(No Model.)

J. R. LAMB.

POST HOLE BORING MACHINE.

No. 427,580. Patented May 13, 1890.

Fig. 1.

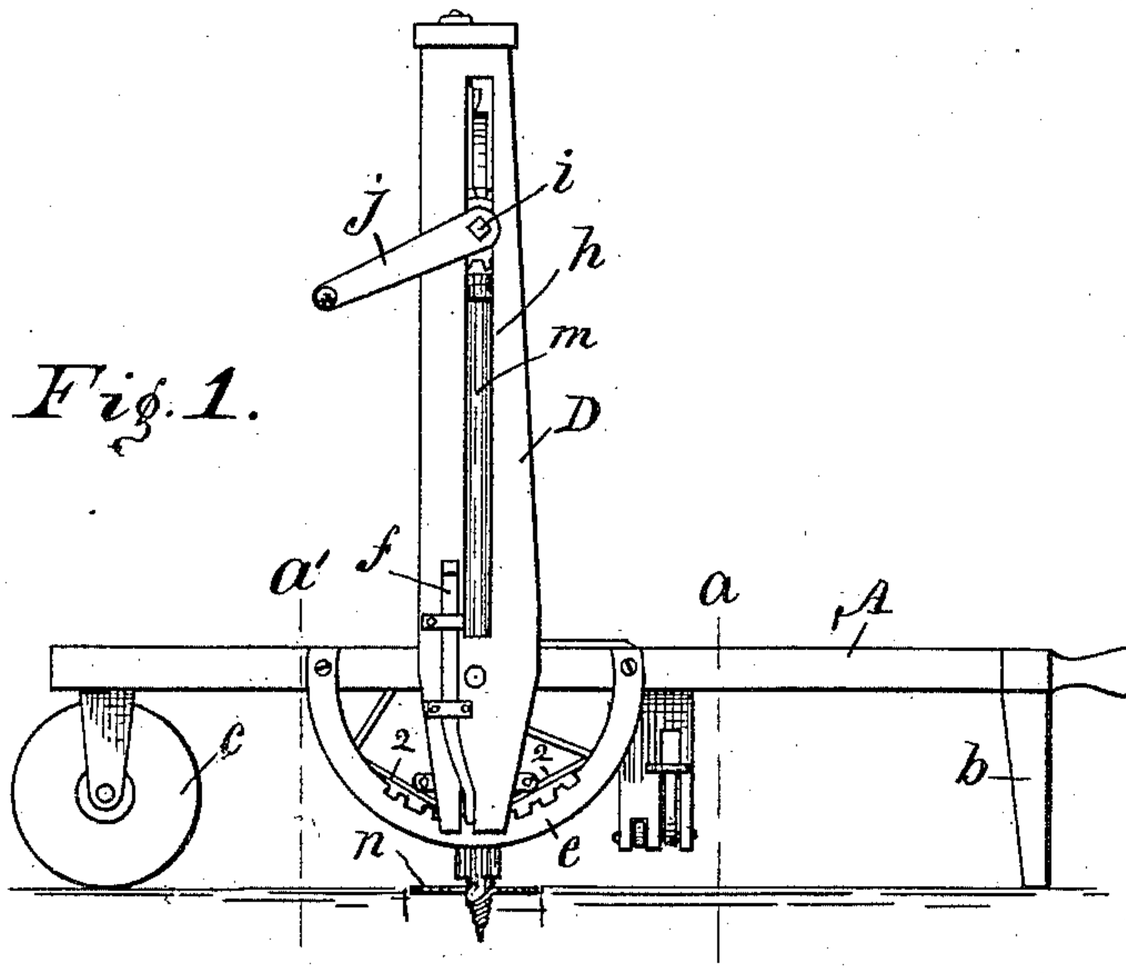


Fig. 3.

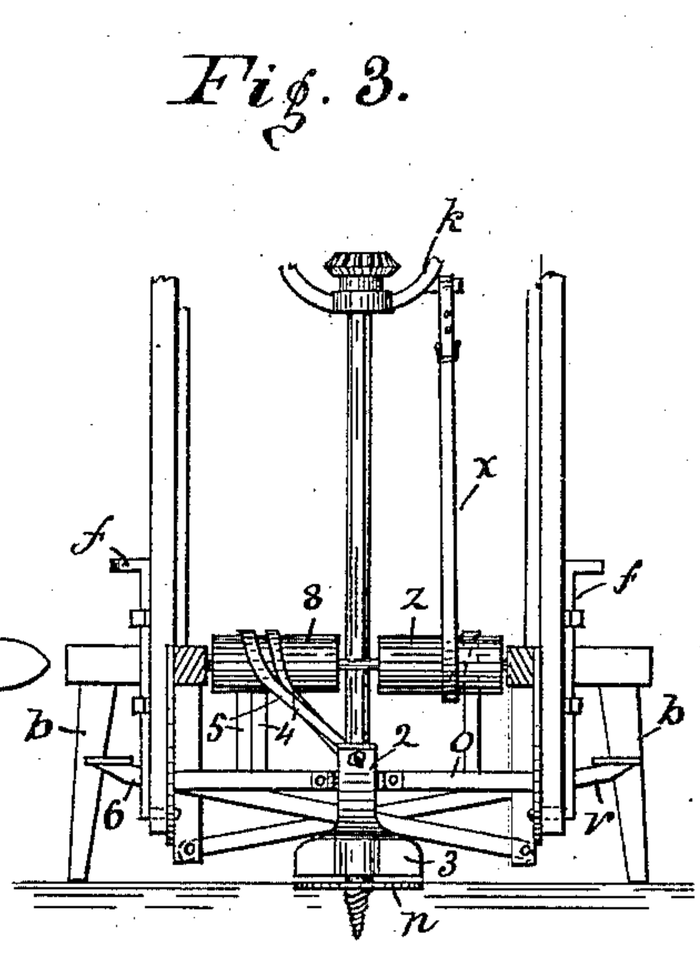


Fig. 4

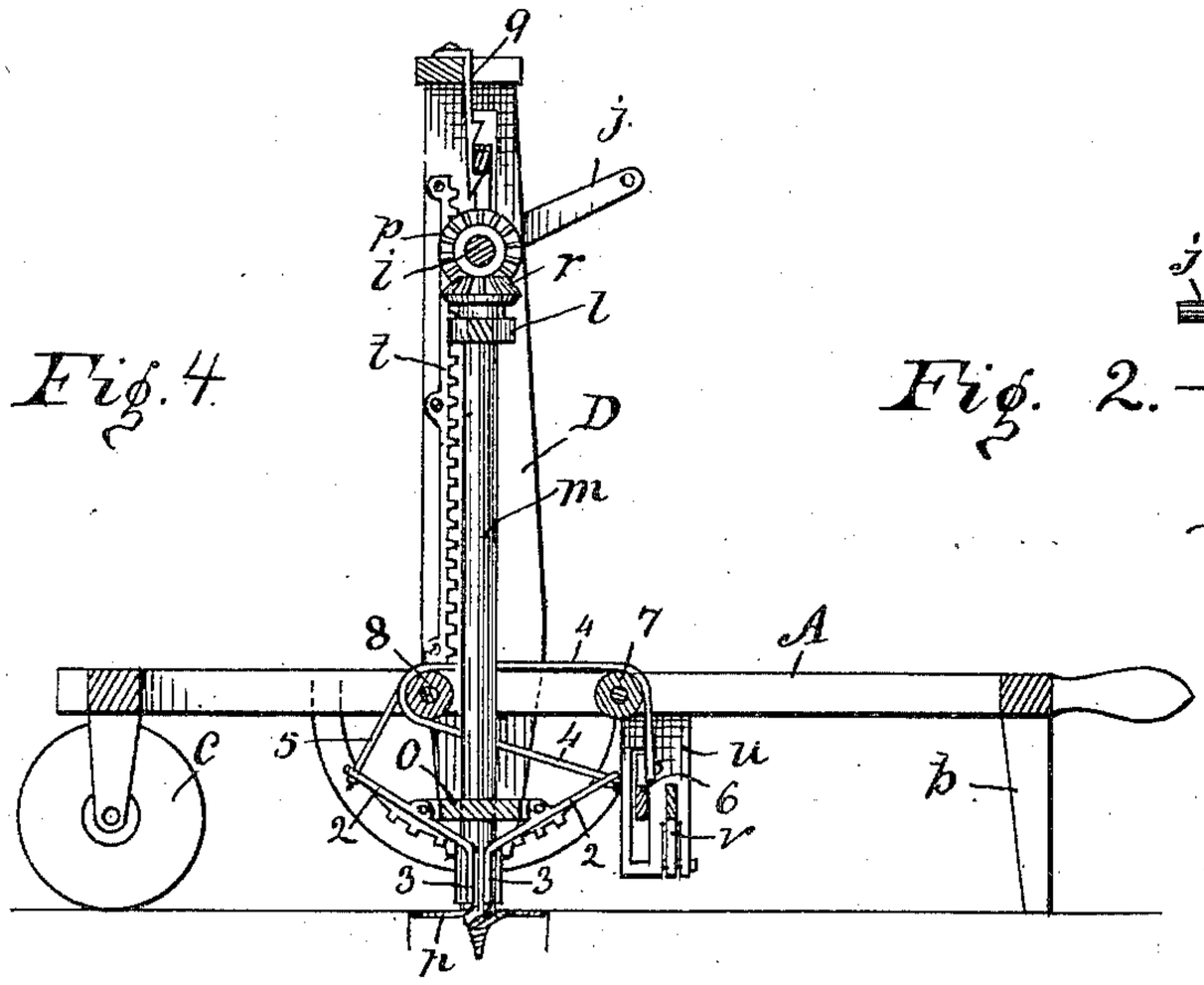
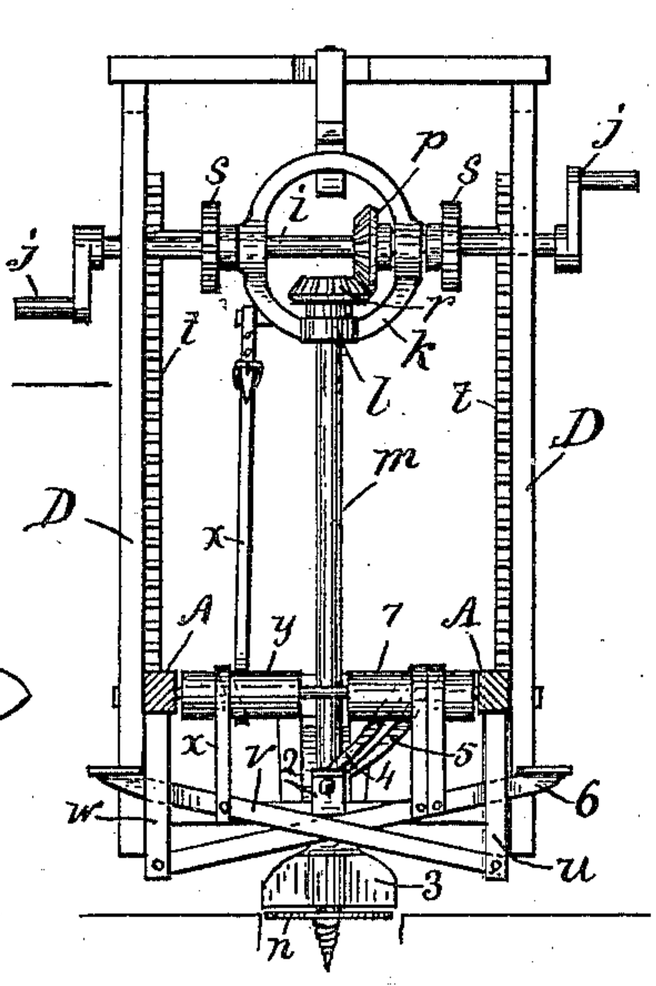


Fig. 2.



Witnesses
C. M. Hood
Frank A. Jacob.

John R. Lamb. Inventor
By His Attorney
H. P. Hood,

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN R. LAMB, OF GOODVIEW, INDIANA.

POST-HOLE-BORING MACHINE.

SPECIFICATION forming part of Letters Patent No. 427,580, dated May 13, 1890.

Application filed March 15, 1890. Serial No. 343,966. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. LAMB, a citizen of the United States, residing at Goodview, in the county of Randolph and State of Indiana, have invented a new and useful Improvement in Post-Hole-Boring Machines, of which the following is a specification.

My invention relates to an improved machine for boring post-holes.

The object of my improvement is to provide means for forcing the auger into the earth at starting and means for clearing the loosened earth from the auger, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 represents a side elevation; Fig. 2, a transvere elevation at *a*, Fig. 1; Fig. 3, a transverse elevation at *a'*, Fig. 1; and Fig. 4, a central longitudinal section.

A is a horizontal frame, which is supported on a pair of legs *b b* at one end and on a single wheel *c* at the other end.

D is a vertical frame extending partly above and partly below frame A and pivoted thereto at each side, so as to swing thereon in a vertical plane for the purpose of adjustment in working on an inclined surface. Frame D is adjustably secured in position with relation to frame A by a notched arch *e* and sliding catch-bolt *f*. The sides of frame D are each provided with a vertical slot *h*, in which a horizontal shaft *i* slides easily. The ends of the shaft project through the slots, and are each furnished with a crank *j*. Suspended from shaft *i* by suitable bearings is a yoke *k* having a vertical bearing *l* in which is mounted the vertical auger-shaft *m*, having at its lower end the earth-auger *n*. Frame D has at its lower end a cross-beam *o*, in which is formed a bearing for shaft *m*, which is fitted to turn and slide longitudinally therein.

Secured, respectively, to shafts *i* and *m* are a pair of bevel gear-wheels *p* and *r*, by means of which shaft *m* is rotated when shaft *i* is turned. Mounted also on shaft *i*, so as to turn therewith and slide longitudinally thereon, are a pair of spur gear-wheels *s s*, which slide into engagement with rack-bars *t t*, secured to the sides of frame D, for raising the auger in the usual well-known manner. For the purpose of forcing the auger downward at starting the post-hole I pivot to a hanger *u*, depending from frame A, a lever *v*, having its free end projecting through a hanger *w* at the opposite side of frame A within easy reach of the foot of the operator. A strap *x* is attached to lever *v* near its free end, and, passing over a guide-roller *y* and under a guide-roller *z* in frame A, and thence upward, is secured at the other end to yoke *k*. A downward movement of the lever serves to draw the yoke and the auger attached thereto downward.

For the purpose of clearing the loosened earth from the auger I pivot to the edges of the lower cross-timber of frame D, opposite the auger-shaft, a pair of bent levers 2 2, whose lower ends form thin broad scrapers 3 3, which embrace the shaft between them and extend laterally therefrom across the entire diameter of the auger. The upper ends of levers 2 2 are connected by means of straps 4 5 with a treadle 6, pivoted to the hanger *w*, and projecting on the opposite of the frame A within easy reach of one of the feet of the operator, the straps passing over guide-rollers 7 and 8, and the arrangement being such that when the treadle is depressed the upper ends of levers 2 are drawn together and the scrapers forming their lower ends are thrown apart.

Secured to the upper cross-bar of frame D is a double catch-hook 9, for holding yoke *k* when raised.

In operation the auger resting on the earth is rotated by means of means of cranks *j*, and the auger is forced downward by means of lever *v* and strap *x* until it takes hold of the earth. When the auger has entered the earth several inches, it is raised until it comes in contact with the lower edges of the closed scrapers 3 3, which are then thrown apart by means of treadle 6, straps 4 and 5, and bent levers 2 2, as before described, and the earth is thus scraped off from the auger and clear of the hole.

I claim as my invention—

1. In a post-hole-boring machine, the combination of the main frame, the vertical frame erected thereon, the auger-shaft mounted in a bearing in the latter frame and arranged to slide longitudinally therein, the earth-auger, the pair of bent levers pivoted to the vertical

frame and terminating at their lower ends in a pair of scrapers arranged on opposite sides of the auger-shaft and extending laterally therefrom across the earth-auger, a treadle mounted on the main frame, and intermediate connecting mechanism connecting the treadle and the bent levers, whereby said scrapers are thrown apart by the movement of the treadle, substantially as and for the purpose set forth.

2. In a post-hole-boring machine, the combination of the main frame, the vertical frame erected thereon, the horizontal shaft arranged to slide up and down in said vertical frame, the yoke suspended from said horizontal shaft, the auger-shaft mounted in said yoke and the vertical frame, the auger, the lever pivoted to the main frame, and the strap connecting said yoke and the lever, and the guide-rollers whereby the yoke and auger are forced downward by the movement of the lever, substantially as and for the purpose set forth.

JOHN R. LAMB.

Witnesses:
GEO. E. CLEVENGER,
LINDLEY A. OWENS.