W. L. FREESE.
Grading Machine.

No. 202,163. Patented April 9, 1878.

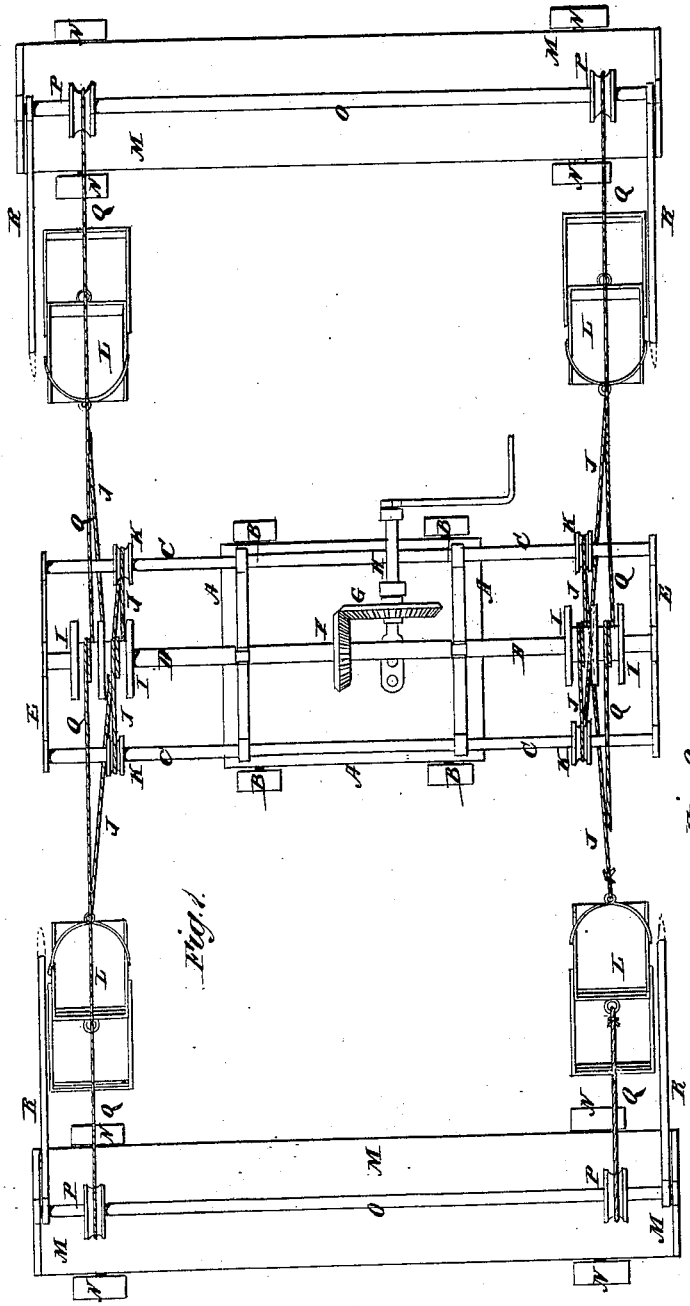

Fig. 1.

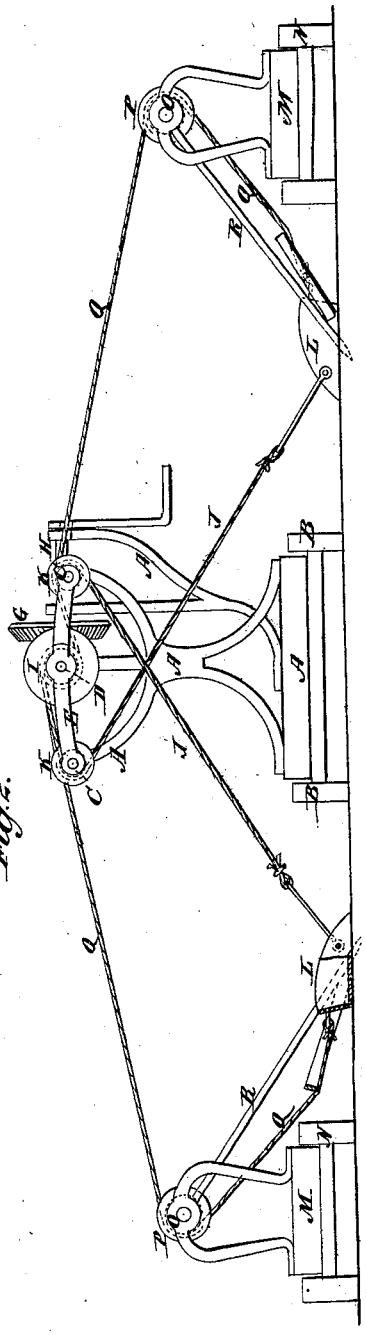

Fig. 2.

WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM L. FREESE, OF MOHAWK VILLAGE, OHIO.

IMPROVEMENT IN GRADING-MACHINES.

Specification forming part of Letters Patent No. **202,163**, dated April 9, 1878; application filed October 9, 1877.

To all whom it may concern:

Be it known that I, WILLIAM LAWRENCE FREESE, of Mohawk Village, in the county of Coshocton and State of Ohio, have invented a new and useful Improvement in Grading-Machines, of which the following is a specification:

Referring to the accompanying drawings, Figure 1 is a top view of my improved machine, and Fig. 2 is an end view of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for moving earth in making roads, banks, levees, &c., and in other cases where the earth is to be moved short distances, which shall be simple in construction, convenient in use, and effective in operation.

The invention consists in the combination of a central frame or truck provided with three shafts, side frames or trucks provided with single shafts, double drums, guide-pulleys, ropes, scrapers, and braces, with each other, as hereinafter fully described.

In the drawings, A is the central frame, which is mounted upon wheels B, and which is designed to be moved along the line of the road or other place where the earth is to be deposited.

In the upper part of the frame A are secured three parallel shafts, C D C, the central one, D, of which revolves, and the other two are stationary. The shafts C D C are considerably longer than the frame A, and their ends are connected and held in their proper relative positions by cross-bars E.

To the middle part of the rotary shaft D is attached a gear-wheel, F, the teeth of which mesh into the teeth of the gear-wheel G attached to the shaft H. The shaft H revolves in bearings attached to the frame A, and to it power is to be applied from a steam-engine carried upon the frame A.

To the end parts of the shaft D are attached two drums, I, which have flanges upon their ends to prevent the ropes wound upon them from slipping off, and have flanges around their centers to divide them into two parts.

To one part of each of the drums I is attached the middle part of the rope J, or the inner ends of two ropes, J, which wind in the same direction upon the side drums, pass over guide-pulleys K, placed upon the side shafts C, and their ends are attached to the bails of two scrapers, L, which are placed face to face, so that both may be filled and drawn forward at the same time, and both drawn back to be filled at the same time.

M M are frames which are placed upon the opposite sides of the central truck A B, and are mounted upon wheels N.

To the upper part of the frames M are attached shafts O, upon which are placed guide-pulleys P.

Around the guide-pulleys P are passed ropes Q, which are attached at one end to the rear parts or handles of the scrapers L, and at their other ends to the other parts of the double drums I. By this construction the ropes Q draw the scrapers L upon both sides back to be filled at the same time.

The ropes J Q and the scrapers L at the forward end of the machine are so adjusted that the earth may be dumped at the sides of the truck A B, so that there may be no bank formed in front of the said truck A B for it to be drawn over when being moved forward, the ropes and scrapers at the rear end of the machine being arranged to dump the earth at the rear of the central truck, between the banks formed by the forward scrapers.

The guide-pulleys K P slide upon the shafts C O, to enable the scrapers L to work over a wider space than they could if said pulleys K P had no sliding movement.

The side trucks M N are held from being drawn inward by the tension of the ropes J Q by the braces R, the outer ends of which are pivoted to the shafts O, and their inner ends rest upon the ground, and are pointed to prevent them from slipping.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the central frame or truck A B, provided with the three shafts C D C, the side frames or trucks M N, provided with the shafts O, the double drums I, the guide-pulleys K P, the ropes J Q, the scrapers L, and the braces R, with each other, substantially as herein shown and described.

WILLIAM LAWRENCE FREESE.

Witnesses:

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