

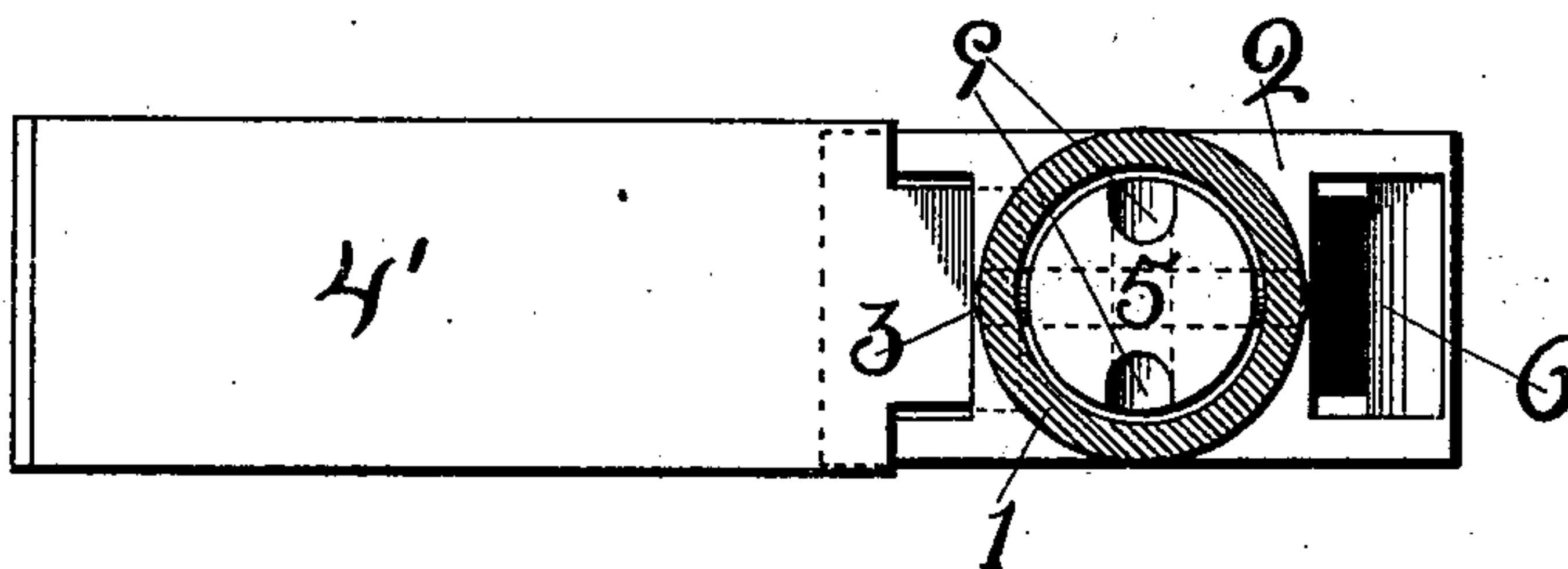
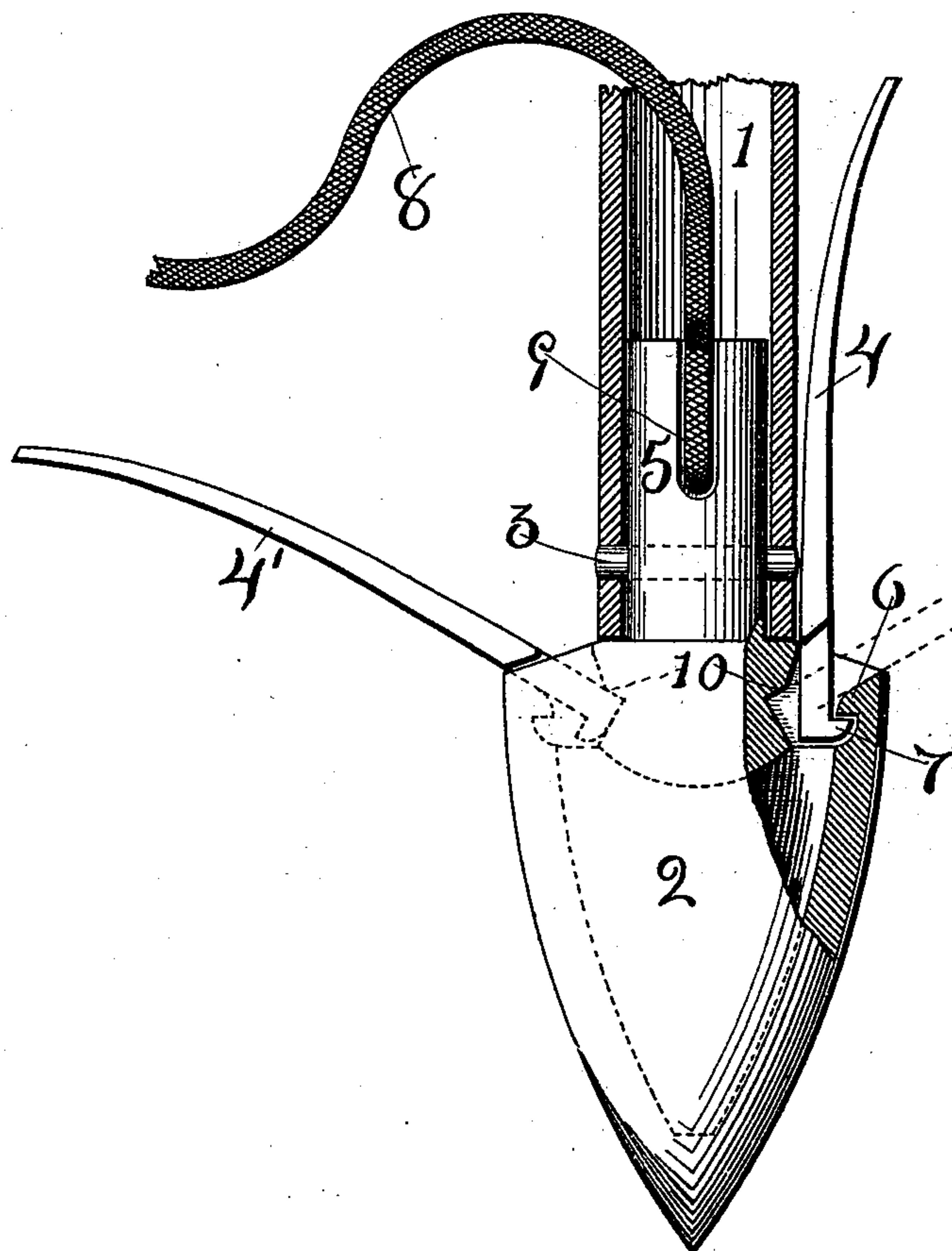
(No Model.)

D. NEALE.

PILE POINT AND PERMANENT ANCHOR FOR PILES OR CABLES.

No. 517,880.

Patented Apr. 10, 1894.



Witnesses

J. W. Sewell.
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UNITED STATES PATENT OFFICE.

DAVID NEALE, OF FORT CALHOUN, NEBRASKA.

PILE-POINT AND PERMANENT ANCHOR FOR PILES OR CABLES.

SPECIFICATION forming part of Letters Patent No. 517,880, dated April 10, 1894.

Application filed October 19, 1893. Serial No. 488,616. (No model.)

To all whom it may concern:

Be it known that I, DAVID NEALE, a citizen of the United States, residing at Fort Calhoun, in the county of Washington and State of Nebraska, have invented a new and useful Combined Pile-Point and Permanent Anchor for Piles or Cables, of which the following is a specification.

My invention relates to improvements in piles and means for anchoring cables to support or stay riprap, bridges, and the false-work used while constructing bridges, or any like work on streams or shores; and the objects of my invention are, first,—to provide a combined pile-point and permanent anchor, with folding and separable flukes, that can be easily driven; and, second,—to provide means whereby said permanent anchor may be placed leaving only a cable attached. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation, partly in vertical section, of the entire contrivance; and Fig. 2 is a top view with the cable and one of the flukes removed.

Similar numerals refer to similar parts throughout the views.

The combined pile-point and anchor-head 2 has a cylindrical shank 5 fitted to closely enter the lower end of the hollow iron pile 1, and is firmly fastened therein, when so desired, by inserting the pin or rivet 3, centrally through both parts as shown. Near the upper end of the shank a perforation is made at right angles to and through the axis, and the grooves 9 cut from the ends of said perforation to the end of the shank forms an eye by which the cable 8 is attached within the perimeter of the shank, so that shank with cable attached may be inserted in the lower end of the hollow iron pile 1, as shown in Fig. 1. The separable folding flukes, 4 and 4', have their shank ends narrower and provided with the outward turned hook 7, at the end of the shank; the anchor-head 2 is enlarged laterally adjacent to the shank 5, thus forming oppositely disposed projections, in which sockets opening upward are formed to receive the shanks of the flukes; the walls of each socket are formed with the inward projecting hook 6, adapted to engage the hook 7 on the end of

the fluke shank; also the shoulder 10 against which the end of the fluke-shank impinges when in the position of 4' in Fig. 1.

In operation where it is desired to use the contrivance as an anchor for cables an iron pile or pipe is used to drive the anchor down to the desired depth; but when used as a combined pile-point and pile-anchor, by a slight modification the anchor-head and pile-point 2, with the flukes may be attached to a wooden pile of any form.

When used as an anchor for cables the cable is attached to the shank 5 and its opposite end passed up through the pile and out through a notch or aperture at the upper end of the pile so as not to injure the cable while driving; the pin 3 is left out, the shank 5 being retained in the pipe by draft on the cable; the shanks of the flukes are then inserted in the sockets, the flukes brought up to the position shown at 4 in Fig. 1 offers little resistance to the driving, and the hook 7 engages the hook 6 and retains the shank in the socket; the upper ends of the flukes are either set or curved outward so as to engage the surrounding earth when upward draft is applied to the shank 5 which forces the flukes to the position of 4' the end of the fluke shank bearing against the shoulder 10 the bases of the shank and fluke resting on the anchor-head above the hook 6, in which position the contrivance forms a permanent anchor limited only in its stability by its size; after the anchor is placed, the iron pipe is withdrawn to be used in placing another anchor.

When used as a permanent anchor for the iron pile 1, the pin 3 is inserted and the cable omitted, otherwise the operation is the same.

The flukes being separable from the anchor head facilitates the convenience in handling, casting and transporting large and heavy anchor points, which are made of cast iron and may be solid, or hollow as shown.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A combined pile-point and pile-anchor with folding flukes substantially as described.
2. A combined pile-point and pile-anchor with folding and separable flukes substantially as described.
3. In a combined pile-point and pile-anchor

the combination of a pointed anchor-head having sockets therein and hooks within the sockets with folding separable flukes having shanks to fit the sockets, and hooks to engage
5 the hooks in the socket substantially as shown and described.

4. In a combined pile-point and pile-anchor, the combination of a pointed anchor-head, adapted to be attached to a pile and having
10 oppositely disposed sockets, and inwardly projecting hooks, and shoulders above, with separable folding flukes having shanks to loosely enter the sockets and bear against the shoulders, and hooks on the shanks to engage
15 hooks on the head, substantially as shown and described.

5. In a combined pile-point and pile-anchor, for hollow iron piles, a pointed anchor-head having a cylindrical shank to attach in the
20 lower end of the pile, and oppositely disposed projections with sockets, inwardly projecting hooks in the sockets, and shoulders above, in combination with separable folding flukes, having shanks to loosely enter the sockets
25 and bear against the shoulders, and outwardly turned hooks to engage the hooks in the sockets substantially as shown and described.

6. In a permanent anchor for cables the
30 combination of a pointed anchor-head, having

an eye to attach a cable, with separable folding flukes and means to separably attach the head to a driving rod or pipe substantially as shown and described.

7. In a permanent anchor for cables, the
35 combination of a pointed anchor-head, adapted to be separably attached to a driving rod or pipe, and having an eye to attach a cable, with folding flukes attached to the head so as to fold up while driving and unfold by up-
40 ward draft substantially as described.

8. In a permanent anchor for cables, a pointed anchor-head having a shank adapted to be loosely and separably inserted in the
45 end of a driving pipe, an eye to attach the cables, and oppositely disposed projections with sockets, inwardly projecting hooks in the sockets, and shoulders above, in combination with separable folding flukes having shanks
50 to loosely enter the sockets and bear against the shoulders, and outwardly turned hooks to engage the hooks in the sockets substantially as shown and described.

Signed at Blair, in the county of Washington and State of Nebraska, this 14th day of
55 October, A. D. 1893.

DAVID NEALE.

Witnesses:

E. C. JACKSON,
LOU VAUGHAN.