April 19, 1932. A. CRILL 1,855,100

HEADGATE

Filed July 31, 1930 2 Sheets-Sheet 1

Fig. 1.

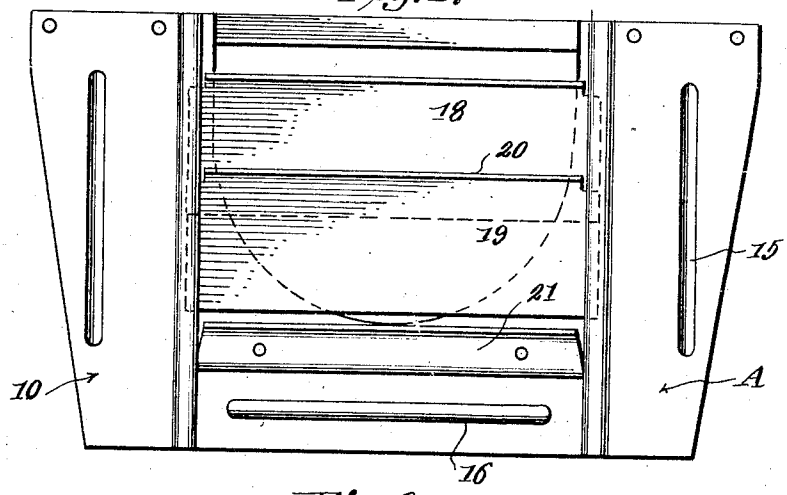


Fig. 2.

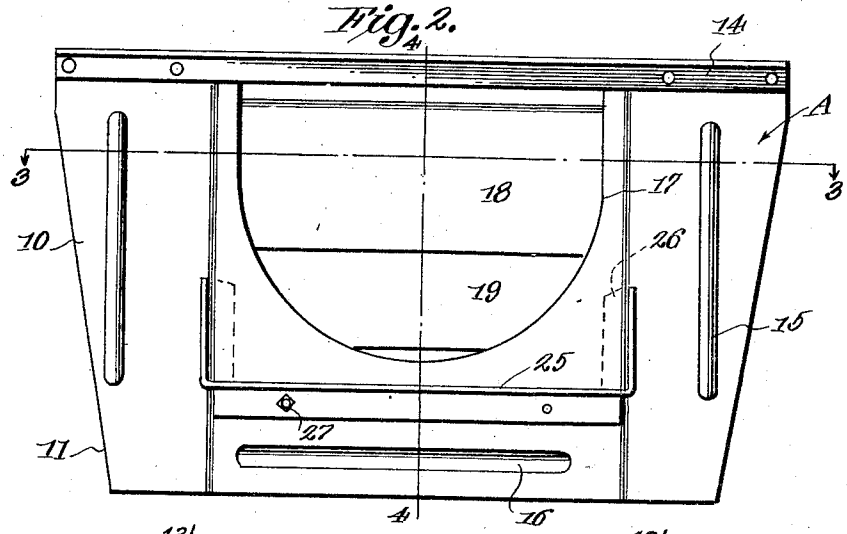
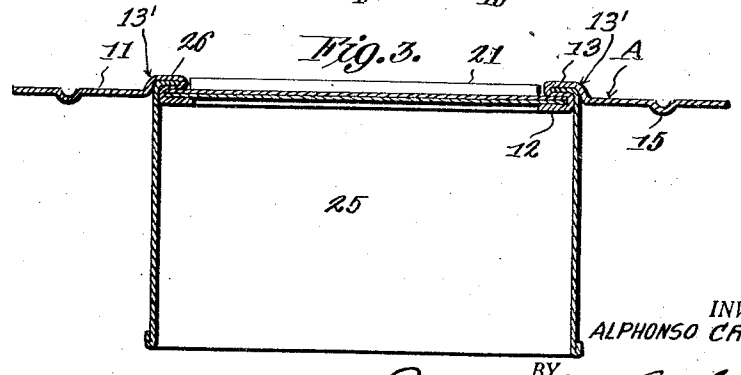


Fig. 3.



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Filed July 31, 1930 2 Sheets-Sheet 2

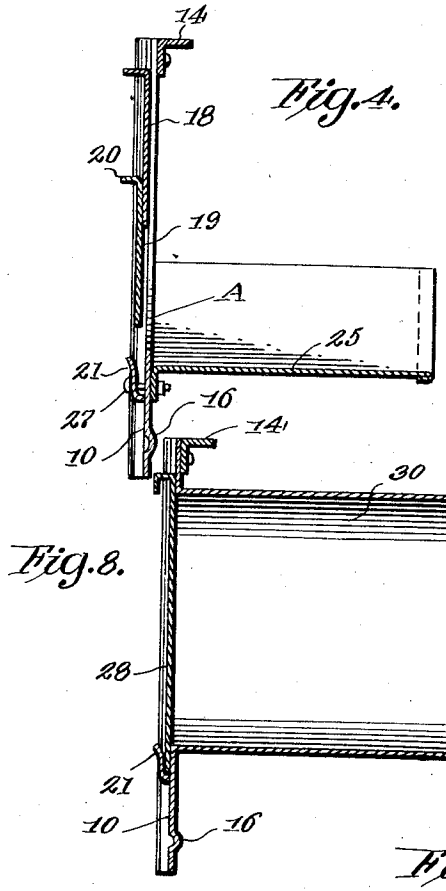


Fig. 4.

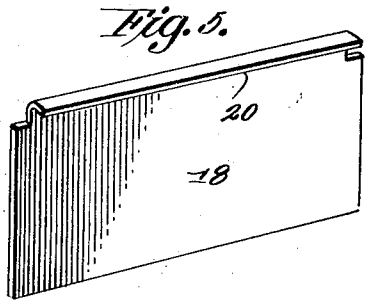


Fig. 5.

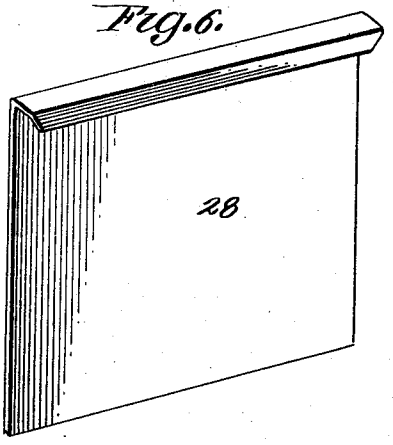


Fig. 6.

Fig. 8.

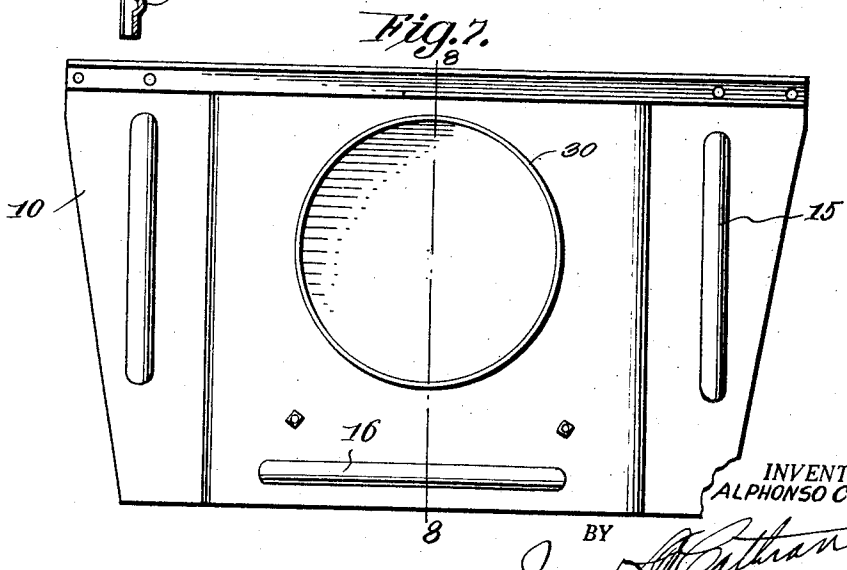


Fig. 7.

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ALPHONSO CRILL, OF NAMPA, IDAHO

HEADGATE

Application filed July 31, 1930. Serial No. 472,076.

This invention relates to a portable headgate for irrigation ditches and is an improvement on my previous Patent 1,768,120, dated June 24, 1930, relating to a headgate.

One of the primary objects of my present invention is to provide a headgate for use in connection with irrigating ditches and the like in which it is unnecessary to forcibly drive the gate in position in the ditch, thereby eliminating the necessity of providing reinforcing frame work and driving penetrating posts, as shown in my said allowed application.

Another important object of my invention is the provision of novel means for mounting the slides or control gates proper on the body of the head and novel means for mounting the tail piece on the head, said means permitting adjustment of said tail piece relative to the head and allowing the convenient and quick association of the tail piece therewith.

A further important object of my invention is the provision of means whereby a pair of control slides or gates proper can be mounted in the head, whereby the pair of slides can be effectively manipulated according to the height of the water in the ditch and the amount of water desired to flow therefrom.

A further important object of my invention is the provision of novel means for reinforcing the body of the head gate whereby the necessity of providing a reinforcing frame will be eliminated.

A still further object of my invention is to provide an improved head gate embodying a minimum number of parts and which can be manufactured and placed upon the market at a low cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawings, in which drawings:

Figure 1 is a front elevation of my improved head gate.

Figure 2 is a rear elevation of my improved head gate.

Figure 3 is a horizontal section through the gate taken on the line 3—3 of Figure 2 looking in the direction of the arrows and illustrating the novel means for mounting the slides, or gate proper and the tail piece on the head or body.

Figure 4 is a vertical central section through my improved head gate taken on the line 4—4 of Figure 2.

Figure 5 is a detail perspective view of one of the pairs of slides or gates proper used in connection with my device.

Figure 6 is a detail perspective view of a single gate which can be employed with my device.

Figure 7 is a rear elevation of a slightly modified form of my gate for use in connection with the piping, and

Figure 8 is a central vertical section through the modified form of my device taken on the line 8—8 of Figure 7.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates my improved headgate, which comprises a body or head 10, preferably formed from a single sheet of metal of the desired gage. The side edges of the body can taper downward toward the lower edge thereof as indicated by the reference character 11.

On opposite sides of the vertical center of the plate adjacent to its side edges, the plate is reversely folded to provide parallel inner guides 12 and parallel outer guides 13 which are offset to provide shoulders 13′ as shown clearly in Figure 3. These guides 12 and 13 extend from the bottom to the top edge of the plate and also form means for reinforcing the plate. The upper edge of the plate has riveted or otherwise secured thereto, an angle iron bar 14, which constitutes means for adding rigidity to the entire plate structure and also as means for facilitating the positioning of the plate in the ditch. In order to provide further means for reinforcing the plate, the same can be provided with vertically disposed struck out ribs 15, between the guides 12 and 13 and the side edges of the plate and horizontal struck out ribs 16 be-

tween the guides and adjacent to the lower edge of the plate.

A water passageway or opening 17 is formed directly in the plate between the inner and outer guides 12 and 13 and the inner guides 12 slidably receive gate sections or upper and lower slides 18 and 19. The extreme upper edges of the slides or gate sections 18 and 19 are bent laterally to provide manipulating handles 20. As shown in Figure 1 of the drawings, in the normal position of the slides or gate sections 18 and 19 the same overlap and thus completely close the water passageway or opening 17.

It is obvious from the construction so far that the lower slide or gate section 19 can be elevated, leaving the upper gate section or slide 18 in its normal position, which will allow the water to flow under the gate sections. The upper gate section can be lowered leaving the lower gate section in its normal position so as to permit the water to flow over the top of the gate sections when desired. I prefer to provide a stop 21 or rest for the lower edge of the bottom gate section 19 and this may constitute a strip of metal extending across one face of the plate having its terminals anchored in the inner guide 12, as shown. The lower edge of the stop plate 21 is secured rigidly to the face of the body plate in any preferred way, such as by solder or the like and flared slightly outwardly from the face of the plate to facilitate the insertion of the lower edge of the lower gate section between the stop plate and the face of said body plate.

The outer guides 13 receive the tail piece 25, which can be substantially U-shaped in cross section. The inner edge of this tail piece is provided with inwardly directed laterally disposed guide flanges 26, which are slidably received in the outer guides 13 and the shoulders 13′ will hold the flanges 26 against accidental lateral displacement from the outer guides 13. Thus this tail piece can be raised or lowered in the outer guide to correctly position the same relative to the bed of the stream. When it is desired to secure the tail piece against movement suitable bolts 27 can be employed which can be passed through the body plate 10 and through the stop plate 21, if so desired.

It is obvious from the foregoing that an exceptionally simple and durable head gate has been provided embodying a minimum number of parts which can be placed upon the market at an extremely low cost.

I can utilize a single slide gate 28 in lieu of the upper and lower gate sections 18 and 19, and I have shown this gate in Figure 6 of the drawings. In this instance both the gates 18 and 19 are removed from their guides and a shingle gate 28 substituted therefor.

In certain instances, where piping or the like is used for conveying the water I provide a round or circular tail piece 30 in lieu of the U-shaped tail piece 25 and I have shown this construction in Figures 7 and 8. In this instance I utilize a single slide gate 28.

Changes in details may be made without departing from the spirit or the scope of this invention, but:—

What I claim as new is:

A gate for irrigation ditches comprising a body plate formed from a single sheet of metal having vertically disposed spaced parallel inner and outer guides forming means for reinforcing the plate, a slide gate slidably mounted in the inner guides, a U-shaped tail-piece having laterally and inwardly direced guide flanges slidably received in the outer guides, said outer guides being off-set with respect to the body plate and having shoulders upon the outer longitudinal edges of said outer guides for holding said flanges of said tail-piece against accidental lateral displacement, and said body plate provided with a water opening formed in the plate between the guides.

In testimony whereof I affix my signature.

ALPHONSO CRILL.