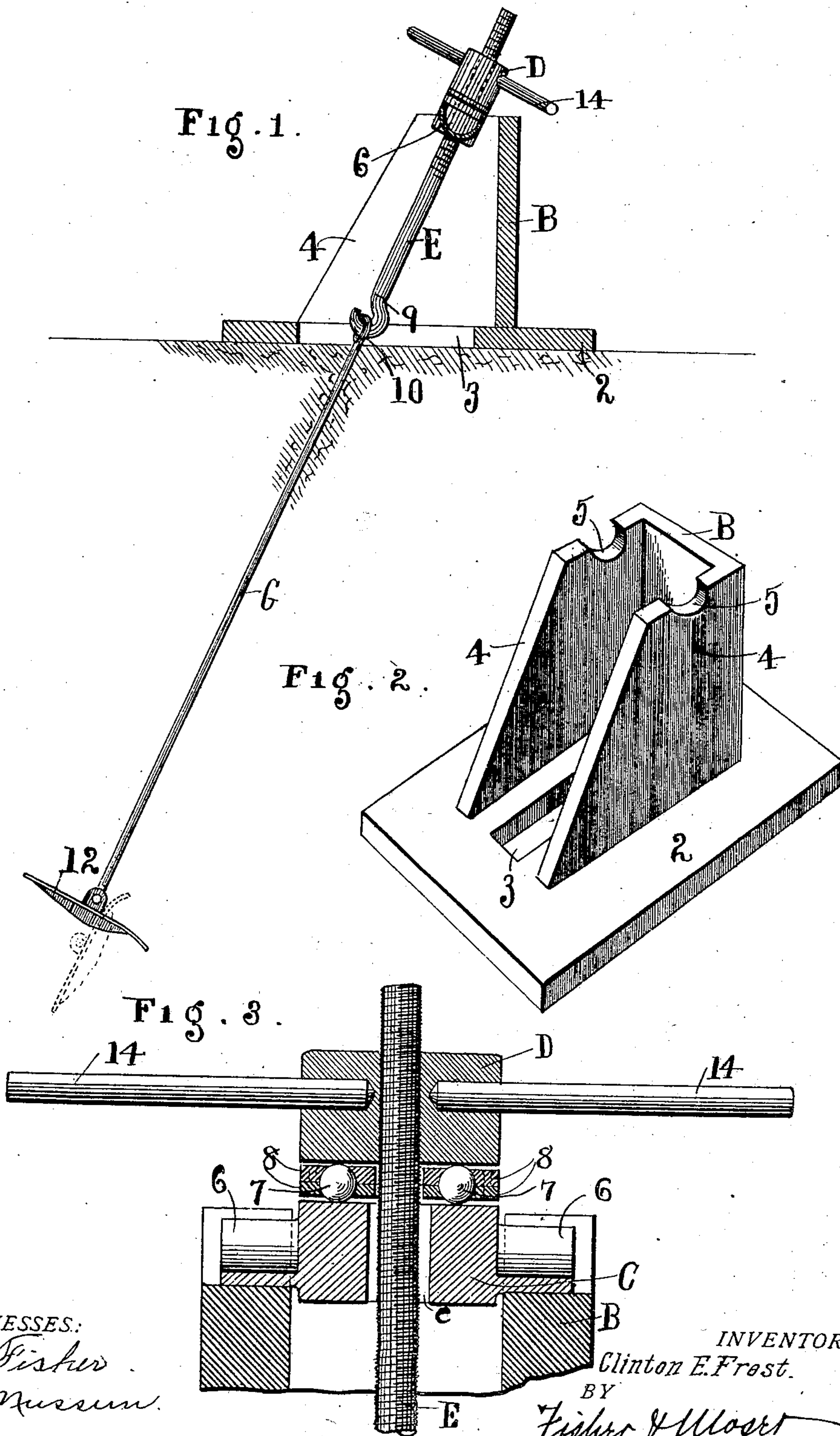


No. 880,649.

PATENTED MAR. 3, 1908.

C. E. FROST.
DEVICE FOR SETTING EARTH ANCHORS.

APPLICATION FILED AUG. 22, 1907.



WITNESSES:
C. M. Fisher
J. C. Mueser

INVENTOR.
Clinton E. Frost.
BY
Fisher & Mueser
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CLINTON E. FROST, OF CLEVELAND, OHIO, ASSIGNOR TO THE ATLAS ANCHOR COMPANY, OF CLEVELAND, OHIO, A CORPORATION.

DEVICE FOR SETTING EARTH-ANCHORS.

No. 880,649.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed August 22, 1907. Serial No. 389,627.

To all whom it may concern:

Be it known that I, CLINTON E. FROST, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Devices for Setting Earth-Anchors; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a device for setting earth anchors, and the invention consists in a device adapted to draw the anchor after placing it in the earth to its permanent setting position, at which point it is adapted to take its maximum pull and not be moved or drawn therefrom by the strain that comes thereon in service.

It is well known that a good earth anchor, in order to be permanently set, should be placed as much as possible under undisturbed earth. If this be not done a very large surface, such as is obtained with the usual deadman, so-called, must be employed, and even then the settling of the earth will allow the deadman to lift more or less.

In my setting of anchors I plan to have from seventy-five to eighty-five percent. of the surface pull against undisturbed earth, while the remaining portion is against doubly packed earth, and it is to set the anchor in these conditions that I employ my present invention. To do this, I first dig a hole about three-fourths of the width of the anchor and to the required depth. The anchor is then placed in right relation in this hole and earth filled in upon the anchor and tamped firmly therein. I then apply my tightening device to the end of the anchor relatively as shown in Fig. 1, and pull the same upward to its tightened position. The lift of the anchor ordinarily in such cases does not exceed three to five inches, and my tightening device is adapted to take up all of this and more if necessary to get a firm setting.

In the accompanying drawings, Figure 1 shows a vertical sectional elevation of the box or frame which constitutes a base or support for the tightening mechanism, and shows an elevation of the said mechanism as it appears in connection with an anchor in the process of tightening. Fig. 2 is a perspective view of the boxing or base of the

device alone, and Fig. 3 is an enlarged sectional elevation of the main portion of the device as it is seated upon said boxing.

The said invention as shown comprises a ground support boxing or base B having a wide flat bottom —2— to rest directly upon the earth and provided with a central longitudinal slot —3— in said bottom, and upright walls —4— connected across their rear and open at their front and provided with bearings —5— on their top. The front edges of said side walls are inclined and the space is open between them to facilitate operations with the device.

C represents a bearing block or member, having semi-circular or equivalent trunnions adapted to rock more or less in said bearings —5— and a central hole *c*, and the said block C is flat upon its top and adapted to serve as a bearing surface for ball bearings —7—. Said balls —7— are rotatably confined in suitable plates —8—; and operating head D serves as a large nut upon draw-rod E to tighten the parts. Said draw or tightening rod E has a hook 9 at its bottom adapted to engage in a loop —10— or its equivalent, at the top of anchor rod —G—, the anchor —12— at the bottom being attached to said rod in any approved way. The said ball bearings, or equivalent anti-friction mechanism, are necessary to sustain the pressure of operating head D upon supporting head E because the pull may be equal to five or six thousand pounds to tighten or set the anchor, and handles 14 are engaged in head D and serve to turn the head to effect the tightening. When an anchor has been set the tightening head or nut is unscrewed and the parts are drawn forward over the open inclined side of side walls —4— and separated and removed, when permanent connections are made with anchor loop —10— and the device is ready to set another anchor, and so on.

What I claim is:—

1. In devices for setting earth anchors, a ground support having a flat bottom having a slot through its middle front to rear and upright supports at the sides of said slot provided with circular bearings in their top and a cross wall at the rear of said slot connecting said side supports.

2. In devices for setting earth anchors, a ground support having a flat bottom with a

slot in its center and upright portions at the sides of said slot having circular bearings at their top and front inclined edges.

3. In devices for setting earth anchors, a
5 support having a flat bottom with a slot through the same front to rear and walls at the sides of said slot having rounded bearings at their top, in combination with a rod threaded at its upper end and adapted at its
10 lower end to connect with an anchor rod through said slot, a block having trunnions seated on said bearings and engaged centrally by said threaded rod, and a threaded head engaged on said rod and adapted to be
15 rotated on said block, whereby the said rod is tightened or loosened in respect to the anchor rod.

4. In devices for setting earth anchors, a
base member having a slotted bottom and
20 upright supports thereon provided with open bearings, in combination with a screw support rotatably and removably mounted within said open bearings, and a tightening screw member adapted to be detachably engaged
25 with the anchor connections and having a threaded head rotatably mounted on said screw support.

5. An anchor setting device comprising a base member adapted to rest upon the ground

and a tightening member rotatably and re- 30 movably mounted on said base member, in combination with an earth anchor having an anchor rod adapted to be detachably engaged with said tightening member.

6. An anchor setting device having an 35 open base and upright supports open at the front, and said supports having open seats at their top, in combination with a tightening member rotatably and removably mounted within said seats and adapted to detachably 40 connect with the anchor connections.

7. In devices for setting earth anchors, a ground support having a flat bottom with a slot in its center and upright portions at the sides of said slot having circular bearings at 45 their top.

8. In devices for setting earth anchors, a ground support having a flat bottom with a slot in its center and upright portions at the sides of said slot having circular bearings at 50 their top and an open front.

In testimony whereof I sign this specification in the presence of two witnesses.

CLINTON E. FROST.

Witnesses:

R. B. MOSER,

F. C. MUSSUN.