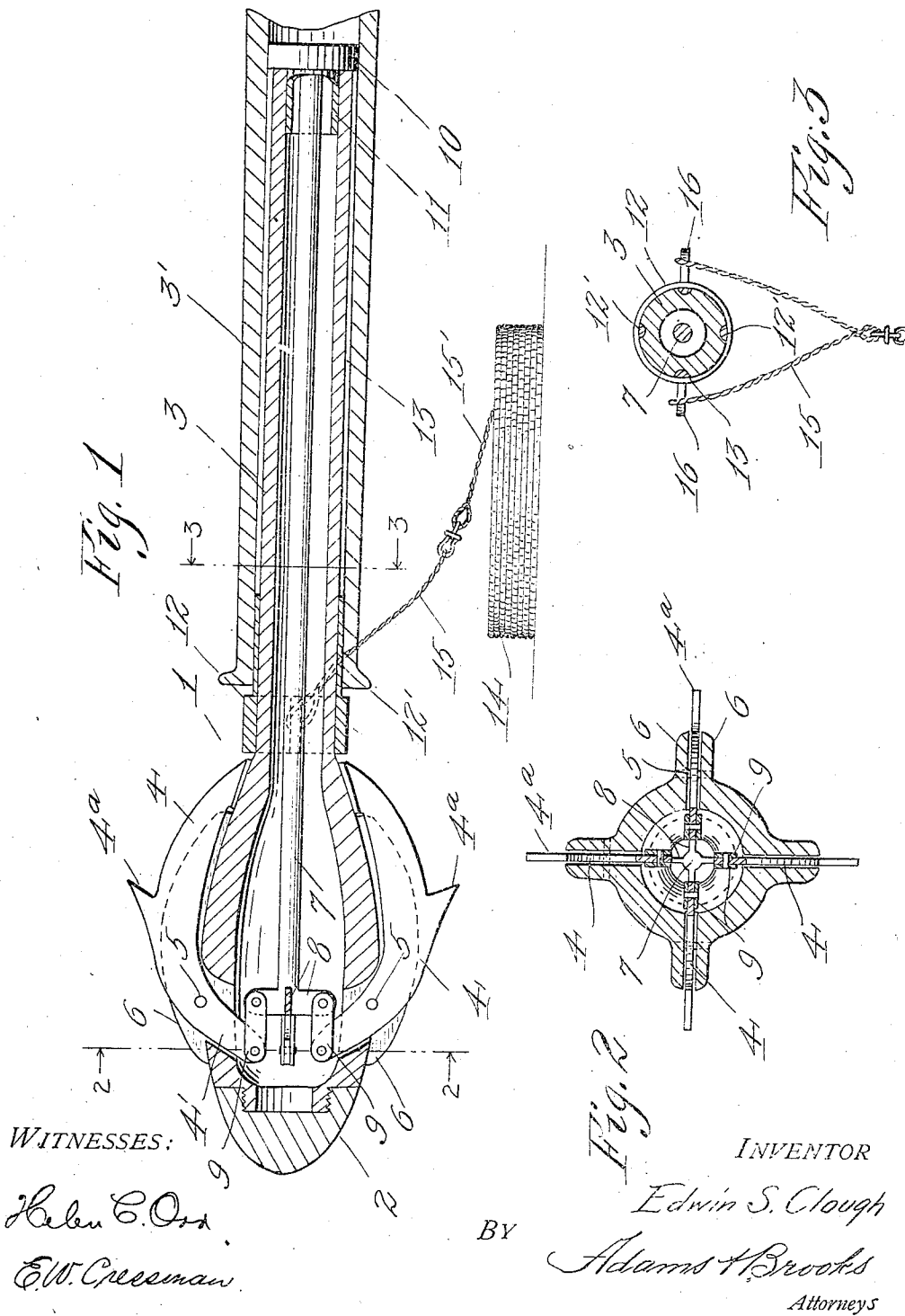


No. 890,499.

PATENTED JUNE 9, 1908.

E. S. CLOUGH.
ANCHOR PROJECTILE.
APPLICATION FILED JULY 16, 1907.



UNITED STATES PATENT OFFICE.

EDWIN S. CLOUGH, OF SEATTLE, WASHINGTON.

ANCHOR-PROJECTILE.

No. 890,499.

Specification of Letters Patent.

Patented June 9, 1908.

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To all whom it may concern:

Be it known that I, EDWIN S. CLOUGH, a citizen of the United States of America, and a resident of Seattle, county of King, State of Washington, have invented certain new and useful Improvements in Anchor-Projectiles, of which the following is a specification.

My invention relates to improvements in devices of the above type which are especially adapted for use in projecting and anchoring life lines.

The primary object of my invention is to simplify and improve projectiles of the aforementioned class.

With the above mentioned object in view the invention resides in the construction, combination and arrangement of parts as hereinafter set forth and defined in the appended claims.

In the accompanying drawing, wherein like reference numerals designate corresponding parts throughout:—Figure 1 is a longitudinal section view of an anchor projectile embodying the features of my invention and shown in loaded position in a gun. Fig. 2 is a transverse section taken on line 2—2 of Fig. 1 and, Fig. 3 is a transverse section taken on line 3—3 of Fig. 1.

With reference to the drawing, numeral 1 indicates a projectile formed with a chambered head portion 2 and a tubular stem 3, the latter being of suitable diameter to fit in the bore of a gun as 3'.

Mounted on the projectile are engaging members, as flukes 4, which are preferably swingably supported on respective pivots 5 seated in ribs 6, which extend longitudinally of the head portion 2. The members normally lying in retracted positions in the channels between respective ribs 6, and having base extensions 4' which project inwardly through suitable slots provided in the head portion.

Reference character 4^a indicates claws which are provided on the attaching members at suitable points to project clear of the projectile when the said members are in retracted positions, and serve as means for engaging the objective as will be later understood.

Located within the projectile 1 is a draw-bar, as 7 having lateral extensions 8 at its forward end which are connected, each with the extension 4' of a respective member 4, by means of links 9 and suitable pivots.

Movable with the bar 7 is a part 10 against

which the projecting force acts. As shown, the part 10 is in the form of a circular disk of suitable diameter to fit snugly but freely in the bore of gun 3', and is secured to bar 7 so as to occupy a position at the rear of the projectile. Secured to the part 10 is an annular flange 11 which fits slidably in the bore of the stem 3 and serves to steady said part and prevent grit or dirt entering the projectile at the rear end.

Reference numeral 12 indicates an annular member slidably fitting upon the stem 3 and having rearwardly projecting guides 12', which slidably engage in suitable grooves as 13 provided in said stem. These guides insure the member 12 from binding as it moves rearwardly on the stem 3 and are adapted to engage the part 10 to effect movement of bar 7 to open the flukes.

The rope or lifeline 14 is connected with member 12 in any convenient manner, as for example by means of sections of wire cable 15, 15' the former of which has its end portions engaged with lugs 16 provided on said member at opposite points. While the latter is connected with said rope and with the section 15.

In operation, the projectile is loaded in the gun as indicated in Fig. 1, and when the gun is fired the force of the charge acting upon part 10 insures the projectile leaving the gun with the engaging members 4 in retracted positions. During its initial movement the projectile takes up the lifeline in a comparatively gradual manner and will have the same well under way, owing to the relatively long sliding movement between stem 3 and member 12, before the guides 12' reach the part 10, thus reducing the liability of the engaging members 4 being forced open and consequently broken or bent when the projectile strikes. After the projectile has reached the objective, the engaging members 4 may be forced to open positions by pulling on the life line as some of the claws 4' will in all probability engage rocks or other natural projections and therefore cause the said members to swing outwardly on their pivots as the bar 7 is drawn rearwardly.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States of America, is:—

1. A device of the type set forth comprising a projectile, a part movable relatively to said projectile and arranged to be directly acted upon by the projecting force, an en-

gaging member movably mounted on said projectile and connected with said part, and means for attaching a line associated with said member.

5 2. A device of the type set forth comprising a projectile, a part movable relatively to said projectile and arranged to be directly acted upon by the projecting force, an engaging member movably mounted on said projectile, and connected with said member, and means for attaching a line related to said member for moving the same, said means being movable independently of said part.

10 3. A device of the type set forth comprising a projectile, an engaging member movably mounted on said projectile, a movable part arranged to be acted upon by the projecting force and associated with said member to hold the same from movement when said force acts, and means for attaching a line to move the member.

15 4. A device of the type set forth comprising a projectile, a part movable relatively to said projectile and arranged to be directly acted upon by the projecting force, an engaging member movably mounted on said projectile and connected with said part; and means for attaching a line movable on said projectile to move said part.

20 5. A device of the type set forth comprising a projectile, a part movable relatively to said projectile and arranged to be directly acted upon by the projecting force, an engaging member swingably mounted on said projectile, a bar having pivoted connections with said member and secured to said part, and means for attaching a line movable on the projectile to move said bar.

25 6. A device of the type set forth comprising a projectile having a stem, a relatively movable part at the rear end of said stem, an engaging member movably mounted on said projectile and connected with said part, and means for attaching a line movable on said stem to engage and move said part.

30 7. A device of the type set forth comprising a projectile having a stem provided with a groove, a relatively movable part at the rear end of said stem, an engaging member movably mounted on said projectile, and connected with said part, and means for attaching a line movable on said stem to engage and move said part, said means having a guiding part slidably engaging in said groove.

8. A device of the type set forth comprising a projectile having a stem, a relatively movable part at the rear end of said stem comprising a circular disk, an engaging member movably mounted on said projectile and connected with said part, and means for attaching a line movable on said stem to engage and move said part.

9. A device of the type set forth comprising a projectile having a stem, a part movable relatively to said projectile and arranged to be directly acted upon by the projecting force, an engaging member mounted on said projectile for movement to relatively projected and retracted positions and connected with said part, means connected with said member for engaging the objective when said member lies retracted, and means for attaching a line related to said member to operate the same by tension on the line when said first means is so engaged.

10. A device of the type set forth comprising a projectile, an engaging member movably mounted on said projectile, a draw bar within said projectile connected with said member, a part arranged adjacent the rear end of said projectile to be acted upon by the projecting force and connected with said bar, and means for attaching a line slidable on said projectile to move said part.

11. A device of the type set forth comprising a projectile, an engaging member movably mounted on said projectile, means connected to said member and arranged to be acted upon by the projecting force for holding said member against movement when the said projectile is projected, means slidable on said projectile adapted to engage said first means, and a life line connected to said last means, for the purpose specified.

12. A device of the type set forth comprising a projectile, an engaging member movably mounted on said projectile, a line connected to said projectile for affecting movement of said member, and means arranged to be directly acted upon by the projecting force for holding said member against movement when said projectile is projected.

Signed at Seattle, Wash., this 8th day of July, 1907.

EDWIN S. CLOUGH.

Witnesses:

C. R. BARNEY,
FRANK E. ADAMS.