

No. 692,001.

Patented Jan. 28, 1902.

J. BARKER.

APPARATUS FOR RAISING SUNKEN VESSELS.

(Application filed Mar. 5, 1901.)

(No Model.)

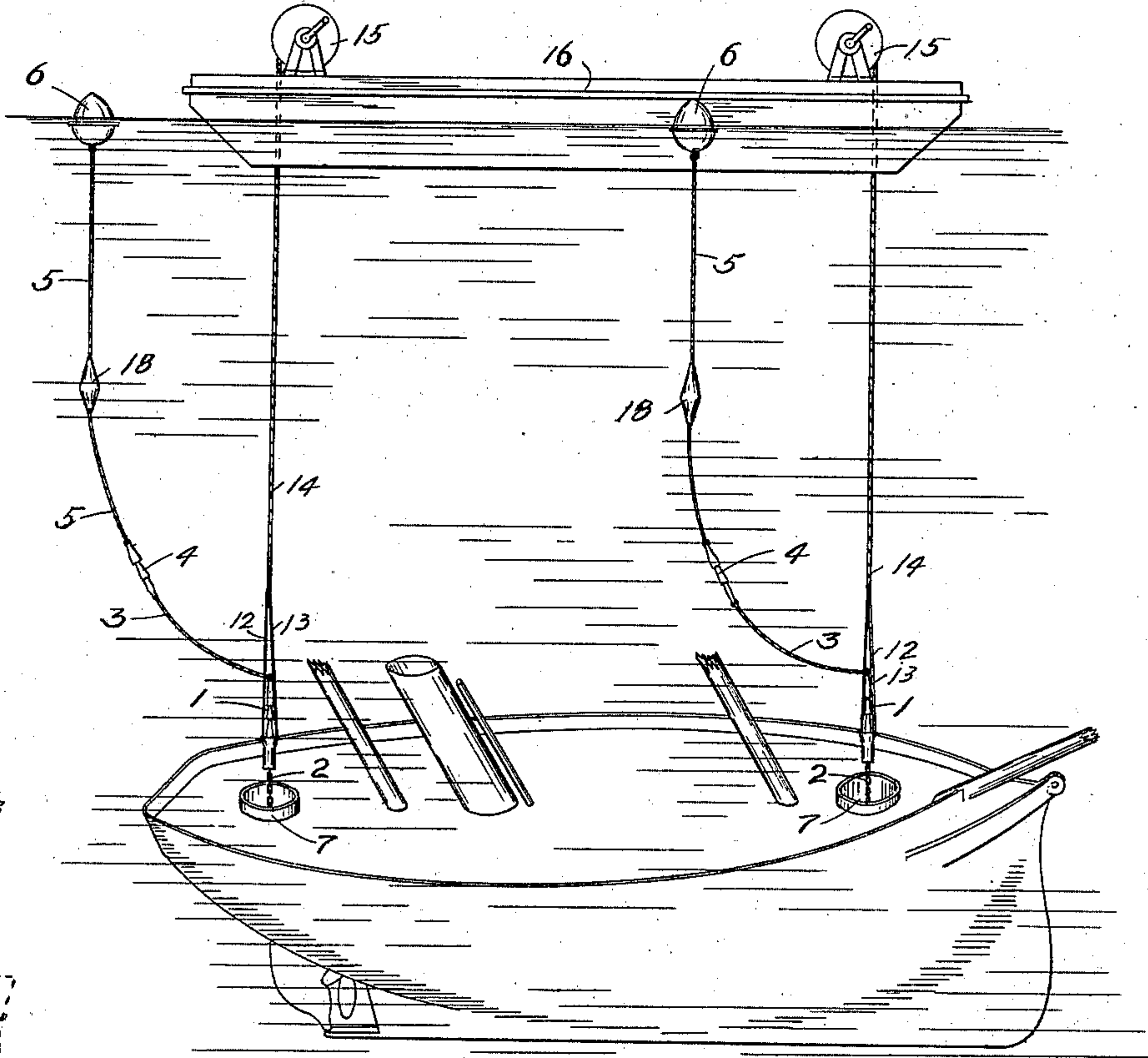


FIG 1

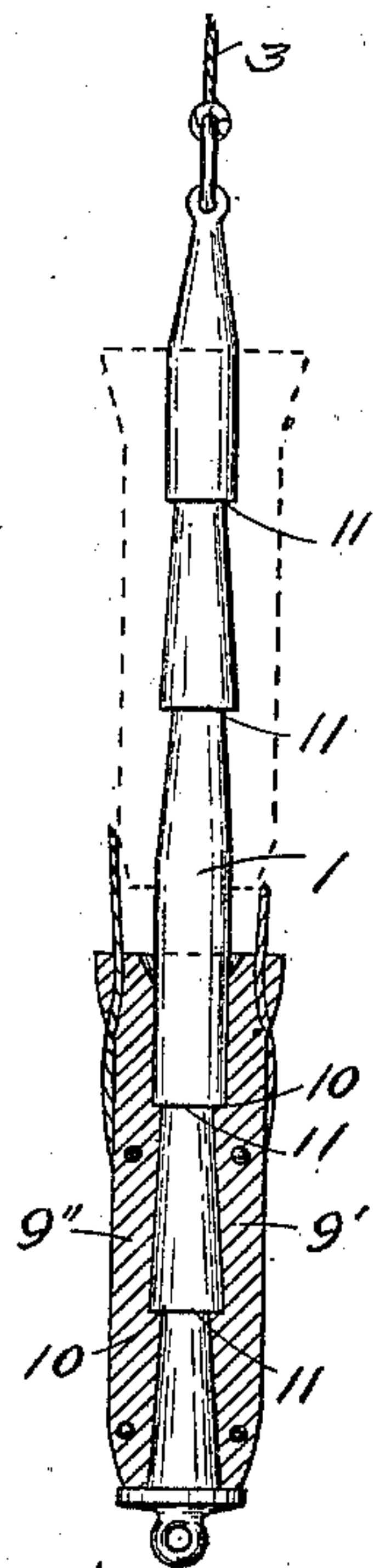


FIG 2

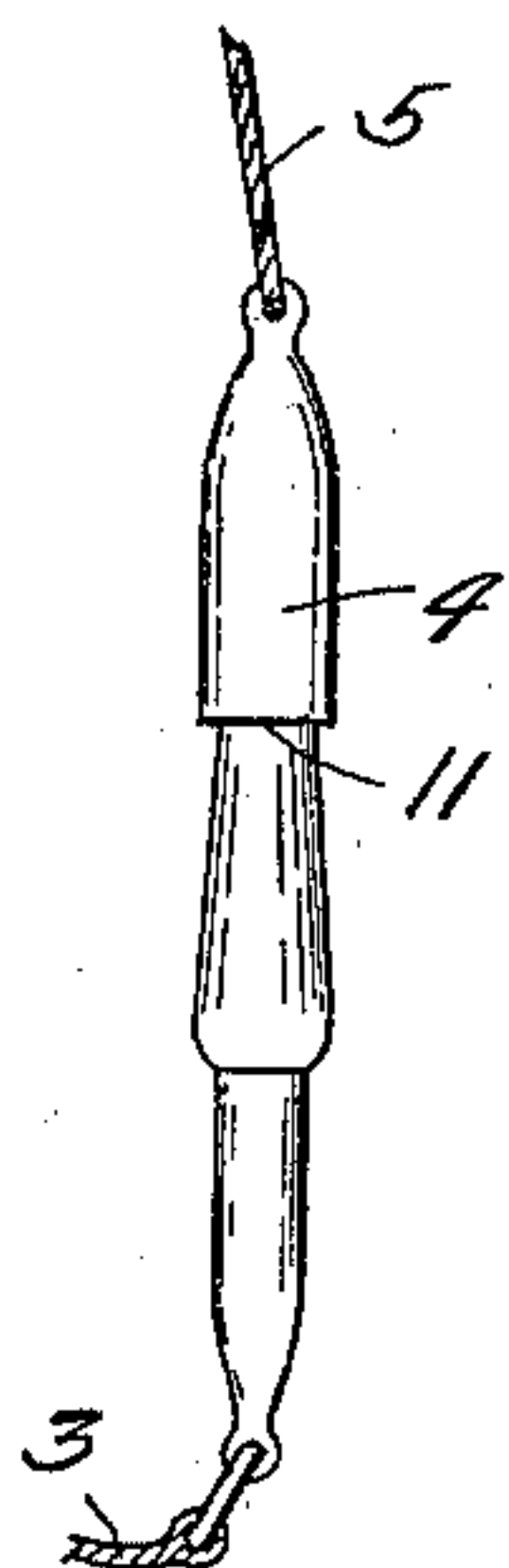


FIG 3

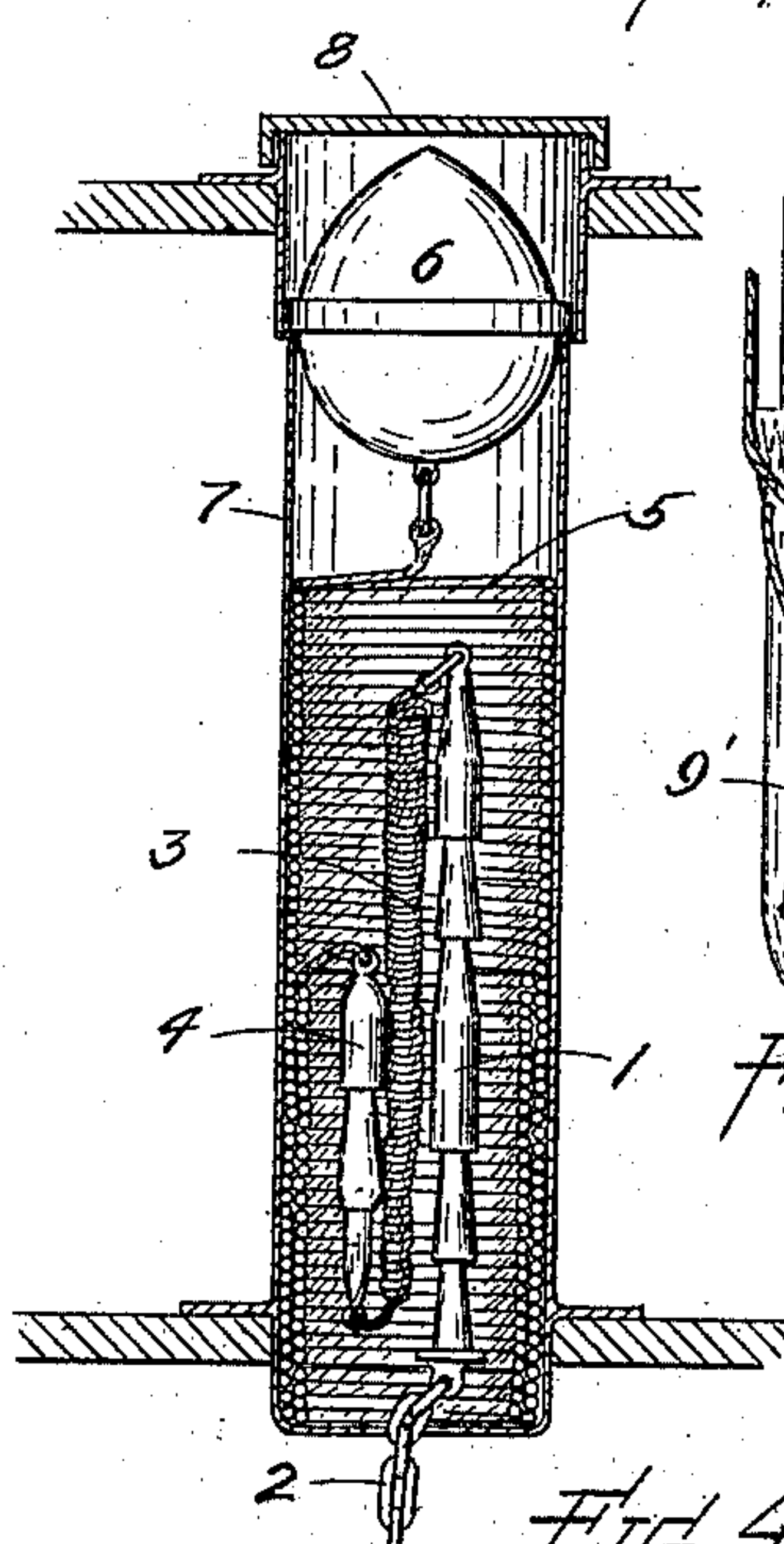


FIG 4

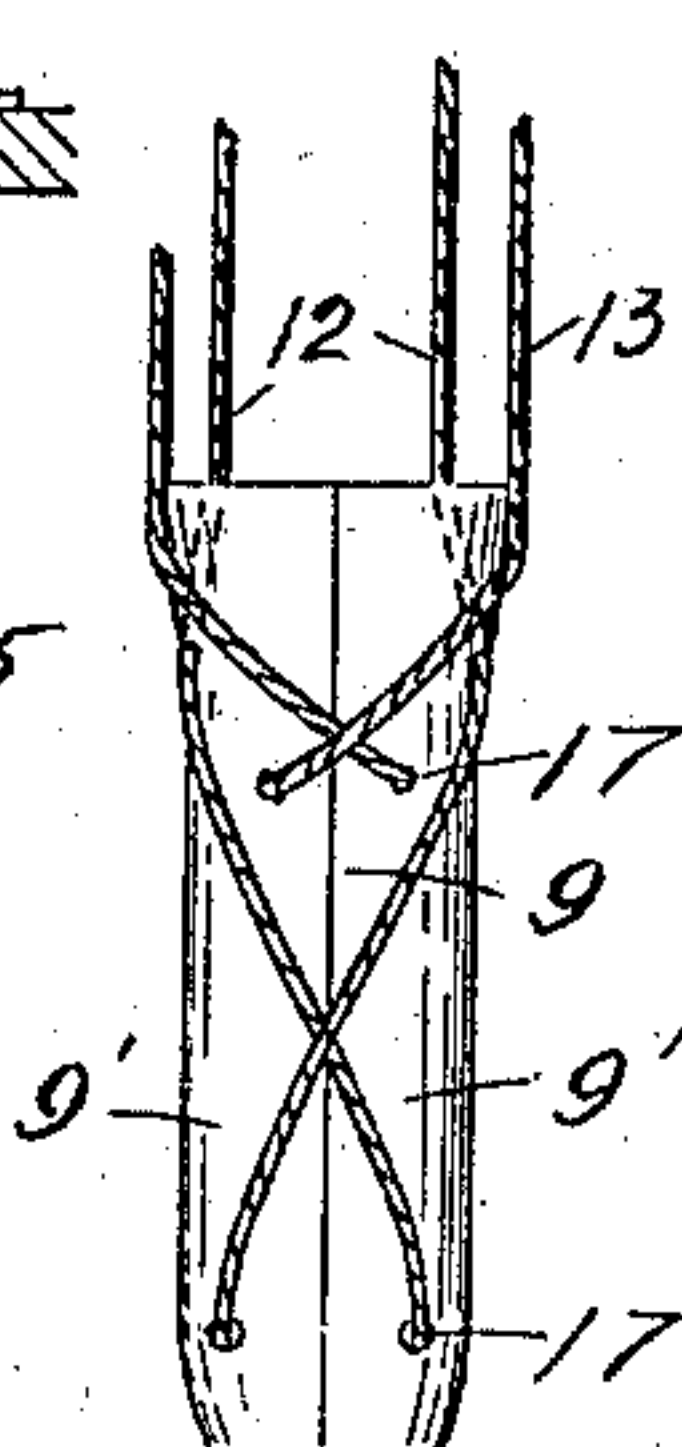


FIG 5

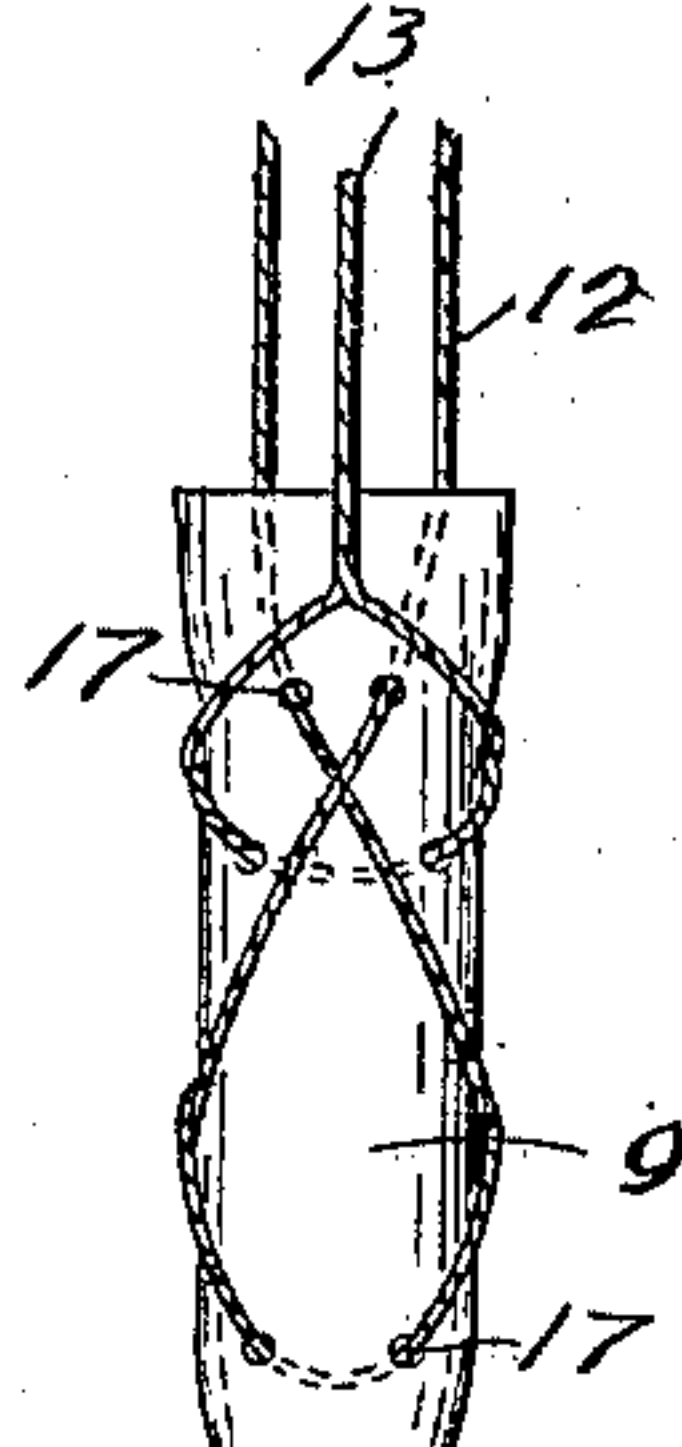


FIG 6

WITNESSES:

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APPARATUS FOR RAISING SUNKEN VESSELS.

SPECIFICATION forming part of Letters Patent No. 692,001, dated January 28, 1902.

Application filed March 5, 1901. Serial No. 49,916. (No model.)

To all whom it may concern:

Be it known that I, JOHN BARKER, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Apparatus for Raising Sunken Vessels, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to the raising of sunken vessels, and particularly to vessels which have foundered to a great depth.

The invention consists, first, in buoyant bodies connected by lines secured to the vessel, preferably at points as near the longitudinal center as possible and near the extremities thereof; secondly, of suitable receptacles for the stowage of the aforesaid buoyant bodies, their connections, and attachments, so constructed and arranged that they will instantly be released upon the submergence of the vessel, and, thirdly, of independent grappling devices adapted to drop down and be guided by the said lines to and engage 25 with attachments thereon, in combination with hauling-lines and mechanism which when lowering permits the grappling devices passing freely down the first-named lines to below the attachments or drawing-bars secured thereon, but when the hauling-lines are raised the grappling devices grip the said draw-bars and positively lock upon the same.

It is the object of my invention to produce apparatus which will be simple in construction, durable, and efficient for saving sunken vessels.

The nature of my invention will now be more particularly described, and pointed out in the claims.

40 In the accompanying drawings, where like numerals represent corresponding parts in all of the views, Figure 1 is a view partly in side elevation and partly in perspective and representing the application of my improved vessel-saving apparatus. Fig. 2 is an elevation of the draw-bar with the grapnel shown in section connected thereto. Fig. 3 is an elevation of the supplementary draw-bar. Fig. 4 is a central vertical section of the fixed receptacle upon the vessel with certain parts of the apparatus stowed therein. Figs. 5 and 6

are respectively front and side elevations of the grapnel.

In the drawings, 1 represents a draw-bar permanently attached by a chain cable 2 to the vessel, as at the keelson, and by another cable 3 to a supplementary draw-bar 4, which is itself connected by a line 5 to a float or buoyant body 6, all of which parts are in Fig. 4 shown "nested" or stowed in a receptacle 7, which is secured to or built into the vessel's hull, so as to be integral therewith. 8 is a cover fitting loosely upon said receptacle, so that when the vessel is submerged the buoyancy of the float 6 will be ample to displace the cover to permit the line 5 being dragged to the surface by the said float.

9 is a grapnel made in two semicircular parts 9' 9" and chambered so as to form a number of cone-shaped recesses, each tapering from the bottom and terminating in a number of shoulders 10, adapted to register with corresponding reverse cone-shaped projections and steps 11 upon the draw-bar 1 or upon the supplementary draw-bar 4. The grapnel parts 9' 9" are drawn together to lock the bars by means of straps or lines 12 and 13, attached to the main hoisting line or lines 14, which pass over suitable drums 15 upon a wrecking vessel 16. The lines 12 and 13 are formed into bights or loops, which pass through holes or leadways 17 upon one of the several parts comprising the grapnel and extending around the opposite part, so that when the leads are drawn upwardly the grapnel is closed about the draw-bar to embrace the same.

The draw-bar 1 is formed, preferably, with a double series of shoulders, so that in case the hoisting-lines of one should break under a great strain or when the vessel is of considerable weight an additional grapnel may be utilized, as indicated in Fig. 2 by dotted lines.

In Fig. 1 I show pendent weights 18 attached to lines 5 for the purpose of making the floats ride easier in a seaway; but they are not essential to the apparatus. However, in case they are used they will be made to taper toward both ends, so as not to interfere with the passage of the grapnel thereover.

The operation of the apparatus will now be

described, it being supposed that the vessel had foundered and the floats or buoyant bodies 6 have ascended to the surface. Guided by these the wrecking-boat 16 is brought to a position above the sunken vessel and the lines 5 detached from the floats and passed through the grapnels, that descend by gravity until they have traveled below the supplementary bars 4. The hauling-lines are then wound upon drums provided to withdraw the main draw-bar 1 from the receptacle 7. The lines 5 being made fast, the grapnels are lowered to the bars 1, and the hauling-lines being again wound up cause the grapnels to clutch the bars and raise the vessel.

As before mentioned, two grapnels may be used upon each of the main draw-bars 1 and another at the same time upon each of the supplementary bars, thus distributing the load over a greater number of hauling-lines. Again, the several lead-lines 12 13 may extend directly to the wrecking-boat.

The particular form and arrangement of parts represented in the drawings have been found to be convenient and desirable; but it will be understood that they may be varied more or less without departing from the spirit of my invention or sacrificing its advantages.

What I claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus for raising sunken vessels, in combination with a vessel, a buoyant body, a connection between the vessel and the

buoyant body, a draw-bar forming part of said connection and having a plurality of annular projections, a grapnel comprising two or more sections embracing the connection and slidable thereon, said grapnel being provided with a number of annular grooves on its interior to fit the projections of the draw-bar, and a hoisting-rope connecting the several sections of the grapnel together and adapted to press them tightly against the draw-bar causing the annular grooves of the grapnel to engage the projections of the draw-bar when the hoisting-rope is tightened.

2. In a device of the character described, a draw-bar provided with a plurality of annular tapering projections, in combination with a grapnel comprising two or more sections embracing the draw-bar and slidable thereover, each of said sections of the grapnel being provided with a series of grooves forming inclined teeth therebetween to fit between the projections of the draw-bar, and a hoisting-rope connecting the sections of the grapnel together by having loops each passing through one of the sections and embracing another section.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN BARKER.

Witnesses:

PIERRE BARNES,
W. H. WHITE.