

2 Sheets—Sheet 1.

J. COAST.
Digging Machine.

No. 201,499.

Patented March 19, 1878.

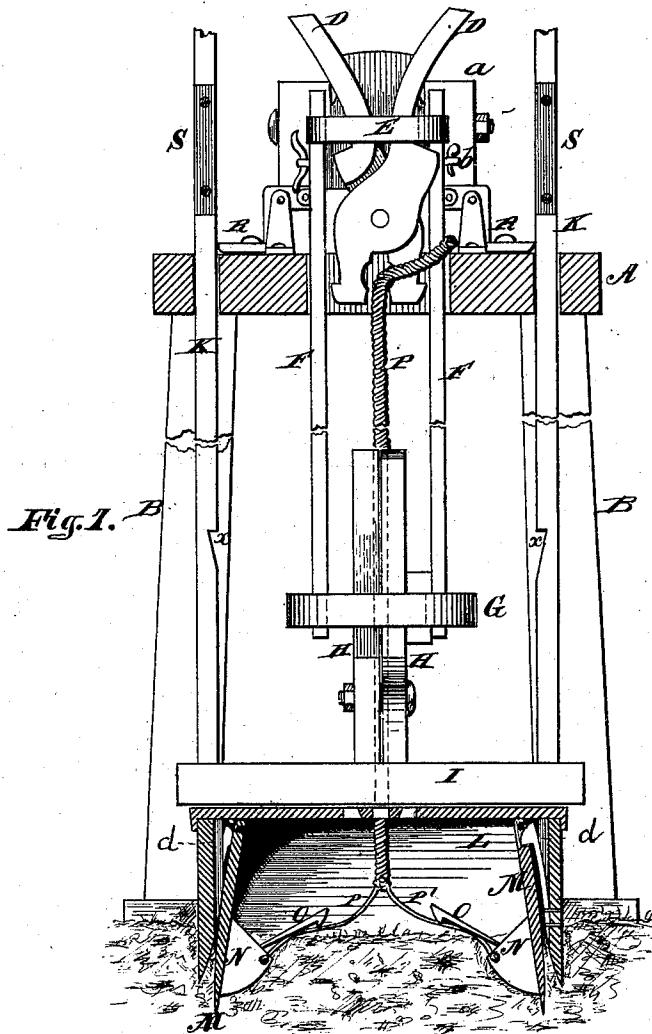


Fig. 1.

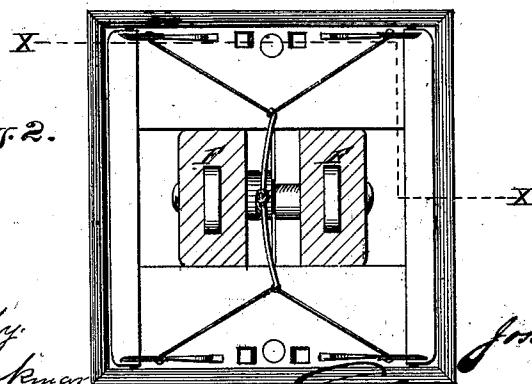


Fig. 2.

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Inventor:

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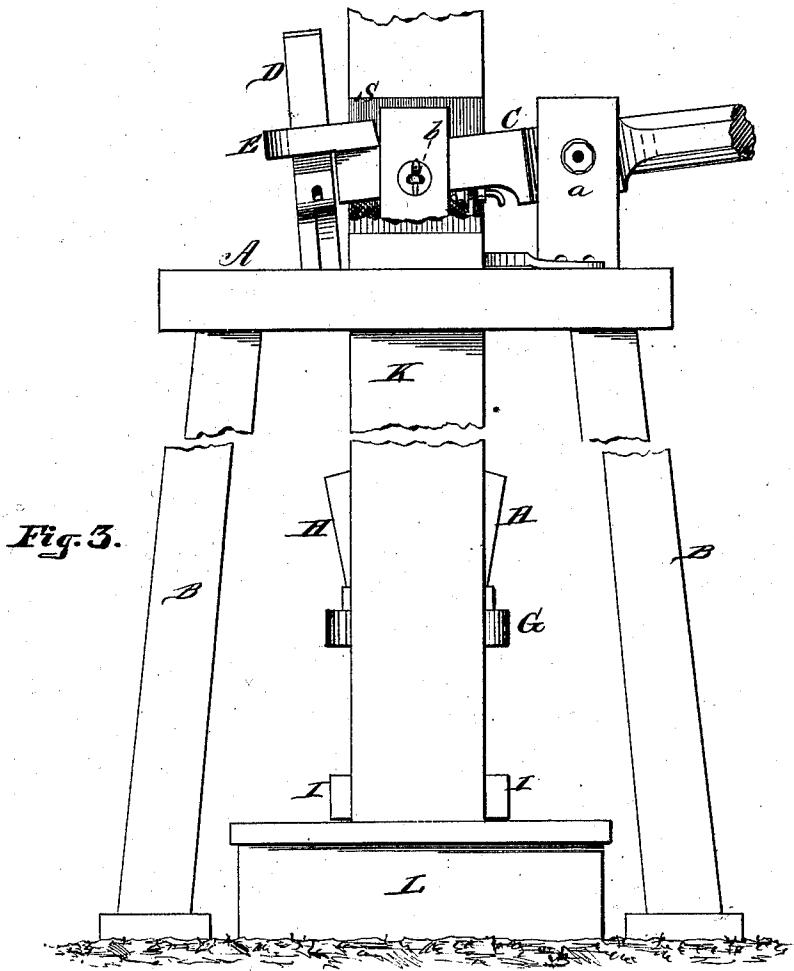


Fig. 3.

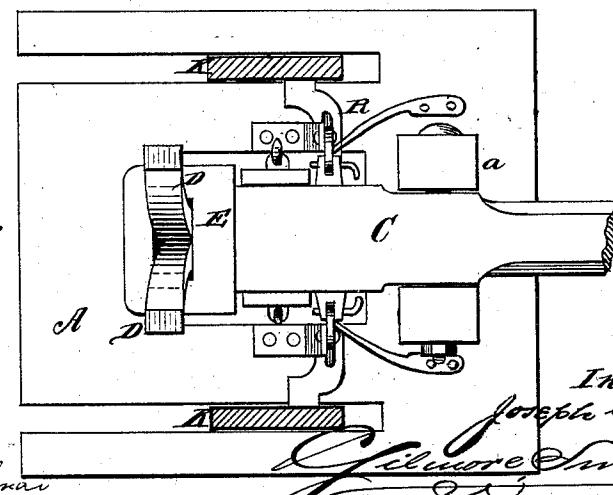


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOSEPH COAST, OF HAMMONTON, NEW JERSEY.

IMPROVEMENT IN DIGGING-MACHINES.

Specification forming part of Letters Patent No. 201,499, dated March 19, 1878; application filed January 26, 1878.

To all whom it may concern:

Be it known that I, JOSEPH COAST, of Hammonton, in the county of Atlantic and State of New Jersey, have invented a new and valuable Improvement in Digging-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical section of my digging-machine. Fig. 2 is a plan view with top removed. Fig. 3 is a side view, and Fig. 4 is a plan view, of the same.

My invention consists in the construction and arrangement of a machine for digging wells, &c., as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents a table or platform, supported from the ground by legs or standards B B. On top of this table, and pivoted between two posts, or in one forked post, a, is a lever, C, having at the inner or front end a yoke, E, permanently secured to it. In this yoke E is hung a pair of peculiarly-shaped jaws or pinchers, D D. These jaws are pivoted together, as shown, and their upper ends curved slightly outward and passed upward through the yoke E. To the lever C are also hung two bars, F F, to the lower ends of which is secured a second yoke, G, and through this yoke works a second pair or set of jaws, pinchers, or clamps, H H, having across their lower edges cross-bars I I, which are of such length as to pass entirely across the base of the machine.

Through suitable slots in the table or platform A are passed two rods or bars, K K, which extend downward, and are secured to a cutting-box, L. Within this box are hinged two winged cutting-scrappers, M M, having lugs N N and spring-catches O O at their sides or ends, as shown. P P' are ropes or chains, for operating the cutting-scrappers M M. R R are spring-catches on top of the plat-

form A, to engage with the rods or bars K K. S S are sockets or joints, arranged on the bars K, so that extra lengths may be added to the same.

The machine being placed in position over the well or hole to be dug, the outer end of the lever C is depressed, whereby the hangers F and yoke G are caused to operate on the jaws H, so that the bars or clamps I I will bite on the standards K K, and thereby lift the cutting-box L until the catches R R engage in notches x x on the standards K, and thus hold the cutting-box in an elevated position. The pin b, which connects the hangers F to the lever C, is then removed and the lever dropped, allowing the cutting-scrappers M M to fall to the sides of the cutting-box L, where they are held by means of spring-catches d d in the sides of said box. The spring-catches R R are then let off, allowing the cutting-box L and cutting-scrappers M M to fall, their combined weight and sharp edges forcing them some distance into the soil. The rope P is then put into the pinchers D, the slack being first taken up. The lever C is then hauled down, causing the cutting-scrappers M M to come together at their edges, scraping and cutting a quantity of earth in so doing, and forming a bottom to hold and elevate the earth. The hangers or lifters F F are then connected to the lever C by the pin b, and the entire box L and scrapers M M lifted high enough to allow a chute to be passed under the same.

In hauling up the scrapers M M the spring-catches O O have been made to pass through slots in the cover of the cutting-box L, and, catching thereon, allow the rope P to be removed from the pinchers D. When ready to discharge the load the catches O O are pushed apart, allowing the scrapers M M to fall, dropping its load into the chute underneath. The operation is then repeated.

When the hole has been dug deep enough, the bars or standards K K are lengthened to suit.

The cutting-box is sometimes provided with a series of guides, to be placed at the corners,

which extend from the table or platform to the grade-line, and are more particularly for use when the machine is first put into operation.

What I claim as new, and desire to secure by Letters Patent, is—

1. The cutting-box L, with standards K K, and the hinged scrapers M M arranged within the same, with catches O O, in combination with a device for lifting the same, and allowing them to fall of their own gravity, substantially as and for the purposes set forth.

2. The lever C, hangers F F, yoke G, jaws H H, and clamps I I, in combination with the

cutting-box L and its standards K, as and for the purpose set forth.

3. The lever C, yoke E, pieces D D, and ropes or chains P P', in combination with the hinged scrapers M M, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH COAST.

Witnesses:

EDWARD J. McCREA,
EDWARD C. RYER.