April 27, 1954 C. C. PHILLIPS 2,676,681

ANCHOR DRIVER

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Fig. 1.

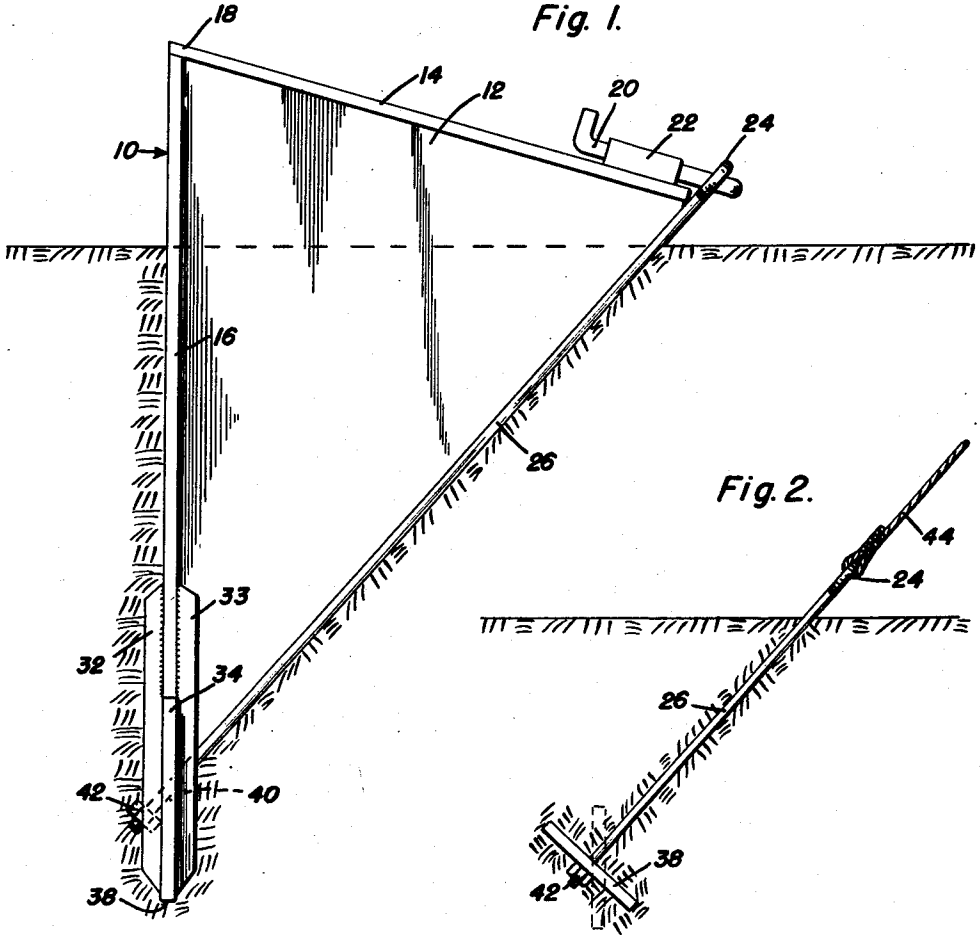
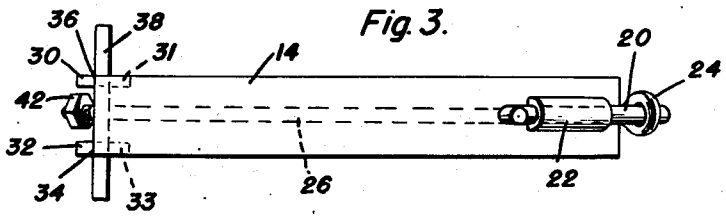


Fig. 2.

Fig. 3.



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Fig. 4.

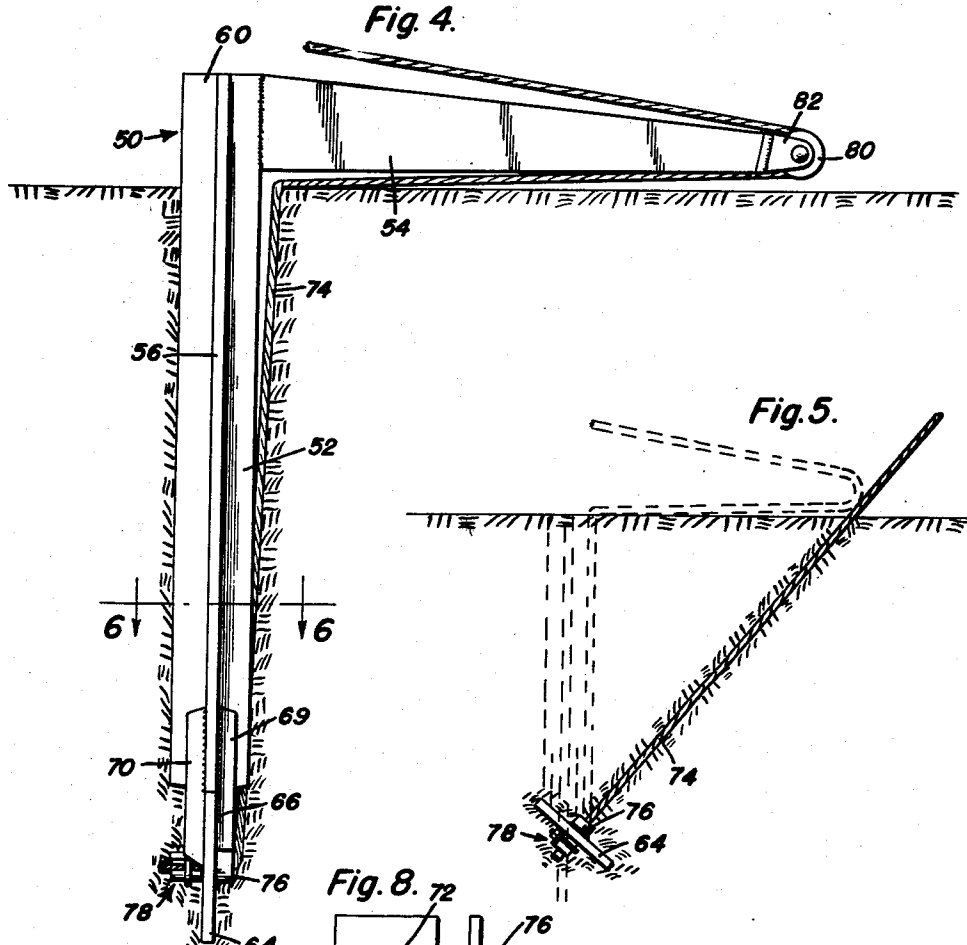


Fig. 5.

Fig. 8.

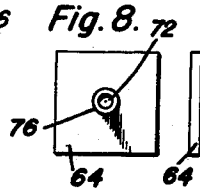


Fig. 9.

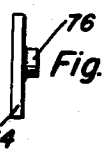


Fig. 7.

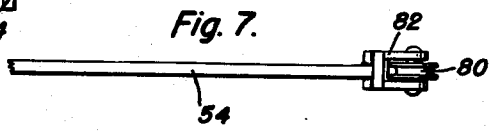
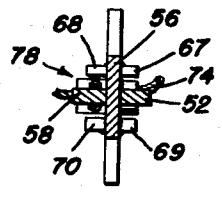


Fig. 6.



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ANCHOR DRIVER

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1 Claim. (Cl. 189—90)

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This invention relates to devices for placing anchors in the ground.

An object of this invention is to provide an improved anchor driver which is to be used as an attachment for or in connection with a pile driver of standard description, or some other device which supplies driving force, the attachment including a lead member arranged to be driven into the ground and provided with a means of retaining an anchor plate to which a cable or rod is fastened whereby when the driving member is hammered into the ground, it may be lifted by standard means, leaving the anchor in the ground.

Ancillary objects and features if importance will become apparent in following the description of the illustrated forms of the invention.

In the drawings:

Figure 1 is an elevational view of the device showing it in place in the ground;

Figure 2 is an elevational view showing the anchor located in the ground after having been applied by the structure of Figure 1;

Figure 3 is a plan view of the device in Figure 1;

Figure 4 is an elevational view of a second form of the invention showing it in place in the ground;

Figure 5 is an elevational view of the anchor after it has been separated from the driver;

Figure 6 is a elevational view taken on the line 6—6 of Figure 4 and in the direction of the arrows;

Figure 7 is a top view of a part of the driving member or assembly of Figure 4;

Figure 8 is a plan view of a typical anchor plate; and

Figure 9 is an end view of the structure in Figure 8.

The devices illustrated in the drawings are specifically designed to be used to locate and place an anchor in the ground. They are arranged to be used with standard pile drivers, to be actuated by the hammer thereof or to be used in conjunction with other articles or devices providing a hammering or driving force.

Attention is first invited to Figures 1–3. A driving member 10 is illustrated and consists of a substantially triangular plate 12 with a strengthening plate 14 along the upper edge thereof and a plate 16 fixed to the vertical side edge thereof. The plate 16 is adapted to be placed in grooves of the pile driver lead and the hammer force is applied to the upper surface of the plate 14 approximately at the region 18. When the device is not employed with a pile

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driver, the driving force is still applied at the region indicated at 18. Although the plate is illustrated as being driven in the ground so that one edge is vertical, this is not necessary, since the plate may have said edge arranged at any angle.

There is a rod 20 which constitutes a bolt, slidably disposed in the sleeve 22 which is fixed to the plate 14. This rod is adapted to be disposed in the eye 24 of the anchor rod 26 which constitutes a part of the anchor and is adapted to be left in the ground.

Guides in pairs 30 and 31, 32 and 33, are welded or otherwise rigidly fixed to the plate 16 and are so arranged as to constitute slots 34 and 36 into which the anchor plate 38 is disposed. Since the slots open downwardly, after the rod 26 has been pressed into the ground by a hammering force derived from a sledge hammer, pivoting the hammer or other device, the driving member 10 may be lifted after releasing the bolt 20, thereby leaving the anchor plate 38 and its rod 36 in the ground.

In order to hold the rod 26 and anchor plate 38 in assembly, there is an aperture 40 provided in the anchor plate 38 through which the lower end of the rod 26 passes and a nut 42 is disposed on the lower end of the rod holding the assembly in place releasably on the driving member 10 and serving to hold the rod 26 and anchor plate 38 assembled when the anchor is serving its function as such, for example by attachment of a cable 44 to the eye 24 thereof and using the cable for its usual purpose in connection with construction when a force is applied to the rod 26, the anchor plate 38 will rotate until such time that the back surface thereof contacts the inner surface of the nut 52 as disclosed in Figure 2. The aperture 40 in the anchor plate is sufficiently sized to permit this movement.

Attention is now invited to Figures 4–9. Here a modified form of the invention is illustrated and includes a driving member generally indicated at 50 and differing from the driving member 10 in certain details of construction.

Instead of using a triangular plate, the plate of Figure 4 is rectangular and is indicated at 52. Welded or otherwise fixed to the upper end of the plate 52 is another plate 54 which is disposed at right angles to the plate 52.

A plate 56 is fixed, as by welding, to the outer edge of the plate 52 and is adapted to be fitted in the grooves on the pile driver leads or portable leads. There is a plate 58 fixed to the surface of the plate 56 opposite from the surface to which the plate 52 is attached, thereby pro-

viding a structure which is substantially X-shaped in cross section. The upper surfaces of the plates **52**, **56** and **58** constitute the region **60** at which the force derived from the driver element is adapted to be applied.

The anchor plate **64** which is arranged to become a fixture in the ground, is located in slots **66** formed by the presence of pairs of members **67**, **68** and **69**, **70** which are welded or otherwise rigidly fixed to opposite surfaces of the plate **56**. The anchor plate **64** is arranged to be inserted in the slots **66** which open downwardly.

Attention is invited to Figures 8 and 9 for the specific construction of the anchor plate **64**, which is substantially rectangular and provided with a central aperture **72** through which the cable **74** is adapted to pass. A nipple or sleeve **76** is welded or otherwise rigidly fixed to one surface of the plate **64** and is arranged conventrically with the aperture **72**.

In order to hold the cable **74** fixed with respect to the plate **64**, the cable is knotted, bolted or held in place by means of the split clamp **78** consisting of two jaws held together by means of a U-bolt.

There is a pulley **80** mounted in the bracket **82** at the outer end of the arm **54** and the cable **74** is adapted to be entrained therearound.

In operation, after fitting the device in leads or holding it appropriately, it is driven into the ground as noted in Figure 4. Then, by pulling the cable **74** over the guide **80**, the driving member **50** serves as a support while the cable **74** forms a slot constituting a lead in the ground. This is a distinct advantage in using the embodiment of Figure 1 or 4 inasmuch as the slots constituting leads in the ground are formed by virtue of the same structure which is employed to hold the anchor plates and their rods or cables during the driving of them into the ground.

Of course, after the driving member **50** is pulled out of the ground, the anchor plate **64** is released so that when a pulling force is applied

to the cable **74** in a direction oblique to said plate **64** (Figure 5), the anchor plate **64** will be capable of turning in the ground so that a plane passed through one or the other of its surfaces is perpendicular to the pulling force transmitted through the cable **74**.

Having described the invention, what is claimed as new is:

An anchor driver comprising an elongated first plate, a second plate substantially coextensive with said first plate fixed to said first plate and extending along one longitudinal edge of said first plate at a right angle thereto and from opposite sides thereof, said plates having lower ends adapted to be driven into the ground, pairs of guides depending from the lower end of said second plate at opposite sides of the first plate, said pairs of guides forming a pair of right angularly disposed slots therebetween one of which is adapted to slidably receive therein an anchor plate for driving into the ground by said lower ends, an arm extending laterally from said first plate and having a terminal pulley thereon spaced from said first plate, and a cable attachable to said anchor plate and trained upwardly over said pulley for pulling into an upwardly inclined position relative to said plates to form a lead slot in the ground, the other slot of the pair being adapted to accommodate said cable therein when the anchor plate is slidably received in said one slot.

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