March 22, 1932. F. W. AIKEN 1,850,147

ANCHOR

Filed Sept. 20, 1928

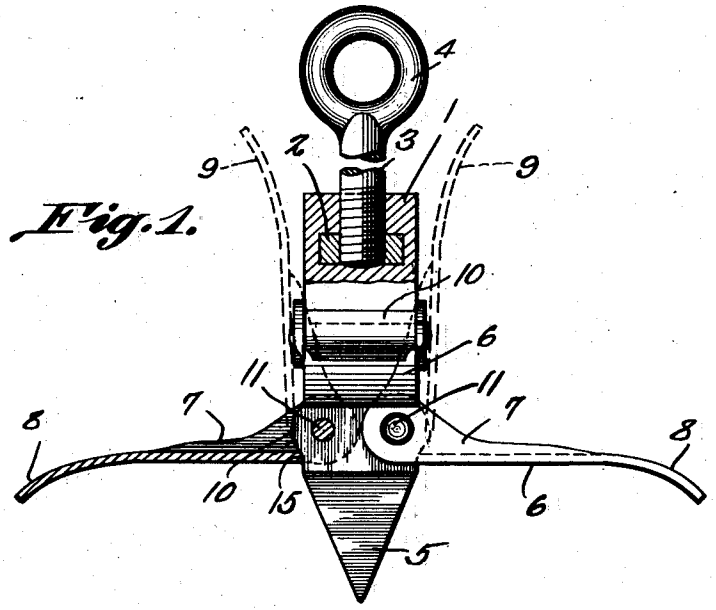


Fig. 1.

Fig. 2.

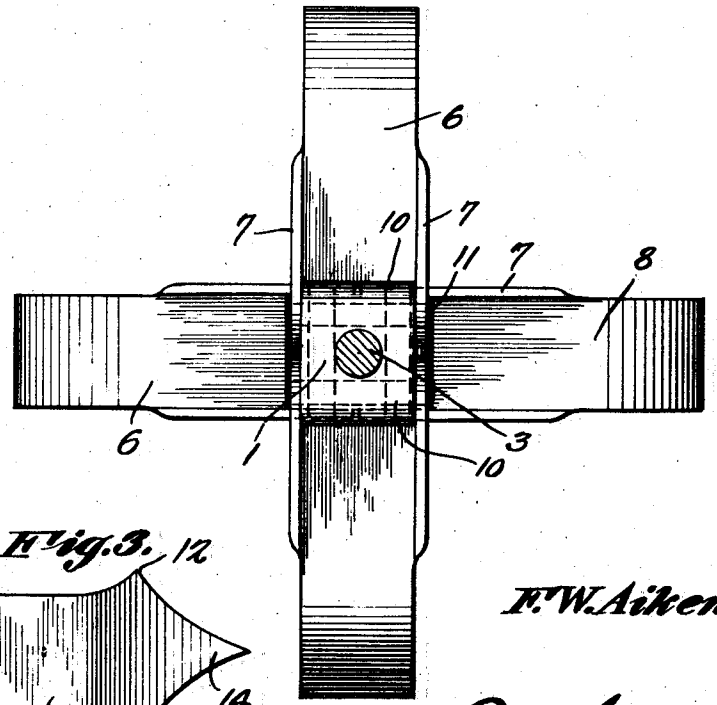


Fig. 3.




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# UNITED STATES PATENT OFFICE

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## ANCHOR

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This invention aims to provide an anchor, adapted to be driven into the ground, and so constructed that the arms of the anchor will open readily, when the anchor is pulled up a little. The invention aims, moreover, to provide an anchor which will be inexpensive to manufacture, facile in operation, and void of complicated parts.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of the invention.

In the accompanying drawings:—

Figure 1 shows in elevation, a device constructed in accordance with the invention, parts being broken away and parts being in sections;

Figure 2 is a top plan wherein the shank appears in section;

Figure 3 is a fragmental plan showing a slight modification.

The anchor forming the subject matter of this application preferably is made of metal throughout, and includes a body 1. A steel nut 2 is embedded in the body 1, when the body is cast. The numeral 3 designates a shank which is threaded into the nut 2, and because the nut 2 is provided, the shank 3 has a very strong anchorage in the body 1. At its upper end the shank 3 is supplied with an eye 4 or other attaching element. The lower end of the body 1 is pointed, as indicated at 5, so that the body can be driven readily into the ground.

The body 1 is provided with any desired number of arms. In the present embodiment of the invention, but not of necessity, the body is supplied with four arms, designated by the numeral 6. The arms 6 may be as wide as the body 1, and at their inner ends, they are provided, at their longitudinal or outer edges, with reenforcing flanges 7.

At their outer ends, the arms 6 are curved, as shown at 8, so that when the arms are turned up against the body 1, as shown at 9 in Figure 1, the upper ends of the arms will bear a diverging relation to each other. There are hinge knuckles 10 on the body 1, the hinge knuckles being arranged in pairs, and one pair of hinge knuckles being located slightly above the other pair of hinge knuckles, an observation which will be understood readily when Figure 1 of the drawings is noticed. In the hinge knuckles 10, pivot elements 11 are mounted. The pivot elements 11 pass through the ends of the flanges 7 on the arms 6, the flanges extending a little beyond the inner ends of the arms.

In practical operation, the arms 6 are turned up against the sides of the body, as shown in Figure 1 of the drawings. By means of a suitable tool (not shown) applied to the upper end of the body 1, and not to the shank 3 or the eye 4, the body 1 may be driven down into the ground as far as desired. Because the pressure is applied, as aforesaid, directly to the body 1 and not to the shank 3 or the eye 4, there is no danger of breaking the shank. After the body 1 has been driven down far enough into the ground, an upward pull is exerted on the eye 4 of the shank 3 by means of block and falls, or in any other suitable way, and the body 1 is pulled up a little. Because the upper ends of the arms 6 diverge, as shown at 9, the arms tend to swing downwardly, as the body 1 is pulled up, and, ultimately, the arms 6 come to rest at right angles to the body 1, with the inner ends of the arms 6 abutting against the body 1, as indicated by the numeral 15 in Figure 1.

When the parts are arranged in this position, it will be exceedingly difficult, and, indeed, practically impossible, to pull the anchor out of the ground.

In the modification shown in Figure 3 of the drawings, the arm 6*a* is broadened somewhat, as at 12, near to its outer end, and is pointed at its outer end, as shown at 14.

Having thus described the invention, what is claimed is:

1. In a device of the class described, a body of polygonal cross section, provided on each of its sides with outstanding hinge knuckles arranged in oppositely-disposed upper and lower pairs, pivot elements carried by the hinge knuckles, inwardly and upwardly foldable arms mounted to swing on the pivot elements, and means for limiting the outward and downward swinging movement of the arms when the body is retracted; the knuckles of the upper pairs and the knuckles of the lower pairs being spaced apart both longitudinally and circumferentially of the body, whereby each pivot element may be mounted at each end the same length in the lugs, the spacing of the upper and lower pairs of lugs longitudinally of the body giving the arms of the upper pairs of knuckles a separate hold on the earth from the arms of the lower pairs of hinge knuckles when the body is retracted and the arms opened outwardly and downwardly, the arms of the knuckles of the upper pairs being disposed out of alignment, longitudinally of the body, with respect to the arms of the lower pair of knuckles.

2. A device of the class described, constructed as set forth in claim 1, and further characterized by the provision of a nut embedded in the upper end of the body, and an operating shank threaded into the nut.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

FRANK W. AIKEN.