G. Coffin,

Anchor.

No. 48370. Patented. June. 27. 1865.

Fig. 2.

Fig. 1.

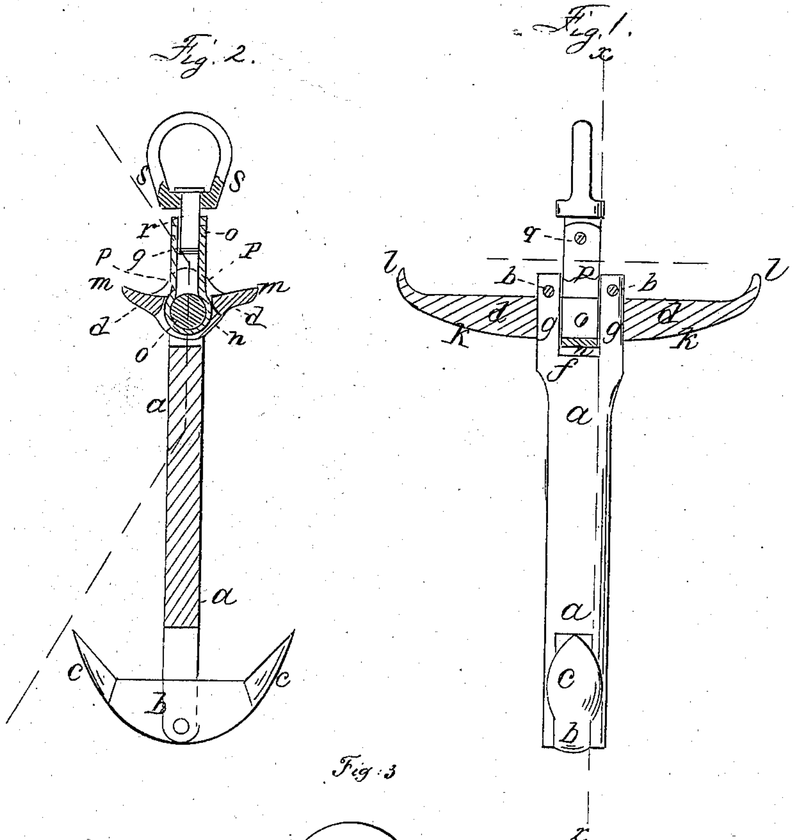
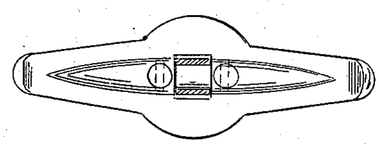


Fig: 3



Witnesses.

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UNITED STATES PATENT OFFICE.

GEO. COFFIN, OF JAMAICA PLAINS, MASSACHUSETTS.

IMPROVED ANCHOR.

Specification forming part of Letters Patent No. **48,370**, dated June 27, 1865.

To all whom it may concern:

Be it known that I, GEORGE COFFIN, of Jamaica Plains, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Anchors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates to certain new and useful improvements in the form of the anchor-stock, and in the mode of connecting it with the shank, the principal objects of which are, first, to obviate all liability of the ship riding to a "foul anchor," so called, when the anchor has reached the ground by the "bighting" or looping of its slack chain about the shank and the then upper end of its stock, which now often occurs in the use of anchors with the ordinary form of stocks, the many disadvantages of which are evident; second, to prevent the anchor "coming home" and the liability of its fluke or palm being broken when anchored in firm and unyielding ground from the frequent heavy strains which come upon the anchor by the rolling of the vessel in rough seas; third, to obviate all danger of the breakage of the shank between the stock and its shackle-ring as the anchor is weighed; fourth, to enable the anchor to be stowed away in a small space when not desired to be used; and, fifth, to construct the anchor in such a manner as to considerably lessen its weight without decreasing its strength, the advantages of which, with regard to convenience in handling and economy in expense, are important.

Having thus generally stated the objects in the production of the present improvements in anchors, I will now proceed to describe in detail the manner in which I secure the same, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a side view of the shank of the anchor with its stock represented in section; and Fig. 2, a sectional view taken in the plane of the line *x x*, Fig. 1; and Fig. 3, a detail view.

a a in the drawings represent the shank of the anchor, in the lower end of which is hung a curved arm, *b*, having upon its outer ends flukes or palms *c*, as in the ordinary anchors.

d is the stock, attached to the forked end *f* of the shank at right angles thereto and to the direction of the fluke-arm, the two prongs *g g* of the said forked end passing entirely through the stock, and each having inserted in their outer ends a pin, *h*, to hold the stock in place, which pins, when desired to stow the anchor away, are driven out in any proper manner, thus allowing the stock to be easily detached from the shank, whereby a smaller amount of space is required for storage than with anchors having their stock and shank formed in one piece or secured together in the modes heretofore practiced. The stock *d* is made rounding or inclined on in its lower sides, *k k*, in an outward direction from the shank, with each of its ends *l l* bent over into a hook shape, and has the middle portion, *m*, of its side edges formed in such a manner, as seen in Fig. 2, that after an anchorage has been secured, the stock then generally lying in a horizontal position, or nearly so, upon the ground, the edge of the stock in direct contact with the same shall stand at such an inclination thereto that should the fluke yield in the least degree in its hold upon the ground, or its arm be broken in consequence of a hard and unyielding surface, (both of which frequently occur in the use of anchors as hitherto constructed, because of a severe pull or strain thereon from the rolling of the vessel in a heavy sea, thus causing the anchor to "come home,") the stock will immediately embed itself, as it were, within the ground as it drags along upon the same from the pulling of the anchor-chain by the rolling of the vessel or from any other cause.

In case, when at anchor, the stock of the anchor, in lieu of resting directly upon the ground in a horizontal position, as above described, should stand at a vertical inclination thereto, as often happens, resting then upon the ground by one of its hook ends, the yielding of the anchor in such cases would also be prevented by the then embedding of the hook end in the ground as before described for the edges of the stock, and as is evident without further description.

In addition to the above-stated advantages in forming the stock of the anchor with hook ends and inclined side edges, it may be here mentioned that by the embedding of the hook or the edge, as the case may be, in the ground,

as described, a considerable portion of the strain is not only relieved from the fluke-arm and transferred to the stock, but also the resisting power of the anchor is thereby in a great measure increased.

Within the opening *n* at the center of the stock *d*, and swinging upon a shaft, *o*, extending across the same from one side to the other, and in the direction of the length of the stock, is a short connecting-band, *p*, having between its outer ends and turning upon a pivot, *q*, of the same at right angles to the plane of motion of the band, a block, *r*, on the outer end of which is a swiveled shackling-ring, *s*, to which the anchor-chain is attached.

By hanging the chain to the stock of the anchor by means of the connecting-band *p*, to which the shackle-ring is swiveled, as described, in weighing the anchor the strain which has heretofore come upon the projecting portion of the shank to which the shackle-ring was hung, and which often caused its breakage between the stock and ring, is transferred from the same to the stock itself, and at its strongest part, the advantages of which are manifest.

From the above description it is apparent that by forming the sides of the stock of a rounding or inclined shape from the shank the bighting of the slack anchor-chain about the stock as the anchor is dropped is entirely prevented, for the reason that as the slack of the chain becomes taken up it can freely slide off the stock because of its rounding shape.

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

1. The form of the anchor-stock herein described, the same consisting in making its end of a hook shape, with inclined or rounding sides, and with flanged or inclined side edges, either when combined together in one and the same stock or when used separately, substantially as and for the purposes specified.

2. Making the end of the shank to which the stock of the anchor is secured in a forked shape, fastened to and within the stock by means of pins or their equivalents, substantially as described, and for the purpose specified.

3. Hanging the shackle-ring to which the anchor-chain is hung to and within the stock of the anchor by means of a connecting-band, arranged and operating as described, and for the purpose set forth.

GEORGE COFFIN.

Witnesses:

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SAM. COVERLY.