May 30, 1933. G. H. BACOT 1,912,244

PILE PULLER CLAMP

Filed Oct. 30, 1931

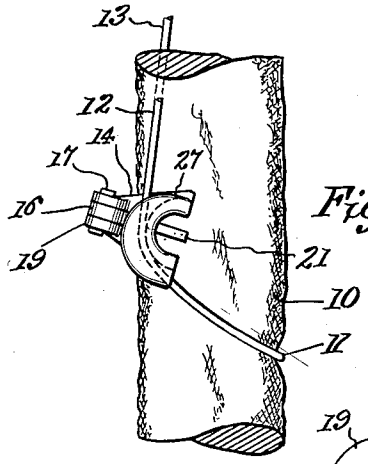


Fig. 1.

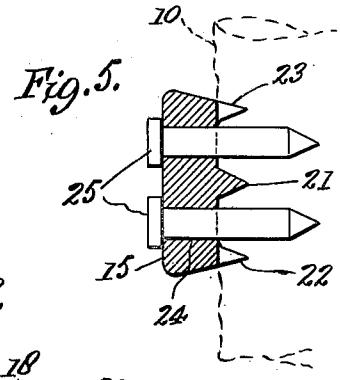


Fig. 5.

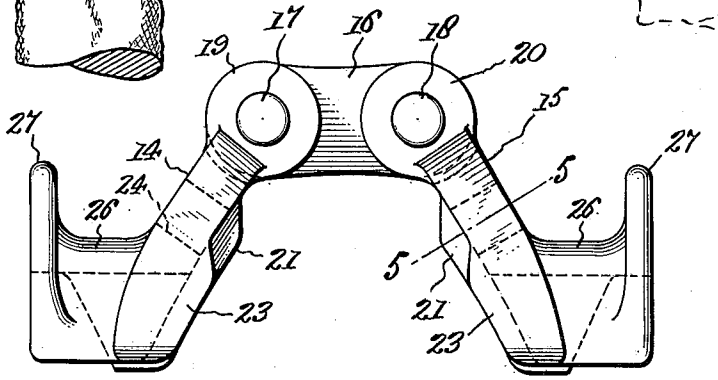


Fig. 2.

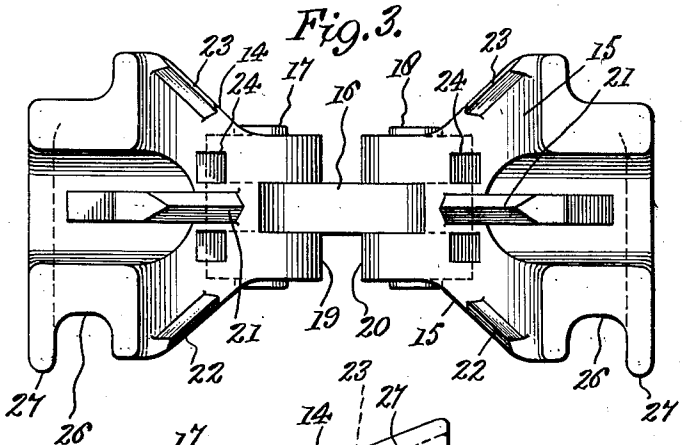


Fig. 3.

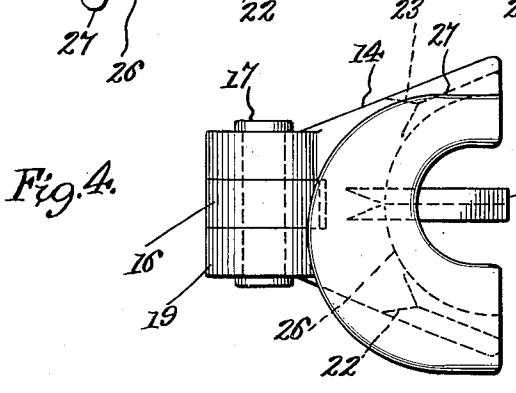


Fig. 4.

Inventor

George H. Bacot

by Wilkinson & Mawhinney

Attorneys.

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UNITED STATES PATENT OFFICE

GEORGE H. BACOT, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE ARUNDEL CORPORATION, OF BALTIMORE, MARYLAND, A CORPORATION OF MARYLAND

PILE PULLER CLAMP

Application filed October 30, 1931. Serial No. 572,170.

The present invention relates to improvements in pile puller clamps, and has for an object to provide a clamp that will be self adjusting to various sizes of piles and which may be quickly applied and detached.

Another object of the invention is to provide an improved pile puller clamp which will be positive in action and which cooperates with a pulling cable, whereby to offer a smooth path for the take-up of the pulling cable when tightening the cable loop and clamp upon the pile.

A further object of the invention resides in providing an improved pile puller clamp in which the life of the pulling cable is greatly prolonged and which is so constructed and arranged that the operation will be successfully carried on under conditions where the ordinary cable or chain "sling" will not be effective.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawing, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a fragmentary side view of a pile with the improved device applied thereto in the position of use.

Figure 2 is a side view on an enlarged scale of the improved pile puller clamp with the cable unapplied.

Figure 3 is a bottom plan view of the improved device.

Figure 4 is an end view of the same, and

Figure 5 is a section taken on the line 5—5 in Figure 2.

Referring more particularly to the drawing 10 designates a pile, post, timber or the like, 11 designates the loop of the pulling cable which extends about the pile, and 12 and 13 indicate the two parallel ends of the cable which are brought up lengthwise of the pile 10 after passing in engagement with the improved clamp device.

This improved clamp consists of two mutual members 14 and 15 hingedly or pivotally connected together as by the use of a link 16 pivoted as indicated at 17 and 18 to the two members.

The link 16, as shown in Figure 3, may extend between bifurcated parts or perforated ears 19 and 20 of the two members and the pivot pins 17 and 18 may be passed through the alining perforations in the ears and in the end portions of the link 16. The heads of the pivot pins are then flattened or riveted over the outside walls of the members. The link arrangement will not only afford a hinge connection between the members but it will provide for a rotation on two spaced pivotal centers for the members, thus providing a great latitude of movement for compensation in the cases of small and large diameter piles.

The main body portions of the members 14 and 15 extend down diagonally and in divergent relation and preferably spread out fanwise, as indicated in plan in Figure 3, in order to give the members a relatively great purchase upon the piles. The under sides of the body portions of the members 14 and 15 are provided with a number of fins or spurs preferably elongated and sharpened. As shown in Figure 3 each member is provided with three such fins, an intermediate fin 21 and two lateral fins 22 and 23.

The central fin 21 is radial with respect to the pivotal axis of the device while the two flanking fins 22 and 23 are diagonal thereto and extend in relatively opposite directions. The three fins are intended to bite into the timber and as they extend along relatively angular lines the same will obtain a very secure hold upon the timber preventing the clamp device from casual or accidental movement there along.

The body portions 14 and 15 of the members are also preferably provided with nail holes 24. Advantageously one such hole is provided to each side of the center fin 21 and the nails 25, as shown in Figure 5, may be driven into these holes and into the timber, so as to prevent the device from creeping along the pile under strain.

Figure 5 shows the cooperation of the nails of other fastening devices 25 and the

fins, the nails also tending to drive the fins into the wood.

At the lower outer free portions of the members 14 and 15 are extension parts forming saddles 26 with horns, lugs or flanges 27 on the outer sides of the saddles. These saddles are semi-circular in end view, see Figures 1 and 4, and they are adapted to receive the portions of the cable 12 and 13, the cable sliding around in the semi-circular saddles and acting to bind the members against the pile.

In the use of the device, the clamp is placed around the pile on one side. A loop of cable, used for pulling, is placed on the other side of the pile. The cable is then hooked around both sides of the clamp upon the saddles 26, as indicated in Figure 1.

As strain is put on the pulling cable, the clamp members tighten upon the pile proportionately to the strain on the cable. The fins on the inside of the clamp sink into the timber resulting in a very powerful grip and holding power.

In placing the clamp on the pile, it may be held or supported in place by driving spikes 25 into the pile through the holes 24 provided in the clamp castings.

The device may be made in appropriate metal or other material and in desired sizes and weights.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims:—

What is claimed is:—

1. A pile puller clamp comprising two mutual separated members having means to grip the pile, means to which said members are pivoted for spacedly connecting said members, and means on the portions of the members remote from said pivotal connections for receiving a cable whereby the members are moved about their pivotal connections tightly against the pile.

2. A pile puller clamp comprising two mutual members, a link pivoted to said members, fins on the members for biting into the timber of the pile, and rope saddles on the free outer portions of said members.

3. A pile puller clamp comprising mutual cast members substantially fan shaped in plan and having bifurcated perforated ears at the narrower near ends, a perforated link bridging the gap between said members and fitted between the pairs of perforated ears, pivot pins connecting said ears and the link, elongated central fins having sharpened ridges lying on the inner sides of the members and radial to the pivots, elongated lateral fins having sharpened ridges at the outer portions of the fan shaped members extending diagonal to the central fin and in relatively opposite angular directions to one another, said members having holes therein at opposite sides of the central fin for receiving fastening means to be driven into the pile, semi-circular rope saddles extending outwardly at the free portions of the members for receiving the opposite sides of a looped pulling cable, said saddles having flanges upon their outer sides for confining the cable.

4. A pile puller clamp comprising two pivoted members adapted to close in their pivotal movement in an embrace upon opposite side portions of the pile, said members being relatively short compared to the circumference of the pile to embrace a portion only of the pile opposite to a loop formed in a cable about the pile, each member having at its free end a rope saddle extending substantially axially of the pile for slidingly receiving therethrough both free ends of the cable whereby when the ends of the cable are pulled axially or longitudinally of the pile such ends will slide through the rope saddle and bind the members against opposite side portions of the pile.

GEORGE H. BACOT.