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SHOULDER TRIMMING MACHINE

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My invention relates to improvements in shoulder trimming machines, and has for its object to produce a traveling machine designed to cut and level, on a desired angle, a strip or shoulder of earth contiguous to the finished surface of a hard road.

In the prevalent standard concrete highway construction there is left outside the limits of the outer edges of the hard road a shoulder, a belt or strip of earth which is usually required by law or regulation to be leveled off, either horizontally, or sloping downwardly, from the outer parallel margins of the hard road. It is the object of the machine of my invention to treat by a trimming element that soft earth shoulder in compliance with the specifications of such laws or regulations, and to treat or finish the outer edge of said shoulder by means of a tool mounted, adjustably or otherwise, at the outer terminal of the trimming element.

Drawings.

In the drawings—

Fig. 1 is a rear elevation of a machine embodying my invention at work, the road bed and shoulder being shown in section. Fig. 2 is a top plan view of the same.

Description.

In the drawings A indicates the finished surface of a hard road, having the outer edge 3, beyond which outer edge 3 lies the earthen shoulder B which is to be leveled and scored at its outer edge 4.

The traveling frame C has longitudinal sills 5 and 6 and travels on wheels 7. Hinged at 8 to the outer sill 6 is the mold-board 9 carrying the scraper-blade 10, and having a standard 11 connected to the hand-lever 12 by the strap 13.

A cross-brace 14 of the frame C has the segmental rack 15 with which the plunger 16 (mounted on the hand-lever 12) engages to hold the blade 10 elevated out of working position (see dotted lines in Fig. 1) and permitting the machine to travel idle for purposes of transportation; by proper manipulation of the hand-lever 12 the scraper-blade 10 is lowered to or below the horizontal and into working position.

At its outer terminal the scraper-blade 10 carries the scoring or finishing tool 17, pivoted to the blade 10 at 18. A collar 19 fixed on the mold-board 9 loosely receives the threaded pin 20, which pin 20 is hinged at its outer terminal to the outer end of the tool 17 and adjustably secured by nuts 21—21 mounted on the opposite ends of the collar 19.

Thus the shoulder-edge finishing tool 17 is adjusted at the desired angle to form the outer beveled marginal edge 4 of the shoulder B.

The mold-board 9 is provided with the reinforcing beam 22 hinged to the side-sill 6 at 23. The mold-board 9 is set at an angle of approximately 45 degrees to the path of travel of the machine as shown, and in actual use I have found it necessary to have means holding the traveling frame C against the edge 3 of the hard road A, to resist the inward thrust occasioned by the engagement of the plate 10 with the earth shoulder B. This I have accomplished by the use of a guide-bar 24, vertically and adjustably mounted upon the outer face of the sill 6 by means of the bolts 25, and extending sufficiently below the plane of the top surface of the road A, as shown in Fig. 1, to present a sufficient bearing surface against the edge 3.

Various modifications of the structure of the machine shown and described may be accomplished without departure from my actual invention as defined in the following claims.

Claims.

I claim:

1. A shoulder trimming machine comprising a traveling frame arranged to travel along the edge of a finished hard road; means to hold said frame in alignment with the edge of said hard road; and a trimming element mounted on said frame and arranged to trim a predetermined width of earthen shoulder contiguous to said hard road.

2. A shoulder trimming machine comprising a traveling frame arranged to travel along the edge of a finished hard road; means to hold said frame in alignment with the edge of said hard road; and a trimming element mounted on said frame and arranged to trim a predetermined width of earthen shoulder contiguous to said hard road; in combination with a scoring tool mounted on the outer end of said trimming element.

3. A shoulder trimming machine comprisi.
ing a traveling frame arranged to travel along the edge of a finished hard road; means to hold said frame in alinement with the edge of said hard road, and a trimming element mounted on said frame and arranged to trim a predetermined width of earthen shoulder contiguous to said hard road; in combination with a scoring tool adjustably mounted on the outer end of said trimming element.

In testimony whereof I have hereunto affixed my signature.

ALVA H. MAUTZ.