Dec. 25, 1956 D. M. FINCH 2,775,252

ADJUSTABLE TENT STAKE

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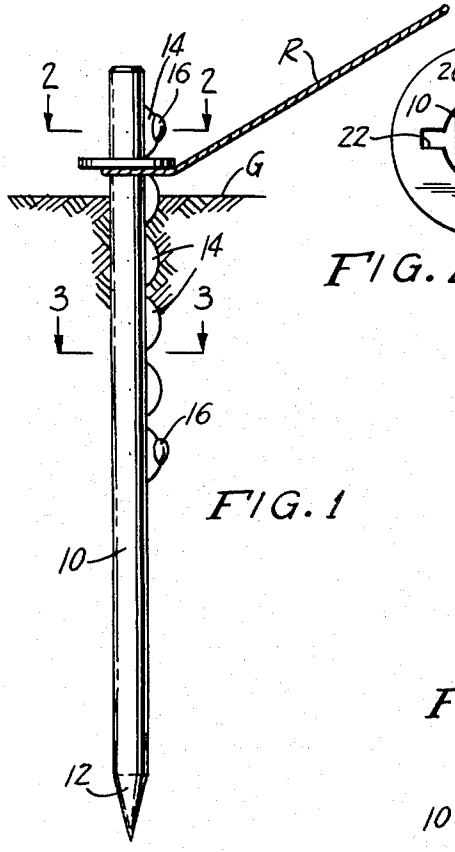


FIG. 1

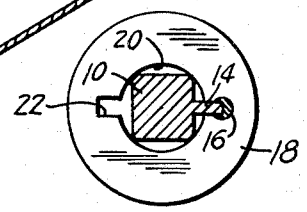


FIG. 2

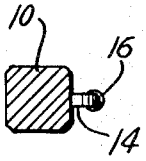


FIG. 3

FIG. 6

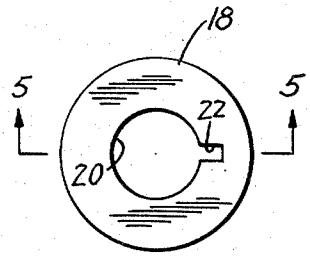


FIG. 4

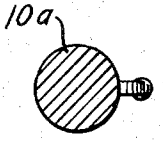


FIG. 7

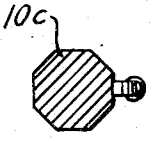


FIG. 9

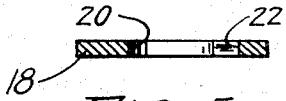


FIG. 5

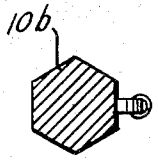


FIG. 8

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ADJUSTABLE TENT STAKE

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4 Claims. (Cl. 135—15)

The present invention relates to tent stakes, and more particularly has reference to an adjustable tent stake which can be driven into the ground any of various distances, and which in each instance will be adapted for connection of a tent rope thereto where the stake projects out of the ground.

Ordinarily a tent stake includes a single notch or hook, and the stake must be driven into the ground for its full length in order to bring the rope-engaging notch or hook to ground level. Obviously, this presents no difficulties when the soil is light or soft, but where the soil is hard, rocky, etc., as for example in mountain areas, considerable difficulty is encountered in locating a place where a stake can be driven to its full length.

It has been heretofore proposed to permit connection of a tent rope to a tent stake at any of various locations along the length of the stake, but the means heretofore suggested have involved the formation of openings in channel members, etc., so that the construction, while usable in a tent stake of channelled formation, is not readily usable on tent stakes formed from lengths of solid bar stock, which are much preferred for their strength, durability, and lack of crevices in which dirt may lodge.

The main object of the present invention is to provide adjustable means of the type referred to which will be particularly adapted for use with tent stakes having body portions of solid cross section, though the invention is not necessarily limited to tent stakes of this type. The invention, in fact, can be embodied in stakes of angular cross section or channel cross section, but where previously devised tent stakes having longitudinally spaced locations at which the ropes can be attached have been adapted only for manufacture with special cross sectional shapes such as channel or angle members, the present invention is applicable to tent stakes of all cross sections.

One important object is to provide a tent stake of the type referred to wherein the means for providing an abutment for the tent rope can be swiftly adjusted along the length of the stake into closely spaced relation to the ground.

Another object is to provide a construction wherein said means, following adjustment along the length of the tent stake, can be locked in the position of adjustment by a partial turn.

Another object is to so design said means that it will be relatively loose upon the tent stake, so as to permit it to tilt slightly under the upward pull of the tent rope, to correspond in great degree to the inclination of the tent rope, whereby to eliminate surfaces against which the tent rope may rub.

Still another object is to provide a device of the type referred to wherein the means for connecting the tent rope adjustably to the tent stake will provide a rope-engaging surface extending about the full circumference of the stake, to insure to the maximum extent the firm connection of the rope to the stake.

Still another object is to provide a tent stake wherein

the adjustable means will include a plurality of fins, spaced longitudinally of the stake, said fins being so designed as to interfere to a minimum degree with penetration of the ground by the stake.

Other objects will appear from the following description, the claims appended thereto, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a side elevational view of a tent stake formed according to the present invention as it appears when in use;

Figure 2 is an enlarged transverse sectional view on line 2—2 of Figure 1;

Figure 3 is a transverse sectional view on the same scale as Figure 2, taken on line 3—3 of Figure 1;

Figure 4 is an enlarged plan view of the adjustable collar or washer per se;

Figure 5 is a sectional view on line 5—5 of Figure 4, on the same scale as Figure 4;

Figure 6 is an elevational view of the tent stake in use, with the washer in a different position of adjustment, the stake being viewed from the right of Figure 1; and

Figures 7, 8, and 9 are views similar to Figure 3 showing different modifications of the invention.

Referring to the drawings in detail, the reference numeral 10 designates an elongated body portion of the tent stake constituting the invention, having a tapering point 12 at its lower end. The body portion in the form shown in Figures 1–6 is of square cross section as shown in Figure 3 to best advantage, and to one of the flat faces of the body portion there are secured longitudinally extending fins 14. The fins have rounded or arcuate outer edges, terminating in the plane of the body portion face on which the fins are formed, and all the fins as shown in Figure 6 are disposed in a common plane, in which plane the longitudinal center line of the body lies. The fins are spaced closely apart, with the upper end of the series of fins terminating close to the upper end of the stake, and the lower end of said series terminating slightly beyond the midlength point of the stake in the illustrated embodiment. The number of fins is not critical, and the particular location of said fins or the length of the series is also not critical, it being mainly important that the fins be spaced apart along the upper portion of the tent stake, for a distance along the lnegth of the stake such that there will be a fin at or about the ground level when the stake is driven into the ground a suitable distance.

On the uppermost and lowermost fins of the series, there are provided longitudinally extending beads or enlargements 16. These can be applied by weld material, or in any other suitable manner. It is mainly important that the fins at the opposite ends of the series have thickened parts, for the purpose of preventing loss of a flat, annular collar 18 that shifts longitudinally of the body portion along the length of the series. In a commercial embodiment, it may be desired that the uppermost and lowermost fins be thicker than the remaining fins, for this purpose. Alternatively headed bolts may be extended through the end fins of the series or other means applied for the purpose of providing abutments or stops limiting movement of the collar in opposite directions along the series.

Collar 18 has a circular center opening 20, with the edge of said opening being disposed adjacent the corners of the body portion 10 as shown in Figure 2. The collar thus may have a characteristic wherein it can tilt out of a plane normal to the length of the body portion, so as to be inclined correspondingly to the inclination of a tent rope R extended about the body portion below the collar. Although the collar in Figures 1 and 6 is shown in said plane, the opening 20 is of a sufficiently large diameter to permit said tilting. The size of the opening further as-

sures maximum freedom of adjustment of the collar longitudinally of the body portion, between the opposite extreme positions of the collar shown in Figures 1 and 6 respectively.

Formed in the collar **18** is a radial slot **22** opening upon the center aperture **20** as shown in Figure 4. The radial slot is of a width slightly greater than the thickness of the fins **14**, thus permitting the collar to be shiftable longitudinally of the body portion whenever the slot **22** is aligned with the fins.

In use of the device, the stake is driven into the ground to the maximum extent consistent with the relative softness of the ground. For example, if the ground is soft the stake can be driven into the ground for almost its full length as shown in Figure 1. Should the ground be hard, the stake may be driven halfway into the ground as shown in Figure 6, and will still operate properly with the tent rope R secured to the stake just above the ground level.

When the stake has been driven into ground G to the desired extent, the collar **18** is shifted downwardly along the length of the stake with the slot **22** aligned with ends **14** so that the fins may pass through the slot. When the collar has been lowered to a location in which it will be between the fin at ground level and the fin next above the same, the collar is turned with the slot out of engagement with the adjacent fins, to misalign the slot relative to the fins as in Figure 2. This locks the collar against movement from its selected position, and the tent rope arm may now be looped about the body portion below the collar. The collar as previously noted may tilt out of a plane normal to the length of the body portion correspondingly to the inclination of the tent rope, so that the tent rope will not rub against the periphery of the collar. Further, the collar has the desirable characteristic that it affords a surface extending the full circumference of the stake against which the loop of the rope will bear, to assure a tight connection of the rope to the stake.

The cross sectional shape of the body portion may be varied, and for example in Figure 7 there is shown a stake which has a body portion **10***a* of circular cross section. The stake is otherwise identical to that shown in Figure 1. In Figure 8 the stake body portion **10***b* is of hexagonal cross section, and in Figure 9, the stake **10***c* is of octagonal cross section. The stakes of Figures 8 and 9 are also identical in all other respects to the stake shown in Figure 1.

Other cross sectional shapes may be employed, so long as they permit partial rotation of the collar to misalign the slot **22** relative to the plane of the fins **14**.

When the collar has been turned to misalign its slot with the fins, it will be held in the position to which it is so rotated by pull of the tent rope thereupon, which pull will tend to bind the collar frictionally against the body portion to hold the collar against accidental rotation to a position in which the slot will again be aligned with the fins. The lateral tilting of the collar aids in this regard.

When the tent rope is to be removed, it is merely necessary that the collar be turned to align the slot with the fins, after which the collar may be raised, loosening the tent rope by allowing the loop of the rope to slip upwardly along the length of the body portion, thereby facilitating disengagement of the loop from the body portion.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. A tent stake including an elongated body portion adapted to penetrate the ground; a plurality of fins spaced longitudinally of said body portion; and a collar having a center opening receiving said body portion, said collar having a slot communicating with said center opening and alignable with the fins responsive to rotation of the collar to a selected position, whereby to permit adjustment of the collar along the length of the body portion, said collar being rotatable in selected positions to which it is adjusted to offset the slot from the fins, whereby to engage the collar between adjacent fins in the selected position of adjustment of the collar, for looping of a tent rope about the body portion below the collar.

2. A tent stake comprising an elongated body portion; a series of low fins extending longitudinally of the body portion, said fins projecting radially, outwardly from the body portion in a common plane; and a collar having a center opening receiving said body portion, said collar being formed with a slot extending radially thereof and communicating with the center opening, said slot being alignable with said fins for shifting of the collar along the length of the body portion and for rotation of the collar to offset the slot from the fins in selected positions to which the collar is so shifted, said collar providing an abutment extending through the full circumference of the body portion to engage a tent rope extending about the body portion below the collar.

3. A tent stake comprising an elongated body portion; a series of low fins extending longitudinally of the body portion, said fins projecting radially, outwardly from the body portion in a common plane; and a collar having a center opening receiving said body portion, said collar being formed with a slot extending radially thereof and communicating with the center opening, said slot being alignable with said fins for shifting of the collar along the length of the body portion and for rotation of the collar to offset the slot from the fins in selected positions to which the collar is so shifted, said collar providing an abutment extending through the full circumference of the body portion to engage a tent rope extending about the body portion below the collar, the fins at opposite ends of said series having enlargements forming stops limiting movement of the collar in opposite directions beyond opposite ends of the series.

4. A tent stake comprising an elongated body portion; a longitudinal series of fins formed upon said body portion, each of said fins extending longitudinally of the body portion and the several fins being disposed in a common plane, the longitudinal center line of said body portion lying in said plane; a collar having a center opening receiving said body portion, said collar loosely receiving the body portion for tilting of the collar out of a plane normal to the length of the body portion in selected positions to which the collar is shifted along the body portion, said collar having a radial slot communicating with the center opening thereof and said slot being alignable with said plane of the fins, for effecting adjustment of the collar longitudinally of the series of fins, said collar in selected positions to which it is adjusted being rotatable to offset the slot from said plane of the fins, whereby to engage the collar between adjacent fins of the series against movement from selected positions of adjustment of the collar, the collar defining an abutment extending circumferentially of the body portion to engage a tent rope looped about the body portion under the collar.

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