

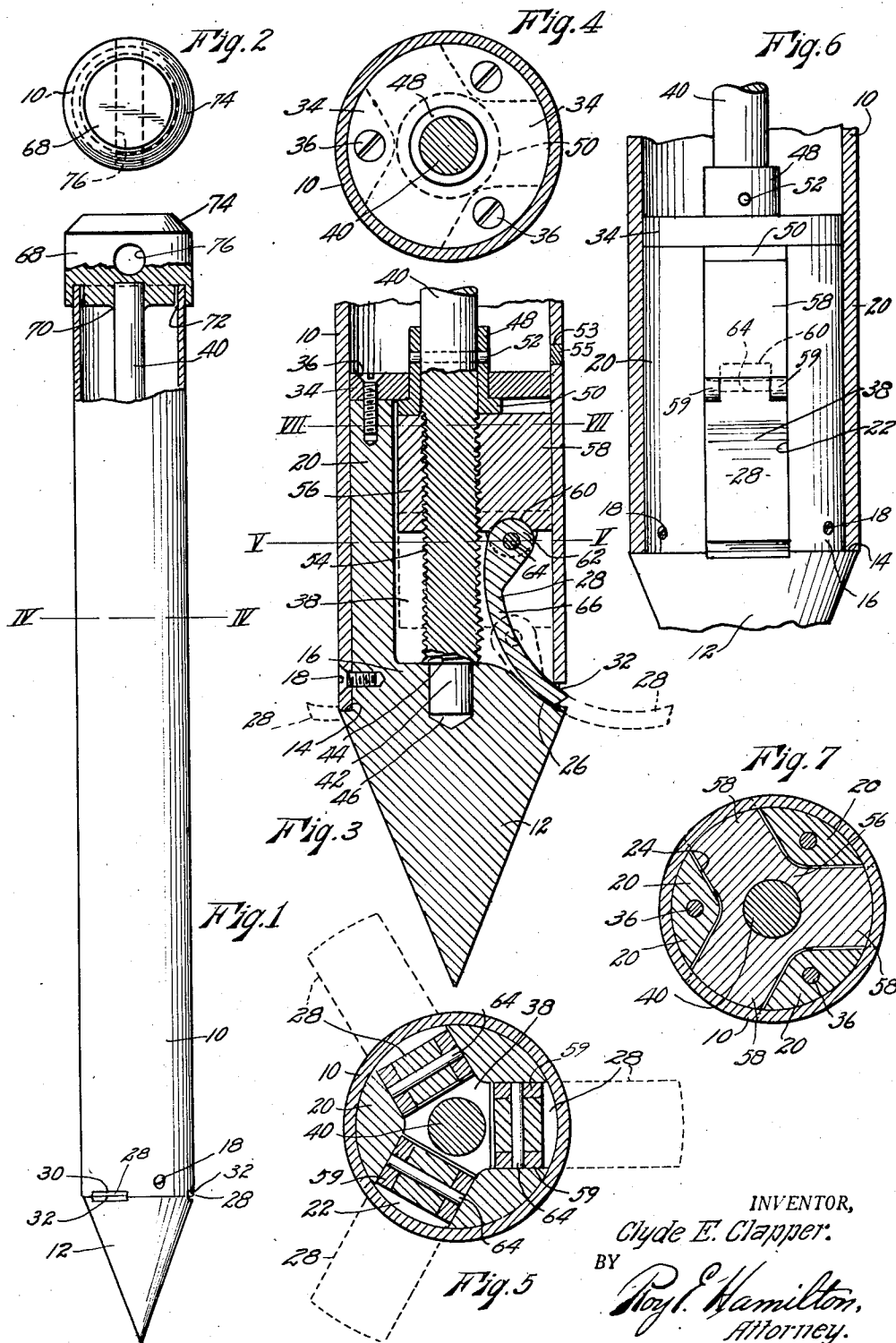
Nov. 25, 1947.

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2,431,608

ANCHOR STAKE

Filed July 13, 1945



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UNITED STATES PATENT OFFICE

2,431,608

ANCHOR STAKE

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Application July 13, 1945, Serial No. 604,772

3 Claims. (Cl. 189—92)

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This invention relates to improvements in anchor stakes and has for its general object a device of this kind which can be driven into the ground, anchored by means of adjustable flukes, then when desired may be withdrawn by retracting the flukes and withdrawing it from the ground.

One of the chief objects of the present invention is the provision of an anchor stake having means for forcing a series of flukes into the earth at substantially right angles to the axis of the post, whereby there will be no tendency to raise the post upwardly as the flukes are set.

Another object of the invention is to produce a structure wherein the flukes and the fluke operating means is securely anchored adjacent the point of the stake and manually operable from above the ground level.

Other objects are simplicity and sturdiness of construction, ease and efficiency of operation, and adaptability for many and varied uses.

With these objects in view as well as others which will hereinafter appear during the course of the specification and claims reference will be had to the drawings wherein:

Figure 1 is a side elevation of an anchor stake partly broken away and embodying this invention.

Fig. 2 is a plan or top view of the stake.

Fig. 3 is an enlarged longitudinal sectional view of the lower end portion of the stake with the flukes shown extended in dotted lines.

Fig. 4 is an enlarged cross sectional view taken on line IV—IV of Fig. 1.

Fig. 5 is a cross sectional view taken on line V—V of Fig. 3 with the flukes shown extended in dotted lines.

Fig. 6 is an elevational view of the fluke mounting positioned in the sectioned stake casing.

Fig. 7 is a cross sectional view taken on line VII—VII of Fig. 3.

Throughout the several views like reference characters refer to similar parts and the numeral 10 designates a stake casing or tubing shown as circular in cross section and providing at its lower extremity with a substantially conical driving point 12 which is shouldered at 14 to receive the end of casing 10 for firm abutment thereagainst. The shank 16 of the point extends upwardly into the body of the housing and is securely fastened therein by means of screws 18. The upper portion of shank 16 is slotted at equally spaced intervals to form tongues 20 and grooves 22 having parallel side walls 24. The lower portion of each of these grooves are curved downwardly

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and outwardly at 26 to serve as a guide and bearing for the curved body of the fluke 28 as it is moved from and to the retracted position as hereinafter described.

It will be noted that lower edge of casing 10 is notched at 30 to register with the grooves 22 and to present an opening 32 through which the fluke 28 is extended and retracted. An annular ring 34 fits the inner wall of casing 10 and rests on top of the tongues 20 to each of which it is attached by means of screws 36 thus forming a chamber 38 for the flukes and the fluke operating means. A rod 40 disposed axially in casing 10 is offset at 42 to present a shoulder 44 to rest against the bottom of chamber 38 with its reduced end portion rotatably mounted in a picket bearing 46 formed in the point 12. A sleeve 48 is rotatably fitted into ring 34 and is secured to rod 40 by pin 52. For positioning the pin 52 a hole 53 is provided in the wall of casing 10 through which the pin is inserted, after which a plug 55 is inserted to close hole 53. An annular ring 50 integral with sleeve 48 rests against the under side of ring 34 to prevent relative axial movement of the rod and supporting parts. That portion of rod 40 intermediate sleeve 48 and shoulder 44 is threaded at 54 to receive nut 56 which is secured against rotation by radial lugs 58 which rest in grooves 22 to permit movement of the nut axially of said casing.

The lower face of each of the lugs 58 is grooved at 60 to receive the arcuate head 62 of fluke 28. It will be noted that a depending lug 59 is provided at each side of the lug 58 to receive the narrowed head 62 of the fluke therebetween whereby a carrying pin 64 may be provided to pivot the fluke to the nut. The body 66 of the fluke is shown curved and when the nut is in the raised position as shown in solid lines in Fig. 3 the outer end of the fluke will be positioned substantially flush with the periphery of the casing 10 and will be resting on the curved wall 26. The body of the fluke is of a width to slidably fit in the groove 22, thus insuring a definite path of travel for the fluke to and from its position in the casing.

Rod 40 is provided at its upper extremity with a head 68 to which it is secured by welding at 70. The under side of the head is provided with an annular groove 72 adapted to receive the upper portion of casing 10 against the bottom of which the casing rests to absorb the driving force as the stake is being driven. The top of head 68 is beveled at 74 and has a transverse hole 76 to receive an operating rod, not shown, for rotating

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rod 40 to move the flukes to or from the extended position.

It will be noted that this stake is provided with three like flukes equally spaced apart so as to provide suitable anchorage at the bottom of the housing. The flukes when extended are disposed at substantially right angles to the axis of the housing, thus providing good engagement with the unbroken earth structure adjacent the stake.

When the flukes are extended as shown in dotted lines in Fig. 3 it will be noted that the head of the fluke rests in the groove 60 of the nut while the outer curved surface of the body thereof rests against the curved portion 26 of the groove, thus insuring a secure anchorage for the fluke as force is exerted to pull the stake from the ground.

When the stake is properly set the anchoring cable or guy wire is passed through hole 76 and recessed. It is considered best practice to drive the stake so that it will be in substantially parallel relation with the anchoring cable when the parts are in the anchoring position.

What I claim as new and desire to protect by Letters Patent is:

1. An anchor stake comprising a casing having a rigidly attached driving point at its one end and a rotatably mounted driving cap at its other end, an operating rod disposed axially in said casing with its upper end fixed to said cap and its other end portion rotatably carried by said point, threads formed in the lower end portion of said rod, an operating nut mounted on the threaded portion of said rod, means to prevent rotation of said nut in said casing, means carried by said driving point to prevent axial movement of said rod relative to said casing, a plurality of equally spaced flukes pivotally carried by said nut and operable through openings at the juncture of said casing and point, to and from a position beyond said casing as said rod is rotated in said casing.

2. An anchor stake comprising a casing having a removably attached driving point at its one end and a rotatably mounted driving cap at its other end, a radially grooved shank integral with said point to engage the inner end of said casing, an operating rod disposed axially in said casing with its upper end fixed to said cap and its other end portion rotatably mounted in said driv-

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ing point, a flanged sleeve fixed to said operating rod and rotatably mounted in an annular ring fixed to the upper end of said grooved shank with the flange of said sleeve resting against the lower side of said annular ring to prevent axial movement of said rod relative to said casing, threads formed adjacent the lower end portion of said rod, a radially notched nut operatively mounted on the threaded portion of said rod to engage said grooved shank to prevent rotation of said nut in said casing, a plurality of circumferentially spaced apart flukes slidably mounted in recesses formed in the intermediate portion of said point and pivotally carried by said nut and operable to and from a position within said casing as said rod is rotated in said casing.

3. An anchor stake comprising an elongated casing notched at its lower end, a driving point having a shank fitted into the notched end of said casing and secured thereto, said shank comprising a series of spaced apart tongues to form notches therebetween, a driving cap at the upper end of said casing, an operating rod disposed axially in said casing with its one end fixed to said cap and its other end portion rotatably mounted in a recess formed in said driving point, a ring secured to the upper ends of said shank tongues, a flanged sleeve mounted for rotation in said ring and securely attached about said operating rod to rotate therewith, threads formed on the lower portion of said rod, a nut operatively mounted on the threaded portion of said rod, lugs on said nut to engage the tongues of said shank to prevent rotation of said nut within said casing, flukes pivotally carried by said nut and operable to and from a position within said casing as said rod is rotated.

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