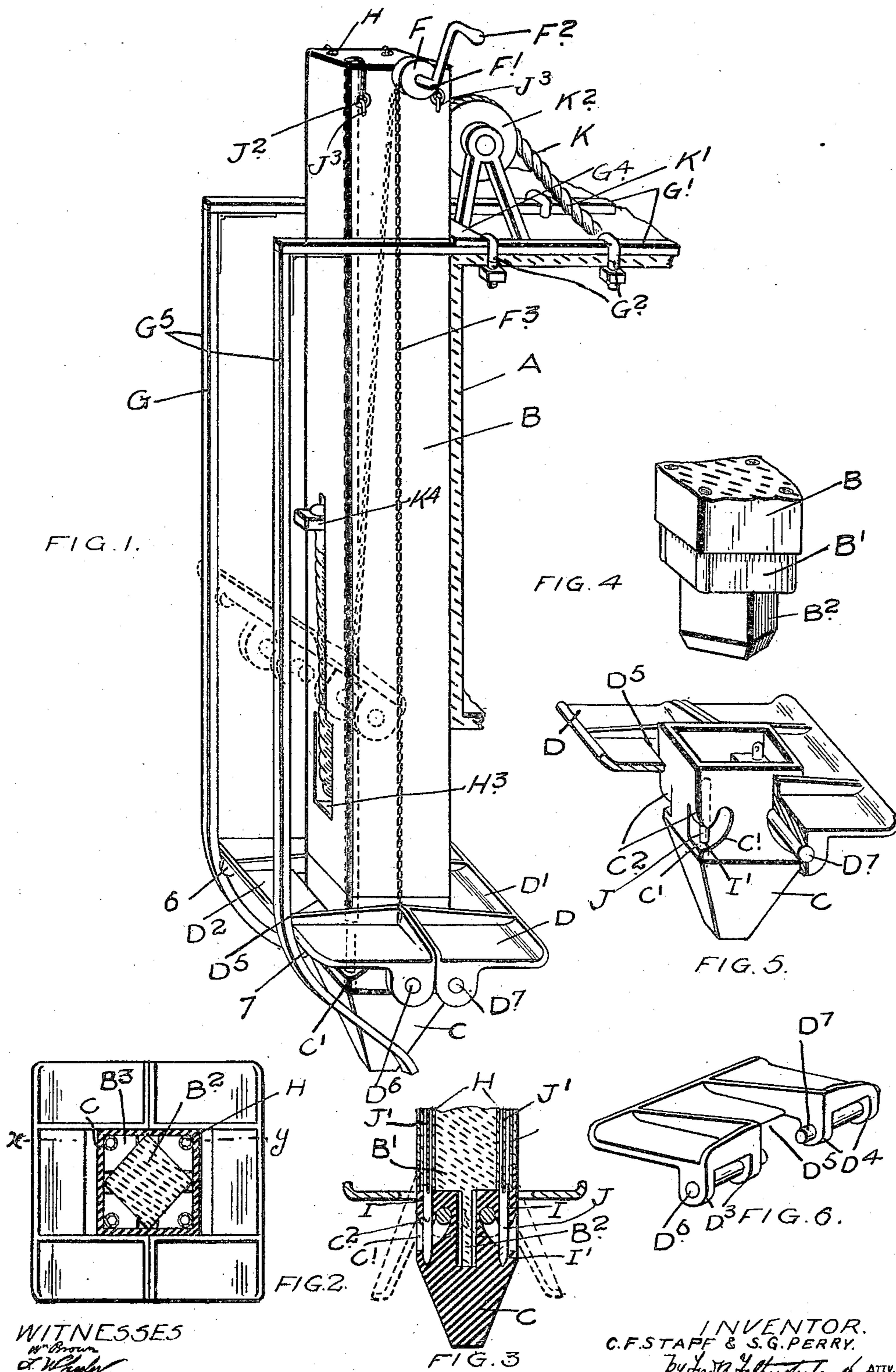


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 BOW ANCHOR FOOT PLATE AND SHIPPING APPARATUS THEREFOR.
 APPLICATION FILED OCT. 30, 1909.

965,931.

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UNITED STATES PATENT OFFICE.

SYLVESTER GEORGE PERRY, OF PORT DALHOUSIE, AND CHARLES FREDERICK STAFF,
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BOW-ANCHOR FOOT-PLATE AND SHIPPING APPARATUS THEREFOR.

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Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed October 30, 1909. Serial No. 525,540.

To all whom it may concern:

Be it known that we, SYLVESTER GEORGE PERRY, of the town of Port Dalhousie, in the county of Lincoln, and CHARLES FREDERICK STAFF, of the town of Welland, in the county of Welland, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Bow-Anchor Foot-Plates and Shipping Apparatus Therefor, of which the following is the specification.

Our invention relates to improvements in bow anchor foot plates and shipping apparatus therefor, and the object of the invention is to provide a foot plate for bow anchors which may be readily shipped and unshipped without any danger of the anchor sticking in the bed of the stream or lake when being raised and it consists essentially of a pair of leaf castings arranged at each side of the anchor point and abutting each other at their inner side, a detachably hinged connection between the leaf castings and the anchor point, and a shipping frame detachably secured on the scow or dredge for shipping the outer leaf of the foot plate as hereinafter more particularly explained by the following specification.

Figure 1, is a general perspective view of a bow anchor shown at the side of a portion of a dredge or scow with our foot plate and shipping apparatus connected thereto. Fig. 2, is a sectional plan view taken through the anchor point immediately above the foot plate. Fig. 3, is a vertical sectional view taken through Fig. 2 on line *x-y*. Fig. 4, is a perspective detail view of the lower end of the anchor post. Fig. 5, is a perspective detail view of the anchor point and the leaves of the foot plate partially broken away and in section. Fig. 6, is a perspective detail of one of the leaves of the foot plate.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a portion of a dredge or scow.

B is the anchor post connected to the dredge or scow by the usual means, such means not being shown as it forms no part of our invention. The anchor post B is formed with a reduced portion B' and a further reduced portion B² arranged diagonally to the portion B'.

C is the anchor point which fits onto the portions B' and B² of the anchor post, the portion B² fitting between the internal

bosses B³ formed in the anchor post shown particularly in Fig. 2 of the drawings.

D is the foot plate comprising leaves D' and D² each having hinge lugs D³ and D⁴ at their inner ends abutting each other as shown in Figs. 1 and 3.

It will be seen on referring to Fig. 6 that the hinge lugs D³ and D⁴ are arranged in pairs at each end of the plates D' and D².

D⁵ is a recess formed on the inner side of each of the plates D' and D² and in the center thereof.

D⁶ and D⁷ are pins which extend through the lugs D³ and D⁴ toward the center of the plate and project slightly into the recesses D⁵.

C' are arc-shaped recesses formed in the anchor point C and designed to receive the pins D⁶ and D⁷ when the plates are in their operative position. The arc-shaped recesses C' extend into each side of the anchor point and open out into the front and rear faces of such point. The upper edge of the entrance into the slots C' are curved at C² so as to allow of more ready entrance of the hinged pins D⁶ and D⁷ when the leaves of the foot plate D⁶ are being shipped.

F is a pulley secured to a cross arbor F' provided with a suitable crank handle F².

F³ are chains secured to the pulley F at their upper ends and detachably secured at the bottom to the leaf castings D² and D³ of the foot plate D.

G is a shipping frame comprising horizontal arms G' detachably secured to the deck of the scow by U-bolts G² or other suitable means. The arms G' are connected together by a cross plate G⁴.

G⁵ are depending arms hinged at their inner ends to the horizontal arms G' and provided at their lower ends with inwardly curved portions extending to each side of the anchor point.

When it is desired to ship the outer leaf of the foot plate the frame is placed in the position shown in Fig. 1 of the drawing and the leaf D² inserted between the anchor post and the frame at the top thereof and set in the position shown by dotted lines in Fig. 1. The leaf D² is provided with lugs 6 and 7 designed to bear against the inner opposing sides of the depending bars G⁵ so as to guide the plate D³ downwardly when lowered by means of the chain and pulley F³ and F respectively. The foot plate D² is

lowered in this position until the hinged pins D^6 and D^7 engage with the inwardly curved portions C^2 of the arc-shaped recesses C' .

5 By means of the curved portions C^2 the hinge pins are guided into the slots C' and also by means of the inwardly curved portions D^6 of the shipping frame G . When the hinge pins are brought within the slot
10 the motion of the crank F^2 is reversed so as to pull upwardly upon the chain F^3 and on the inner end of the foot plate also carrying the hinged pins upwardly into the top of the arc-shaped slots C' into the position shown
15 in Figs. 3 and 5.

To secure the hinge pins within the slots C' I provide the following means:

20 H are a series of tubes extending downwardly through the anchor post to the boss B^3 formed inside the anchor point.

I are holes extending through the bosses B^3 into the arc-shaped slots C' . These holes communicate at their upper ends with the tubes H .

25 I' are orifices formed in the bottom portions of the arc-shaped slots immediately opposite the portion I hereinbefore referred to.

30 J are pins provided with pointed lower ends. The pins J are normally held within the orifices I in the position shown in Fig. 3.

J' are cords extending upwardly through the tubes H . The cords are secured at their lower ends to the pins J and at their inner
35 ends to rings J^2 which are connected to fastening hooks J^3 . When the leaf casting D^3 of the foot plate D has been brought into position as hereinbefore described and as shown particularly in Fig 3 of the drawings
40 we release the ring J^2 from the hook J^3 and allow the pin J to drop through the orifice I across the opening of the arc-shaped recess C' into the orifice I' thereby closing the entrance to the recess. By this means the
45 hinge pins D^6 and D^7 are securely held within the arc-shaped recesses which thereby form a hinge for the leaf of the foot plate. When this has been accomplished we remove the frame G and ship the inside
50 anchor. It will of course, be understood that no frame is necessary for shipping such inside anchor as the natural tendency of the hinge pins D^6 and D^7 thereof is to enter the recesses C' when the leaf casting is being
55 lowered.

K is the tackle by which the anchor post is raised, the cable K' of which extends over the pulley K^2 mounted in suitable bearings on the deck of the scow. The cable
60 then passes downwardly over the usual pulley journaled within the anchor post in the slot H^3 whence the cable extends upwardly to a bracket K^4 to which it is suitably connected.

65 Having described the principal parts in-

involved in our invention we shall briefly describe the operation and utility of the same.

When it is necessary to raise the point all it is necessary to do is to operate the cable
70 K in the usual way so as to raise the anchor post vertically. As the anchor point C is withdrawn from the bed of the lake or stream the leaf castings D' and D^2 will fall into the position shown by dotted lines in Fig. 3 thereby allowing the anchor post to
75 withdraw easily out of the mud forming the bed of the stream.

It will be understood by those skilled in the art that anchors hitherto have pins which extend through the anchor post in proximity
80 to the bottom thereof. It will be seen that this cross pin will sink into the soft bed of the stream and make it very difficult to raise the anchor point out of the bed.

By our device it will be seen that as soon
85 as the anchor point is raised the leaves will fall downwardly to each side of the anchor point and thereby allow of easy withdrawal of the post.

From this description it will be seen that
90 we have devised a very simple means whereby an anchor post of a dredge or scow may be supported on the bed of the stream or lake without such support interfering with the easy withdrawal of the anchor post when
95 it is being raised.

What we claim as our invention is:

1. In a bow anchor for dredges and the like, the combination with an anchor point having arc-shaped recesses located to each
100 side thereof and opening into the front and rear faces of the point, of a foot plate provided with central opposing recesses designed to extend around each side of the anchor point, and hinged pins extending
105 through suitable portions of the foot plate into the arc-shaped recesses of the point, as and for the purpose specified.

2. In a bow anchor for dredges and the like, the combination with an anchor point
110 having arc-shaped recesses located to each side thereof and opening into the front and rear faces of the point, of foot plates provided with central opposing recesses designed to extend around each side of the
115 anchor point, hinged pins extending through suitable portions of the foot plates into the arc-shaped recesses of the point, and a suitable closure for the recesses, as and for the purpose specified.
120

3. In a bow anchor for dredges and the like, the combination with an anchor point having arc-shaped recesses formed on each side of the point and opening into the front and rear faces thereof, of a pair of foot
125 plates provided with central opposing recesses, opposing hinged pins extending through a suitable portion of each plate into the arc-shaped recesses of the point, and vertically slidable pins located in holes in
130

the point and designed to be dropped vertically across the opening of the recesses to close the same, as and for the purpose specified.

5 4. In a bow anchor for dredges and the like, the combination with a point having recesses located at each side thereof opening into the front and rear faces of the point, a foot plate provided with hinged pins extending toward the center of the plate and
10 into the recesses of the point, and a removable closure for the recesses, as and for the purpose specified.

5 5. In a bow anchor for dredges and the like, the combination with an anchor post supported in the usual manner on the dredge and the anchor point secured to the bottom of the anchor post, of foot plates, a removable hinge connection between the foot
15 plates and the anchor point, and a shipping frame comprising guiding bars extending from the dredge to each side of the anchor post to the outside thereof and then vertically downwardly into proximity to the
20 anchor point and then curved inwardly to each side of such anchor point, and suitable tackle for raising and lowering the foot plate, as and for the purpose specified.

30 6. In a bow anchor for dredges and the like, the combination with an anchor post supported in the usual manner to the dredge, and an anchor point forming part of the post, of a foot plate and removable hinge connection between the foot plate and the
35 anchor point, lugs extending downwardly from the foot plate in proximity to the

outer edges thereof, a shipping frame comprising bars extending outwardly from the dredge to each side of the anchor post and downwardly to a point in proximity to the
40 anchor point and then curved inwardly to each side of the point and with the inner opposing edges of which the lugs of the foot plate are designed to slidably engage as the foot plate is lowered, and suitable tackle
45 for raising and lowering the foot plate, as and for the purpose specified.

7. In a device of the class described, an anchor point provided with arc-shaped side recesses opening into the front and rear
50 faces of the point, as and for the purpose specified.

8. In a device of the class described, an anchor point provided with arc-shaped side recesses opening into the front and rear
55 faces of the point, and a suitable closure for the recessed openings, as and for the purpose specified.

9. In a device of the class described, an anchor point provided with arc-shaped side
60 recesses opening into the front and rear faces of the point, and pins located in vertical orifices located in the point above the recesses and designed to drop vertically across the openings of the recesses, as and for the
65 purpose specified.

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Witnesses:

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W. M. GERMAN.