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2,157,671

WATER CHECK FOR DRAINAGE DITCHES

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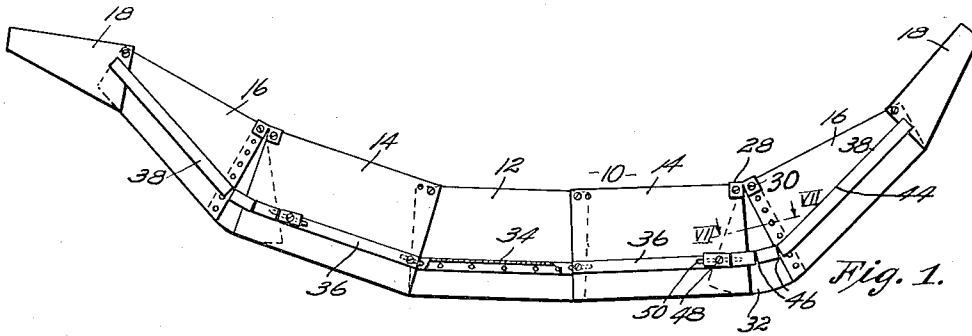


Fig. 1.

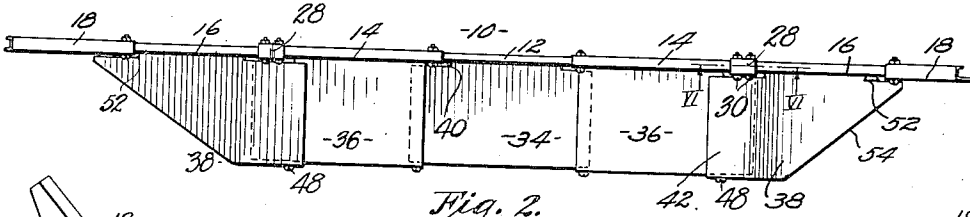


Fig. 2.

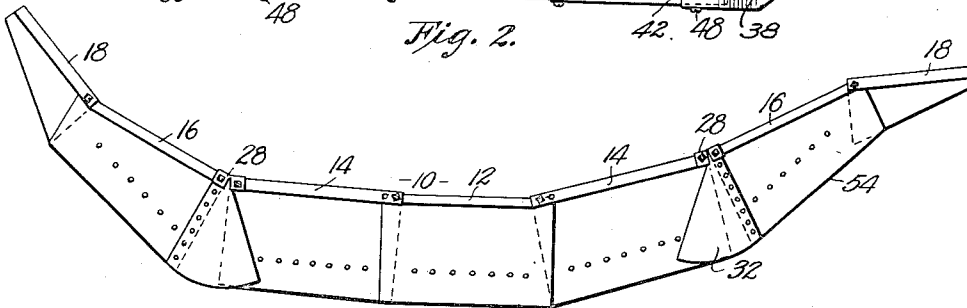


Fig. 3.

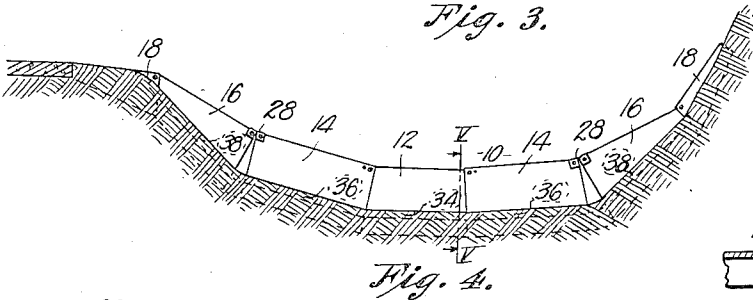


Fig. 4.

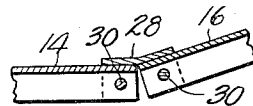


Fig. 6.

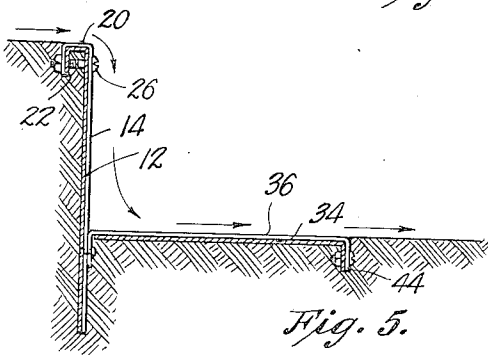


Fig. 5.

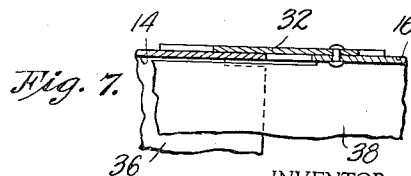


Fig. 7.

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WATER CHECK FOR DRAINAGE DITCHES

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5 Claims. (Cl. 61—29)

This invention relates to improvements in water checks for drainage ditches, and particularly to checks adapted to be positioned in the drainage ditch to prevent the bottom of the ditch from washing during the rainy season and to maintain the ditch in a substantially predetermined cross sectional contour, regardless of the amount of water flow.

The principal object of this invention is to provide a water check comprising a body portion which consists of a series of overlapping sections, interconnected and relatively adjustable to conform to the cross sectional contour of the drainage ditch, each of said body sections being provided with a transverse splash apron carried intermediate the top and bottom edges thereof, whereby a continuous splash apron is formed longitudinally of said check.

A further object of the present invention is the provision of a water check made of sheet metal and provided at its upper edge with a relatively thick head.

Other objects are economy and simplicity of construction, ease of installation, and adaptability for use in drainage ditches of various cross sectional forms.

Reference will now be had to the drawing, wherein the preferred embodiment of the invention is shown.

Figure 1 is an elevation of the water check, looking up stream.

Fig. 2 is a plan view of the water check as shown in Fig. 1.

Fig. 3 is an elevation of the water check, looking down stream.

Fig. 4 is a view of the water check, shown in position in a drainage ditch.

Fig. 5 is an enlarged, vertical, sectional view, taken on line V—V of Fig. 4.

Fig. 6 is a sectional view, taken on line VI—VI of Fig. 2, and,

Fig. 7 is a horizontal section, taken on line VII—VII of Fig. 1.

Throughout the several views of the drawing like reference characters refer to similar parts, and the numeral 10 designates a body portion, consisting of a series of overlapping sections 12, 14, 16 and 18, which are interconnected and relatively adjustable by the workman to conform to the particular drainage ditch in which the check is to be used. Each of these sections is made of a sheet of metal, formed at its top edge to produce a relatively wide head 20 and a resulting inverted channel 22 at the up stream side

of said sections. This broad head presents a surface which will not interfere with or injure the rubber tire of a mowing machine used in maintenance of the roadway.

It will be noted that the central section 12 is inserted into the adjacent sections 14, and that each succeeding section likewise overlaps the adjacent section, thereby making it possible to first insert the central section and gradually build the check outwardly therefrom by simply placing the successive sections one on top of the other, as shown. It is also possible to completely assemble all sections of the water check and press the same to the position shown in Fig. 5. The upper overlapping edges of adjacent sections are pivoted together by means of bolts 26.

The sections 16 which are preferably intended to engage the angled side walls of the ditch are joined together for relative adjustment by means of a bendable member 28, secured by means of a bolt 30 to the adjacent abutting edges of sections 14 and 16. A relatively long, overlapping metal curtain 32, secured to or integral with section 16, serves to close the opening between sections 14 and 16 when the same are positioned in angled relation. The outer plain sections may or may not be used to serve as additional protection against wash adjacent the top surface of the ditch.

Each of the sections 12, 14 and 16 of the check are provided with a longitudinally disposed splash apron 34, 36 and 38 respectively, which are carried intermediate the top and bottom edges of the respective sections and overlap to form a continuous splash apron. It will be noted that the splash apron 34 is provided with notches 40 to allow the positioning of sections 36. The splash apron 38 of section 16 is extended beyond the inner end of 16 to present a bendable tongue 42, which is arcuate in form and adapted to be slightly varied by the workman when the angle between 14 and 16 is altered. Each of the splash aprons 34, 36 and 38 is provided with downturned flanges 44, which serve to give rigidity to the aprons and also serve to check the flow of water beneath said apron.

To facilitate the desired bending of tongue 42, it will be observed that that portion of flange 44 carried by said tongue is notched at 46. The bolts 48 which pass through the apertures formed through overlapping flanges 44 of adjacent sections serve to secure the check in the operative position. It will be noted that one of the apertures is elongated to allow for relative longitudinal

nal adjustment of flanges 44. These bolts 48 may be eschewed in some instances. The outer sections 18 are pivotally mounted to the adjacent section 16 and are not provided with any splash apron, thus making it possible for them to be embedded to the top thereof, as shown in Fig. 4.

Referring now to Fig. 5, which shows more definitely in detail the position of the check in the ditch when in operation, it will be noted that that portion of the sections below the splash aprons is inserted into the soil at the bottom of the ditch, as is also the flanges 44 of said splash aprons, thereby presenting an unbroken barrier entirely across the ditch to preclude any possible flow of water beneath said apron. When said check is first positioned in the ditch with the apron extending down stream, that portion of the sections above the apron will project above the ditch bed, however, after continued use, sediment will be deposited on the up stream side of the sections to eventually fill said ditch substantially to the top of the check.

Apron 38 is notched at 52 to permit of free pivotal movement of section 18. Furthermore, said section is preferably angled at 54 to gradually decrease the width of the splash apron on section 16.

While the specific structure has been shown in presenting the invention, it is apparent that many modifications might be made in the general structure without departing from the salient features of this invention.

What I claim is:

1. A water check for a drainage ditch comprising a body portion consisting of a series of overlapping, planar sections, interconnected and relatively adjustable to conform to the cross sectional contour of a drainage ditch; a relatively wide head formed on the up-stream side and at the top edge of each of said sections; a splash apron carried intermediate the top and bottom edges of certain of said planar body sections whereby a continuous splash apron is formed longitudinally of said check, adjacent splash apron being notched and overlapped; and means to secure said sections in the operative position.

2. A water check for a drainage ditch comprising a body portion consisting of a series of overlapping sections, interconnected and relatively adjustable to conform to the cross sectional contour of a drainage ditch; a relatively wide head formed at the top edge of each of said sections;

and a horizontally disposed splash apron carried intermediate the top and bottom edges of certain of said sections whereby a continuous splash apron is formed longitudinally of said check, the apron of each of the outer sections of said certain sections having inwardly extending, bendable tongues adapted to be curved to meet the apron of the adjacent section when said sections are in the operative relation.

3. A water check for drainage ditches comprising a vertically disposed body portion consisting of a series of overlapping sections, interconnected and relatively adjustable to conform to the cross sectional contour of the ditch; a horizontally disposed splash apron carried by certain of said sections intermediate the top and bottom edges thereof, the splash aprons of adjacent sections being overlapped to present a continuous splash apron longitudinally of said check on the down stream side thereof; and a downturned flange along the free edge of each of said apron sections, to present a continuous flange throughout the entire length of said overlapped splash aprons.

4. A water check for drainage ditches comprising a vertically disposed body portion consisting of a series of overlapping sections, interconnected and relatively adjustable to conform to the cross sectional contour of the ditch, each of said sections having a relatively wide head offset in an up stream direction; and a horizontally disposed splash apron carried by certain of said sections intermediate the top and bottom edges thereof, the splash aprons of adjacent sections being overlapped to present a continuous splash apron longitudinally of said check and on the down stream side thereof, the outer splash aprons being positioned to extend outwardly and upwardly.

5. A water check for drainage ditches comprising a vertically disposed body portion consisting of a series of overlapping sections, interconnected and relatively adjustable to conform to the cross sectional contour of the ditch; and a horizontally disposed splash apron carried by certain of said sections intermediate the top and bottom edges thereof, the splash aprons of adjacent sections being overlapped to present a continuous splash apron longitudinally of said check and on the down stream side thereof, each of said sections having at its upper edge an outwardly extending flange turned down at its outer portion, whereby an inverted continuous channel is formed at the up stream side of each section.

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