C. H. ELLIS.

ROAD DRAG.

APPLICATION FILED OCT. 19, 1915.

1,203,188. Patented Oct. 31, 1916.

Fig. 2.

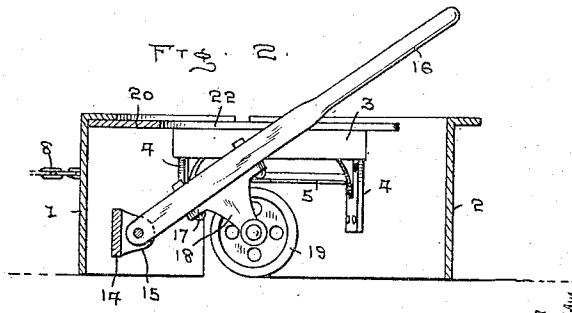


Fig. 3.

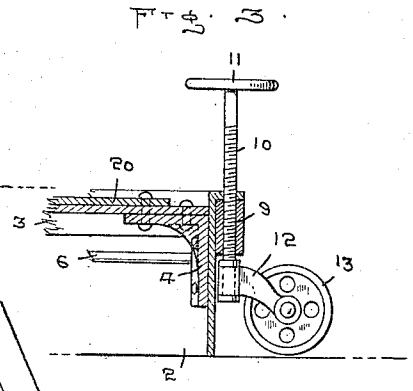
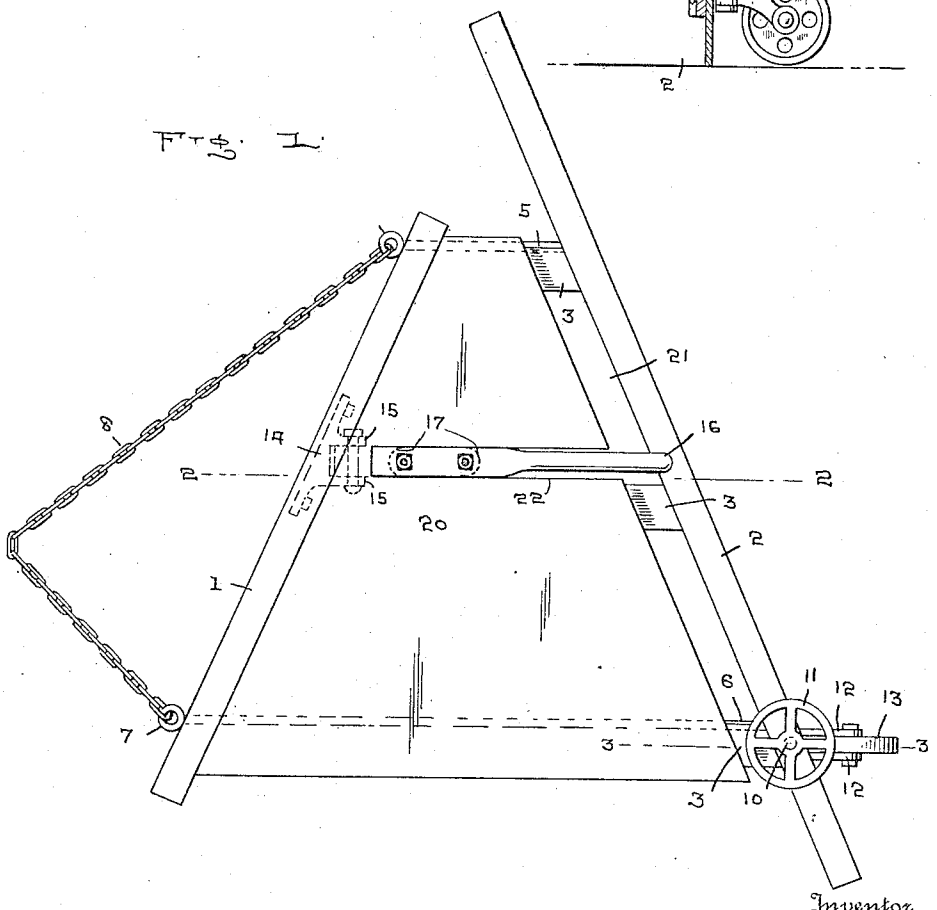


Fig. 1.



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ROAD-DRAG.

1,203,188. Specification of Letters Patent. Patented Oct. 31, 1916.

Application filed October 19, 1915. Serial No. 56,757.

To all whom it may concern:

Be it known that I, CHARLES H. ELLIS, a citizen of the United States, residing at Centerville, in the county of Appanoose and State of Iowa, have invented certain new and useful Improvements in Road-Drags; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to road drags and has for one of its objects the provision of a road drag provided with means for efficiently leveling the road by moving the dirt in alternating opposite directions and thereby eliminating side draft.

Another object of this invention resides in the provision of means for preventing the formation of a sharp ridge in the center of the road when the dirt is drawn from the ditches at each side of the road toward its center.

Another object of this invention is the provision of means whereby the road drag is adapted for conveying a pile of dirt to any desired point in the road and subsequently discharging the dirt.

A further object of this invention is the provision of means for connecting together the drag bars of the road drag, and in a manner for reinforcing the drag bars to render the same capable of resisting undue strains exerted against their lower edges.

Other objects and advantages will be hereinafter more clearly set forth in the specification, defined in the claims, and illustrated in the accompanying drawings, in which,

Figure 1 is a top plan view of the device. Fig. 2 is a vertical sectional view on line 2—2 of Fig. 1. Fig. 3 is a detail sectional view on line 3—3 of Fig. 1, partly broken away.

The device shown in the drawings may be formed of any desired material, but is preferably formed of metal.

Referring to the drawings, 1 denotes the front drag bar and 2 the rear drag bar. The bars 1 and 2 are preferably formed L-shaped in cross section with the sharp edge adapted to rest upon the ground, the bar 1 being of less length than the bar 2. The bars are disposed in acute angular relation to each other and connected together by a plurality of channel shaped connecting bars 3, having their ends secured to the respective bars 1 and 2 through the medium of the angle brackets 4, and for drawing the drag along the road by any suitable power, preferably horses, the short rod 5 and the longer rod 6 are provided. These rods have their rear ends secured within the drag bar 2 and project through the drag bar 1, and are provided at their forward ends with the eyes 7, or other suitable attaching means, to which is attached the draft chain 8.

The channel bars 3 have their horizontal end portions secured to the horizontal arms of the angle brackets 4, with their vertical end portions embracing the sides of the vertical arms of the angle brackets, and the ends of the channel bars 3 snugly engaging the inner surfaces of the drag bars 1 and 2. The vertical arms of the angle brackets 4 are secured to the inner sides of the drag bars 1 and 2 at their transverse centers and embrace half of the width of the drag bars, and extending from the drag bar 1 to the drag bar 2 and projecting therethrough at substantially their transverse centers at the sides of the vertical arms of the outermost of the angle brackets 4, are the rods 5 and 6 provided at their front ends with the eyes 7 to which is attached the draft chain 8, and at their rear ends with screw threads and bolts through the medium of which the rods 5 and 6 are secured in the drag bars 1 and 2. By the provision of the channel bars 3, the angle brackets 4, and the rods 5 and 6, and the specific construction and relative positioning of these parts with respect to each other and the drag bars, the drag bars are not only firmly secured together in operative relation, but are also efficiently reinforced so as to resist undue strains exerted against their lower operating edges.

Secured upon and adjacent the left hand end of the rear drag bar 2, is the screw threaded sleeve 9, through which is adjustably threaded the shaft 10, provided at its upper end with the operating wheel 11, and also provided at its lower end with the caster swivel 12 in the bifurcated ends of which is pivotally mounted a caster wheel 13.

Secured upon the inner side of the front drag bar 1 substantially intermediately of its ends, and adjacent its lower edge, is the bracket 14, provided with the apertured ears 15, between which is pivotally mounted one end of the lever 16, projecting rearwardly and obliquely upwardly from the bracket 14. Upon the under side of the lever 16, in

proximity to its pivotal connection with the bracket 14, is the bracket 17, provided with the parallel depending arms 18, having apertured ends, between which is pivotally mounted the pivot wheel 19.

Suitably secured upon the connecting bars 3 is the platform 20. The platform 20 is substantially triangular in shape, and has its forward inclined edge in contact with the inner side wall of the front bar 1, just beneath the flange upon the upper edge of the bar 1, and has its rear inclined edge terminating at a point in front of the rear drag bar 2 to provide the space 21 therebetween, through which space the operator is enabled to look and determine the disposition of the dirt, which is regulated by the raising or lowering of the left hand end of the bar 2 through the operation of the hand wheel 11. Formed in the platform 20 along the longitudinal direction of the drag is the elongated slot 22 through which projects and operates the lever 16.

The various uses to which the device is adapted and its operations are briefly described as follows: For drawing the device along the road, suitable draft appliances are attached in any desired manner to the chain 8, and the angular position of the drag bars 1 and 2 of the device relative to the road way may be adjusted to any desired angle by disposing the draft attaching means along the chain 8 to the desired point of connection. When it is desired to drag the dirt from one of the ditches at either side of the road, the right hand end of the bar 2 which projects beyond the right hand end of the bar 1, gathers the dirt in the ditch, and the forward movement of the device will force the dirt toward the center of the road and discharge the dirt at the left hand end of the bar 2. However, to prevent the formation of a sharp ridge in the center of the road or for depositing the dirt in a depression, which may be at any point between the ditch and the center of the road, the left hand end of the bar 2 is manipulated to accomplish these results through the medium of the hand operating wheel 11. This wheel is revolved for either raising or lowering the bottom edge of the bar 2 relative to the ground, whereby when the shaft 10 is in its uppermost position within the sleeve 9, the entire bottom edge of the bar 2 rests upon the road way and the dirt will be discharged at the center of the road, but should this be inadvisable, the wheel shaft 10 is revolved in a manner for raising the left hand end of the bar 2, so that the dirt will slide beneath the lower edge of the bar 2 at any desired point along the longitudinal direction of the bar 2 for depositing the dirt at the desired point. When it is desired to level the surfaces of the road, the device is drawn along the road, and the front bar 1 will cut into the higher points of the surface and force the same toward the right hand side of the device thus filling the depressions in the road and leveling the same. However, should the depressions be more or less shallow and the dirt be discharged from the right hand end of the bar 1, which owing to its direction of inclination forces the dirt in this direction, the dirt discharged therefrom will be gathered by the right hand end of the bar 2 which bar is inclined in the opposite direction to bar 1, and forces the dirt in the opposite direction and thus by this two fold movement of the dirt, the depressions in the road are more thoroughly filled and the road thereby leveled. When it is necessary or desirable to move a pile of dirt in the road, which may have been previously discharged from a vehicle or other means, the connections for the drafting appliance are attached to the chain 8 substantially midway between its ends, and this adjustment disposes the front drag bar 1 transversely or at right angles to the road, and the pile of dirt is engaged by the bar 1 and the dirt is then conveyed to the desired point, and at which point the operator by bearing down upon the free end of the lever 16, the pivot wheel 19 acting as a fulcrum, the forward end of the lever 16 through its connection with the front drag bar 1 will elevate the bar 1 above the ground, the bar then passing over and above the dirt deposits the same at the desired place, and following thereafter the rear drag bar 2 may be so manipulated as to force the pile of dirt toward the center of the road or level the same, or may be so elevated that the bar 2 will also pass over the pile of dirt.

While I have here shown and described the preferred embodiment of the invention, minor variations and alterations may be made therein without departing from the spirit of the invention or scope of the claims.

Having described my invention, what I claim as new and desire to secure by Letters-Patent, is:—

1. A road drag, comprising a front drag bar, a rear drag bar, said drag bars being L-shape in cross section and disposed in acute angular relation to each other, the rear drag bar being of greater length than the front drag bar and having its ends projecting beyond the ends of the front drag bar, a plurality of oppositely disposed angle brackets secured upon the inner sides of said front and said rear drag bars, the vertical members of said angle brackets being positioned at the transverse center and embracing half the width thereat of said drag bars for reinforcing the same against undue strains at their lower edges, angle connecting bars having their horizontal members secured to the horizontal members of said

brackets for maintaining said front and said rear drag bars in coöperative relation with each other, the ends of the vertical members of said angle connecting bars engaging the inner faces of said drag bars at the sides of said brackets for additionally reinforcing said drag bars, a platform upon said connecting bars having its forward edge projected beneath the flange of the front drag bar and its rear edge terminating at a point remote from said rear drag bar to provide an observation space therebetween, draft bars secured to said rear drag bar and projecting through said front drag bar and provided with eyes upon their projecting ends, and a draft chain having its ends secured to the eyes of said draft rods.

2. A road drag, comprising a front drag bar, a rear drag bar, said drag bars being L-shape in cross section and disposed in acute angular relation to each other, the rear drag bar being of greater length than the front drag bar and having its ends projecting beyond the ends of the front drag bar, a plurality of oppositely disposed angle brackets secured upon the inner sides of said front and said rear drag bars, the vertical members of said angle brackets being positioned at the transverse center and embracing half the width thereat of said drag bars for reinforcing the same against undue strains at their lower edges, angle connecting bars having their horizontal members secured to the horizontal members of said brackets for maintaining said front and said rear drag bars in coöperative relation with each other, the ends of the vertical members of said angle connecting bars engaging the inner faces of said drag bars at the sides of said brackets for additionally reinforcing said drag bars, a platform upon said connecting bars having its forward edge projected beneath the flange of the front drag bar and its rear edge terminating at a point remote from said rear drag bar to provide an observation space therebetween, draft bars secured to said rear drag bar and projecting through said front drag bar at their transverse centers for aiding said brackets in maintaining said drag bars in constant engagement with the ends of said connecting bars to thereby additionally reinforce said drag bars, said drag bars being provided with eyes upon their projecting ends, and a draft chain having its ends secured to the eyes of said draft rods.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES H. ELLIS.

Witnesses:
H. H. HENDERSON,
C. A. BAKER.

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