Dec. 4, 1928. 1,693,903

V. O. JOHNSTON

METHOD AND APPARATUS FOR MAKING ROAD EDGINGS

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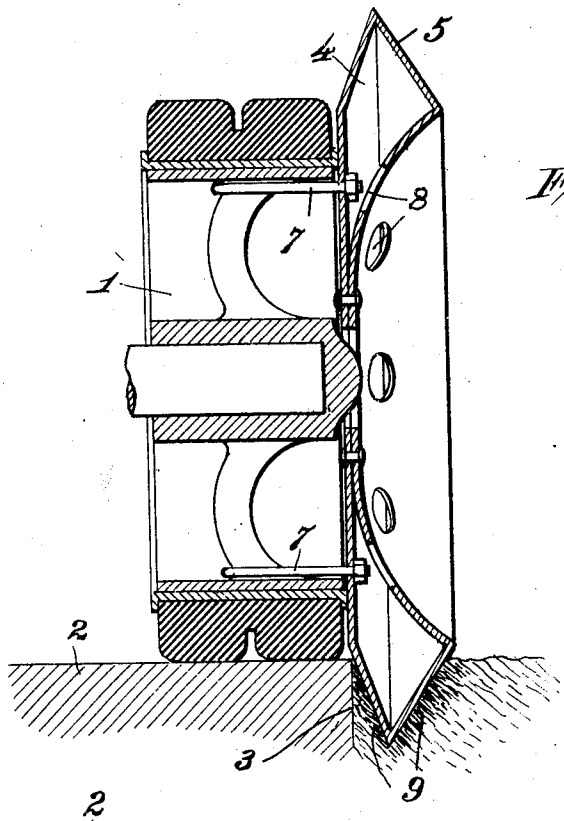


Fig. 1.

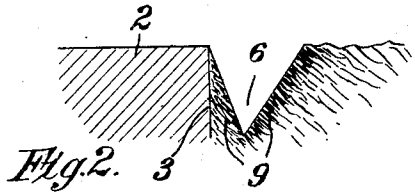


Fig. 2.

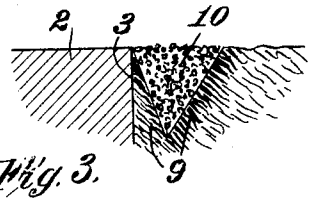


Fig. 3.

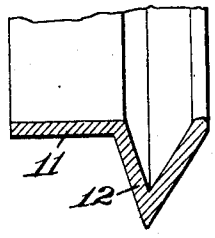


Fig. 4.

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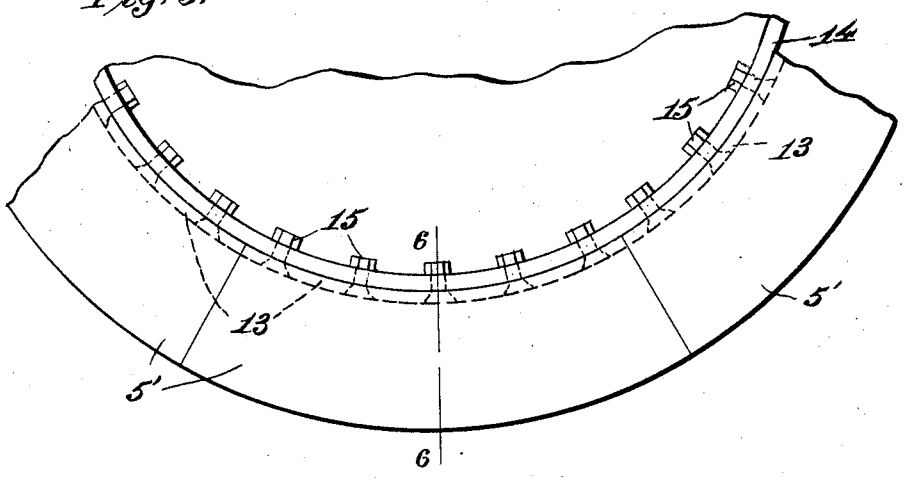
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Fig. 5.



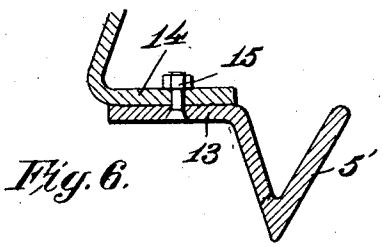


Fig. 6.

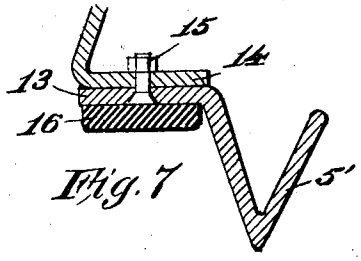


Fig. 7

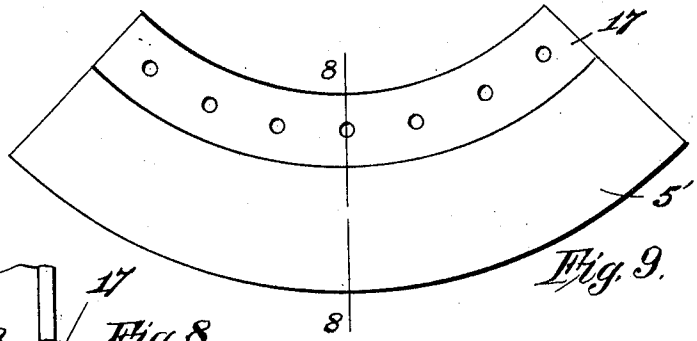


Fig. 9.

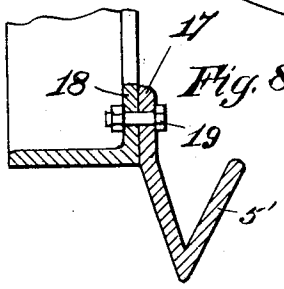


Fig. 8.

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UNITED STATES PATENT OFFICE.

VERNON O. JOHNSTON, OF LINCOLN, ILLINOIS.

METHOD AND APPARATUS FOR MAKING ROAD EDGINGS.

Application filed August 10, 1927. Serial No. 212,001.

My invention relates to an improved method of making road edgings, and to apparatus used therein.

The common form of roadway as now generally constructed and maintained, is formed of concrete with a square edge or shoulder. These form excellent roadways, but when vehicles slip or go off the edge of the road, particularly in wet weather, they soon form deep ruts beside the squared shoulders of the roadway, thereby frequently making dangerous conditions, and in any event making it difficult for the vehicle to return to the roadway. To counteract these conditions, road maintenance forces are constantly employed filling in the ruts thus made. This is done by hand; and is not only expensive, but usually the benefit is of short duration and little value, particularly in wet weather.

The object of my invention is to provide an improved method of making the road edgings whereby the edgings may be made and maintained at a comparatively low cost. A further object of my invention is to provide a method of making road edgings which will provide an edging having ample drainage, thereby maintaining the same in useful condition for extended periods of time, even in bad weather. A further object of my invention is to provide an apparatus adapted for use in carrying out my improved method. Other objects will appear hereinafter.

With these objects in view my invention consists generally in a method of forming road edges which consists in compressing the earth adjacent the shoulder of the road to form a ditch and then filling the ditch with gravel, cinders or the like which will provide a firm bed for the vehicle wheels, and which will also provide ample drainage. My invention further consists in a device or apparatus for forming the ditch, which consists of a rotary member having a V-shaped periphery, which is adapted to be rolled along the edge of the road to compress the earth to form the ditch above mentioned. In carrying out my invention I form the device either as part of a truck or other vehicle wheel or as an attachment to be applied to such wheels. My invention further consists in various details of construction and arrangements of parts all as will be fully described hereinafter and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which—

Fig. 1 is a vertical sectional view through a truck wheel equipped with an edging device embodying my invention in one of its forms, and illustrating the same in the operation of compressing a ditch along the edge of a roadway.

Fig. 2 is a detail sectional view illustrating the ditch as formed by the edging device,

Fig. 3 is a similar view illustrating the road edging completed,

Fig. 4 is a detail view of a modified form of the apparatus,

Fig. 5 is a fragmentary side elevation of a further modification.

Fig. 6 is a transverse section on the line 6—6 of Fig. 5,

Fig. 7 is a view similar to Fig. 6, illustrating a further slight modification,

Fig. 8 is a detail sectional view of a further modification, the same being taken on the line 8—8 of Fig. 9, and,

Fig. 9 is a side elevation of the device illustrated in Fig. 8.

Referring now to Fig. 1 of the drawings, 1 indicates conventionally a truck wheel to which is secured an apparatus embodying my invention for forming a ditch along the side of the concrete slab 2 of a roadway, the slab having the usual square or vertical shoulder 3. The device comprises a circular member 4 having a wedge shaped periphery 5, which projects radially beyond the tread of the truck wheel the depth it is desired to form the ditch 6 along the side of the road. The device 4 is secured to the truck wheel in any desired manner, as by bolts 7, access to the bolts being had through apertures 8.

In using the device the truck or other vehicle to which the ditching device is applied, is driven along the roadway with member 4 just clearing the shoulders 3. The weight of the vehicle causes the wedge shaped portion to compress a ditch 6 along the side of the roadway. In compressing this ditch it should be noted that the earth is greatly compressed about the ditch as indicated at 9, which is greatly conducive to the long life of the edging. After the ditch is formed it is filled with coarse material, such as cinders or gravel, such material not only making a good surface for the edging but also providing ample drainage.

In Fig. 4 I have illustrated a detail transverse section of the wheel formed with the

V-shaped peripheral extension. In this form of the device 11 indicates the tread of the wheel which is adapted to travel on the roadway and 12 the V-shaped extension formed integrally therewith.

In the form of the device illustrated in Fig. 1, the wheel attachment 4 is substantially an unitary structure. If preferred, the V-shaped extension 5′ may be formed in sections, as illustrated in Figs. 5 and 6, each section being formed with a flange 13 adapted to be secured to the tread 14 of the wheel by bolts 15. Fig. 7 illustrates a construction similar to Fig. 6 but equipped with a tire 16. In Figs. 8 and 9 I have illustrated a sectional device similar to Fig. 5, with the exception that the attaching flange 17 is vertically arranged to be secured to a vertical wheel flange 18, as by bolts 19.

From the above it is obvious that my ditch forming device may be constructed in any desired manner, either integrally with the wheel of the vehicle with which it is to be used, or formed to be attached to any ordinary or special form of wheel. Also, it may be made as an unitary structure or made in sections. It is also obvious that in carrying out my improved method of making road edgings, a more permanent edging may be made and maintained at a lower cost than with the methods now employed.

I claim:

1. The method of forming road edgings which consists in compressing the ground adjacent the road shoulder to form a ditch and filling said ditch with suitable material, substantially as described.

2. The method of forming road edgings which consists in forming a ditch adjacent the edge of the road bed by compression and filling said ditch with gravel or the like, substantially as described.

3. The method of forming road edgings which consists in rolling a member having a V-shaped periphery along the edge of the roadway to form a ditch by compression and then filling the ditch with suitable material, substantially as described.

In testimony whereof I have signed my name to this specification.

VERNON O. JOHNSTON.