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A. McGILLIVARY & E. FRYE.

ANCHOR OR STAY FOR POLES, DERRICKS, &c.

APPLICATION FILED DEC. 28, 1905.

Fig. 4.

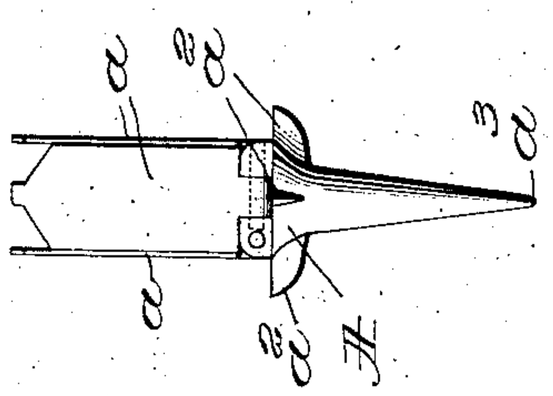

Fig. 5.

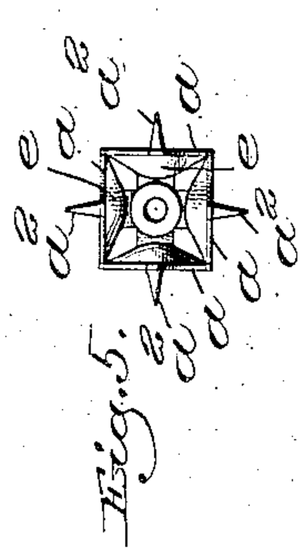

Fig. 6.

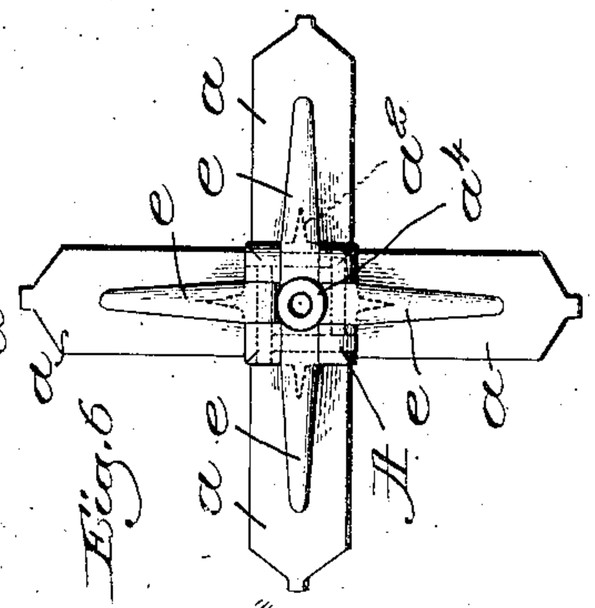

Fig. 3.

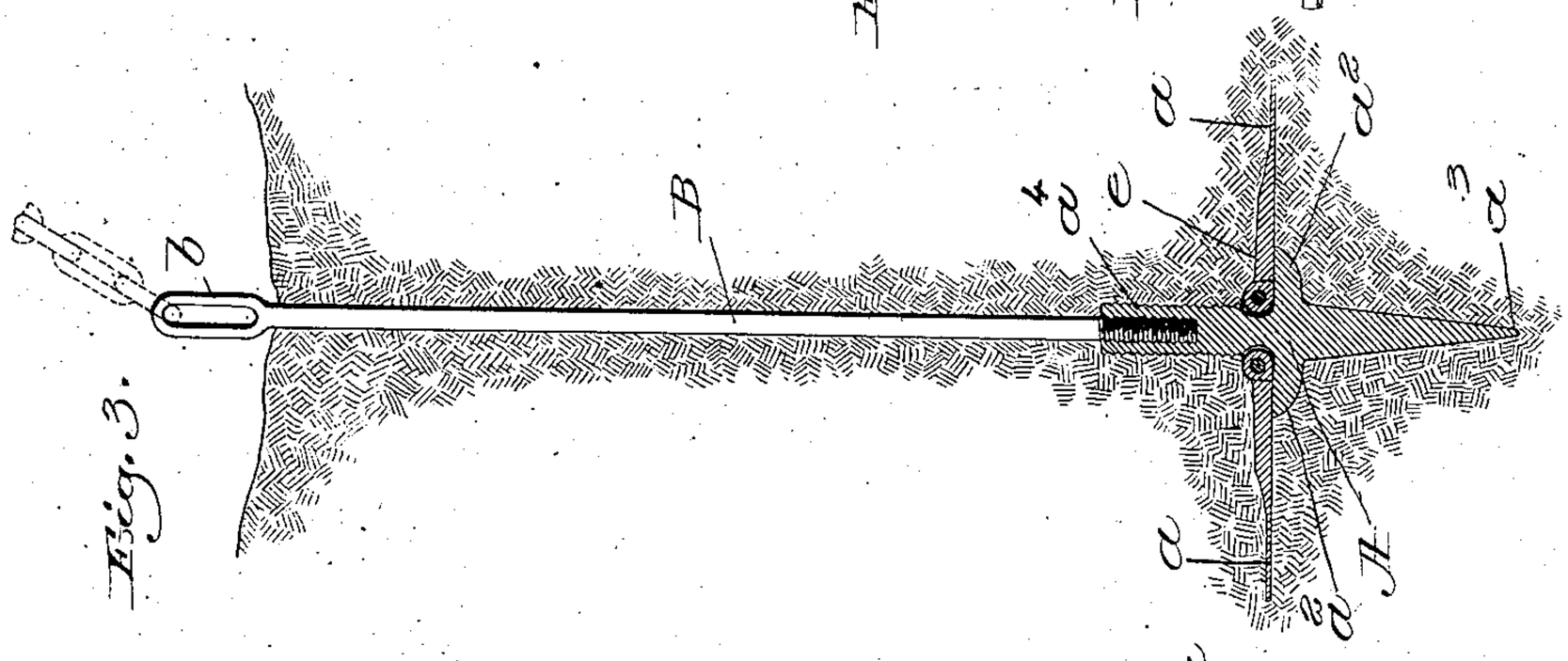

Fig. 7.

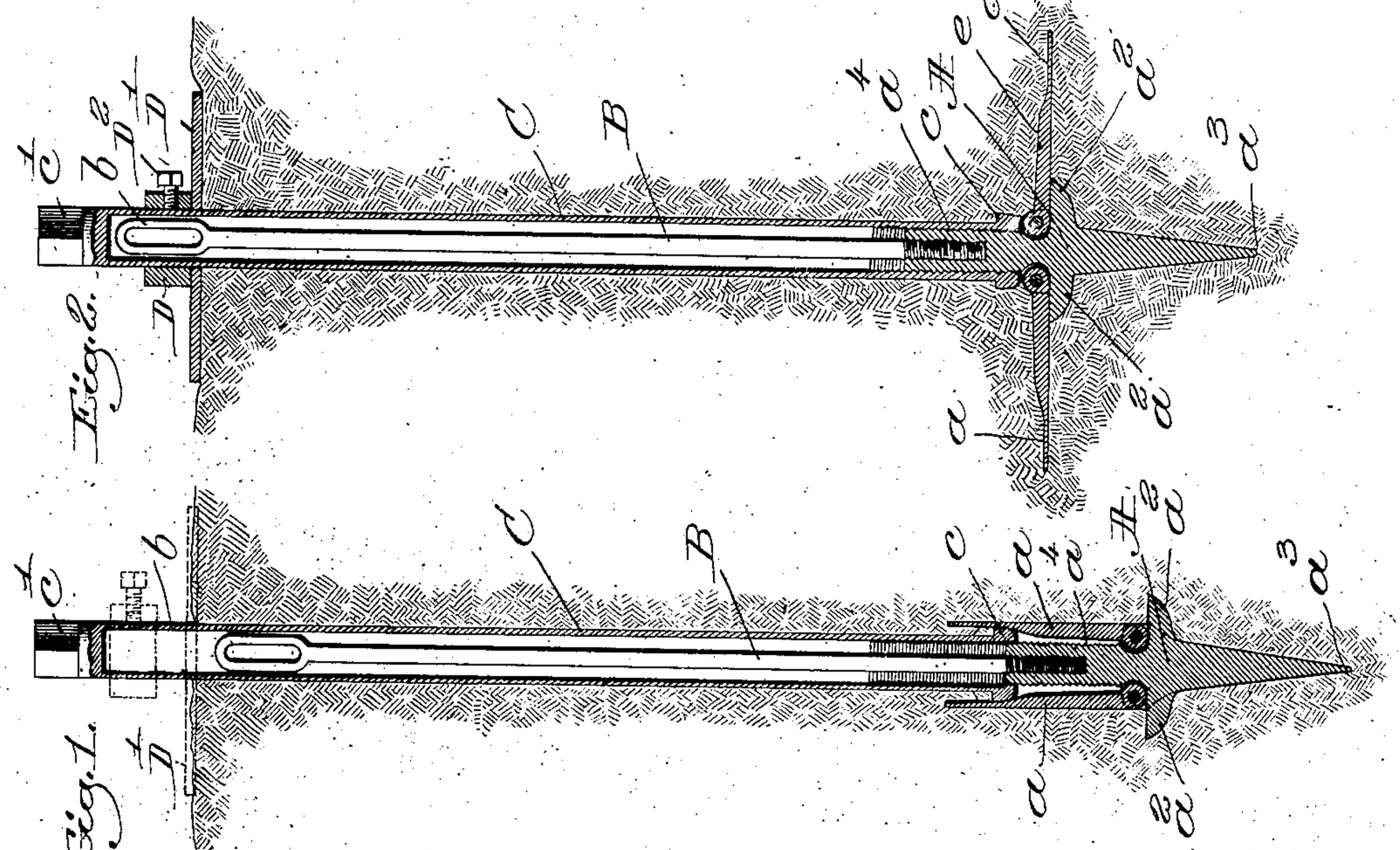

Fig. 8.

Fig. 1.

Witnesses:
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Edward Frye,
by Crosby Gregory Attys.

UNITED STATES PATENT OFFICE.

ANGUS McGILLIVARY AND EDWARD FRYE, OF QUINCY, MASSACHUSETTS.

ANCHOR OR STAY FOR POLES, DERRICKS, &c.

No. 814,229. Specification of Letters Patent. Patented March 6, 1906.

Application filed December 28, 1905. Serial No. 293,583.

To all whom it may concern:

Be it known that we, ANGUS McGILLIVARY, a subject of the King of Great Britain, and EDWARD FRYE, a citizen of the United States, both residents of Quincy, county of Norfolk, State of Massachusetts, have invented an Improvement in Anchors or Stays for Poles, Derricks, &c., of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a novel anchor or stay to be driven into the ground and to be utilized to receive chain or rope employed to stay any upright, as a pole in telegraph or line work or a derrick or other article used for construction purposes.

Our invention comprehends a novel head having multiple hinged grabs and means acting automatically to cause the grabs to be turned outwardly to enter the ground; also, in an anchor having a head provided with a series of grabs and cutting edges located therebelow; also, in an anchor comprising a pointed head, a series of grabs, and a tube provided with a collar to act on the inner sides of the grabs and force them outwardly.

Figure 1 shows our improved anchor-support, to be driven into the ground for the desired distance. Fig. 2 is a like view with the point of the anchor shown as elevated and the grabs turned outwardly into the soil. Fig. 3 shows the tube removed from the head of the anchor and a chain or cable connected with the shank or rod forming a part of the anchor. Fig. 4 is an enlarged side elevation of the head and grabs in their inoperative position; Fig. 5, a plan view of Fig. 4, and Fig. 6 a view similar to Fig. 5 with the grabs occupying their operative position.

The anchor comprises, essentially, a pointed head A, a shank B, and a series of grabs *a*. The grabs, shown as four, (any desired number, however, may be used,) are represented as hinged to the head to turn about pivots *a'*. The head has a series of cutters or projections a^2, that cut into the soil as the point is driven thereinto, said cutters being located above the extremity or point a^3 of the head and below the pivotal point of the grab on said head. The upper end of the head is threaded externally, as at a^4, and is also provided with a hole or longitudinal bore threaded interiorly, as represented in the drawings, to receive the screw-threaded lower end of the shank B. When the anchor is to be driven into the ground, the tube C is screwed slightly onto the upper end of the head. This tube has at its lower end a collar *c*.

With the parts assembled as shown by full lines in Fig. 1 and the head of the anchor drawn into the soil, the user of the anchor will lay upon the top of the soil a plate or planking D', as shown in Fig. 2, and then apply to the tube the collar D, so that the lower side of the collar will contact with the top of the plate, when the collar will be fixed in position by a set-screw D^2. This done, the user of the anchor will apply a suitable wrench or other turning device to the upper squared or other shaped end *c'* of the tube and will rotate the tube. The latter through the screw-threads at its lower end engaging the threaded exterior of the upper part of the head will draw the head and its point upwardly, and at the same time the collar *c*, acting gradually on the ribs *e* at the inner sides of the grabs, will force same outwardly; so that when the tube-head has been lifted from the position Fig. 1 into the position Fig. 2 the grabs will be thrown out into the position Fig. 2. Thereafter the user of the anchor will turn the tube in an opposite direction, remove the same from the head, and will take away the plate or plank. This exposes the upper end of the shank having the eye *b*; in which may be hitched any chain or guy-rope, as b^2, the opposite end of the latter extending to any pole or other device which is to be held in the desired upright or other position. In practice there may be a number of these anchors having chains or cables connected with the pole to be supported. If the head and tube C are driven into sandy soil, the soil will pack about the tube, as shown in Figs. 1 and 2, and when the tube is withdrawn the soil will hug the shank B. If driven into clay soil, the head making a larger hole will be put into position to leave a little space or clearance outside the tube, which will be packed eventually about the shank.

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

1. In apparatus of the class described, a head having a point provided with a series of cutters, and a series of grabs pivoted on said head above said cutters.

2. In apparatus of the class described, a head having a threaded portion, a series of grabs, and a tube engaging said threaded por-

tion and having a projection to act on and turn said grabs outwardly as the tube is rotated on said threaded portion.

3. In apparatus of the class described, a head having a series of pivoted grabs and provided with a threaded projection, a plate to rest on the ground, a tube having a collar sustained by said plate, said tube engaging said threaded projection, the rotation of said tube lifting the head and causing the grabs to be turned outwardly into the soil.

4. In apparatus of the class described, a head having at its upper side a projection threaded internally and externally, a shank engaging said internally-threaded portion, and a tube engaging the externally-threaded portion, a series of grabs pivoted on said head, the rotation of the tube on the threaded portion of the head forcing the grabs outwardly, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ANGUS McGILLIVARY.
EDWARD FRYE.

Witnesses:
GEO. W. GREGORY,
MARGARET A. DUNN.