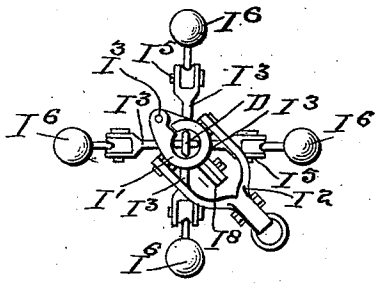
(No Model.)

H. A. HOUSE & H. A. HOUSE, Jr.

MEANS FOR RAISING ANCHORS.

No. 527,060. Patented Oct. 9, 1894.

Fig. 2.



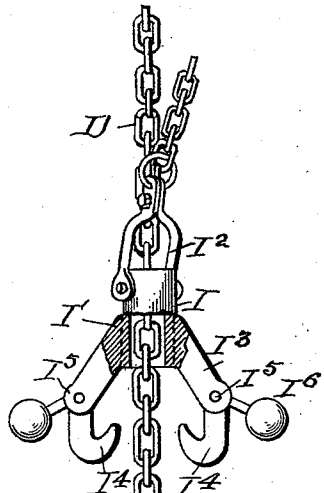


Fig. 3.

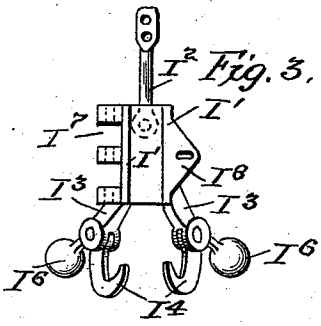
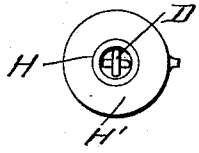
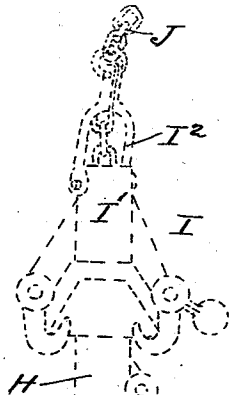


Fig. 4.





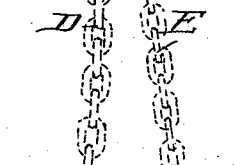
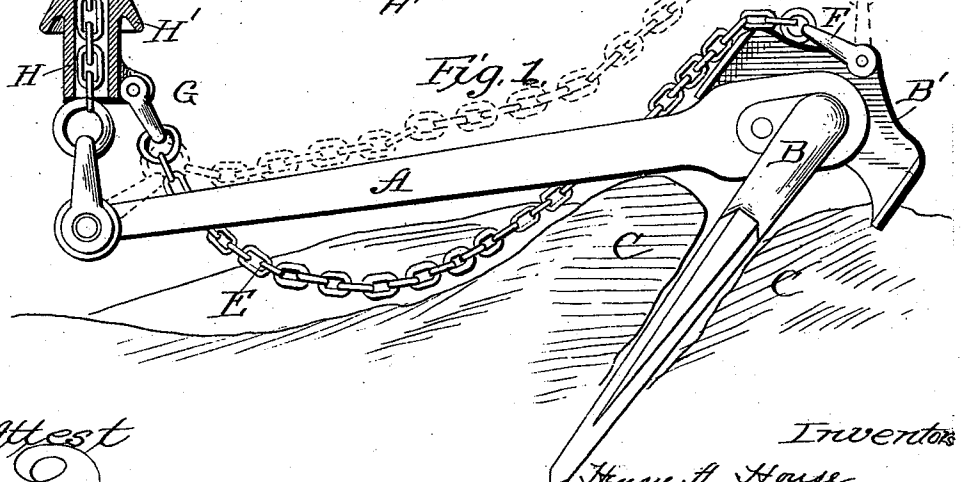


Fig. 1.



Attest

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UNITED STATES PATENT OFFICE.

HENRY A. HOUSE AND HENRY A. HOUSE, JR., OF BRIDGEPORT, CONNECTICUT, ASSIGNORS OF ONE-HALF TO ROBERT RINTOUL SYMON, OF LONDON, ENGLAND.

MEANS FOR RAISING ANCHORS.

SPECIFICATION forming part of Letters Patent No. 527,060, dated October 9, 1894.

Application filed November 25, 1893. Serial No. 491,971. (No model.) Patented in England October 6, 1893, No. 18,760.

To all whom it may concern:

Be it known that we, HENRY ALONZO HOUSE, Sr., and HENRY ALONZO HOUSE, Jr., mechanical engineers, both citizens of the United States of America, and both temporarily residing at Teddington, in the county of Middlesex, England, but usually of Bridgeport, county of Fairfield, and State of Connecticut, United States of America, have invented certain new or Improved Means for Raising Anchors, (for which we have obtained a patent in Great Britain, No. 18,760, dated October 6, 1893,) of which the following is a specification.

The object of this invention is to provide means or devices whereby anchors which have been caught or held by rocks or other obstacles in such manner as to prevent their being raised in the ordinary way by power applied to the shackle end of the shank without breaking or bending them, can be raised by power applied at the opposite end of the anchor in such manner as to draw the flukes longitudinally out of and to free them from the hole or other space in which they may be engaged. For this purpose we employ the devices shown in the accompanying sheet of drawings, in which—

Figure 1 is the elevation of an anchor with its fluke or flukes caught in between two rocks, and having our recovering gear applied thereto. Fig. 2 is a plan of the grappling tackle shown in sectional elevation at I in Fig. 1. Fig. 3 is an elevation of one half of the said grappling tackle, and Fig. 4 a plan of the part marked H in Fig. 1.

The anchor shown is of the kind known as "Martin's" but the invention is also applicable to other kinds of anchors.

Similar letters of reference relate to like parts in all the figures of the drawings.

A is the shank of the anchor; B, one of the flukes which is shown engaged between two rocks C C in such manner that power applied, in the usual way, to the main cable D in the direction of the arrow cannot raise the anchor unless the fluke B breaks or yields by bending sufficiently to allow of its being drawn out from between the rocks.

Our new or improved devices consist as follows:

E is a chain connected at one end by a shackle F or otherwise to the crown B′ of the fluke arm, or to any other suitable point at that end of the anchor. This chain E is connected at its other end by a shackle G or otherwise to a sleeve H which is free to slide on the main cable D. The upper end of this sleeve is conical as shown at $H^{\times}$ and formed with a pendent lip H′ which extends round the lower end of the conical part. The chain E and sleeve H may be kept permanently connected to the anchor, or be only applied thereto when it is known or suspected that the bottom is rocky or of a nature to unduly hold the anchor and prevent it from being weighed in the usual way.

I is a grappling apparatus (shown partly in section in Fig. 1) which is lowered from the ship down the main cable D by a chain J when it is found that the anchor has fouled something and cannot be weighed by the main cable. The grappling apparatus consists of a sleeve I′ which is free to slide up and down on the main cable D. The chain J is connected to the sleeve I by the shackle I^2.

I^3 are arms standing out from the lower part of the sleeve I′ and having hooks I^4 turning on fulcra I^5 at their lower ends. The ends of these hooks are pressed normally inward toward the main cable D by means of the counterbalance weights I^6. When this grappling apparatus is lowered by the chain J it slides down the main cable D and the hooks I^4 slide down the conical surface $H^{\times}$ of the sleeve H until their points descend below the lip H′ of the sleeve H when the weights I^6 force the hooks inward under the said lip into position shown in dotted lines at the right hand top corner of Fig. 1. When the hooks I^4 have got well under the lip H′ (which can be ascertained by pulling the chain J upward until sufficient resistance is encountered to indicate that the sleeve H has been grappled and raised as far as the chain E will allow) the main cable D is slackened out, and the chain J tightened until the main cable D and the chain E assume positions such as

those shown in dotted lines in Fig. 1 and a continuance of the pull on the chain J (which pull is transmitted through the grappling apparatus I, sleeve H, and chain E to the head of the anchor) will draw the fluke or flukes out of the hole or cavity in which it or they have been caught, and the anchor may then be raised to the ship either head first by the chain J or shank first by the main cable, or more or less in a horizontal position by simultaneously pulling on both chains D and J.

The sliding sleeve I′ of the grappling apparatus is preferably made in two halves so that it can be easily placed on or removed from the main cable D, and for this purpose the two halves may be hinged together at one side as at I^7 in Fig. 2 and fastened together at the other side by a bolt or stud passing through lugs I^8 or by any other suitable means.

In Fig. 2 four hooks are shown on the grappling apparatus but it is obvious that any other number may be employed according to circumstances.

In the foregoing specification the parts D, E and J are described as chains; but it is obvious that wire ropes or ropes of any other suitable kind may be employed instead of chains for any or all of those parts.

We claim—

1. The means or devices for raising anchors by transferring the lifting point from the shackle end of the shank to the head or fluke end of the anchor, which consist of a sleeve sliding on the main cable, a chain connecting the said sleeve to the head or fluke end of the anchor and grappling apparatus adapted to slide on the main cable and to engage with the aforesaid sleeve, combined, arranged and operating substantially as described.

2. The means or devices for raising anchors which consist of a sleeve H free to slide on the main cable D and provided with a lip H′ adapted to be engaged by the hooks of the grappling apparatus, a chain or rope E connecting the sleeve H with the head or fluke end of the anchor, and grappling apparatus I sliding on the main cable D and provided with hooks I^4 adapted to engage with the sleeve H so as to connect the chain J with the chain E combined and operating substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

HENRY A. HOUSE.
HENRY A. HOUSE, JUNIOR.

Witnesses:
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STEPHEN EDWARD GUNYON,
Both of 115 *Cannon Street, London.*