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O. V. HOUGH

1,696,237

MEANS FOR PROTECTING PAVED ROADS AGAINST EROSION

Filed Aug. 24, 1925

Fig. 1.

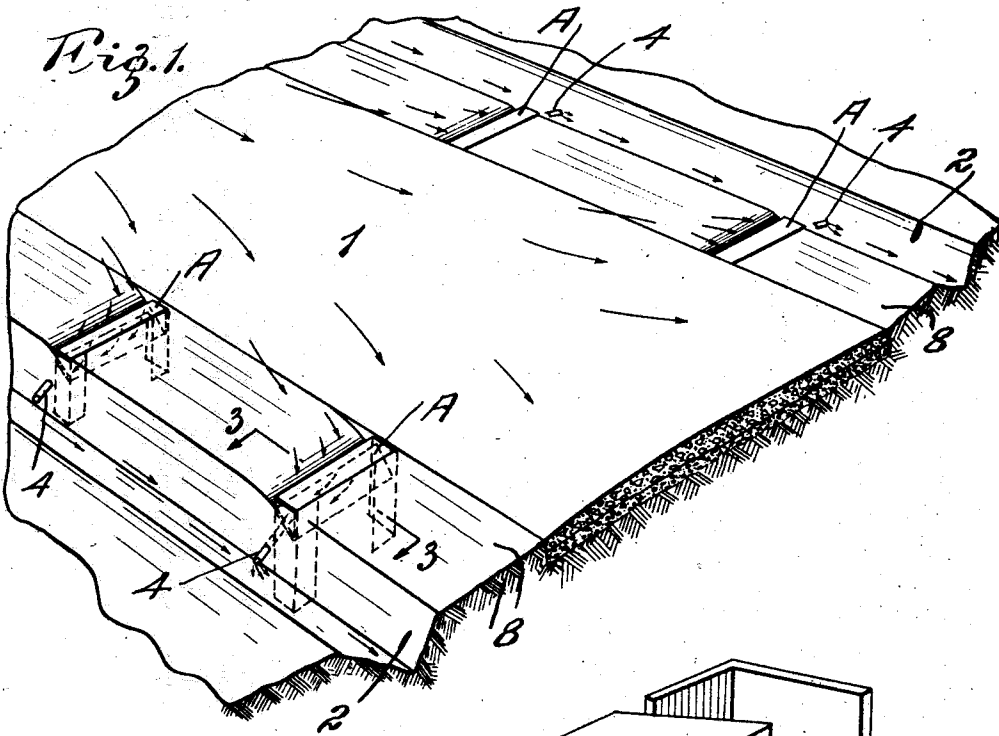


Fig. 2.

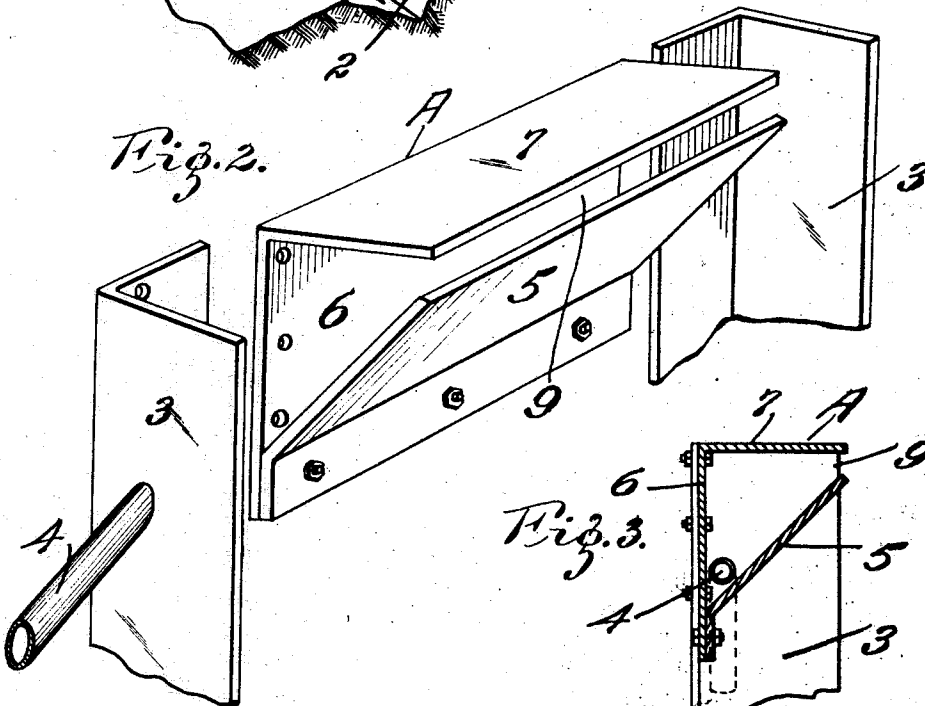
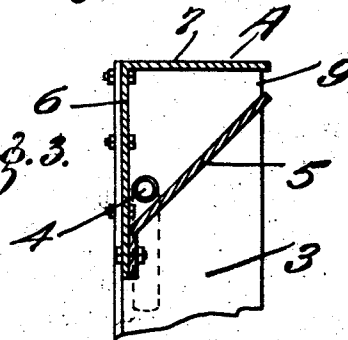


Fig. 3.



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MEANS FOR PROTECTING PAVED ROADS AGAINST EROSION.

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My invention relates to the protection of paved roads and the like against erosion and has for its principal object an economical, easily installed and effective means for preventing erosion along the edges of roads paved with concrete and the like. The invention consists principally in placing at intervals along the edge of the highway drain devices that abut at one end against the paved portion of the road and that extend to the ditch near the road, thereby trapping water running along the edge of the road and diverting it to the ditch before it has had an opportunity of washing out the earth alongside the road. The invention further consists in the drain device and in the parts and combinations of parts and in the method hereinafter described and claimed.

In the accompanying drawing which forms part of this specification and wherein like reference characters indicate like parts wherever they occur,

Fig. 1 is a perspective view of a portion of a concrete road equipped with drain devices embodying my invention;

Fig. 2 is a perspective view of one of said drain members; and

Fig. 3 is a cross-sectional view thereof along the line 3—3 of Fig. 1.

It is well known that water flowing along the edge of a concrete pavement or the like washes out the earth shoulder along the pavement, resulting in the formation of gulleys and holes, so that vehicles rolling off the edge of the pavement are likely to meet with serious damage; and sometimes the pavement is washed out.

To obviate these difficulties, I place along the edges of the pavement 1 drain devices A that abut at one end against the pavement and extend transversely of the road, thus diverting water to the ditch 2 that extends along the side of the road. A preferred form of drain device is illustrated in the drawing and comprises a hollow drain box A of triangular section adapted to trap water flowing along the side of the road. Each drain box is provided with suitable legs adapted to be embedded in the ground and with a drain pipe 4 leading to the ditch that extends along the road. Said legs 3 may be angle bars bolted to the drain box and closing the ends thereof.

Each drain box A is preferably embed-

ded in a depression provided therefor along the road with the bottom portion 5 disposed at an incline. The side 6 of the drain box A abuts against a wall of the depression and the top 7 of the drain box is substantially flush with the level of the earth 8 alongside of the road. The open mouth 9 of the drain box formed by the spaced edges of the top 7 and bottom 5 of the box is extended toward the upslope so as to trap water flowing down grade. The bottom of the drain box is inclined slightly away from the road so as to carry off the water to the drain pipe 4 and into the ditch. The drain boxes are disposed at suitable intervals along the road, being closest together on steep grades.

The method of protecting paved roads against marginal erosion by placing drain boxes at intervals along the edge of the road has great advantages; since it prevents the pavement from washing out and it prevents damages to person and property resulting from vehicles running off the road into the ditches, gulleys and holes caused by erosion. The particular form of drain box described and illustrated herein is simple and easy to make, it is strong and durable and it provides an upper surface that is flush with the earth surface along the side of the road.

Obviously, numerous changes may be made without departing from the invention and I do not wish to be limited to the precise construction shown.

What I claim is:

1. A concrete pavement, an earth shoulder alongside of said pavement and substantially flush with the surface thereof, a ditch alongside of said shoulder, and a plurality of drain boxes disposed with their ends abutting against said pavement and adapted to receive water flowing along said shoulder and divert it to said ditch, said drain boxes having their top portions substantially flush with the surface of said earth shoulder.

2. A drain box for the edges of paved roads, comprising a flat upper portion, an inclined bottom, a side portion and closures for the ends of said box, said top and bottom portions forming a mouth adapted to receive water.

3. A drain box for the edges of paved roads, comprising a flat upper portion, an inclined bottom, a side portion, said top

and bottom portions forming a mouth adapted to receive water, and supports at the ends of said box said supports having portions closing the ends of said box.

- 5 4. A drain box for the edges of paved roads, comprising a flat upper portion, an inclined bottom, a side portion, said top and bottom portions forming a mouth adapted to receive water, and supports at the ends
10 of said box said supports having portions closing the ends of said box, one of said

supports being provided with an outlet pipe to drain water from said box.

5. A concrete pavement, a drainage ditch extending along the edge of said pavement and spaced therefrom and a plurality of transversely disposed drain devices for carrying water from said pavement to said ditch.

Signed at Kansas City, Mo., this 17 day 20 of August, 1925.

OTTO V. HOUGH.