G. VAN KESSEL, JR.

ROAD GRADING DEVICE.

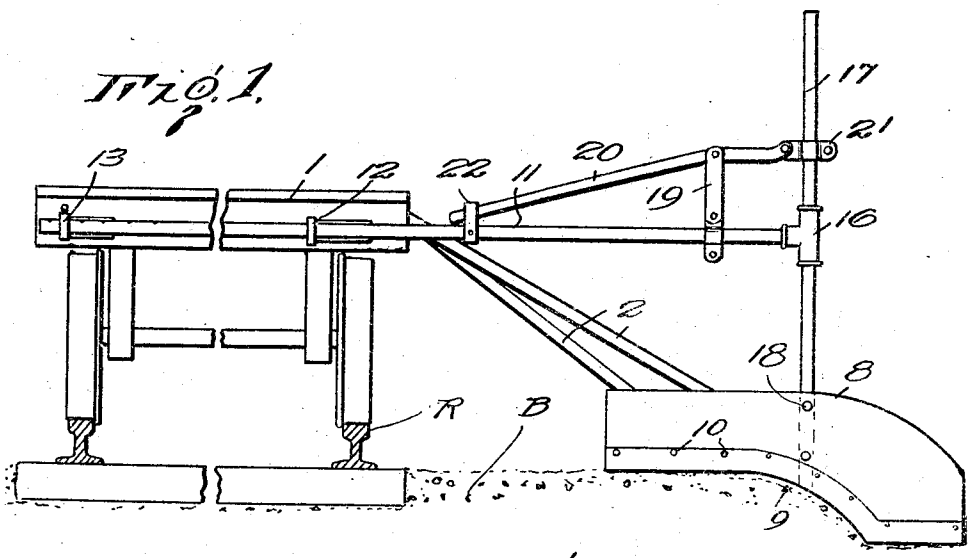
APPLICATION FILED OCT. 15, 1917.

1,287,526.

Patented Dec. 10, 1918.

2 SHEETS—SHEET 1.

Fig. 1.



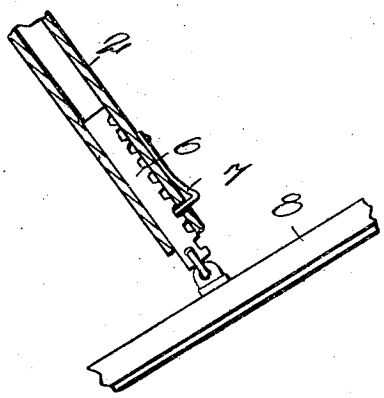


Fig. 4.

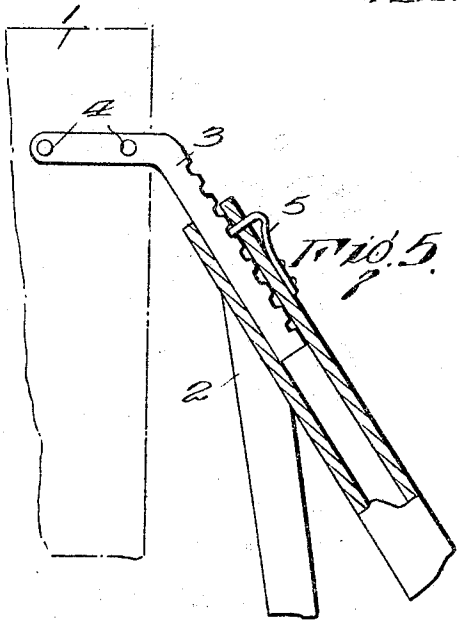


Fig. 5.

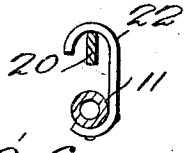


Fig. 6.

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2 SHEETS—SHEET 2.

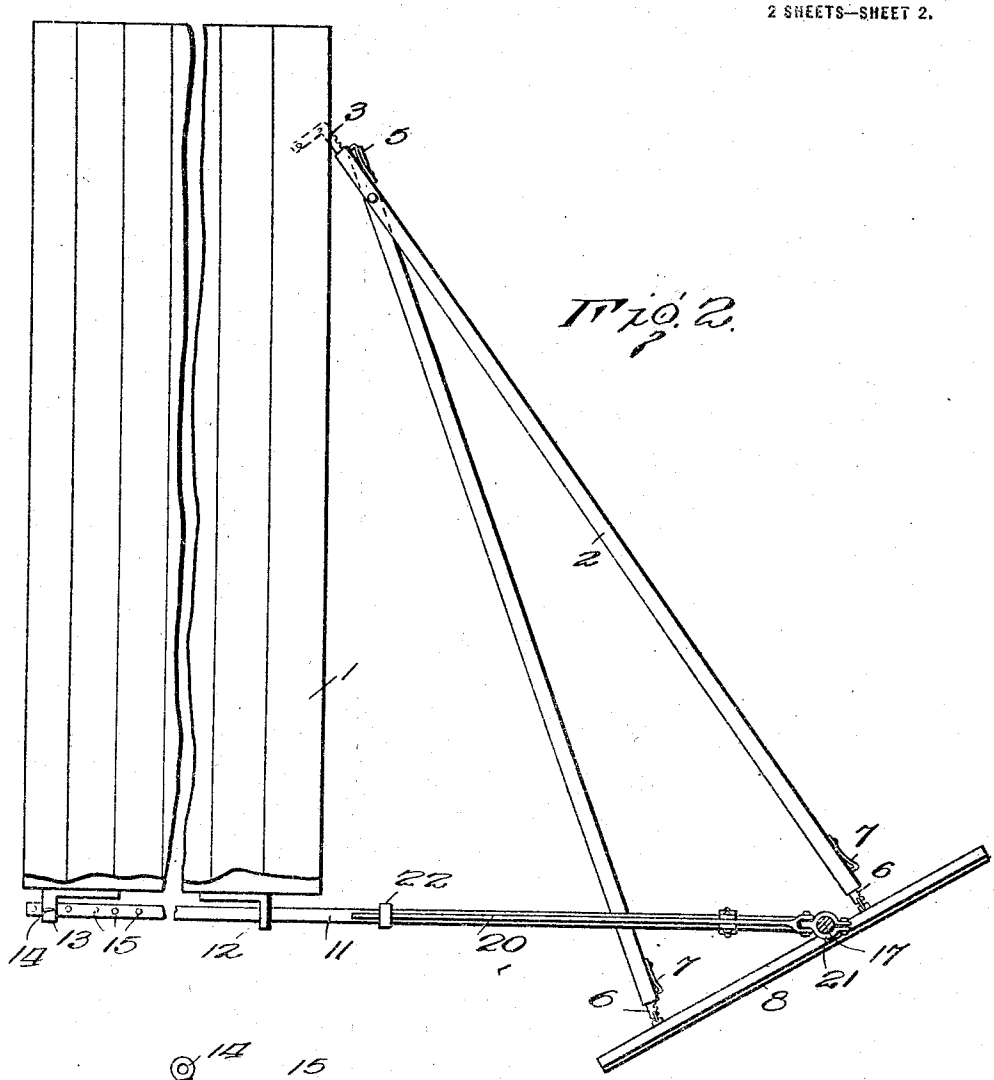


FIG. 2.

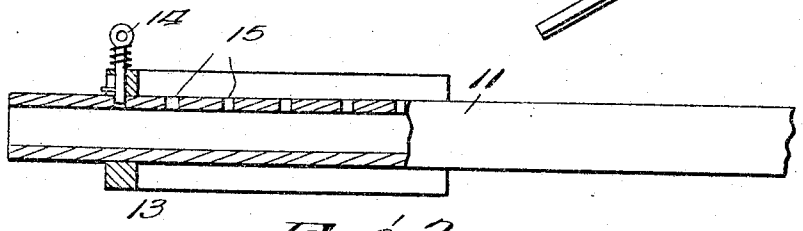


FIG. 3.

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UNITED STATES PATENT OFFICE.

GEORGE VAN KESSEL, JR., OF WEBSTER, WISCONSIN.

ROAD-GRADING DEVICE.

1,287,526. Specification of Letters Patent. Patented Dec. 10, 1918.

Application filed October 15, 1917. Serial No. 196,638.

To all whom it may concern:

Be it known that I, GEORGE VAN KESSEL, Jr., a citizen of the United States, residing at Webster, in the county of Burnett and State of Wisconsin, have invented certain new and useful Improvements in Road-Grading Devices, of which the following is a specification.

This invention relates to road grading devices and it is the dominant object of the invention to provide a device for grading the sides of railway beds whereby the banks of the crowns formed thereby will be properly sloped.

Another and equally important object of the invention is to provide a device adapted to move over the rails of the road and to grade the sides of the bed during such movement, thus, effecting a material saving in labor and time.

The foregoing together with additional advantageous details and arrangement of parts of the preferred embodiment of my invention will be clear from the specific description hereinafter contained, when read in connection with the accompanying drawings forming part thereof, wherein said embodiment of the invention is illustrated for the purpose of facilitating a full understanding of the present improvements.

In the drawings:—

Figure 1 is a front view of the improved grader having parts thereof shown in fragments while the rails of the road are shown in sections;

Fig. 2 is a top plan of the grading device;

Fig. 3 is a fragmentary detail partly in section;

Fig. 4 is a detail in section of the connection between the grading blade and the supporting device therefor;

Fig. 5 is a fragmentary detail partly in section of the connection between the grading blade support and the truck; and

Fig. 6 is a detail partly in section showing the catch for maintaining the grading blade adjusting means in fixed position.

Similar characters of reference refer to similar parts throughout the several views of the drawings.

Having more particular reference to the drawings, B represents the railroad bed, it being noted in this connection, that the sides thereof are sloped or graded, thereby providing the usual crown and R represents the rails of the road.

A truck indicated in its entirety by the numeral 1 is provided and as will be readily understood, is adapted for movement over the rails R of the road. Arranged adjacent one side of the truck 1 is a substantially V-shaped supporting member 2, the same being formed of tubular metal or like material and having a serrated shank 3 slidably arranged in the rear end thereof, which shank is offset intermediate its ends and secured to the truck 1 at a point in proximity to the rear end of the same by bolts or other suitable fastening devices 4. Secured to the adjacent end of the V-shaped supporting element 2 is a spring pawl 5, the engaging lip of which passes through a suitable opening formed therein and received upon the serrated portion of the shank 3, thereby preventing undue relative longitudinal movement of the element 2. Other serrated shanks 6 are slidably arranged in the forward or outer ends of the supporting element 2 and are locked in adjusted position thereupon by spring pawls 7, the lips of which pass through suitable openings formed in the extremities of the supporting element into engagement with the shanks 6.

Positioned adjacent the outer end of the supporting element 2 is a grading blade 8 the lower marginal edge of which is curved, as at 9 to correspond with the proper slopes of the road bed banks. In this connection, it is to be noted that the body portion of the blade 8 is formed of wood, while the cutting or grading portion thereof is formed from a strip of metal which is secured to the body through the medium of rivets 10. However, it will of course be understood that the entire blade may be formed of metal if desired.

Other supporting means in the form of a rod 11 is provided and as will be noted, is slidably supported upon the forward end of the truck 1 by means of brackets 12 and 13, the bracket 13 having a spring pressed slidable locking pin 14 mounted thereon, which pin is adapted to be engaged with any one of the series of openings 15 formed in the adjacent extremity of the said rod 11. A T fitting 16 is arranged upon the outer end of the rod 11 and slidably receives a standard 17 therethrough, the lower end of which is connected to the grading blade 8 as at 18. Due to the mounting of the blade 8 upon the rod 11 it will be understood that the same may be adjusted laterally with respect to the

truck 1 by disengaging the locking pin 14 from the same and then moving it to the desired point, whereupon the locking pin 14 is again engaged with the adjacent opening 15 formed therein.

Mounted in bearings arranged upon a supporting arm 19 which is clamped to the rod 11 is a lever 20 having its outer end pivotally engaged with a clamping element 21, the said clamping element being arranged about a portion of the shank 17 and connected thereto by passing a bolt or similar fastening means through the alined apertured ends. A catch 22 is also secured to the rod 11 and affords means for engaging the free end of the lever 20 in order that the grading blade 8 may be securely held in raised position.

In operation, the grading blade 8 is properly adjusted both laterally and vertically with respect to the banks of the road bed crown which is to be graded, whereupon the truck 1 is moved over the rails R, thereby causing the grading blade to move therewith over the bank of the crown and properly grade or slope the same. By adjusting the serrated shanks 3 and 6 with respect to their respective portions of the V-shaped element 2, the angular positioning of the grading blade may be varied to cause the removal of the superfluous portions of the banks of the crown and the spreading of the same over the irregular or improperly straight portions of the same. To disengage the grading blade from the banks or sides of the road bed crown the lever 20 is rocked in a direction to cause the upper movement of the standard 17 and the free end of the same is then engaged under the catch 22, thus, holding the blade in its raised position for the desired period of time.

Manifestly, the construction shown is capable of considerable modification and such modification as is within the scope of my claim, I consider within the spirit of my invention.

I claim:—

In combination with a truck, a laterally extending support adjustably connected thereto, a vertically disposed standard slidable in the outer end of said support, a grading blade, means connected to the standard for adjusting the same with relation to said support, a substantially V-shaped hollow bracing member, rack extensions slidable in the extremities of the bracing member, means for releasably securing the extensions to the extremities of the bracing member, certain of said extensions having pivotal connection with the grading blade at points in proximity to its opposite ends and the remaining extension being fixedly secured to a portion of said truck.

In testimony whereof, I affix my signature hereto.

GEORGE VAN KESSEL, JR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."