

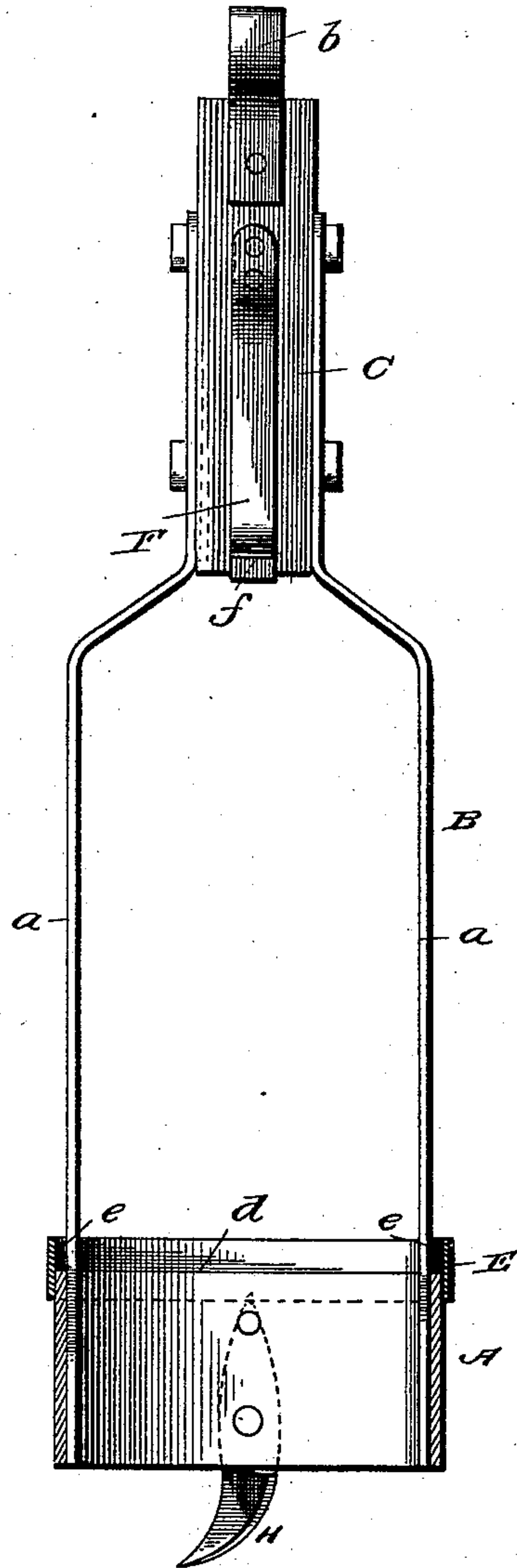
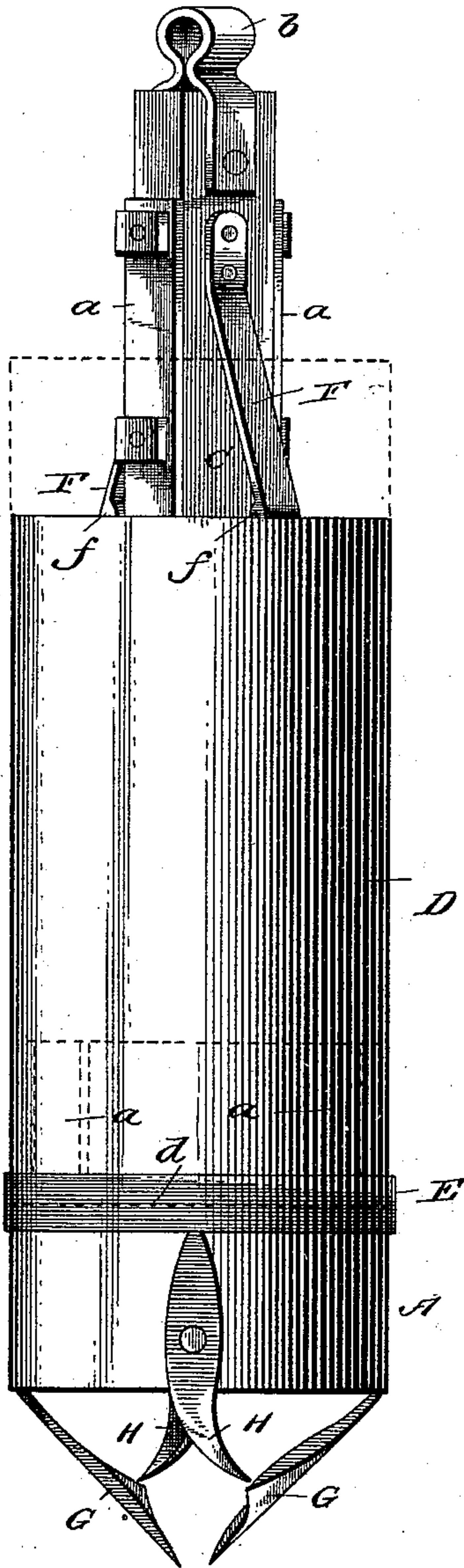
(No Model.)

E. G. STEPHENSON.

DEVICE FOR DIGGING WELLS OR POST HOLES.

No. 414,873.
Fig. 1.

Patented Nov. 12, 1889.
Fig. 2.



Witnesses.

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Inventor
E. G. Stephenson.

By his Attorneys
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UNITED STATES PATENT OFFICE.

ELAM GRIGORY STEPHENSON, OF MOUNT PLEASANT, TEXAS, ASSIGNOR OF ONE-HALF TO J. G. RIDDLE AND JOHN M. STEPHENSON, OF SAME PLACE.

DEVICE FOR DIGGING WELLS OR POST-HOLES.

SPECIFICATION forming part of Letters Patent No. 414,873, dated November 12, 1889.

Application filed June 24, 1889. Serial No. 315,373. (No model.)

To all whom it may concern:

Be it known that I, ELAM GRIGORY STEPHENSON, a citizen of the United States, residing at Mount Pleasant, in the county of Titus and State of Texas, have invented certain new and useful Improvements in Devices for Digging Wells or Post-Holes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in devices for digging wells or post-holes; and the novelty will be fully understood from the following description and claims, when taken in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of my improved device, showing in dotted lines the cylinder partly raised from the annular head; and Fig. 2 is a vertical diametrical sectional view with the cylinder and pivots G removed.

Referring by letter to the said drawings, A indicates the annular head, which is preferably made of stout metal, although it may be made of any suitable material. This annular head has secured to it at diametrically-opposite points the parallel branches of the frame B, which is here shown as being composed of two metallic bars *a*, secured together at their upper ends with an interposed block C, which is provided with a vertically-disposed loop *b*, for the attachment of a handle or other means whereby the device may be manipulated. The arms *a* are secured to the inner sides of the annular head A, and extend in a vertical plane coincident with that of the interior of the said head, so as to permit the cylinder or drum to be snugly seated on the upper edge of the said head and braced in position by the said arms *a*.

D indicates the cylinder, which is designed to be arranged in a vertical position with its lower edge resting upon the upper edge *d* of the head A, and the said cylinder is confined thereon by means of an annular band E, secured to the upper edge of the head and extending sufficiently above the latter to form an interspace *e* with respect to the arms *a*, as shown.

Secured to opposite sides of the block or

bar C are spring locking-arms F. These arms, which have their upper ends secured to the said block, diverge, as shown, and are shouldered at their lower ends at *f*, so as to engage the upper edge of the cylinder from within and above, and thereby firmly secure the same and prevent it from rising during operation.

The head A is provided with a number of cutting bits or points, there being two pair employed. The central cutters or points G are of broad contour, and are secured to the inner sides of the head at diametrically-opposite points, with their lower ends curved, as shown, so that as the earth is cut they will have a tendency to force it up into the cylinder. The cutting-edges of the central cutter are slightly curved, so as to present an entering-point, and are arranged in approximately-parallel planes diametrically across the head.

H indicate lateral cutters, which are secured to the head A at diametrically-opposite points, their cutting-edges being in vertical positions relatively to the head, and are directed oppositely with respect to each other. These lateral cutters slightly overlie the internal area of the head, and are designed to cut sufficiently in diameter to permit the cylinder being freely entered and withdrawn. In applying these cutters to the head I design to have the heads of the securing-bolts counter-sunk on the outer sides, so as to offer no obstruction to the free and easy movement of the apparatus.

In operation, when the cylinder has been seated upon the upper edge of the head A and within the band E, the arms F will clamp the upper edge of the cylinder and hold it firmly in position. Now, when motion has been imparted to the frame and its block C by hand or other motive power, the cutters will travel in the earth, drawing the auger after them, and feeding the earth up into the cylinder, which, when full, may be drawn out. When the apparatus has been raised, it is simply necessary to press the spring holding-arms inwardly, so as to disengage their shoulders from the upper edge of the cylinder, when the latter can be lifted from its seat upon the head, and the arms F, passing into the cylin-

der, may assist in discharging the contained earth therefrom.

The cylinder may be made of sheet metal or other material, and the whole device may
5 be turned by hand or other suitable means.

The device may be cheaply manufactured, and the parts, being very durable, are not liable to get out of order.

Having described my invention, what I claim
10 is—

1. A post-hole or well boring machine consisting of the annular head having arms *a* secured thereto and extending upwardly parallel, centering cutters curved and secured to
15 the lower edge of the head, and lateral cutters also secured to the head with their cutting-edges directed oppositely, a band secured to the upper edge of the head to receive within it a cylinder, the spring-arms secured to the
20 main frame and having engaging shoulders, and the vertically-movable cylinder adapted to be secured upon the upper edge of the head and within the band thereof by the spring-arms engaging the upper ends of the cylinder,
25 substantially as specified.

2. In an earth-boring machine, the combination, with a suitable head carrying cutters, of a vertically-movable cylinder adapted to rest upon the head, and spring-arms or yielding arms adapted to engage the upper edge
30 of the cylinder from within and above and secure the same to the head, substantially as specified.

3. In an earth-boring machine, the combination, with an annular head carrying cutters,
35 of the block or bar *C*, the arms *a*, secured at their upper ends to the bar or block and at their opposite ends to the head, the cylinder, and the yielding arms secured at one end to said bar and their opposite ends adapted to
40 engage the upper edge of the cylinder, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ELAM GRIGORY STEPHENSON.

Witnesses:

W. H. BLYTHE,
S. D. SNODGRASS.