

J. M. W. HASSING & J. V. FITZSIMMONS.

WRECKING APPARATUS.

APPLICATION FILED JULY 27, 1909.

959,526.

Patented May 31, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

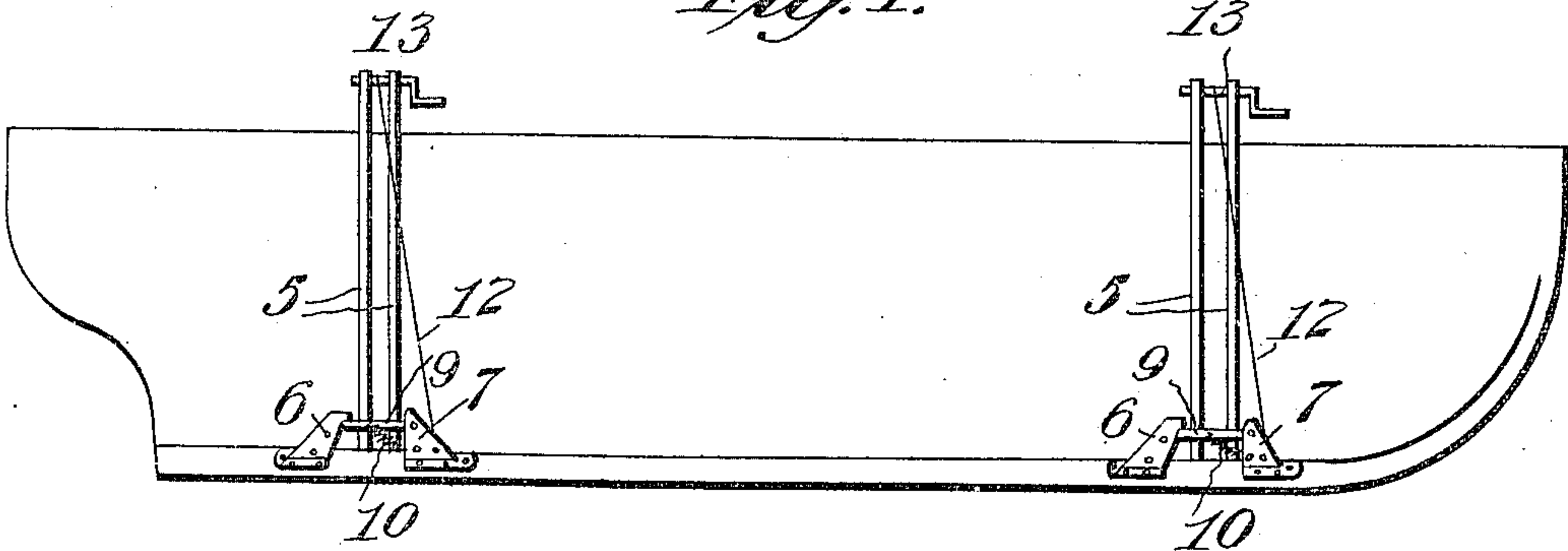
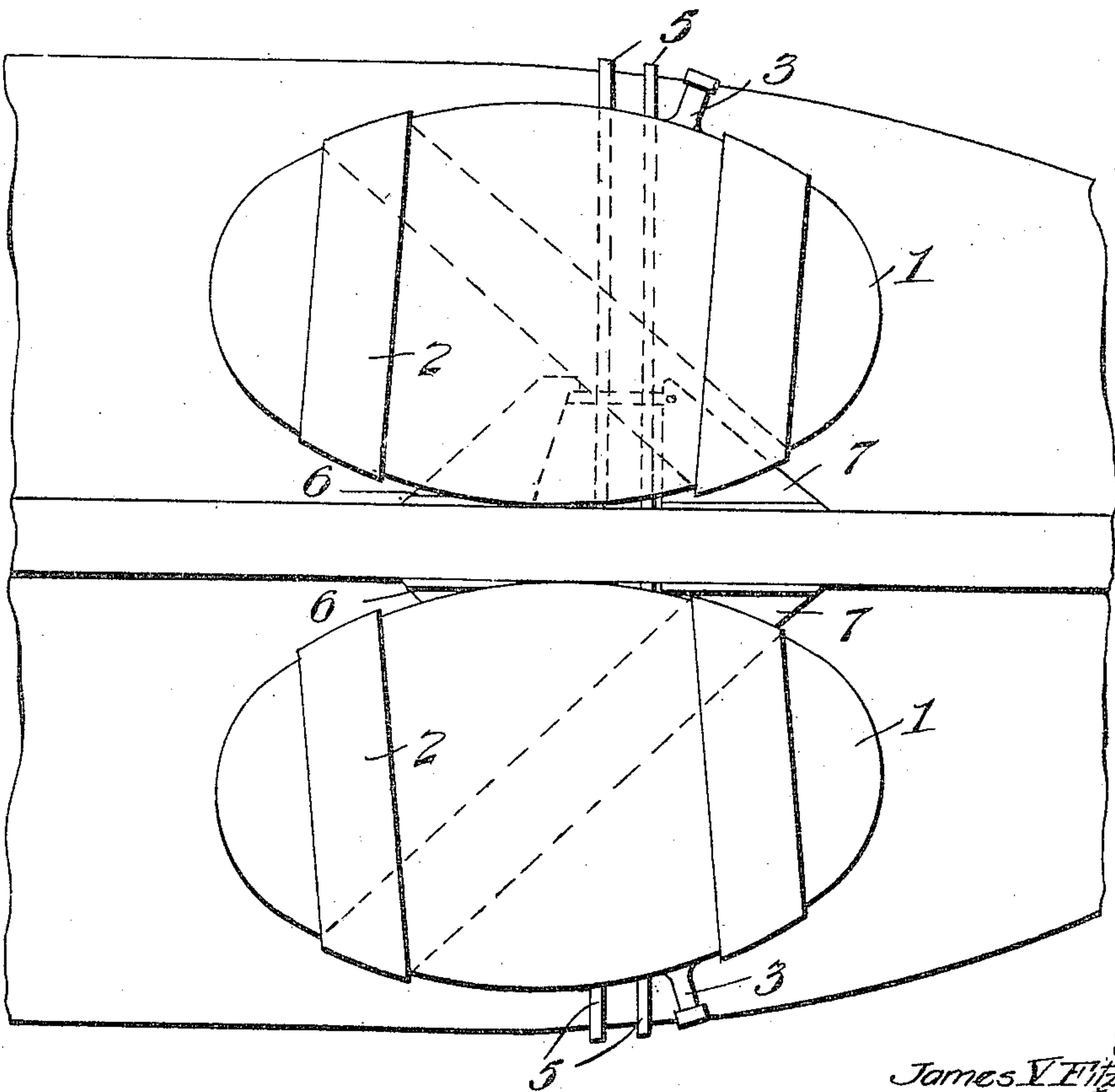


Fig. 2.



Witnesses

T. L. Mochamer
Chas. E. Roach

By

W. N. Roach, Jr.
Attorney

Inventors
James V. Fitzsimmons
Jens M. W. Hassing

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2 SHEETS—SHEET 2.

Fig. 3.

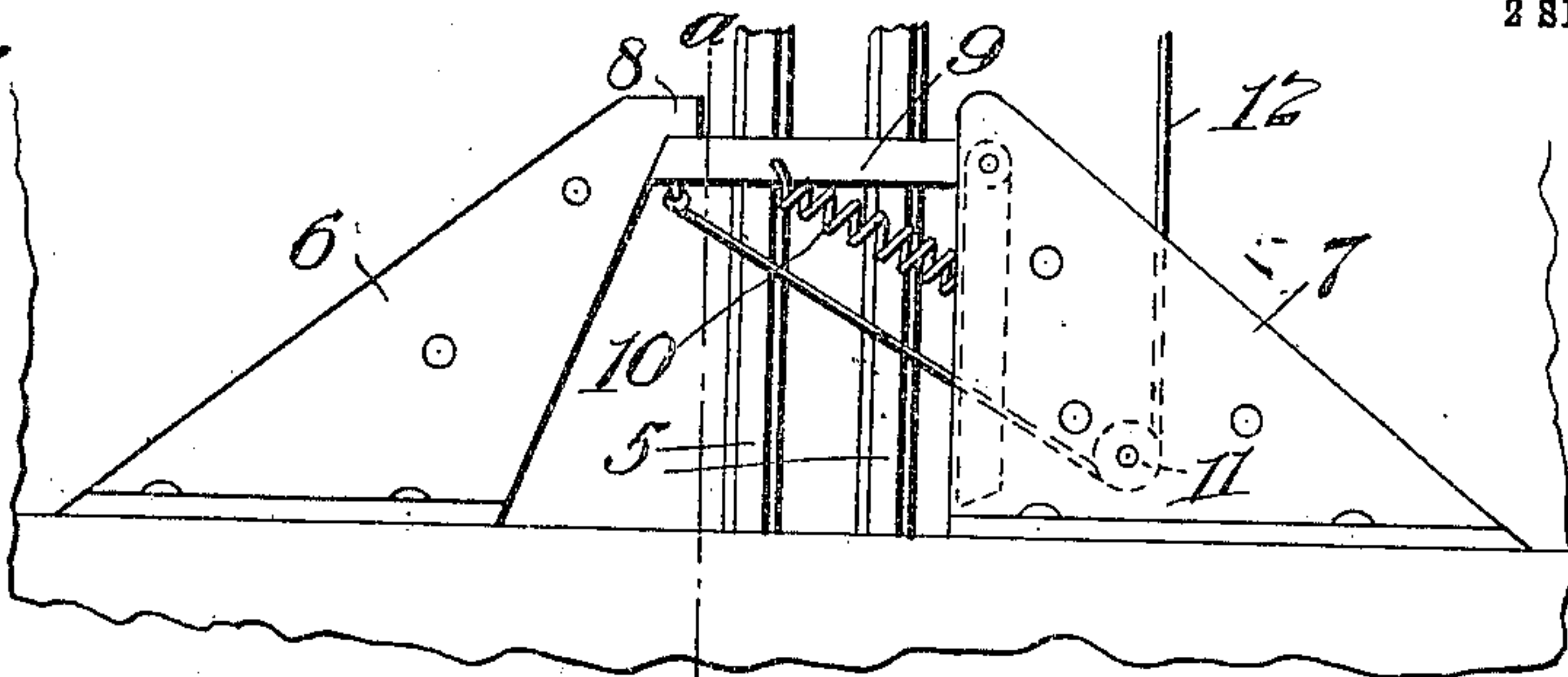


Fig. 4.

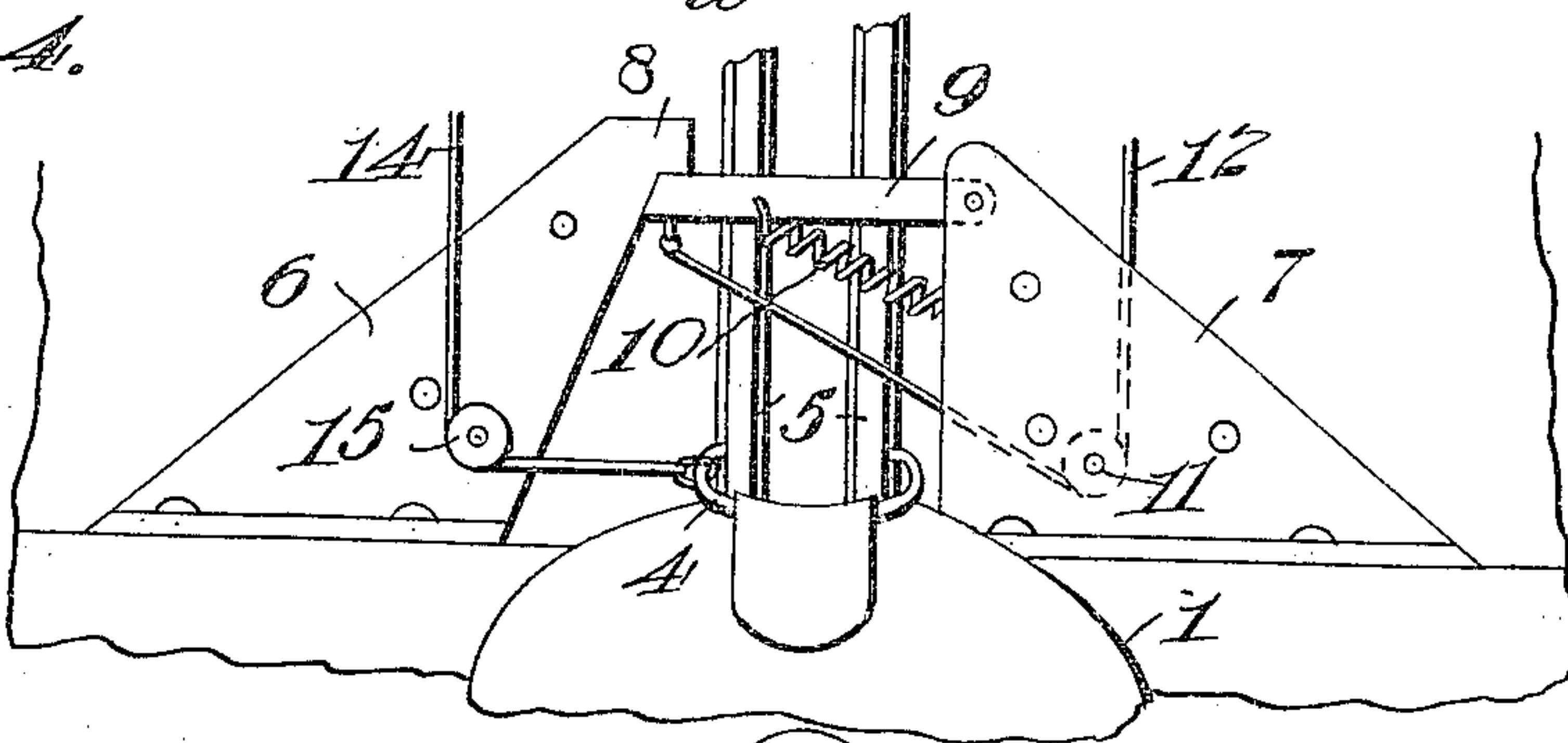


Fig. 5.

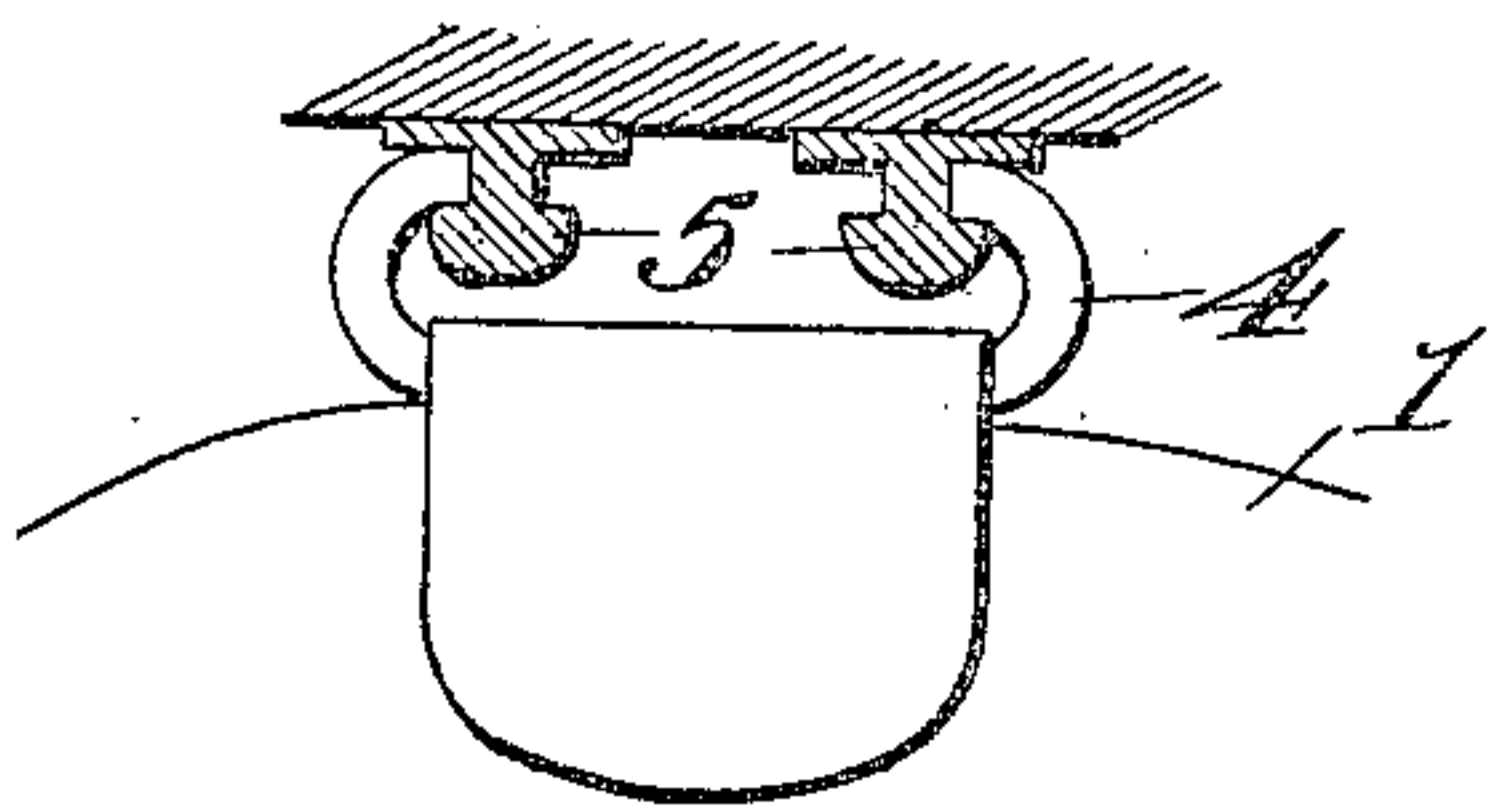
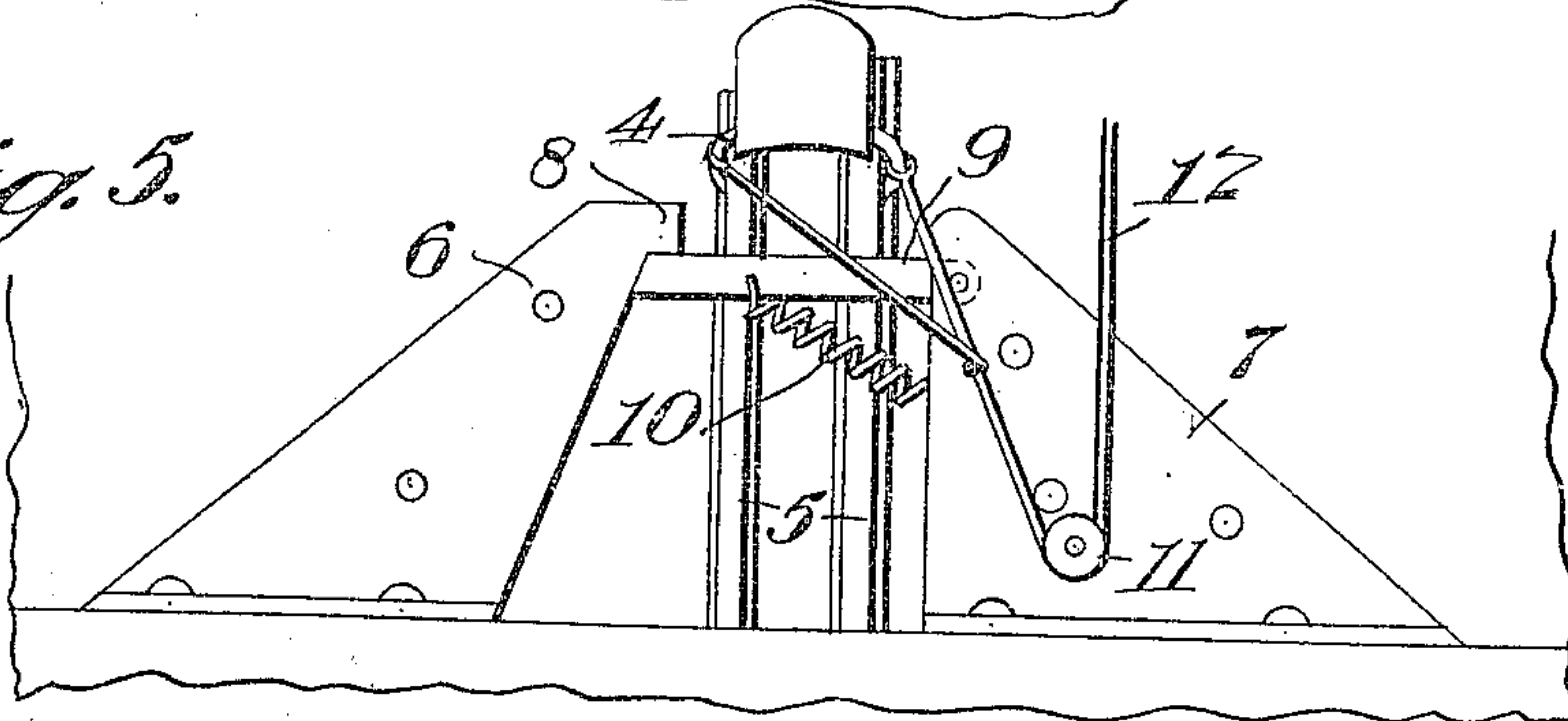
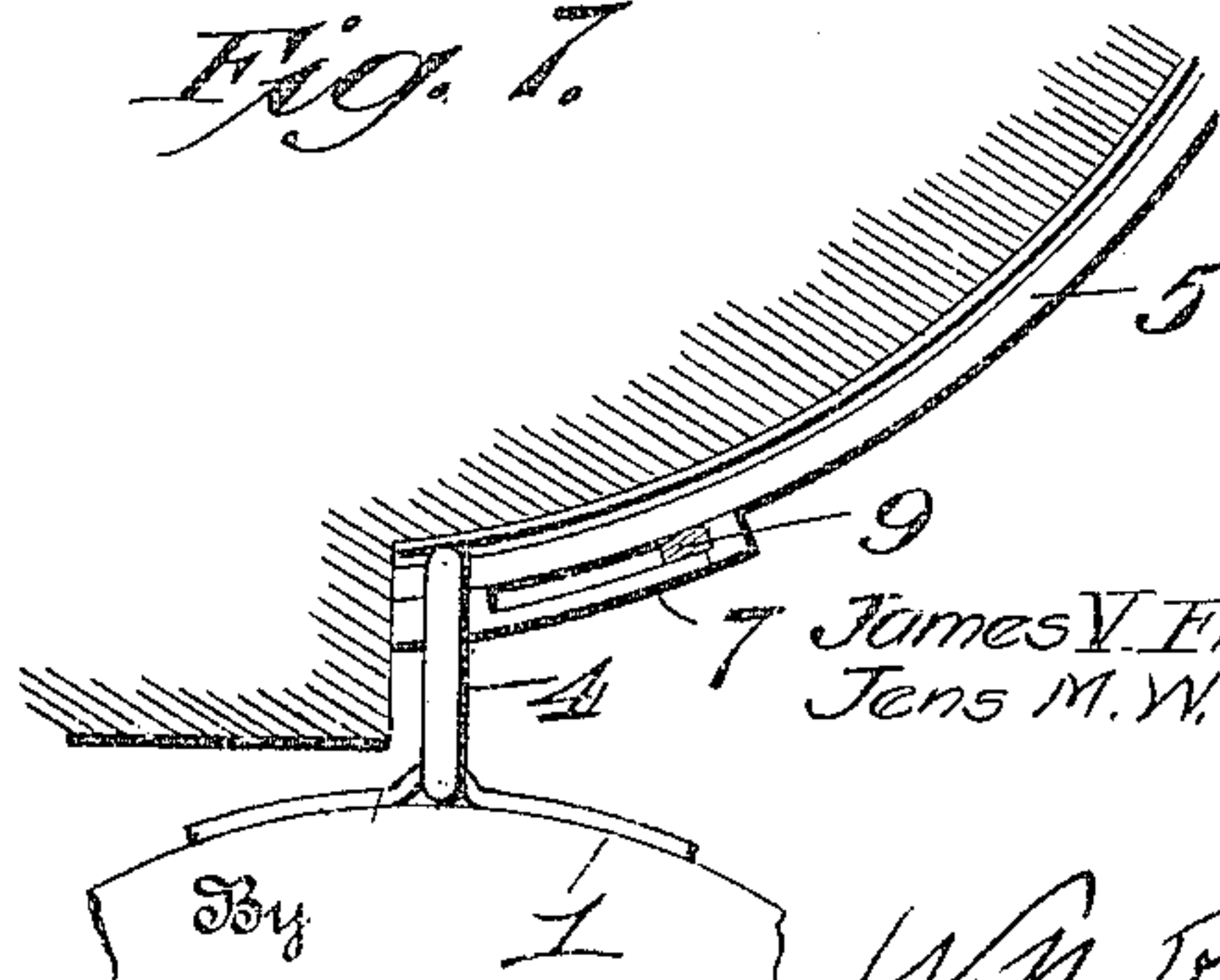


Fig. 6.

Fig. 7.



Witnesses
T. M. Hocking
Chas. E. Roach

Inventors
James V. Fitzsimmons,
Jens M. W. Hassing

By W. H. Roach
Attorney

UNITED STATES PATENT OFFICE.

JENS M. W. HASSING AND JAMES V. FITZSIMMONS, OF SAN FRANCISCO, CALIFORNIA.

WRECKING APPARATUS.

959,526.

Specification of Letters Patent.

Patented May 31, 1910.

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To all whom it may concern:

Be it known that we, JENS M. W. HASSING and JAMES V. FITZSIMMONS, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Wrecking Apparatus, of which the following is a specification.

This invention relates to wrecking appliances, and has for its object improvements in that class of wrecking appliances by which disabled vessels are prevented from sinking, vessels stranded upon shoals are easily floated therefrom, or sunken vessels are raised or lifted by means of collapsible tanks or bags which, when attached to the vessel, may be inflated with air, thereby rendering the tank so much lighter than the body of water occupying the same space, that it is enabled to float, not only itself, but also the vessel to which it is attached. This invention relates to the construction of such tanks or bags and the means for attaching the same to a vessel.

In the practical application of the invention it will, of course, be readily understood that the essential features of the same are susceptible of changes in details and structural arrangements, preferred and simple examples of which are shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a vessel equipped with our improved wrecking device. Fig. 2 is a bottom plan view of the forward part of a vessel with the two tanks in place and inflated. Fig. 3 is a detail elevation of the automatic clutch. Fig. 4 is a detail elevation showing another method of connecting up the device. Fig. 5 is a detail elevation of still another method of connecting up the device. Fig. 6 is a detail plan view of the rod with the ring in place thereon and showing a section of the bag to which said ring is attached. Fig. 7 is a detail sectional view of the automatic clutch taken on the line $a-a$ of Fig. 3.

The tank or bag is made of heavy rubber or other flexible material, and is preferably, circular in cross section and provided with convex ends and suitable reinforcing bands.

Referring to said drawings by numerals, 1 indicates the flexible tank or bag which is strengthened by reinforcing bands 2, and provided, at one portion, with a connecting pipe 3 for the purpose of attachment to the

air hose, and at another portion, about midway of its length, said portion being heavily reinforced, with an open sided link or traveler 4. Said traveler engages the sides of heavy steel I rods 5 extending vertically down the side of a vessel, equipped with our device, and terminating at the keel in such a position as to throw the traveler within an automatic clutch. Adjacent the keel, and immediately above the same, is placed an automatic clutch composed of two plates 6 and 7, somewhat triangular in shape, riveted to the side of said vessel in such a way as to leave a suitable opening between said plates. Plate 6 carries, on its edge adjacent said opening, a horizontally arranged, overhanging catch 8 adapted to receive a horizontally disposed, vertically swinging, automatically closing latch bar 9 pivoted to said plate 7. Interposed between said latch bar 9 and plate 7 is a resilient member 10, preferably a coiled spring. A pulley 11 is secured to the lower edge of plate 7 to guide a steel rope or cable 12, having its lower end attached to the latch bar 9 and its upper end attached to a power operated windlass 13, situated on the deck of the vessel.

The steel rope or cable 12 may be attached directly to the traveler 4, as shown in Fig. 5, and serve as a means of drawing the flexible bag 1 down the rods to the desired position when the latch bar 9 will open, by the traveler striking thereon, and will close automatically by the action of the spring when the traveler has passed said bar. Or, as shown in Fig. 4, a separate cable 14 guided by a pulley 15, attached to plate 6, may be used for drawing the bag down to position and the latch bar 9 operated by the cable 12 in the usual manner.

The operation of our device is as follows:—The hose, leading from suitable air pumps, is attached to pipes 3, the bags are then lowered, the travelers 4 sliding down the rods 5. By means of windlass 13 the rope or cable 12 is wound up causing the latch bar 9 to open and admit the traveler 4. When traveler 4 is within the opening of the clutch the windlass is let go and the latch bar closes automatically. The bags are then inflated with air causing the vessel to which they are attached to be floated.

Having described our invention, what we claim as new and desire to protect by Letters Patent is:—

1. In a wrecking apparatus, an elongated flexible bag, reinforcing bands thereon, an opening for admitting air thereto, an open sided link connected to said bag and guide rods adapted to be engaged by said link.

2. In a wrecking apparatus, a flexible bag containing a pipe for admitting air thereto, a traveler permanently connected to said bag and guide rods engaged by said traveler and permanently connected to the side of a vessel, substantially as set forth.

3. In a wrecking apparatus, a flexible bag containing an opening for admitting air thereto, a traveler permanently fastened to said bag and vertically disposed guide rods engaged by said traveler and permanently connected to the side of a vessel.

4. In a wrecking apparatus, a flexible bag provided with a traveler and guide rods, rigidly secured to the side of a vessel, engaged by said traveler and terminating, at their lower ends, within the opening of an automatic clutch.

5. In a wrecking apparatus, a flexible bag provided with an air inlet, an open sided link permanently connected to said bag and means, engaged by said link, for retaining the same in sliding engagement with a vessel.

6. In a wrecking apparatus, a flexible bag provided with an air inlet, an open sided link connected to said bag, means, engaged by said link, for retaining the same in sliding engagement with a vessel and a spring actuated latch bar for automatically locking the same, when in position.

7. In a wrecking apparatus, a flexible bag provided with an air inlet, an open sided link permanently connected to said bag, I rods, engaged by said link, for retaining said bag in sliding engagement with a vessel and means for lowering the same to position.

8. In a wrecking apparatus, a flexible bag provided with an air inlet, an open sided link permanently connected to said bag, I rods, engaged by said link, for retaining the same in sliding engagement with a vessel, a pulley guided cable for drawing said bag to position and means for automatically locking said bag when in position.

9. In a wrecking apparatus, a flexible bag provided with an air inlet, an open sided link permanently fastened to said bag, guide rods, engaged by said link, for retaining the same in sliding engagement with a vessel, a pulley made fast near the keel of the vessel, a cable passing around said pulley and having one end fastened to said bag and the other end made fast to a windlass, substantially as set forth.

10. In a wrecking apparatus, a flexible bag provided with an air inlet, a traveler fastened to said bag, vertically disposed rods, permanently fastened to the side of a vessel,

engaged by said traveler and means for drawing said bag down said rods.

11. In a wrecking apparatus, a flexible bag provided with an air inlet, a traveler fastened to said bag, vertically disposed rods, rigidly secured to the side of a vessel, engaged by said traveler, means for drawing said bag down said rods and means for automatically locking the same in position.

12. In a wrecking apparatus, a flexible bag provided with an air inlet and a traveler, vertically disposed rods, rigidly secured to the side of a vessel, engaged by said traveler, means for drawing said bag down said rods and a spring actuated latch bar for automatically locking the same in position.

13. In a wrecking apparatus, a flexible bag provided with an air inlet and a traveler, vertically disposed rods engaged by said traveler, means for drawing said bag down said rods, a triangular shaped plate provided with a catch situated at the bottom of said rods, another plate placed opposite thereto, a spring closed latch bar pivoted to said plate, a pulley made fast to the lower portion of said plate, a cable passing around said pulley one end of said cable being made fast to said latch bar and the other end to a windlass situated on deck, whereby said latch bar may be opened.

14. In a wrecking apparatus, a plate fastened adjacent the keel of a vessel, a horizontally disposed latching lip thereon, a similar plate placed opposite thereto, a latch bar pivoted to said plate, means for opening said latch bar and means for automatically closing the same.

15. In a wrecking apparatus, a plate situated adjacent the keel of a vessel, a horizontally disposed latching lip thereon, another plate opposite thereto, a latch bar pivoted to said plate, means for opening said latch bar and a spring interposed between said latch bar and said plate for automatically closing said latch bar.

16. In a wrecking apparatus, a plate situated adjacent the keel of a vessel, a horizontally disposed latching lip thereon, another plate opposite thereto, a latch bar pivoted to said plate, a pulley guided cable for opening said latch bar and a spring interposed between said latch bar and said plate for automatically closing said latch bar.

17. In a wrecking apparatus, vertically disposed guide rods rigidly secured to the side of a vessel and a resiliently operated latch bar situated at the lower end of said rods, substantially as set forth.

In testimony whereof we hereunto affix our signatures in presence of two witnesses.

JENS M. W. HASSING.
JAMES V. FITZSIMMONS.

Witnesses:

B. L. TAYLOR,
G. D. LERTON.