A. D. MARTIN.

Ditching-Machine.

No. 228,092. Patented May 25, 1880.

Fig. 1.

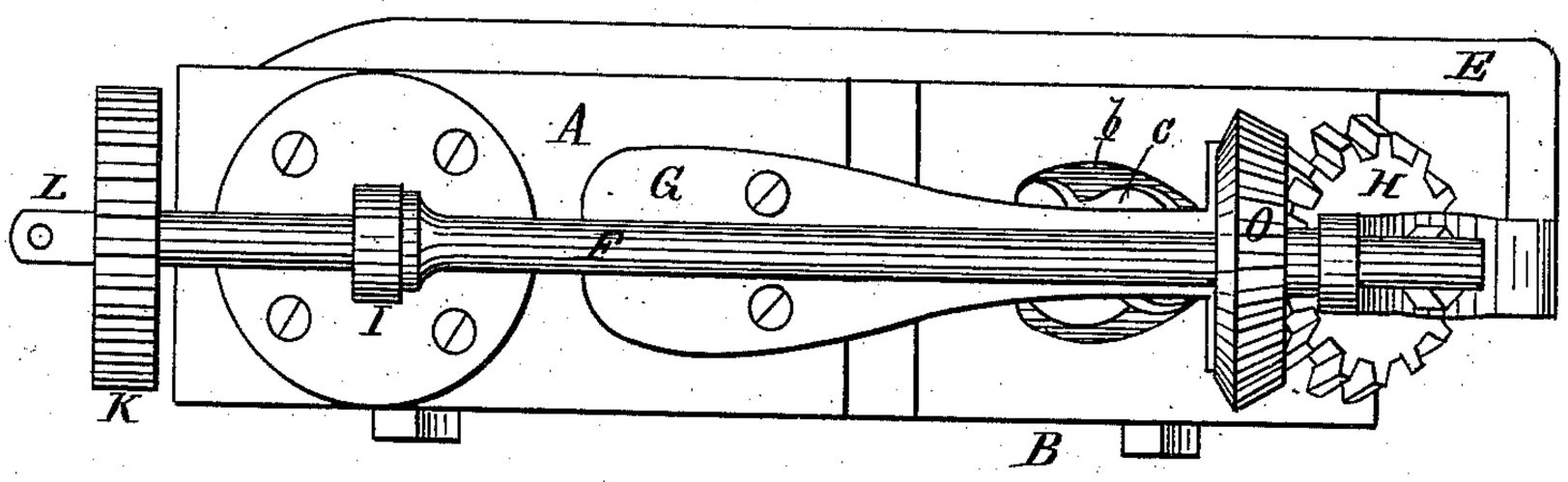


Fig. 2.

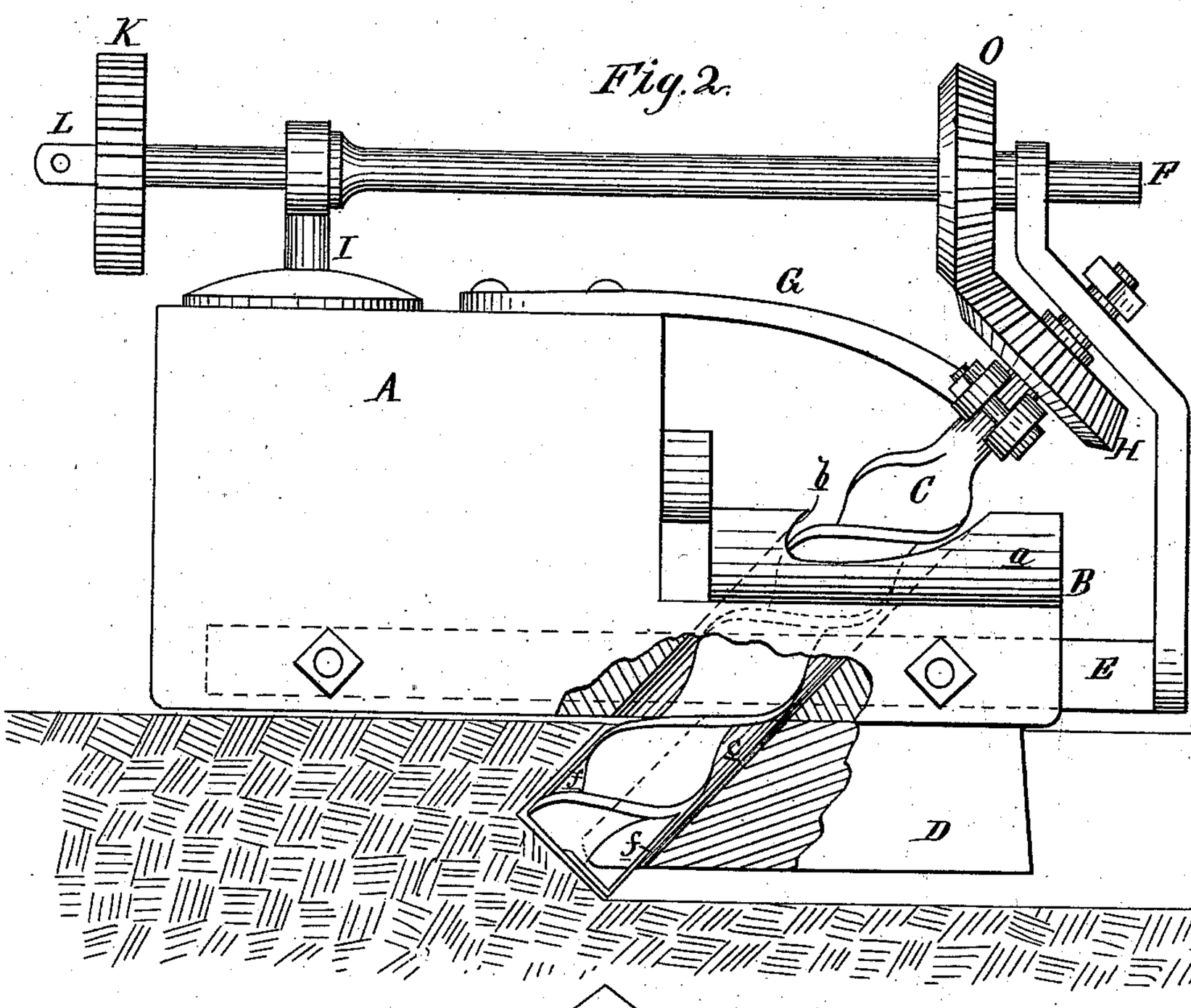
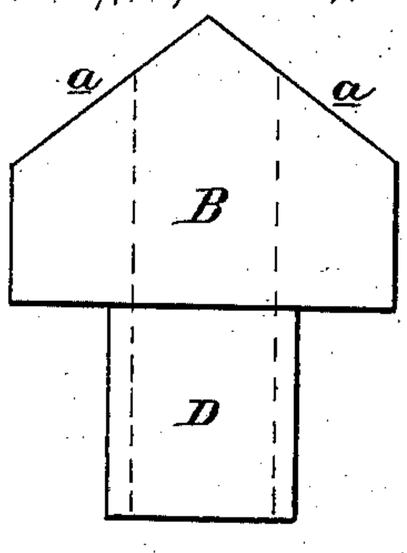


Fig. 3.



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ANDREW D. MARTIN, OF ABBEVILLE, LOUISIANA.

DITCHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 228,092, dated May 25, 1880.

Application filed December 19, 1879.

To all whom it may concern:

Be it known that I, ANDREW D. MARTIN, of Abbeville, in the parish of Vermillion and State of Louisiana, have invented a new and Improved Ditching-Machine, of which the following is a specification.

Figure 1 is a plan of the machine. Fig. 2 is a side elevation of the same, with part broken away the better to show other parts. Fig. 3 is a rear-end elevation of a portion of the machine.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a ditching-machine that as it moves along shall cut and remove the earth and deposit it on the sides of the ditch by means of an inclined auger.

The invention consists of a body or frame within which is secured an inclined auger for excavating and elevating the earth, whose cutting-edges turn in a semicircular groove formed in a block attached to the under side of the said frame, which groove causes the excavated earth to rise to the outlet, whence it falls on stationary inclined planes, that direct it to the sides of the ditch.

In the drawings, A represents the body or frame of the device, the rear portion, B, of which is lower than the front portion, and is made to slope downward on both sides from the apex, as shown at *a a*.

C is an auger, inclined forward at an angle of forty-five degrees, or thereabout, and passing down through the circular opening *b* in the part B, the lower portion of said auger C resting in the semicircular groove *c* of the supplemental block D, that is fixed on the under side of the part B of the device and projecting a little below it. The arm E, extending along the side of the device and bent upward at the rear, affords a bearing for the upper end of the shank of the auger C, and also for one end of the driving-shaft F, that extends longitudinally over the top of the device.

G is a hanger extending rearward from the body or frame A, and affording a second bearing for the auger-shank, on which shank, between the two bearings, is keyed a bevel-gear wheel, H, that gears into a corresponding wheel, O, on the shaft F. I is another bearing for the said driving-shaft F, and K is the driving gear-wheel or pulley to which power may be applied; or power may be applied through the crank L, or in any other convenient way.

This device may be moved along the ground and the auger C operated at the same time by an engine set on the body of the said device, the device being arranged on driving-wheels; or an engine may be placed on the machine to drive the auger, and a portable engine be placed in advance to draw the machine along by means of ropes, or in any other manner suited to the required condition the machine may be made to move forward and the auger to revolve. As the auger C revolves it penetrates the soil to whatever depth it may be arranged for, and, elevating the earth along the groove *c* and through the opening *b*, discharges it on the slopes *a a*, whence it falls on either side of the excavation.

The auger of this machine may be set for excavating at any desired depth, and may be of any required diameter.

The auger C herein shown, and provided with the vertical cutting-bars *f* extending on both sides from the point up to the first screw-thread, is preferably used in this ditching-machine, because it is found to cut the sides of a ditch more smoothly than other devices now in use. The auger becomes smoother and more polished by use and never clogs in hard or soft ground.

By removing the grooved block D and raising the auger so as to cut to a depth of from two to ten inches the device can be used with advantage for plowing and pulverizing the soil. It can be applied to a dredging-boat for deepening and cleaning canals, rivers, lakes, bays, &c.

The part of the auger that operates in the soil can be made of a conical shape, so as to cut a ditch wider at its top than at its bottom.

When it is required to build a levee or to throw up all the soil on one side, it is only necessary to place a detachable door or barrier on the one side of the frame or body, so as to direct all the soil so that it will drop on one side.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. The combination of auger C, grooved block D, and inclined sides *a a*, substantially as shown and described.

2. A ditching-machine made substantially as herein described, consisting of frame A B, provided with sloping top *a a*, inclined opening *b*, grooved block D, inclined auger C, and geared driving-shaft F, combined and arranged substantially as herein shown.

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Witnesses:
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