

(No Model.)

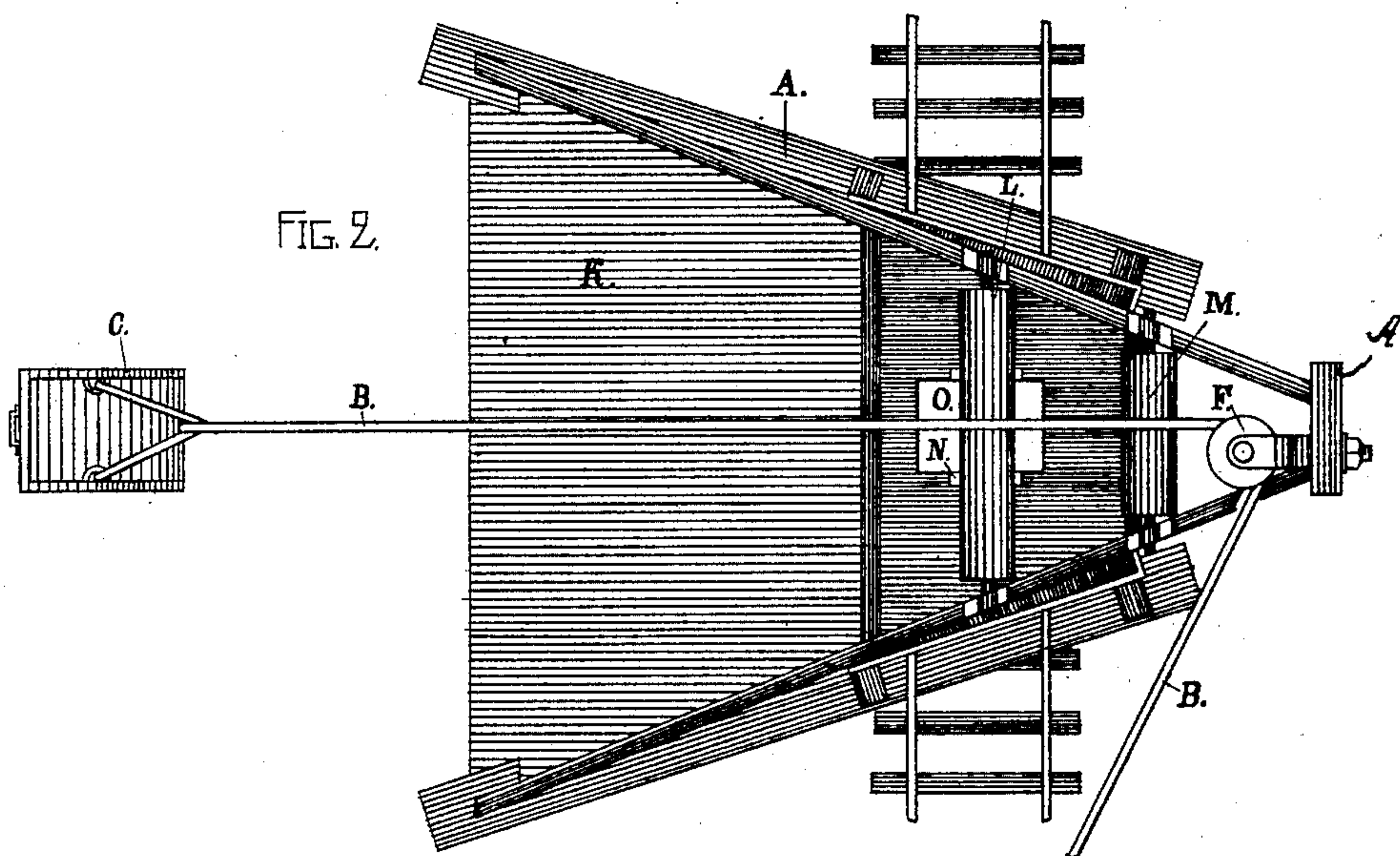
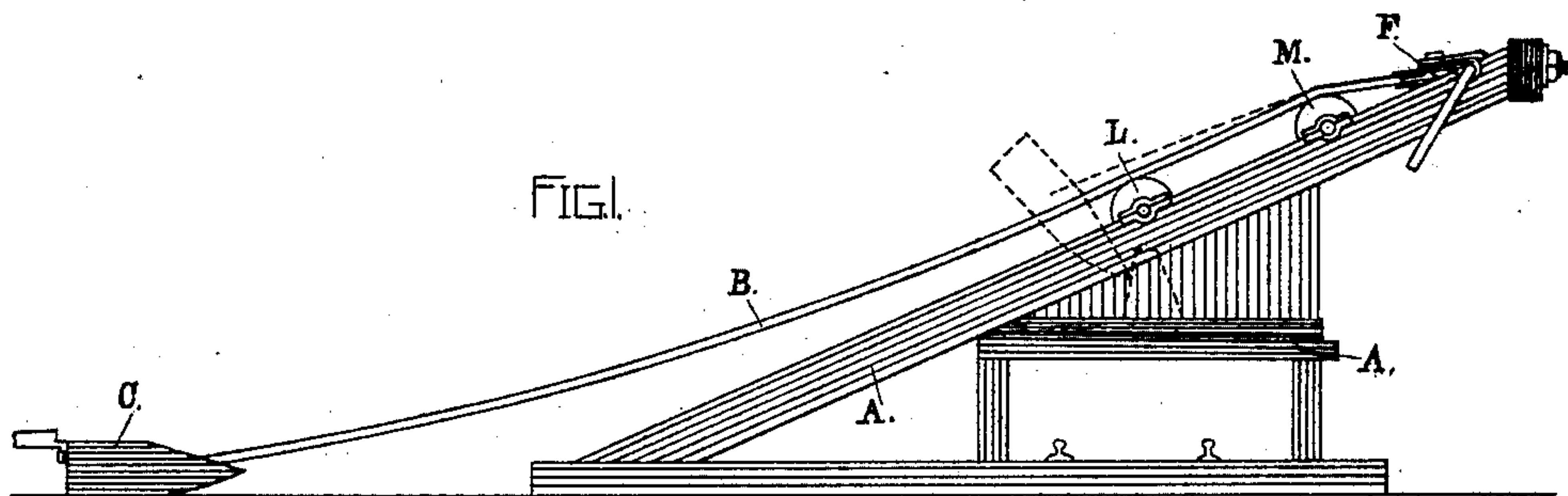
2 Sheets—Sheet 1.

E. REMILLARD.

EXCAVATING AND GRADING MACHINE.

No. 360,539.

Patented Apr. 5, 1887.



ATTEST.

ATTEST,
John H. Redstone
L. E. Redstone-

INVENTOR,

Coloured Remittance

(No Model.)

2 Sheets—Sheet 2.

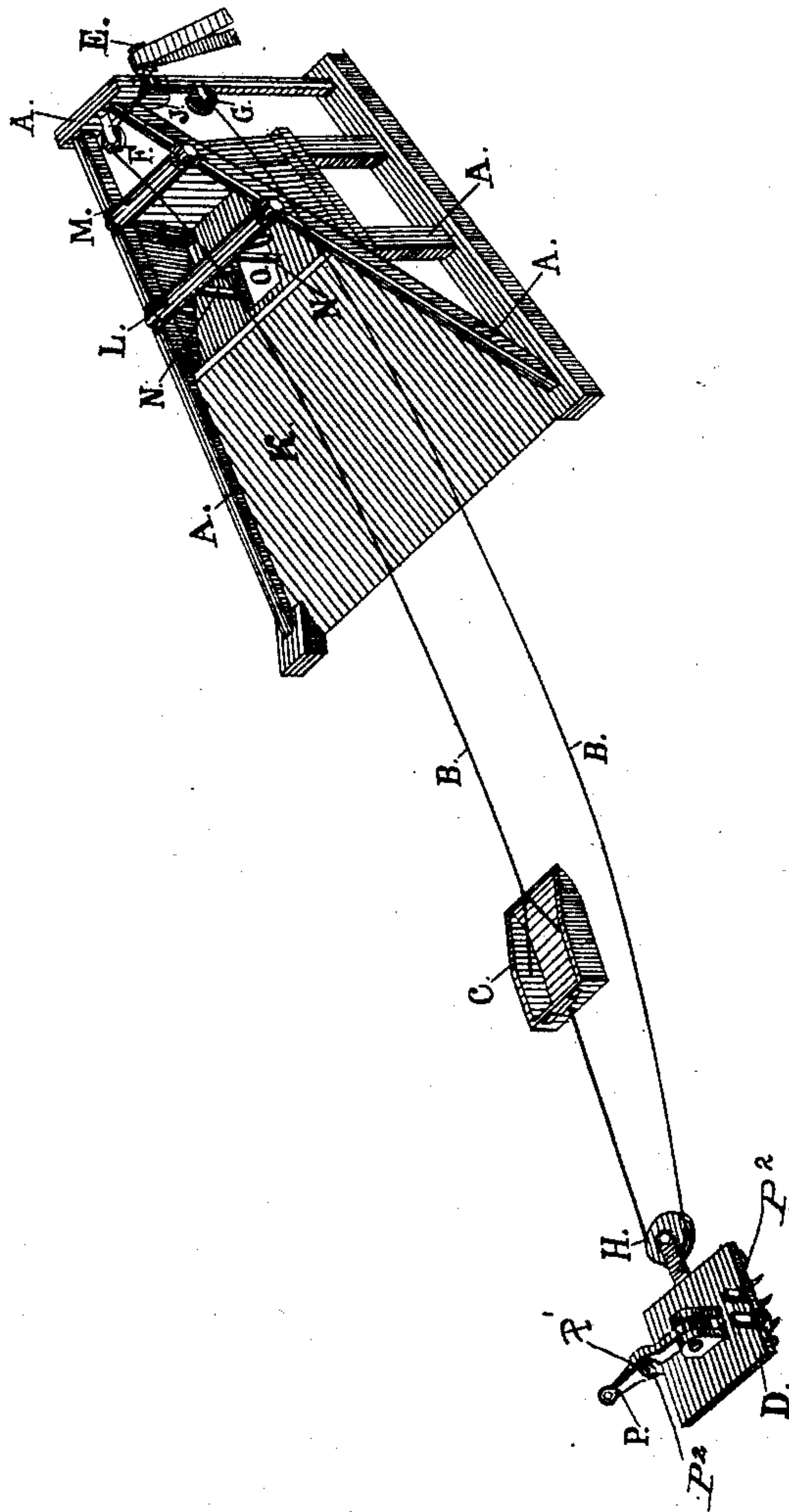
E. REMILLARD.

EXCAVATING AND GRADING MACHINE.

No. 360,539.

Patented Apr. 5. 1887.

FIG. 3.



ATTEST.
John H. Redstone
L. E. Redstone

INVENTOR,
Edward Remillard

UNITED STATES PATENT OFFICE.

EDOUARD REMILLARD, OF OAKLAND, CALIFORNIA.

EXCAVATING AND GRADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 360,539, dated April 5, 1887.

Application filed December 2, 1885. Serial No. 184,412. (No model.)

To all whom it may concern:

Be it known that I, EDOUARD REMILLARD, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented a new and useful Improvement in Excavating and Grading Machines, of which the following is a specification.

My invention relates to improvements in excavating and grading machines; and it consists in the construction and arrangement of machinery, as hereinafter described, for operating scrapers to elevate earth and discharge it automatically either into cars or through chutes to form embankments. It will be readily understood by reference to the accompanying drawings and the letters referring thereto.

Figure 1 is a side elevation of my inclined earth-elevator with the scraper and draft-cable; Fig. 2, a plan view of the same; and Fig. 3, a perspective view of the same, with the anchor and endless wire rope and machinery for moving the scraper backward and forward.

A represents the main frame; B, the endless wire rope; C, the scraper; D, the anchor; E, the driving-shaft. F, G, and H are sheaves for the endless rope, and J the driving-drum for the same. K represents the floor of the inclined earth-elevating machine. L represents the dumping-roll. N represents the discharge-stops. O represents the discharge-opening, and M represents the upper roll and rest for the scraper when turned bottom upward. P represents the hinged draft-beam of the anchor, by means of which the anchor may be moved from point to point by hand or otherwise. By hinging the beam it may be used from either side of the anchor. The draft-beam P is held in a rigid position on either side of the anchor by means of a pin, P', which passes through openings in the bifurcated lugs P², arranged on both sides of the anchor.

In some cases the scraper may be operated directly by a single draft-rope carried over suitable sheaves for the purpose, as in Figs. 1 and 2; but in such case the scraper will have to be drawn back for a new load, either by hand or by hitching a team to a rope or chain (not shown) attached thereto.

The following is the construction of the

same: I construct the frame A of timber, and the floor K of any suitable flooring, and cover with such metal strips as will form a good draftway for the scraper C to slide freely upon as it is drawn up the incline. I form the scraper about in the form of the common road-scraper. I construct the rope B of wire similar to other wire rope.

I do not confine myself to any particular mechanism for operating the draft-rope, as animal power or any well-known mechanical power may be employed to draw the scraper backward and forward. I employ any well-known anchoring device for the outer portion of the cable, so that it allows the scraper to be drawn back the required distance in every part where the excavation is required. The ground may be prepared for scraping by plowing in the usual way, where light work is to be done, although for heavy and rapid work I employ heavy plows of any required dimensions and operate them by the cable or wire rope.

The following is the operation of the same: In making an excavation the machine is set at a convenient point on the side of the excavation, and the wire rope B is anchored back over the excavation, so as to allow the scraper to be drawn back to the opposite side of the cut or excavation. As it is drawn forward to the machine, it is dipped and filled in the usual way and drawn up the incline K until it projects over the top of the same. The front of the scraper C falls down into the position shown by the dotted lines in Fig. 1, the point passing under the roll L and sliding down the stops N while the rear part of the scraper is raised, thus turning the same bottom upward, and discharging all the dirt through the discharge-opening O into a cart or other vehicle, or through any chutes or inclines to fill depressions or form embankments. The upper roll or rest, M, holds the scraper in line and allows it to slide freely while it is drawn down over the roll L, over which it partially revolves, and is turned right-side up and drawn backward down the incline K and out in position to take another load.

In order to render my excavator more portable, I either attach bearing-wheels or place it upon any suitable trucks, according to the situation or condition of the ground.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, in earth excavators and graders, is—

1. The combination, with a supporting-
5 frame, of rollers L M, journaled near the upper end thereof, the guides N N', a scraper, a rope secured to the scraper and passing over the rollers, and means for operating said rope
10 as set forth.

2. The combination, with a supporting-
frame, of journaled rollers L M, the guides N N', a scraper, an anchor-sheave connected with the frame and anchor, and a rope secured to the anchor and passing over said sheaves, sub- 15
stantially as set forth.

EDOUARD REMILLARD.

Witnesses:

JOHN H. REDSTONE,
L. E. REDSTONE.