(No Model.)

J. J. McMAHON.

MEANS FOR GRADING STREETS OR ROADBEDS.

No. 524,028. Patented Aug. 7, 1894.

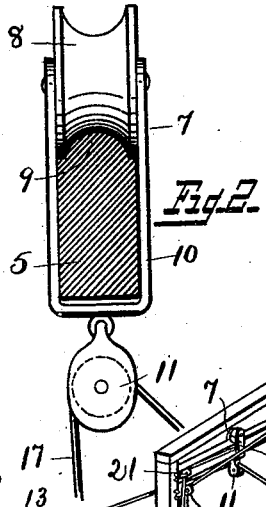

Fig. 2.

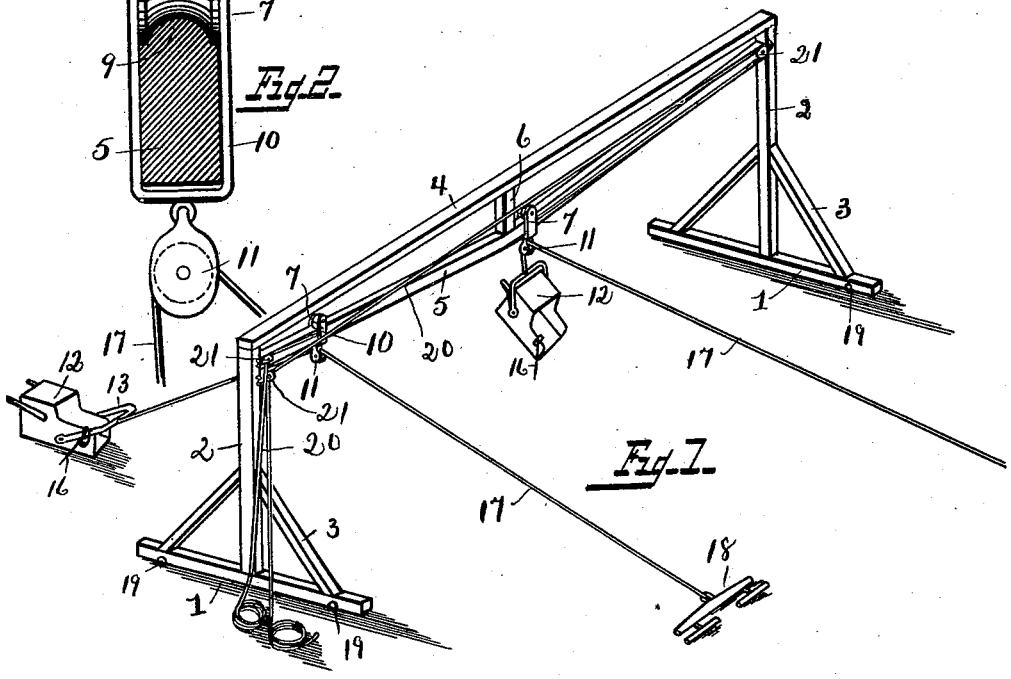

Fig. 1.

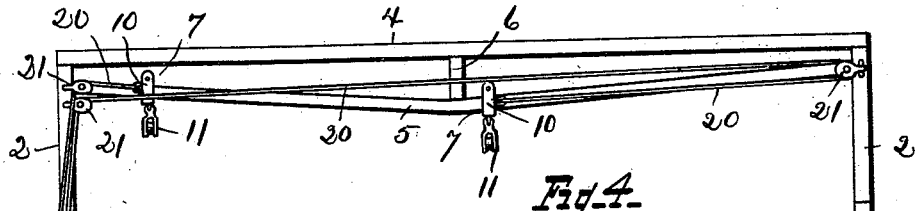

Fig. 4.

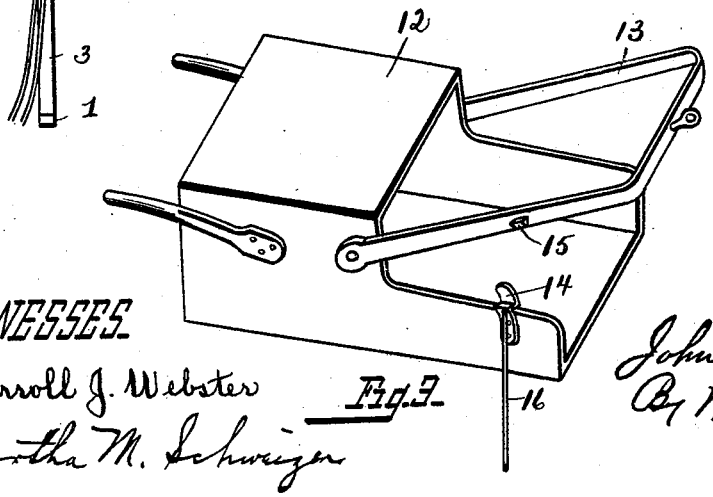

Fig. 3.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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MEANS FOR GRADING STREETS OR ROAD-BEDS.

SPECIFICATION forming part of Letters Patent No. 524,028, dated August 7, 1894.

Application filed August 7, 1893. Serial No. 482,523. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. McMAHON, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Means for Grading Streets and Road-Beds; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to means for grading streets and roadbeds, and has for its object, to provide mechanical means for removing the earth from the street or road bed and dumping the same into wagons or carts, for conveying the earth to a place of deposit.

The invention consists in the parts and combination of parts, hereinafter described and pointed out in the claims.

In the drawings, Figure 1 is an isometric view of a complete mechanism for carrying out my invention. Fig. 2 is a cross sectional view of the inclined track showing the traveler thereon, and the draft rope sheave suspended therefrom. Fig. 3 is a perspective view of the dumping scraper. Fig. 4 is a view of the device in elevation.

My invention comprehends the performance of the work of removing the earth from the road bed, and loading the same into conveyances for removal to a place of deposit, mechanically thereby reducing the cost and expediting the work materially.

In carrying out my invention, I erect a trestle-like frame work preferably of the entire width of the street, comprising sills 1, into which upright posts 2, are framed and sustained in a vertical position by oppositely inclined braces 3, framed into the sill and post respectively. The posts are framed into a cross beam 4 which spaces the same as to width or distance apart, and beneath the cross beam is an inversely inclined track 5, the inclination of the tracks being from the uprights to the center of the width of the trestle, whereby there is formed a trackway inclining from each post to the center, or to a post 6, framed into beam 4, and into the trackway to sustain the same at the center, and also serve as a stop to the trolleys upon the track.

There are two trolleys, 7, upon the trackway one upon each inclined portion which comprise a traveler wheel 8, preferably grooved as shown to fit a semicircular rib 9, upon the tracks, and a hanger 10 suspended upon the journal of the traveler wheel, embracing three sides of the trackway to which is hung a block and tackle 11, with the pulley of the block at right angles to the traveler wheel.

12 designates a dumping scraper preferably of a capacity to hold one half of a wagon load of earth, or if carts are employed in transporting the earth to a place of deposit, the capacity of the scraper may be that of the cart body, and has a bail 13, pivotally connected therewith in such relation that the scraper when loaded, will be counterweighted to normally dump the load when the bail is released from engagement with a spring catch 14, upon the scraper which engages with a lug 15, upon the bail, the lug having an upward inclination to cause the same to automatically engage the bail, and the spring is retracted when it is desired to dump the bucket, by pulling upon a rope 16, secured to the spring catch, and which pulls the catch from engagement with the lug.

17 designates a draft rope or cable connected at one end to the bail of the scraper, and passed through the block over the pulley and connected with a double-tree 18, to which the animal power is attached.

The sills at, or near each end, are formed with a semicircular recess into which are seated rollers 19, when the trestle is to be moved which is easily accomplished, by attaching a team to each sill, and when the trestle is moved to the proper position, the sills are raised and the rollers fall from the recesses, allowing the sills to rest frictionally upon the ground.

In operation the trestle being secured in position, animal or steam power is connected with the rope or cable 17, and the scraper is moved from the trestle until the rope or cable is taut, when upon pulling upon the rope or cable, the scraper is caused to engage and fill with earth, and is drawn full from the

road bed and suspended at a height above that of the wagon or cart body, when the trolley will gravitate to the center of the inclined track over the wagon or cart body, and a pull upon trip rope 16, causes the catch to disengage from the lug on the bail and the scraper is automatically dumped, when the scraper upon the opposite side is operated in the same manner, and the alternation continues until the proper grade is made. When grading from the extreme outer side, it may be necessary to draw the trolley to the extreme outer, highest point of the trackway by hand, in which event, there are ropes 20, secured to the trolleys and passed over pulleys 21, at the side of one of the posts which extend to within convenient reach of the operator.

What I claim is—

1. In grading streets or road-beds, a trestle a track-way inclined from the center upwardly toward each end, trolleys upon the track-way having an automatic movement to the center and means for moving the same outwardly, pulleys carried by the trolleys, draft ropes passed over the pulleys, dumping scrapers connected to the draft rope at one end, the opposite ends connected with the source of power.

2. In grading streets, a trestle comprising sills each provided with removable rollers, vertical standards upon the sills, a cross beam connecting the standard tracks inclined from the standards to the center of the trestle, dumping scrapers comprising the bowl and bail, and an automatic catch to hold the bowl from tilting a sheave movably sustained upon the inclined tracks, a draft rope, or cable, connected with the scraper, passed over the sheave and connected with a source of power, and a means for loosening the catch to allow the scraper to dump the load when elevated.

3. In grading streets or road beds, a trestle, inclined tracks, trolleys thereon carrying pulleys, scrapers, draft ropes connecting the scrapers and passing over the pulleys to the source of power, pulleys upon each side of the trestle, and ropes connecting each trolley passing over the pulleys in convenient reach at one side of the trestle.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

JOHN J. McMAHON.

Witnesses:

WILLIAM WEBSTER,

CARROLL J. WEBSTER.