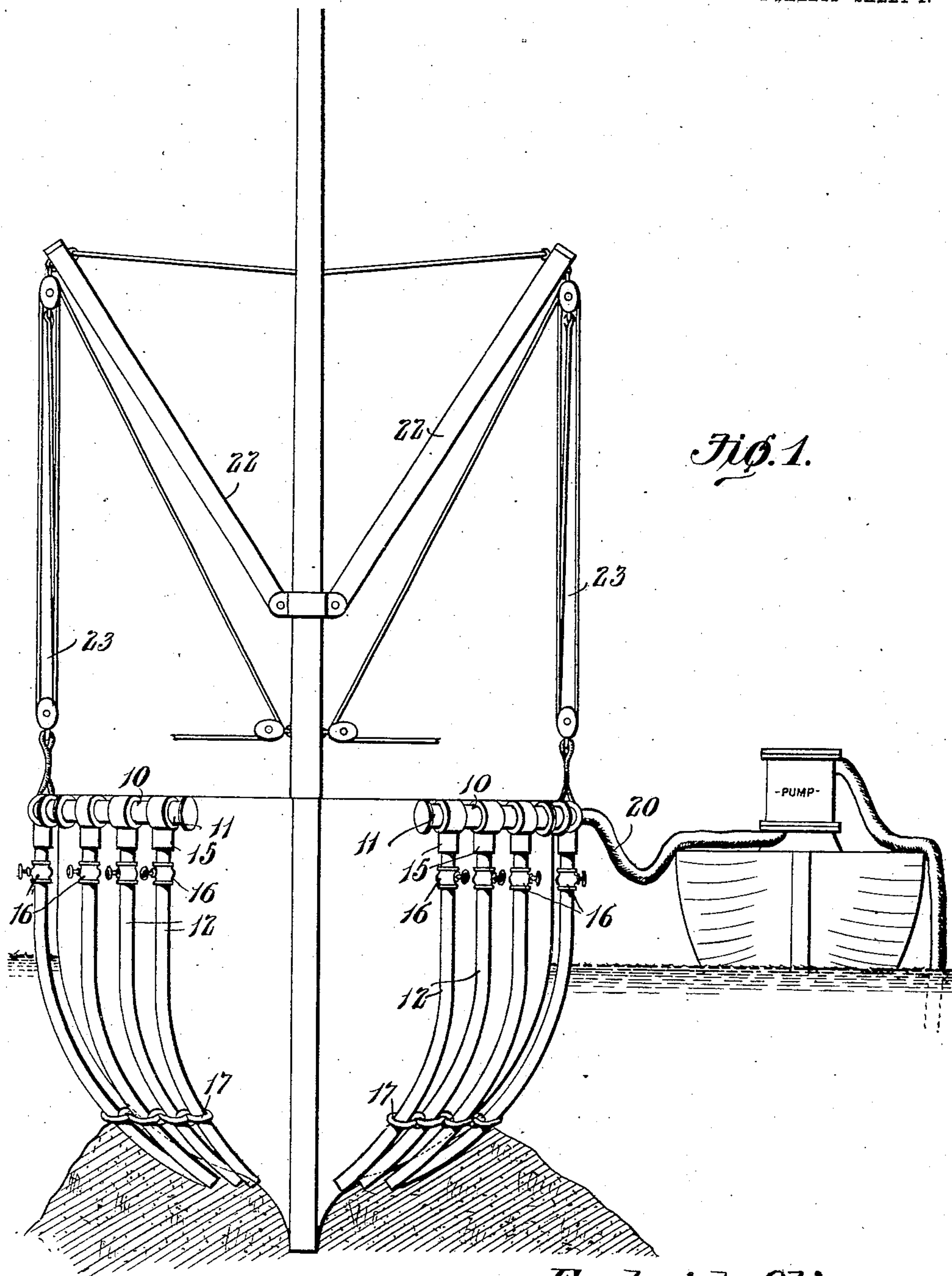


No. 854,596.

PATENTED MAY 21, 1907.

F. OLIVER.
WRECKING DEVICE.
APPLICATION FILED APR. 18, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

E. C. Stewart
John C. Parker

Frederick Oliver,
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ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 2.

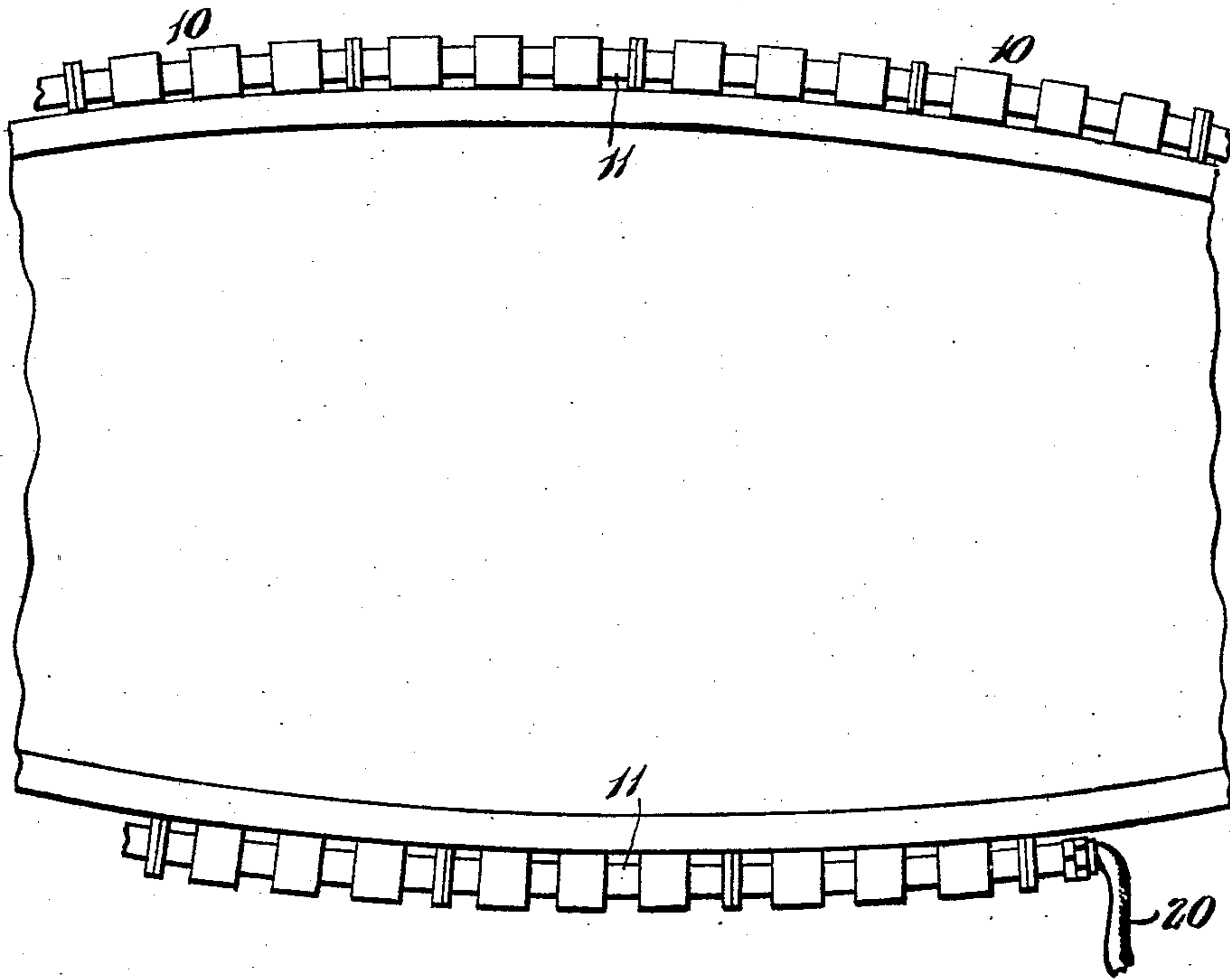
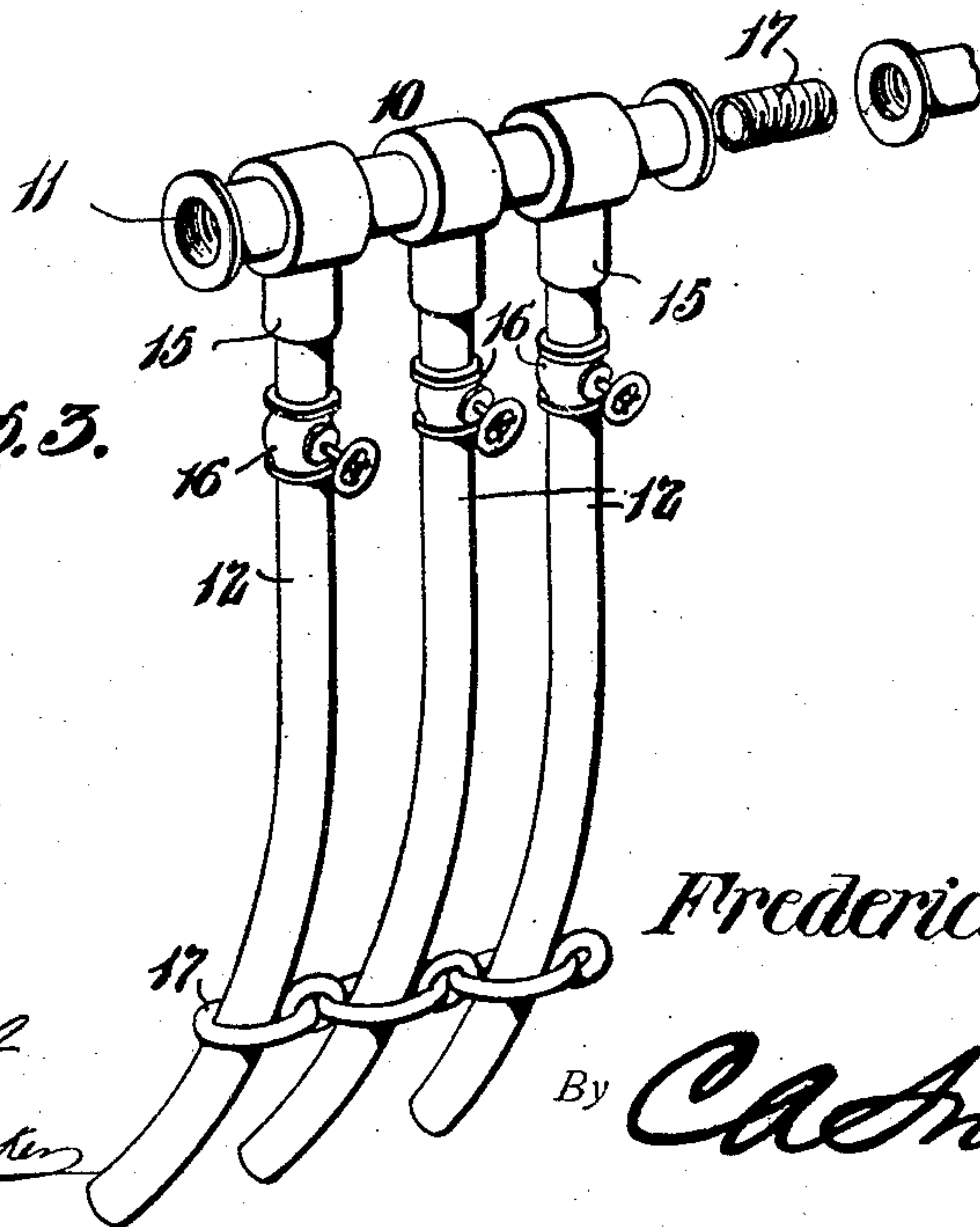


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK OLIVER, OF PORTSMOUTH, VIRGINIA.

WRECKING DEVICE.

No. 854,596.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed April 18, 1906. Serial No. 312,461.

To all whom it may concern:

Be it known that I, FREDERICK OLIVER, a citizen of the United States, residing at Portsmouth, in the county of Norfolk and State of Virginia, have invented a new and useful Wrecking Device, of which the following is a specification.

This invention relates to wrecking apparatus, and has for its principal object to provide means whereby stranded vessels may be readily loosened and withdrawn from shoals, bars and the like.

A further object of the invention is to provide a wrecking apparatus which may be readily placed in working position around all, or a part of a vessel, and by which the earth or sand may be loosened and washed away to a greater or less extent, or softened to a consistency which will permit the withdrawal of the vessel by tugs or kedges.

A still further object of the invention is to provide a wrecking apparatus in the form of a plurality of sectional manifolds which may be readily connected to each other, and through which streams of water may be directed against the sand bar or shoal on which the vessel is stranded, provision being made for pumping the water through the manifolds by power furnished by the vessel or by the lighters or wrecking tugs.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, herein- after fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is an elevation of a wrecking apparatus constructed in accordance with the invention, and showing the same as applied to a vessel. Fig. 2 is a partial plan view of the same. Fig. 3 is a detail perspective view of one of the manifolds.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In carrying out the present invention, the wrecking apparatus is so arranged as to per-

mit ready handling and loading on a lighter or other vessel, and may form a part of the equipment of a wrecking tug.

In carrying out the invention, a series of manifolds 10 are employed, each comprising a pipe 11 arranged to extend horizontally along the side of the vessel, and a series of approximately vertical pipes 12, the lower portions of which may be straight or may be curved in order that they may extend down under the bottom or keel of the vessel, and through these pipes a stream or streams of water may be forced under heavy pressure in order to loosen or wash away the bar or shoal.

The pipes 12 are connected to manifold pipes 11 by suitable couplings 15, either by screws or suitable flange or bolt connections, in order to permit the employment of any desired number of pipes, or to permit the use of pipes of different length, or different curvature, and the manifold pipes 11 are provided with threaded or flanged ends to permit their connection with other manifold connections, so that any desired number may be employed, and a sufficient number of pipes may be used to extend entirely around the vessel, or a smaller number may be used in case only a portion of the length of the vessel is ashore. Each of the pipes 12 is provided with a suitable valve 16 for controlling the flow of water therethrough, and the lower ends of the pipes are slid through the links of a chain or a series of rings fastened together by rods or ropes, as indicated at 17. The chain may be passed around the vessel or secured in such manner as to support the lower ends of the pipes and prevent their being bent or broken off.

Where the vessel is furnished with steam pumps, one end of the manifold may be connected to said pumps, and the water directed through the pipes for the purpose of loosening the sand or other material on which the vessel rests, but as the apparatus is intended as part of a working equipment, the lighter or tug is provided with powerful pumps which may be connected to the manifold by flexible tubes 20 or by tubes having universal joints which will permit freedom of movement of the lighter.

The apparatus is preferably suspended from the gunwale, or other part of the vessel by means of tackle 23 suspended from a boom or booms 22 to permit gradual lowering

of the manifolds as the material is washed away from under the vessel. The apparatus is intended more especially for salving vessels which have been stranded on sandy bars or shoals, and in use a sufficient quantity of water is directed through the pipes to stir up the sand forming a semi-liquid mass on which the vessel may be floated, so that it may be withdrawn from position by tugs, kedges or the like. As the water is forced through the pipes, and the pipes are carried forward by the vessel as the latter is moved by tugs or other devices, a new bed or cradle of water and liquid sand or mud will be made to allow a constant and continuous slow movement of the vessel toward deep water.

I claim:—

1. In wrecking apparatus, a continuous connected series of jet pipes arranged to extend down both sides, and partly under the hull of a vessel, and a vertically adjustable supporting means for said jet pipes.

2. In wrecking apparatus, a series of manifolds having detachable connections and arranged to form a connected series of jet pipes to extend down both sides and partly under

the hull of a vessel, and a vertically adjustable supporting means for said manifolds.

3. In wrecking apparatus, a continuous connected series of jet pipes arranged to extend down both sides and partly under the hull of a vessel, a flexible means connecting the lower portions of said jet pipes under the hull of the vessel, and a vertically adjustable supporting means for said pipes.

4. In wrecking apparatus, a plurality of manifolds having detachable connections, and each including curved interchangeable jet pipes arranged to extend down both sides and partly under the hull of a vessel, each of the pipes having an independent valve, a flexible connecting means for the lower portion of said pipes, and a vertically adjustable supporting means for the jet pipes.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FREDERICK OLIVER.

Witnesses:

JNO. C. PARKERSON,
G. W. BROOKS.