

H. CHENAULT.
 BANK CUTTING ROAD MACHINE.
 APPLICATION FILED JUNE 29, 1918.

1,298,458.

Patented Mar. 25, 1919.

3 SHEETS—SHEET 1.

Fig. 1.

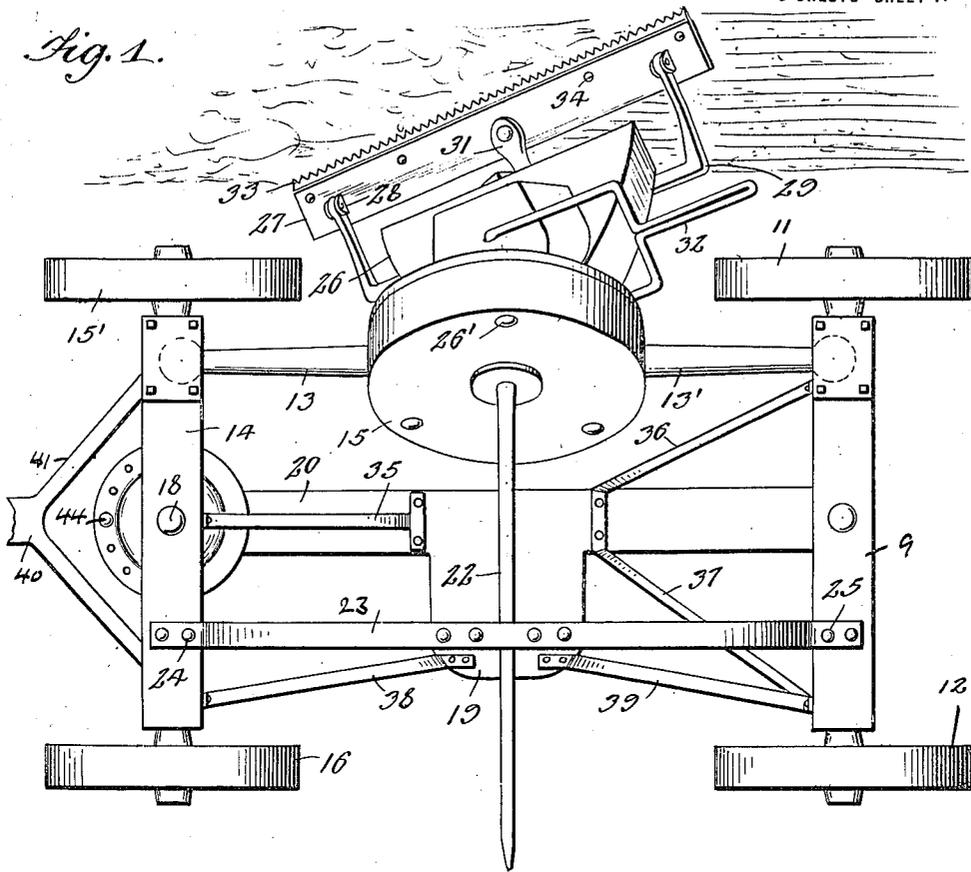
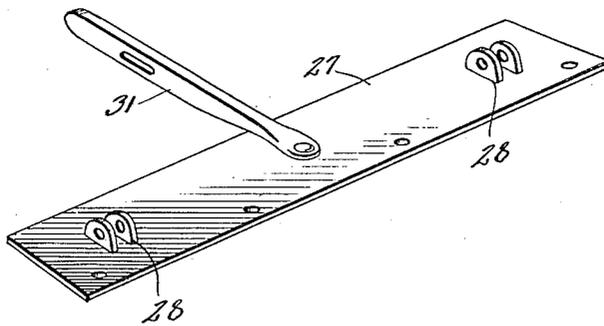


Fig. 6.



Witnesses

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Fig. 2.

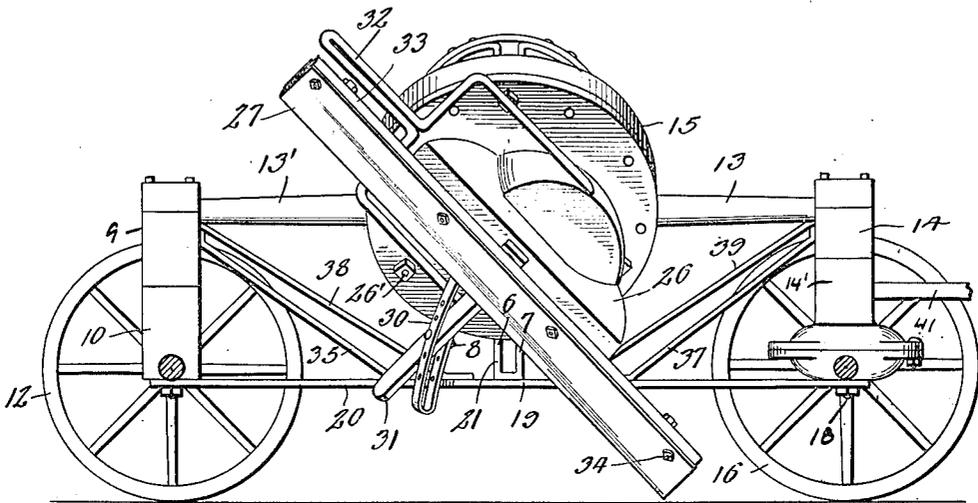
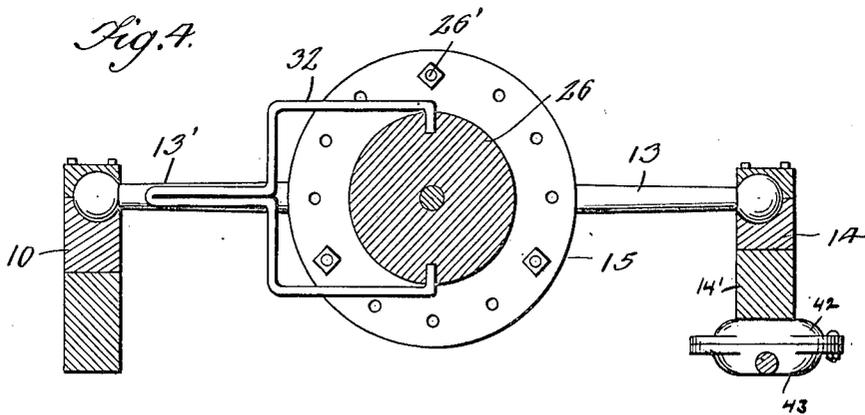


Fig. 4.



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Fig. 3.

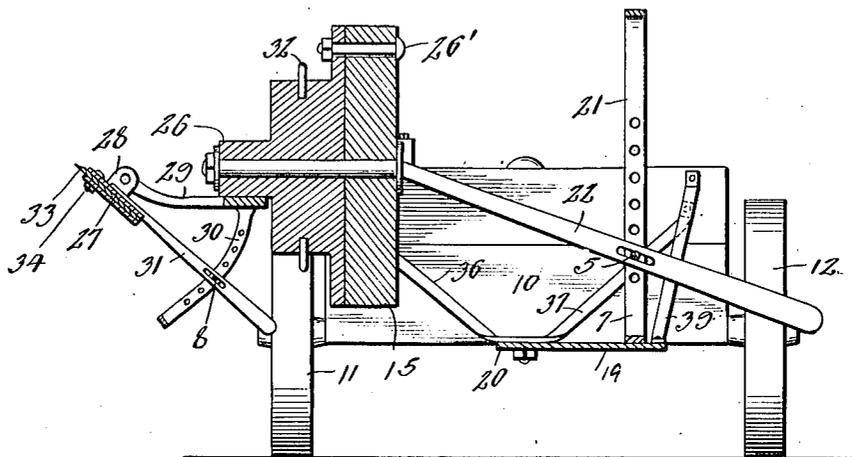
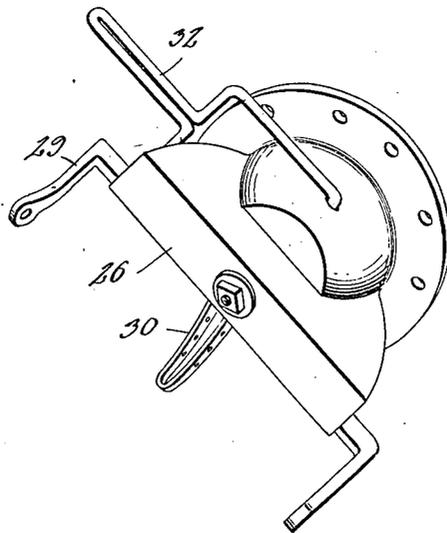


Fig. 5.



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BANK-CUTTING ROAD-MACHINE.

1,298,458.

Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed June 29, 1918. Serial No. 242,584.

To all whom it may concern:

Be it known that I, HENRY CHENAULT, a citizen of the United States, residing at Allensville, in the county of Todd and State of Kentucky, have invented new and useful Improvements in Bank-Cutting Road-Machines, of which the following is a specification.

This invention relates to a bank cutting road machine, and one object is to provide an apparatus designed to be employed in widening a road which may extend between banks or elevations, and which apparatus shall include a blade member carried at one side of the machine and adapted to be thrown to a suitable angle with reference to the direction of draft and with reference to the bank to be cut away.

A further object is to provide an apparatus comprising a framework or the like mounted upon suitable supporting wheels and a blade supporting device comprising a member rotatable on an axis extending transversely with reference to the main axis of the framework, with means for changing the position of the blade in a vertical direction.

A still further object is to provide in connection with a suitable supporting structure, a member under the control of an operating lever and adapted to swing on an axis extending longitudinally of the supporting structure, a rotatable head under the control of said lever and adapted for operation through the arc of a circle of which said axis is the center and means carried by the head for supporting a blade directly operating upon the bank of earth to be cut away.

In the accompanying drawings:

Figure 1 is a top plan view.

Fig. 2 is a view in side elevation.

Fig. 3 is a transverse section.

Fig. 4 is a section longitudinally of the machine, and is taken on a line intersecting the axles and the bearings which support the blade mounting devices.

Fig. 5 is a detail in perspective of the blade holding device.

Fig. 6 is a detail in perspective of a bar directly supporting the blade and adapted to be mounted in the device shown in Fig. 5.

The rear axle 10 is mounted on wheels 11 and 12 and carries a bolster 9 suitably secured thereto. The front axle is pivotally

mounted with reference to bolster 14, and the element last mentioned and the bolster first named are each provided with socket portions for receiving the ends of short shafts or the like designated 13 and 13' extending from pivotally mounted member 15 which carries the blade and operating means therefor. The front wheels are shown at 15' and 16.

Extending between the king bolt 18 and the rear axle is a reach designated 20 carrying suitable mounting means for an upstanding member 21 comprising a plurality of members parallelly arranged and serving to guide a lever 22 for operating the blade carrying mechanism. A longitudinal bar 23 curved as shown is secured at the points 24 and 25 and is further secured to the parallelly arranged members between which the lever mentioned operates.

The lever 22 extends through the body portion of the member 15 and provides for the rotatable mounting of a head or the like designated 26 upon which a blade is mounted.

The blade holder shown at 27 is provided with suitable upstanding devices 28 for the purpose of connecting the bail 29 which in turn is mounted on the under side of the head 26. A curved and U-shaped guiding member 30 accommodates a laterally extending arm 31 and permits of the pivotal movement of the blade with reference to the head. The blade 33 shown in operative position is provided with a toothed edge, but in Fig. 2 I have shown a blade provided with a straight edge for use when the conditions demand an implement of that character.

A bail shaped arm 32 permits of the rotary movement of the head on its pivotal mounting and provides means for changing the angle of the blade with reference to the bank of earth being operated upon. A movement of the blade at an angle to the direction of movement above named is secured by means of the lever 22.

Suitable bracing devices are employed where required, certain of these devices being designated 35, 36, 37, 38 and 39, and they serve to connect the reach with the other elements shown, and to connect the laterally extending plate 19, secured to the reach, with the rear bolster and with the corresponding element at the forward por-

tion of the vehicle. The braces may be of strap iron sufficiently heavy for the purpose intended.

Blade 33 is detachably and adjustably secured to the blade holder 27 by bolts 34. The lever 22 is secured in adjusted position by means of bolts 5 passing through the parallel members of U-shaped device 21, and the arm or lever 31 is adjustable with reference to the guiding member 30 and is secured by a bolt 8. In order to retain the head 26 in position for resisting heavy strains, I provide means for securing the elements 26 and 15 rigidly together as by bolts 26'.

The tongue 40 is connected by means of a bail 41 with a bolster 14' carrying a plate member 42 cooperating with plate member 43 carried by the front axle. These circular plates are apertured as shown and are maintained in any desired position with reference to each other by means of bolts or the like 44. The connection of the tongue with the intermediate bolster 14' produces a draft in a direction for maintaining the front wheels in positive contact with the surface of the roadway, and when the plates 42 and 43 are in adjusted position so that bolster 14' is at an angle with the front axle, the line of draft will be in a direction tending to force the blade into positive contact with the bank being cut away.

What is claimed is:

1. In a device of the class described, a supporting structure including a plurality of axles, wheels carried by said axles, mechanism for cutting the side of a bank adjacent to the path of travel of the device, and comprising a member mounted to rotate on an axis extending longitudinally of the supporting structure, a member rotatable on the member first named, means for controlling the rotary movement, means for controlling the movement of the member first named upon its axis, and blade supporting means carried by the second named member.

2. In a device of the class described, a supporting structure, mechanism for cutting the side of a bank adjacent to the path of travel of the device, and comprising a member mounted to rotate on an axis extending longitudinally of the supporting structure, and a blade carrying device rotatable on the rotatable member first named, said blade carrying device projecting laterally from the supporting structure.

3. In a device of the class described, a supporting structure including a plurality of axles, wheels carried by the axles, mechanism for cutting the side of a bank adjacent to the path of travel of the device, and comprising a blade mounted at one side of the supporting structure, means for rotating

the blade on an axis extending horizontally and transversely of said structure, and means for moving the blade on an axis extending longitudinally of the structure.

4. In a device of the class described, a supporting structure including a plurality of axles, wheels carried by the axles, mechanism for cutting the side of a bank adjacent to the path of travel of the device, and comprising a blade carried at one side of the supporting structure and normally extending longitudinally thereof, means for changing the position of the blade to an angle with reference to the transverse axis of the supporting structure, and means for changing the vertical elevation of the blade, said means last named including an element rotatable on an axis extending longitudinally of the supporting structure, a lever extending transversely of the supporting structure and of the blade, and a second lever directly connected with the blade.

5. In a device of the class described, a supporting structure including a plurality of axles, wheels carried by the axles, blade mounting means, mechanism for cutting the side of a bank adjacent to the path of travel of the device, and comprising a blade carried at one side of the supporting structure and normally extending longitudinally thereof, means for changing the position of the blade to an angle with reference to the transverse axis of the supporting structure and changing the vertical elevation of the blade and the angle thereof with reference to the surface of the road-way upon which the device is traveling, said blade being adjustable with reference to the means directly mounting the same, and a lever for effecting such adjustment.

6. In a machine for cutting the upwardly inclined side of a bank, a supporting structure, wheels for mounting said structure, a cutting blade carried at the side of the structure and beyond the path of travel thereof, a blade holding device, and mounting means for the blade holding device rotatable on an axis extending transversely of the supporting structure and on an axis extending longitudinally of said structure.

7. In a machine for cutting the upwardly inclined side of a bank, a supporting structure, wheels for mounting said structure, a cutting blade carried at the side of said structure and beyond the path of travel thereof, an angularly adjustable blade holding device, and mounting means for the blade holding device rotatable on an axis extending transversely of the supporting structure and on an axis extending longitudinally of said structure.

In testimony whereof I affix my signature.
HENRY CHENAULT.