Nov. 19, 1929. I. S. SANDERS 1,736,628

HEAD GATE

Filed Dec. 6, 1928

Fig. 1

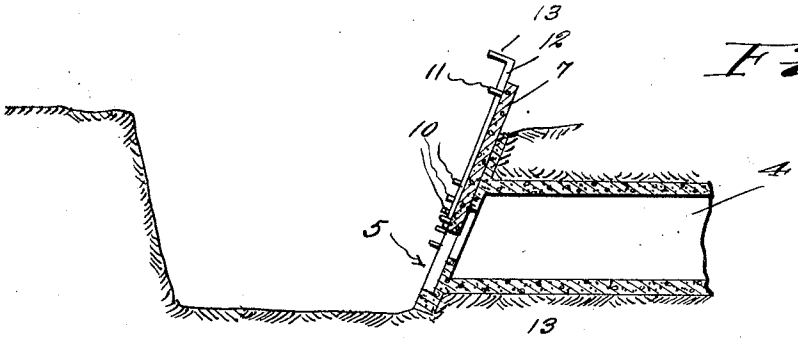


Fig. 2.

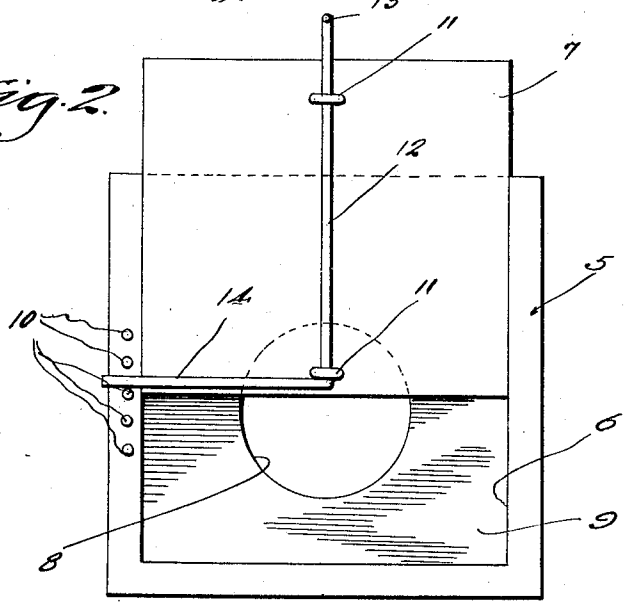
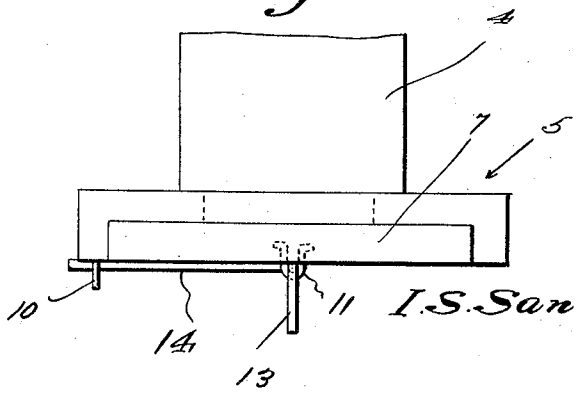


Fig. 3.



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UNITED STATES PATENT OFFICE

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HEAD GATE

Application filed December 6, 1928. Serial No. 324,170.

The present invention relates to an improved head gate adapted to be used in connection with irrigation ditches, for controlling the flow of water in the ditch.

My principal aim is to generally improve upon structures of this class by providing one which is a general improvement upon known patented and marketed head gates, the same being principally distinguished in that it is characterized by an all concrete structure embodying stationary unit, including a frame, and an integral pipe, and a concrete slide mounted on the frame for controlling the flow of water.

One feature of the advantages is that the slide and frame are disposed at an inclined angle with respect to the water conducting pipe, whereby to permit the water pressure and gravity to be relied upon for holding the slide firmly closed, and to insure a fluid tight joint.

Another feature of the invention is predicated upon the utilization of novel means for holding the slide in various adjusted positions and for aiding in raising and lowering the device.

Other features and advantages of the invention will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is a view in elevation and section showing the head gate mounted in a ditch.

Figure 2 is an end view on an enlarged scale showing a structure seen in Figure 1, looking in a direction from left to right.

Figure 3 is a top plan view of Figure 2.

Referring now to the drawings by reference numerals, it will be seen that the water pipe is designated at 4 and is embedded in the ground and integrally connected with the frame 5. The frame is disposed at a downwardly inclined angle or at an obtuse angle to the longitudinal axis of the pipe 4, and it is formed with a recess 6 for the reception of slide valve 7. The slide valve is in the form of a concrete slab, and it cooperates with a restricted water port 8 formed in the central portion of the web or diaphragm 9. On one side the frame is provided with embedded vertically spaced pins 10, functioning as keepers. Rigidly mounted upon the ditch side of the slides are eyes 11, to which the shaft portion of the lifting and retaining handle 12 extends. These eyes 11 are disposed at vertically spaced points and they permit rotation and sliding of the shaft 12. The upper ends of this part terminates in a laterally directed hand grip 13. Also the lower end is bent at right angles as at 14, for cooperation with the keeper pin 10. This allows the slide to be raised and lowered to the desired elevation and held in such position through the medium of the cooperating shaft end 14 and keeper pin 10. The structure is regarded as a novel contribution to the art, in that it is constructed entirely of concrete, with the exception of the operating handle and keeper pin.

Thus, the flow of water can be controlled in a dependable manner. The parts are interchangeable. The angularity of the slide and the frame is an improvement as it helps to keep the gate watertight. In fact, this gate has been found to be more effectively water tight than the average metal gate employed. It is thought however, that persons familiar with a construction of this class will be able to obtain a clear understanding of the construction, operation and advantages, upon considering the description in connection with the drawings.

Therefore, a more lengthy description is regarded as unnecessary.

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

I claim:

A head gate of the class described comprising a concrete pipe, an integral frame at one end of the pipe, said frame being inclined with respect to the pipe and formed with a recessed portion, a concrete slide mounted in said recessed portion, a plurality of vertically spaced keeper pins embedded in said frame, a pair of guide eyes carried by said slide, a shaft mounted for

rotation and sliding in said guide eyes, the upper end of the shaft terminating at a laterally directed handle, and the lower end terminating in an angularly bent portion forming a retainer for cooperation with said stop pin, whereby to permit said slide to be held in different elevated positions to regulate the flow.

In testimony whereof I affix my signature.

IRVIN S. SANDERS.