

J. D. HARRIS.
EARTH-AUGER.

No. 174,815.

Patented March 14, 1876.

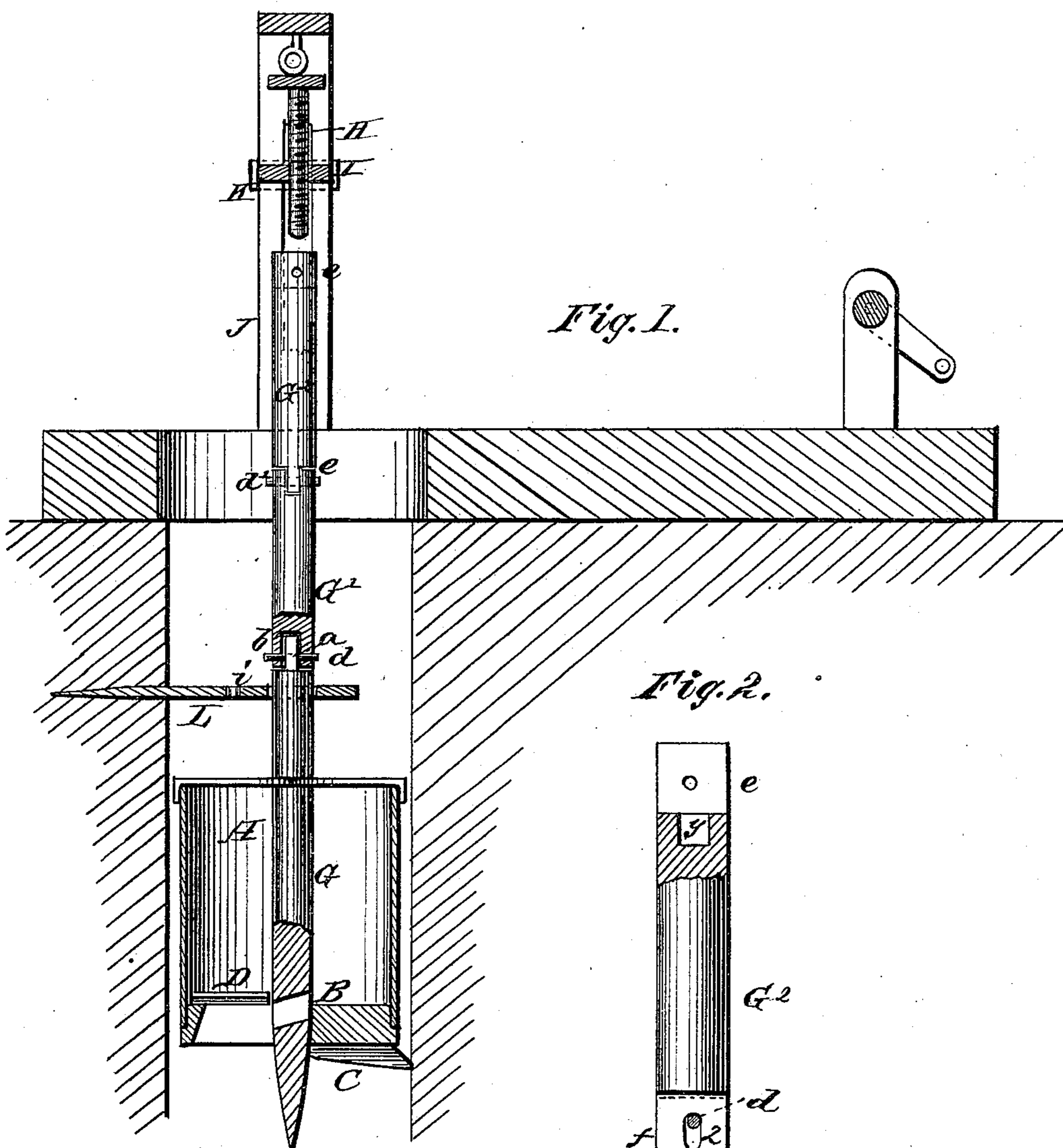


Fig. 1.

Fig. 2.

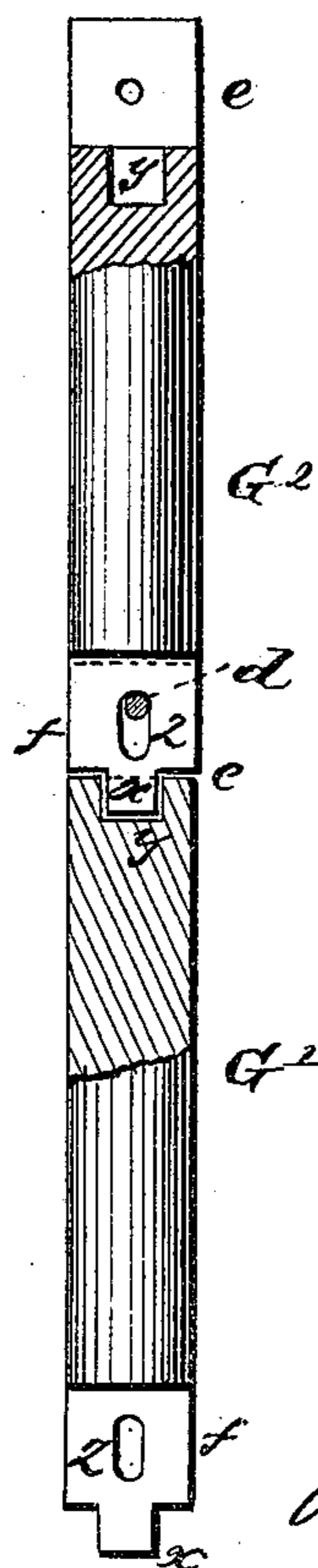
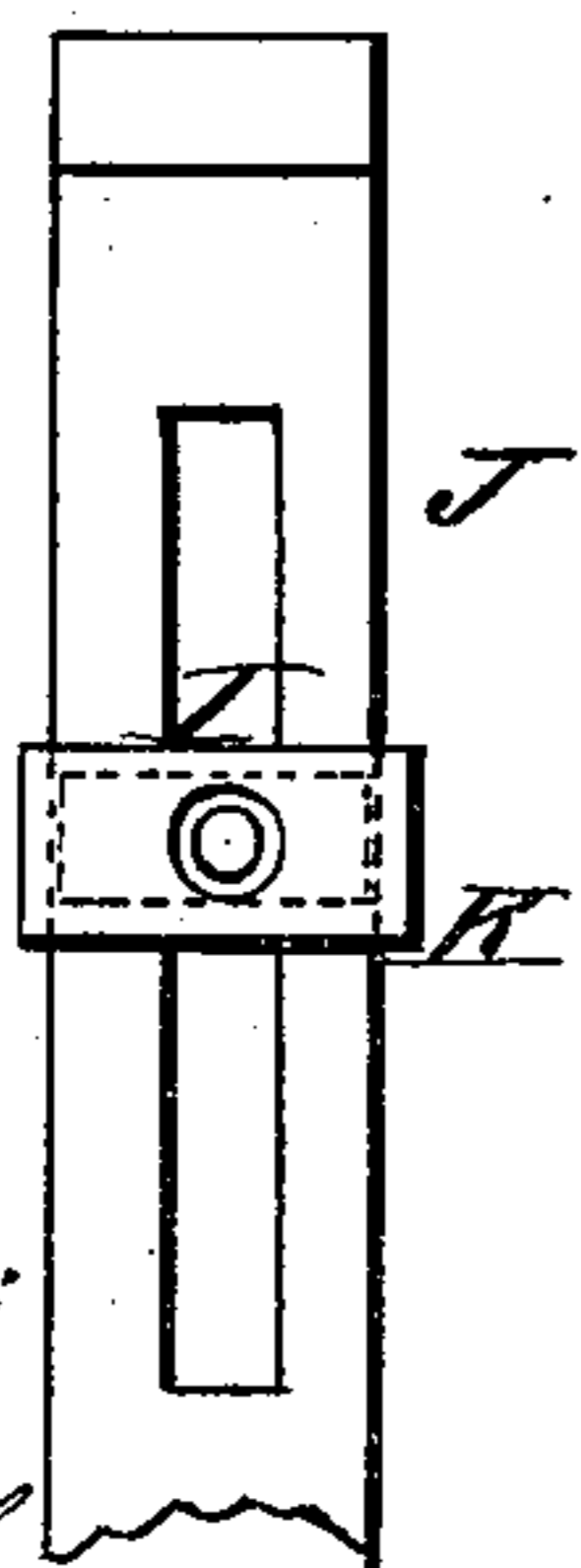


Fig. 3.



WITNESSES:

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JAMES D. HARRIS, OF MEMPHIS, TENNESSEE, ASSIGNOR TO HIMSELF AND
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IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. **174,815**, dated March 14, 1876; application filed
January 5, 1876.

To all whom it may concern:

Be it known that I, J. D. HARRIS, of Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Earth-Augers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to earth-augers; and it consists, principally, in the construction and arrangement of the auger-shaft, and in the construction of the frame carrying the operating-screw, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a central vertical section. Fig. 2 is a side elevation of the auger-shaft, with the joints in section; and Fig. 3 is a detail of my invention.

A represents the ordinary auger-bucket, with bottom B, having bits C C and valve D, in the usual manner. The auger-shaft is made in sections G, G¹, G², &c. The first section, G, is pointed at its lower end, and firmly fastened in the auger-bottom B. The upper end of this section is formed with a square tenon, *a*, which is inserted in a corresponding socket, *b*, formed in the lower end of the second section, G¹, and a pin, *d*, passed through the same for fastening them together. In the upper end of the second section, G¹, is a slot, *e*, and the lower end of the third section, G², is formed with a tenon, *f*, to fit therein. On the end of the tenon *f* is a projection, *x*, which fits in a recess, *y*, made in the bottom of the slot *e*. The sections G¹ G² are then fastened together by means of a pin, *d'*, which passes through a slot, *z*, in the tenon *f*, so as to admit of the upper section G² being raised to remove the

projection *x* from the recess *y*, and thus allow the said section G² to turn on the pin *d'* as on a pivot. The remaining sections are united in the same manner.

The top section of the shaft, as the boring progresses, is coupled to a screw, H, which passes through a beam, I, having its ends passing through the slotted uprights of a frame, J, and held to said frame by clamps K at any desired height.

L represents an arm slipped loosely over the auger-shaft, and its outer end fastened in the ground to one side of the hole being bored. The hoisting-rope is to pass through a hole, *i*, in said arm, whereby the rope is prevented from twisting around the shaft as the boring progresses.

The boring is done in the usual manner, the screw H on top aiding in causing the auger to penetrate deeper into the ground.

In hoisting the bucket the top section of the shaft is first disconnected from the screw, and as this section gets entirely above ground the joint at its lower end is broken, and so on with every section until the last one, which is entirely disconnected.

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

1. A sectional auger-shaft, having the sections connected by means of the slot *e*, with recess *y*, tenon *f*, with projection *x* and slot *z*, and a pin passing through them, substantially as and for the purposes herein set forth.

2. The combination, with an earth-auger shaft, of the screw H, beam I, slotted frame J, and clamps K, substantially as herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES DOUGLASS HARRIS.

Witnesses:

J. C. GROONES,

H. T. CALLAWAY.