ANCHOR FOR AIRCRAFT OR THE LIKE

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1 Claim. (Cl. 189—92)

The invention herein presents an anchor useful for many purposes being devised to be especially useful for fastening down aircraft.

The object of the invention is to provide a retrievable anchor capable of repeated use to fasten down aircraft, or other objects, which will be of new, simple, inexpensive, satisfactory, efficient and improved construction.

In the accompanying drawing forming a part of this specification,

Fig. 1 is a perspective view of an anchor made according to the invention as when applied to use;

Fig. 2 is an enlarged side elevational view of the anchor;

Fig. 3 is a fragmentary edge elevational view of said anchor on the scale of Fig. 2;

Fig. 4 is a detail sectional view, taken on line 4—4 in Fig. 3, of a section of the wedge-shape-and-pointed member 10, which is an enlarged transverse sectional view, taken on line 5—5 in Fig. 2; and

Fig. 6 is a view corresponding generally with the disclosure of Fig. 5 but showing parts in different positions.

Speaking generally, the anchor consists of a lower unit including a wedge-shape-and-pointed member 10 to be driven into the ground, and an upper unit constructed as a shank 11 rotatably mounted upon the lower unit and integrally or rigidly supporting a handle 12 at the upper end of the shank and oppositely extending retaining members or wings 13 at the lower end of said shank.

The wedge-shape-and-pointed member 10 is hollow as disclosed. It consists of first and second pieces, denoted 14 and 15, respectively, which are generally triangular in outline and curvilinear in direction transversely of the shank 11. The first and second pieces 14 and 15 are joined, as by welding, at their respective sides, denoted 16 and 17, respectively, and meet at their lower apices to provide a point 18 at the lower apex of the wedge-shape-and-pointed member 10. Upper portions of the first and second pieces 14 and 15, or portions of said first and second pieces spaced farther from the point 18, curve outwardly from each other at and adjacent to their midwidths in such manner that said wedge-shape-and-pointed member is of gradually increasing thickness from bottom toward top and of greatest thickness at the upper straight ends or edges of the first and second pieces 14 and 15. As disclosed, the welds together, or otherwise secured, side edges 16 and 17 of the first and second pieces 14 and 15 are relatively disposed to provide a 60-degree angle at the point or apex 18 where said side edges 16 and 17 meet. Said straight upper ends or edges of the first and second pieces 14 and 15 are interconnected by a transverse wall 19 which spans the distance between the side edges 16 and 17.

A first rigid strap 21 extends upwardly and inwardly from a portion of the upper end or edge of the first piece 14 adjacent the edge 17, a second rigid strap 21 extends upwardly and inwardly from a portion of the upper end or edge of the second piece 15 adjacent the edge 16, and the straps 20 and 21 integrally or rigidly support a bearing member 22 situated above and in spaced relation to the transverse wall 19 and disposed axially of the wedge-shape-and-pointed member 10 and its point 18.

The shank 11 is hollow. Its lower end portion is fixedly secured, as at 23, to a stud 24, within said shank between the retaining members or wings 13. A portion of said stud projecting from the lower end of the shank is rotatably mounted, as at 25, in the transverse wall 19, and a head 26 upon the stud 24 and in proximate relation to an interior or lower surface of said transverse wall is for precluding movement of the shank 11 in direction away from the wedge-shape-and-pointed member 10. The retaining members or wings 13 are in proximate relation to an exterior or upper surface of the transverse wall 19 when the stud 24 is assembled with said transverse wall. A lower portion of the shank 11 adjacent said retaining members or wings 13 and stud 24 is rotatably mounted in the bearing member 22, and the construction and arrangement are such that when the lower and upper units of the anchor are assembled, said shank 11 is in perpendicular relation to the transverse wall 19 and in axial alignment of the wedge-shape-and-pointed member 10 and its point 18.

The retaining members or wings 13 are of duplicate construction, and each is parallel to the transverse wall 19 and perpendicular to the shank 11. And said retaining members or wings lie in a single plane. Each retaining member or wing is constituted as a flat, tapering strip of rigid material which is integral or rigid with the shank 11 and extends radially outwardly therefrom.

The rigid straps 20, 21, the bearing member 22, the retaining members or wings 13 when in operative position and the shank 11 are all within the confines of planes extended upwardly from midwidth portions of the external surfaces of the first and second pieces 14 and 15 in parallel relation to said shank 11 and to each other, thus to offer no obstacle to insertion of the wedge-shape-and-pointed member 10 into the ground.

The construction and arrangement are such that the upper unit can be rotated with respect to the lower unit selectively to situate the retaining members or wings 13 in alignment with the transverse wall 19 longitudinally of the shank 11 and engaged against the rigid straps 20 and 21, as in Figs. 2, 3, 4 and 5, or in right angular relation to the wedge 10 and said transverse wall to project beyond the opposite side surfaces of said wedge, as in Figs. 1 and 6.

A cable attached to the handle 12, for fastening down an aircraft, or other object, is employed.

The manner in which the anchor is to be used will be apparent. With the lower and upper units of said anchor relatively situated as in Figs. 2 to 5, the handle 12 will be lowered and drawn through the wedge-shape-and-pointed member 10, together with a portion of the shank 11, will be forced into the ground. Then said handle will be manually turned to rotate said shank to cause the retaining members or wings 13 to project from the wedge-shape-and-pointed member 10, as in Figs. 1 and 6, and become imbedded in the ground at opposite sides of said wedge-shape-and-pointed member, as is said Fig. 1. The anchor can be set in place and easily driven into and removed from the ground when the retaining members or wings 13 are longitudinally aligned with the wedge-shape-and-pointed member 10. Said anchor will be firmly fastened down partially underground when said retaining members or wings are imbedded in the earth at locations beyond the opposite side surfaces of said wedge-shape-and-pointed member. Evidently, the anchor can be readily and easily rotated from position relative to the lower unit as in Figs. 2, 3, 4 and 5 to position relative to said lower unit as in Figs. 1 and 6, and vice versa, while the wedge-shape-and-pointed member is inserted. When the anchor is to be removed from the ground, the upper unit will be rotated from its position as in Figs. 1 and 6 to its position as in Figs. 2 to 5. Stated differently, when the anchor is to be put to use, the wedge-shape-and-pointed member 10, together with a portion of the shaft 11, will be pushed into the ground and then said shank will be rotated to cause the retaining members or wings 13

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to project underground at opposite sides of the wedge-shape-and-pointed member. When the anchor is to be retrieved, the shank 11 will be rotated to cause the retaining members or wings 13 to be moved back to position within the confines of said wedge-shape-and-pointed member.

What is claimed is:

An anchor comprising a lower unit including a hollow wedge having a point, and a transverse upper wall removed from the point of the wedge, spaced apart 10 wings extending upwardly above said transverse wall, the upper ends of said spaced wings having a bearing formed thereon, an upper unit consisting of a shank having a handle on its upper portion thereof and divergent retaining wings on its lower end, said shank being mounted in the bearing formed on the lower wedge unit, said retaining wings being concealed over the transverse wall of the wedge in one position, said handle on the shank of the upper unit constituting means for projecting the retaining wings to a position where said retaining wings project beyond opposite side surfaces of said wedge.

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