

H. E. THOMPSON.
HEAD GATE.
APPLICATION FILED JULY 13, 1915.

1,161,997.

Patented Nov. 30, 1915.
2 SHEETS—SHEET 1.

Fig. 1.

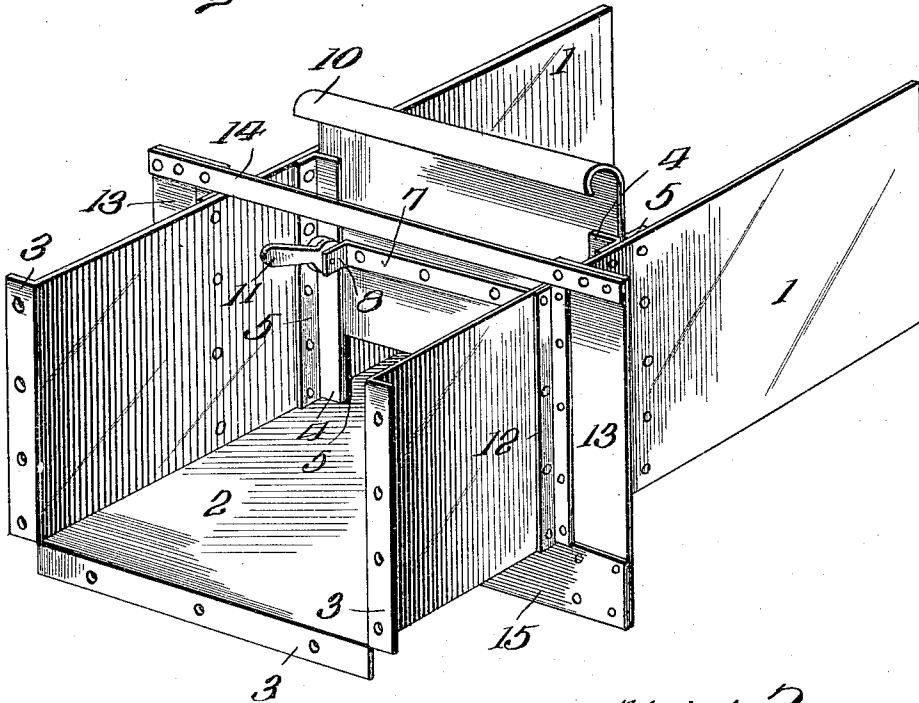
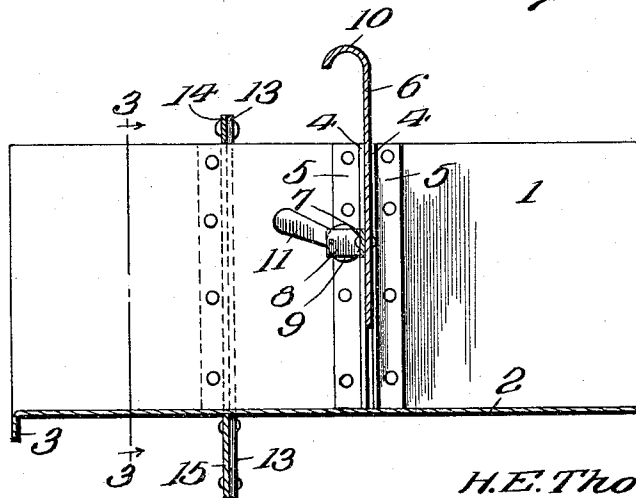


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

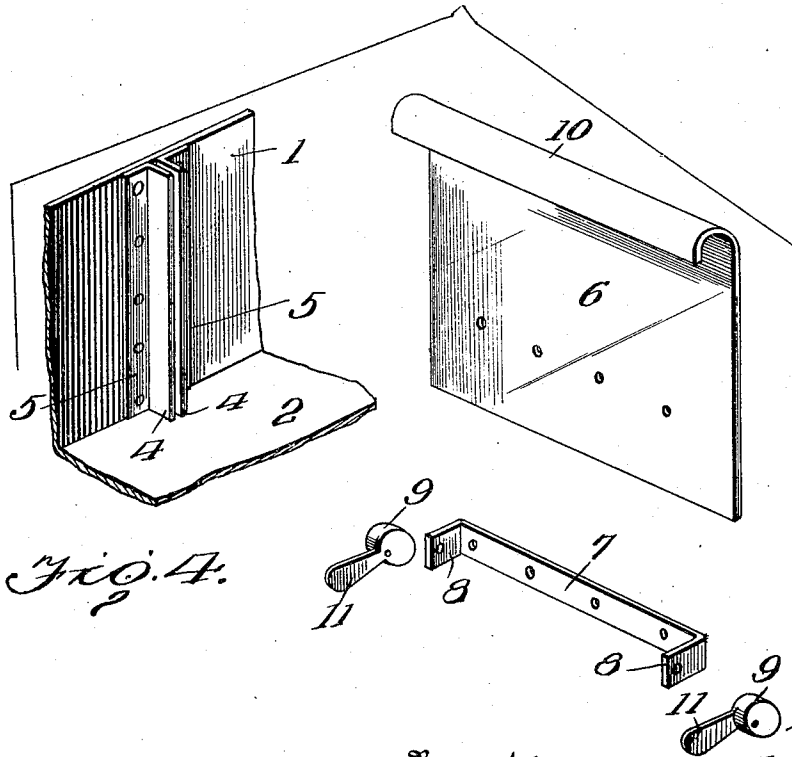
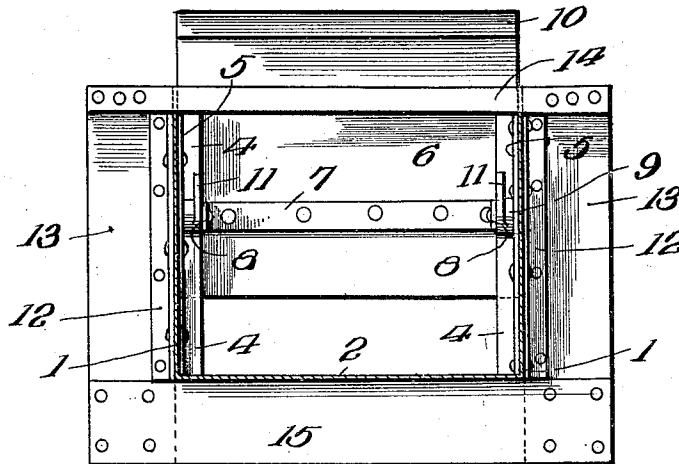


Fig. 4.

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HEAD-GATE.

1,161,997.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY E. THOMPSON, a citizen of the United States, residing at Montrose, in the county of Montrose and State of Colorado, have invented certain new and useful Improvements in Head-Gates, of which the following is a specification.

This invention relates to head gates for irrigation ditches, and has for its object the provision of a simple, inexpensive, durable and easily operated gate, by the use of which the flow of water through the ditch may be controlled and whereby the spreading or collapsing of the box in which the gate is mounted will be prevented.

The invention is illustrated in the accompanying drawings, and consists in certain novel features which will be hereinafter first fully described and then more particularly pointed out in the claims following the description.

In the drawings:—Figure 1 is a perspective view of a head gate and box embodying my invention; Fig. 2 is a central longitudinal vertical section of the same; Fig. 3 is a transverse section on the line 3—3 of Fig. 2; and Fig. 4 is a view showing the gate proper and the parts immediately coacting therewith supported in their approximately relative positions.

In carrying out my invention, I employ a box consisting of side walls 1 and a bottom 2 extending between the lower edges of the side walls, these members being preferably constructed of galvanized sheet metal so as to possess durability and strength without being liable to corrode. The box illustrated in the accompanying drawings is intended to be placed at the junction of the lateral with the main ditch and is provided with lateral flanges 3 at its entrance end through which bolts or rivets may be inserted to secure the same to a box in the connecting ditch, if so desired.

Upon the inner faces of the side walls 1 are secured vertical cleats or guides 4 having flanges 5 through which fastening devices may be inserted to secure them to the side walls. It will be understood that these guides or cleats are disposed in pairs, as shown clearly in Fig. 4, and the gate 6 is mounted to slide vertically between the cleats of each pair. To one side of the gate

I secure a reinforcing bar 7 having its ends 8 turned outwardly from the gate, and upon these out-turned ends, I pivotally mount the locking cams or eccentrics 9 which are adapted to ride upon the cleats or guides 4 between the adjacent side wall of the box and the outwardly projecting end or lip 8 to which the cam or eccentric is pivoted. The gate has its upper portion turned over or rolled upon itself to form a bead 10 which serves as a handle whereby the gate may be readily raised or lowered, and it is obvious that the gate may be held at any desired point vertically of the box by turning the cams or eccentrics 9 so that they will bear upon the adjacent cleats 4. The locking cams are provided with lever handles 11 so that they may be easily manipulated, as will be readily understood.

When the gate is lowered so that its lower edge rests upon the bottom 2 of the box, no water will be permitted to flow past the gate and any water which may have been admitted into the box in front of the gate will be forced to accumulate therein and will eventually rise and overflow the sides of the box so as to run upon the land to be irrigated. It is also obvious that the quantity of water permitted to flow past the gate may be regulated by adjusting the gate vertically and securing it in a set position by manipulating the locking cams. If the gate be arranged in the main ditch, it may, of course, be adjusted so as to entirely cut off the flow to the lateral ditch or to permit the water to flow into the lateral at any desired speed and volume. Likewise, if the system employed does not admit the water to the land by overflowing the ditch, the gate may be set to control the flow from the ditch into the soil. The bar 7 which carries the locking cams not only provides supports for the said cams but also serves to reinforce the gate so that buckling of the same under the pressure of the water is not apt to occur. The vertical side edges of the gate may be crimped or thickened or may be equipped with packing so as to prevent the escape of water around the edges of the gate into the ditch and thereby avoid wasting of the water.

Upon the outer faces of the side walls 1, I secure brackets or angle irons 12 to which are rigidly secured wings or side plates 13

which project laterally from the side walls and are intended to be embedded in the banks of the ditch so as to prevent the flow of water around the sides of the box. The upper ends of these wings or side plates 13 are connected by a cross bar 14 which is rigidly secured to said side plates and extends across the top of the box, as clearly shown. The lower ends of the wings or side plates 13 project below the bottom of the box and a plate 15 is secured to said ends and extends between the side plates and bears against the bottom of the box so as to prevent the flow of water under the box. The bar 14 and the plate 15, moreover, prevent collapse or spreading of the box and serve to hold the side walls of the same in a fixed spaced relation.

My device is exceedingly simple in construction and the arrangement of its parts so that it may be produced and installed at a low cost. The several parts are preferably constructed of galvanized sheet metal, so that they will not corrode and will possess durability, while they will be free of excessive weight and, consequently, may be easily transported and handled when being set up for use.

Having thus described the invention, what is claimed as new is:—

1. In an apparatus for the purpose set forth, the combination of a box having vertically disposed cleats on the inner faces of its side walls, a gate slidably fitted in said cleats, and locking cams carried by the gate and adapted to bear upon said cleats.

2. In an apparatus for the purpose set forth, the combination of a box having side walls, pairs of cleats secured to the inner faces of said side walls, a gate slidably mounted between the cleats, lips projecting from one side of the gate, and locking cams pivotally mounted upon said lips and arranged to bear upon the adjacent cleats.

3. An apparatus for the purpose set forth comprising a box having side walls, pairs of cleats secured on the inner faces of said side walls, a gate having its side edges slidably fitted between the cleats of each pair, a reinforcing bar secured to said gate and having its ends turned outwardly, and locking cams pivotally mounted upon said out-turned ends and arranged to bear upon the adjacent cleats.

In testimony whereof I affix my signature.
HARRY E. THOMPSON. [L. S.]

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