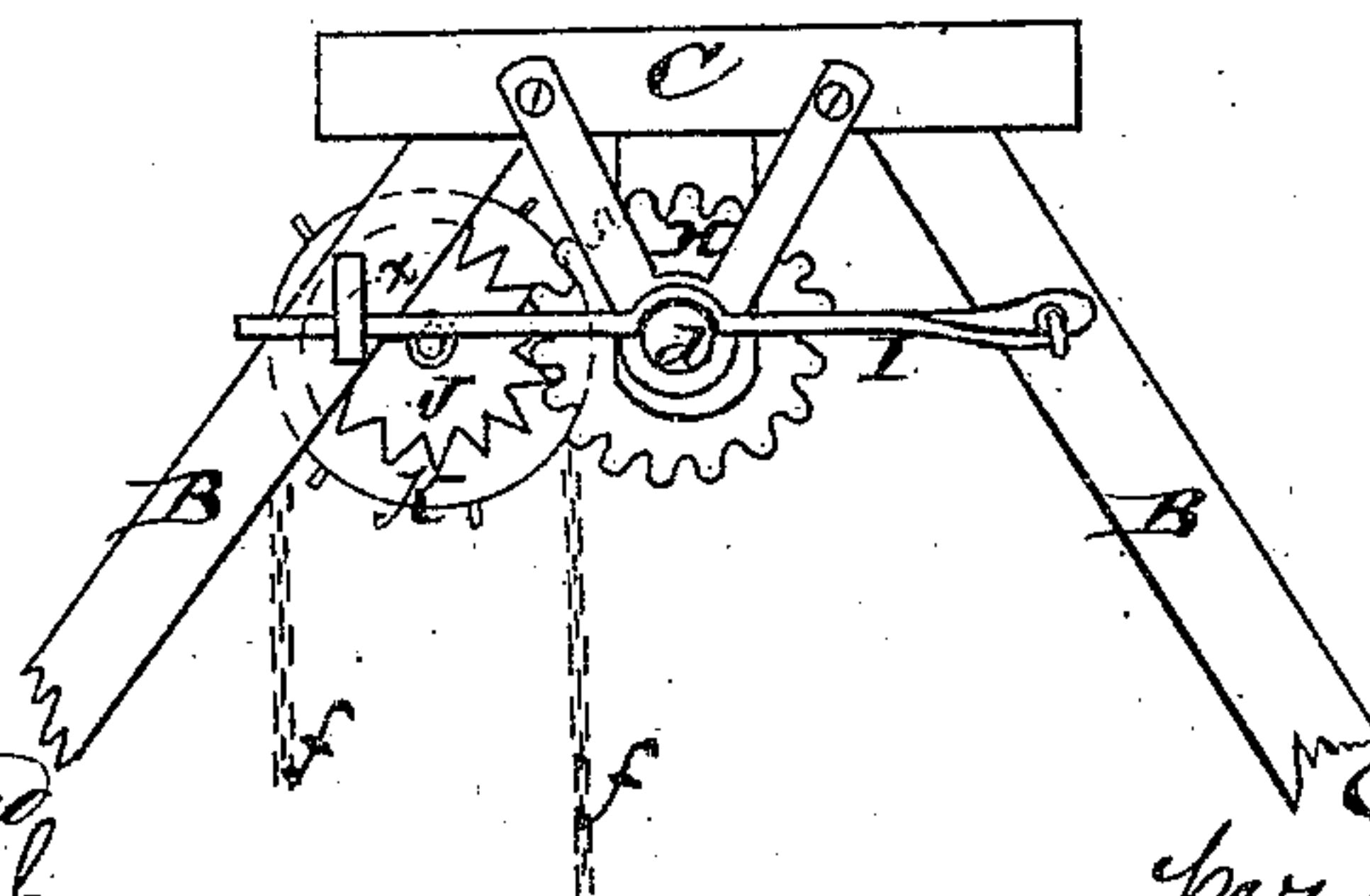
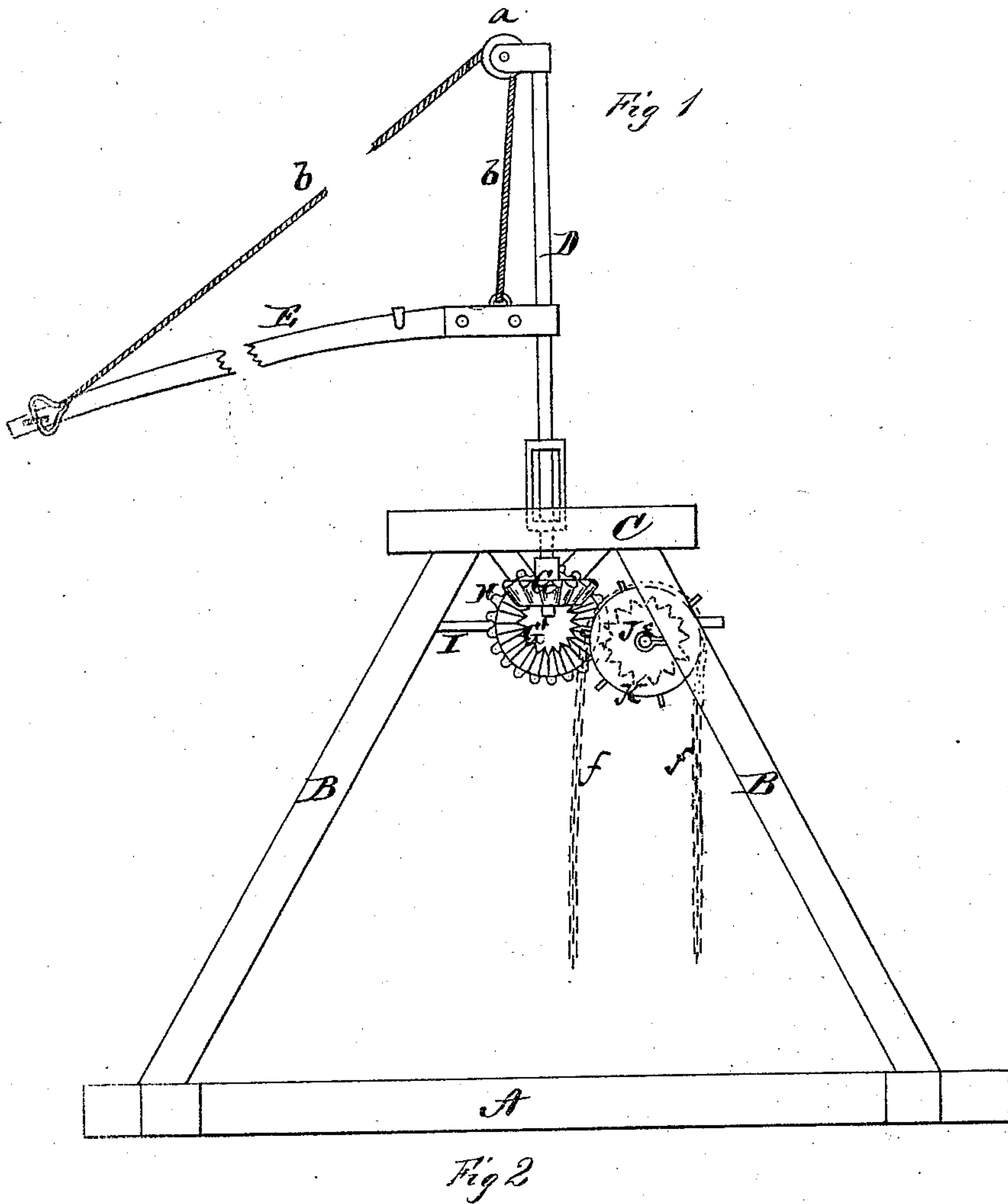


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Means for Operating Earth-Augers.

No. 135,510.

Patented Feb. 4, 1873.



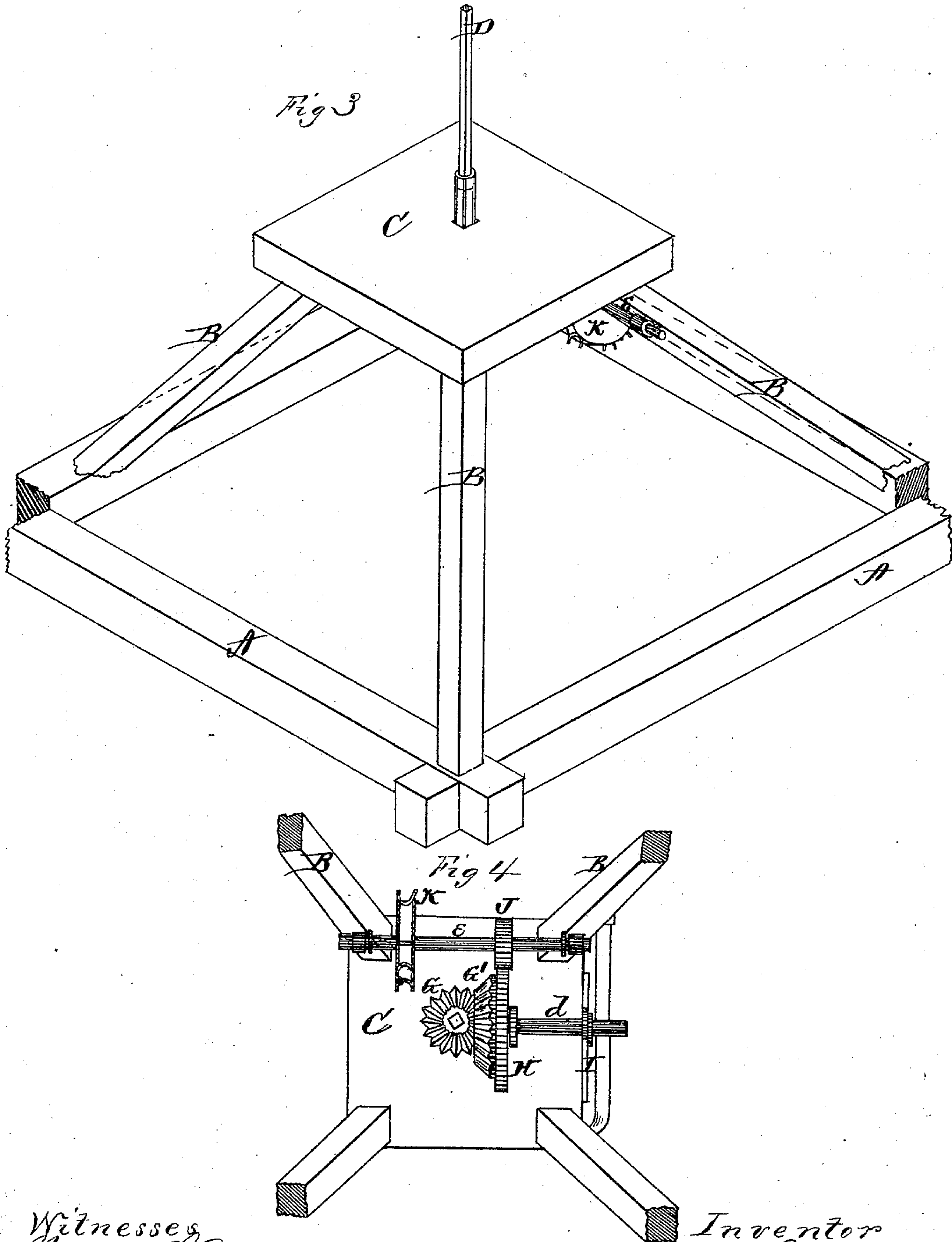
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UNITED STATES PATENT OFFICE.

WILLIAM H. BEACH AND CHANCEY N. HANSON, OF HAMBURG, IOWA.

IMPROVEMENT IN MEANS FOR OPERATING EARTH-AUGERS.

Specification forming part of Letters Patent No. 135,510, dated February 4, 1873.

To all whom it may concern:

Be it known that we, WILLIAM H. BEACH and CHANCEY N. HANSON, of Hamburg, in the county of Fremont and in the State of Iowa, have invented certain new and useful Improvements in Horse-Powers for Well-Augers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists in the construction and arrangement of a well-auger horse-power for drawing dirt out of the pit or well, as will be hereinafter more fully set forth.

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

Figures 1 and 2 are side views; Fig. 3, a perspective view; and Fig. 4, a bottom view of our invention.

A represents a four-cornered square-frame, having a post, B, at each corner. These posts incline inward toward the center of the frame, and support on their upper ends a platform, C. Through the center of the platform C passes a shaft, D, on which the lever E is placed. At the upper end of the shaft D is a pulley, a, over which passes a rope, b, one end being attached to the inner end of the lever E, for raising the same when desired. The lever E is provided with a slot at its inner end and freely moves up and down on the shaft. The outer end of the lever extends beyond the main frame, and to this end is attached the horse. The weight of the lever causes it to incline slightly downward at its outer end, and when in this its normal position, and moved around, the boring-shaft is carried with it.

To raise the lever up and down on the shaft it is only necessary to draw upon the cord b, and the lever moves up on the shaft. By this arrangement the lever or sweep is easily adjusted to conform to the height of the horse, and raised out of the way when the animal is to be disengaged.

One of the objects of our invention is to so construct the operating mechanism that they will all be beneath the top platform C of the frame, and be out of the way of the turning-sweep, and so that their working can at all times be readily seen, and at the same time to use such devices as will bear the great strain put upon them in boring wells.

To the lower end of the shaft D, underneath the platform or bed-piece C, is keyed, or otherwise firmly attached, a beveled cog-wheel, G, which meshes with a similar beveled cog-wheel, G', keyed, or otherwise attached, to a shaft, d, or to the side of a cog-wheel, H, placed on said shaft. The shaft d is supported in hangers or braces from the under side of the platform, and can be moved laterally in said hangers or braces, to throw the wheel G' in and out of gear with the wheel G. The end of the shaft d extends beyond its outer hanger, as shown, and to one of the supports B of the frame, on a line with this shaft, is linked or pivoted a latch, I. This latch is made of sufficient length to extend from one support B to the opposite one, and the central portion of the latch has a semicircular depression, which fits upon the extended end of the shaft. On the support B, opposite to the one to which the latch is secured, is a keeper, x, Fig. 2, so that when the latch is thrown across, resting on the shaft d, with its outer end within this keeper, the shaft and its gears are held in position to gear with the wheel G on the boring-shaft. If it is desired to move the shaft and throw the wheel G' out of gear, it is only necessary to disengage the latch from the keeper x, and throw it off the end of the shaft. The cog-wheel H, above mentioned, is a straight cog-wheel, which gears with a similar cog-wheel, J, on another shaft, e, running parallel with the shaft d, and provided with a drum or capstan, K, over which the chain f is thrown for drawing up the load directly over the center of the well, which gives a center draft.

The device for elevating and lowering the sweep—viz., the rope and pulley on the shaft—we do not claim as our invention.

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

1. The combination, with the shaft D and its gear-wheel G, of the movable shaft *d* with wheels G' and H, and the centrally-curved hinged latch I, the frame A B C, and keeper *x*, all substantially as and for the purposes herein set forth.

2. The combination of the shaft *e*, drum K, and gear-wheel J, movable shaft *d* with wheels G' H, latch I, and the shaft D with gear G,

all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 21st day of July, 1872.

Witnesses:

J. M. WATERMAN,
FRANK M. MORRIS.

W. H. BEACH.
C. N. HANSON.