEAD-GATE.

1,047,423.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed January 30, 1912. Serial No. 874,247.

To all whom it may concern:

Be it known that we, JOHN R. LUDIKER and THOMAS A. LUDIKER, citizens of the United States, residing at Kuna, in the county of Ada, State of Idaho, have invented certain new and useful Improvements in Head-Gates; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to irrigation, and more particularly to means for controlling the passage of water from a stream into communicating ditches.

The principal object of the invention is to provide a head for such purpose, which is adapted to be quickly and easily secured in position and removed as may be desired.

A further object of the invention is to provide a head of the character described, a trough communicating with the head and a gate for controlling the supply of water through said trough, said parts being detachably connected whereby the same may be readily disassembled for the purpose of shipment or the like.

A still further object of the invention is to provide a head gate of sheet metal and composed of a minimum number of parts, whereby the construction of said head is rendered very simple and is consequently very cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings: Figure 1 is a top plan view of a head constructed in accordance with my invention, showing the same in its operative position, Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1, Fig. 3 is a front elevation of the head, Fig. 4 is a perspective view of the trough, Fig. 5 is a detail sectional view through the brace.

Like reference numerals designate corresponding parts in all the figures of the drawings.

Referring to the drawings, the reference numeral 5 designates an ordinary stream and communicating with said stream is a plurality of ditches 6.

My invention comprises a head adapted to be positioned within any one of the ditches adjacent the stream.

The invention broadly comprises a head A, a trough B and a gate C.

The head A is formed from sheet metal, and is preferably of angular construction. This head is centrally formed with an angular opening 7 forming consequent wings 8—8, the opening being disposed in registry with the ditch and the stream, and the wings being embedded in the earth on either side of the ditch. Secured to the outer face of the head around the opening 7 is a U-shaped flange 7^a, the inner edges thereof adjacent the opening being offset to receive a gate 9 also of sheet metal, said gate being provided with an ordinary hand piece 10 for raising or lowering said gate. The trough B is also formed from a single piece of metal, and is bent to form a bottom 11 and side walls 12—12, the inner end of the bottom being bent to form a downwardly extending flange 13 and the inner ends of the side walls 12 being oppositely bent to form outwardly extending flanges 14—14. All of said flanges being adapted to be embedded in the earth to retain the trough against movement. The forward end of the bottom is also formed with a depending flange 15 and the forward ends of the side walls are also formed with oppositely extending and outwardly projecting flanges 16—16. The last mentioned flanges 15 and 16 are disposed against the inner face of the head A around the said opening thereof, and are adapted to be retained in position by means of a U-shaped guide flange 17, which is similar in construction to the first mentioned flange 7^a, and is disposed directly opposite said flange. These flanges 7^a and 17 are secured by means of bolts 18 which pass through suitable openings formed in said flanges and in the wings of the head A.

Extending inwardly from the upper inner ends of the side walls 12 of the trough and integral therewith are short lugs 19, which bear against the head A above the opening thereof. Disposed within the trough and secured to the head A above the opening by means of a bolt or rivet 20, is a brace 21, the ends thereof abutting the respective side

walls to prevent the side walls from moving inwardly, the lugs 19 preventing the ends of the brace from working between the trough and the head A.

5 In order to rigidly retain the inner ends of the side walls 12 against lateral movement, there is provided a brace, which is designated as a whole by the reference numeral 22. This brace is formed of sheet
10 metal, and is bent longitudinally to form a central portion 23 and depending side walls 24—24. The ends 25 of said side walls abut the inner faces of the side walls 12 of the trough. In order to securely support this
15 brace the central portion 23 projects beyond the side walls thereof to form end walls 26, and is bent downwardly to engage over the respective side wall 13 of the brace. The end walls 26 are formed with suitable openings
20 which register with other openings formed in the side walls 13 of the trough, and disposed within these openings is a bolt 27, having a head at one end and having a nut 28 associated with the other end. By
25 this means it will be observed that the brace is securely retained in position.

From the foregoing, it will be observed that the trough B can be easily detached from the head A by sliding the two members
30 apart.

The brace can easily be removed from the trough, and when it is desired to ship these articles a plurality of troughs can be nested and a plurality of the heads can be packed
35 in superimposed relation, and by this means occupy but little space.

What is claimed is:—

1. In a head gate, the combination with a head having an opening, of a trough connected to the head and communicating with the opening, said trough being formed from a single piece of metal bent to form a bottom and side walls, the ends of the bottom and side walls being bent to form outwardly directed flanges.
45

2. In a head gate, the combination with a head having an opening, of a trough connected to said head and registering with the

opening, said trough being formed from a single piece of metal and bent to form a bottom and side walls, and a brace connecting the ends of the side walls opposite the head, said brace being formed from sheet metal and bent longitudinally to form a central portion and depending side walls, the ends
50 of said side walls abutting the inner faces of the side walls of the trough and the central portion projecting beyond the side walls of said brace and extending downwardly against the outer faces of the side walls.
55

3. In a head gate, the combination with a head having an opening, of a trough connected to said head and registering with the opening, said trough being formed from a single piece of metal and bent to form a bottom and side walls, a brace connecting the ends of the side walls opposite the head, said brace being formed from sheet metal and bent longitudinally to form a central portion and depending side walls, the ends
60 of said side walls abutting the inner faces of the side walls of the trough and the central portion projecting beyond the side walls and extending downwardly against the outer faces of the side walls, said depending portions and side walls of the trough being
65 formed with aligned openings, and a transverse rod disposed within the openings for retaining the said brace against movement.

4. In a head gate, the combination with a head formed from sheet metal and centrally formed with an angular opening forming consequent wings, of a trough connected to the head and registering with the opening thereof, said trough being formed from
80 sheet metal and bent to form a bottom and side walls, and means rigidly connecting the ends of the side walls opposite the head.

In testimony whereof, we affix our signatures, in presence of two witnesses.

JOHN R. LUDI KER.
THOMAS A. LUDI KER.

Witnesses:

J. A. MARTIN,
C. V. H. NEGLAY.