

No. 779,852.

PATENTED JAN. 10, 1905.

A. C. A. HOLZAPFEL.
PONTON FOR LIFTING LOADED SHIPS.

APPLICATION FILED JULY 7, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

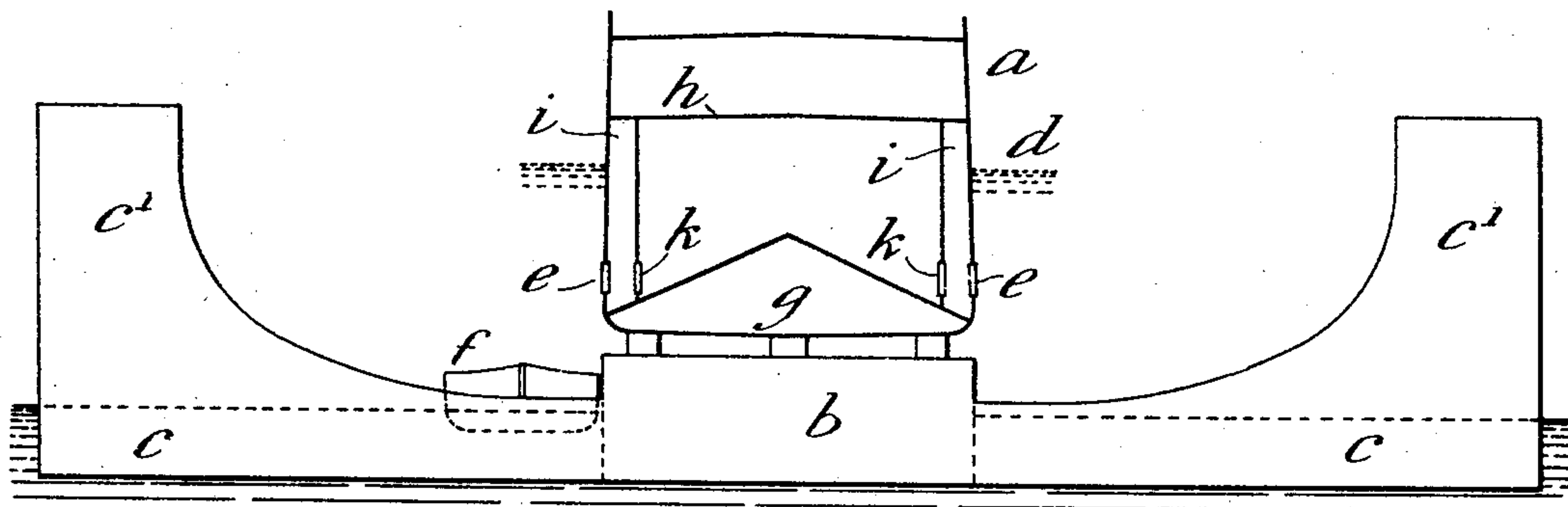
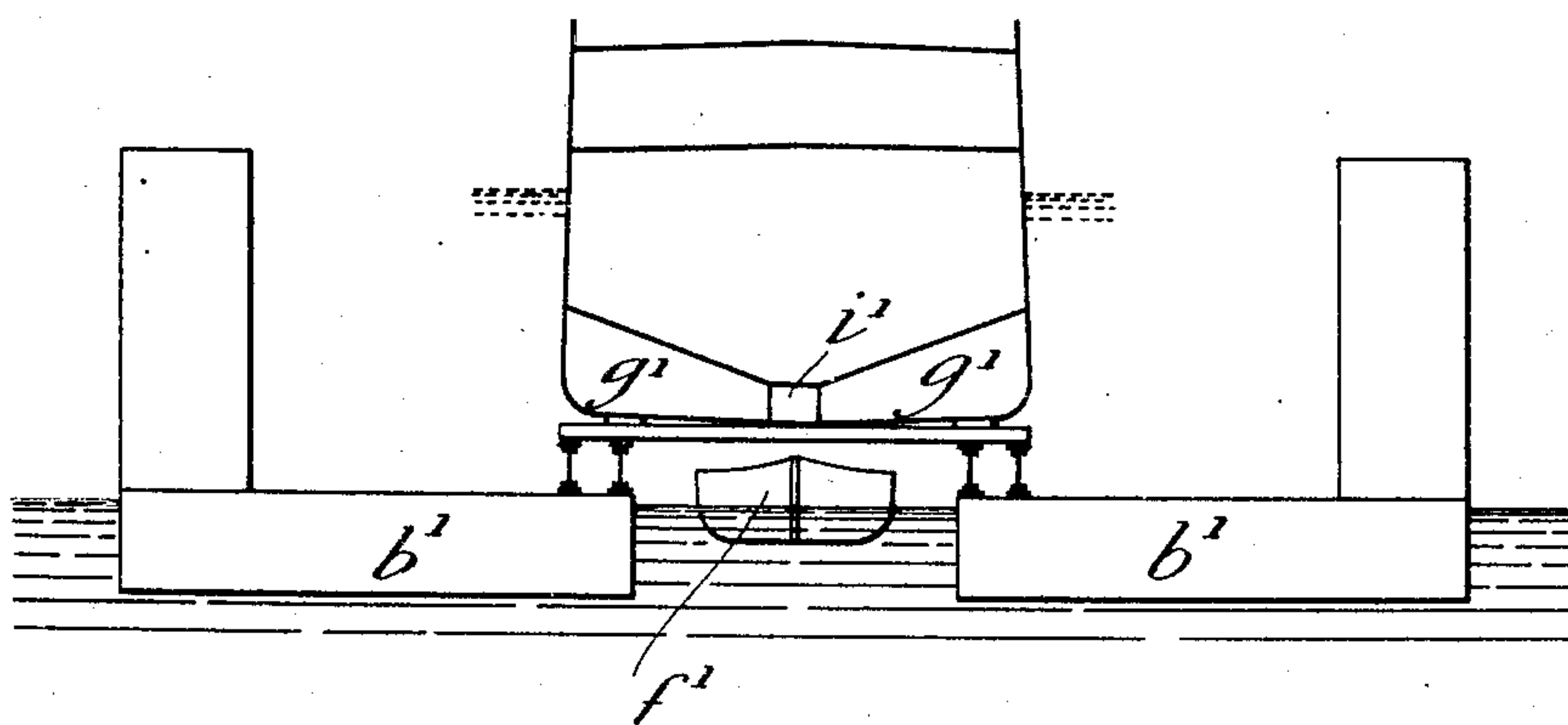


Fig. 3.



WITNESSES

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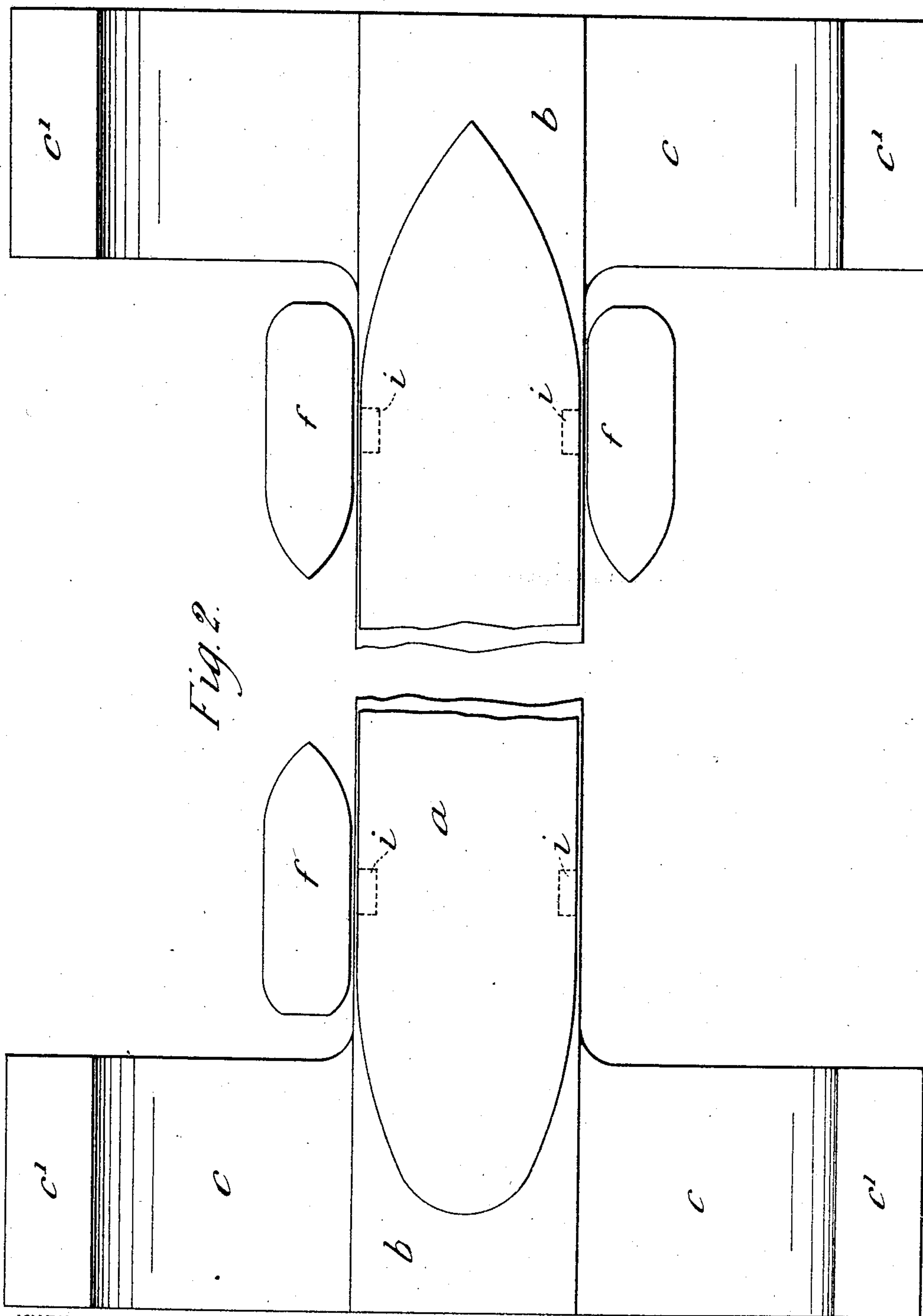
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2 SHEETS—SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALBERT CHARLES AUGUSTUS HOLZAPFEL, OF LONDON, ENGLAND.

PONTOON FOR LIFTING LOADED SHIPS.

SPECIFICATION forming part of Letters Patent No. 779,852, dated January 10, 1905.

Application filed July 7, 1904. Serial No. 215,693.

To all whom it may concern:

Be it known that I, ALBERT CHARLES AUGUSTUS HOLZAPFEL, merchant, a subject of the King of Great Britain and Ireland, residing at 59 Fenchurch street, in the city of London, England, have invented a certain new and useful Pontoon for Lifting Loaded Ships, (for which I have applied for a patent in Great Britain, dated January 26, 1904, No. 1,972,) of which the following is a specification.

A method has been proposed for unloading a ship or the like wherein the ship is to be raised from the water to allow her cargo to fall through outlets in her sides or bottom. The simplest means for raising a ship in this manner consists in lifting her on a pontoon which is brought beneath her. The present invention relates to a construction of pontoon suitable for this purpose.

According to the invention the pontoon is built of a length and width about those of the ship to be raised and has lateral arms at both ends or in various positions, such arms having raised portions or towers, which, together with the arms, are of such dimensions that by themselves displacing water they insure the stability of the pontoon when it is carrying the ship.

Instead of a single pontoon constructed so as to allow discharge of cargo from the sides of the vessel two pontoons having arms and towers on one side only may be constructed, so that discharge may occur from the bottom of the ship when she is raised.

The accompanying diagrams illustrate the invention.

Figure 1 is an end view of a pontoon which has been placed beneath a vessel, here shown in cross-section, to lift her from the water to allow of her cargo being discharged through her sides. Fig. 2 in a plan of Fig. 1. Fig. 3 is a similar view to Fig. 1, the vessel being arranged to discharge her cargo through the bottom, for which purpose she is lifted on two pontoons.

Referring to Figs. 1 and 2, *a* is the ship, and *b* the pontoon, having arms *c* and towers *c'*. The normal load-line of the ship is at *d*, and she is lifted on the pontoon so that the water-tight doors *e* in her sides are at a higher

level than the barges *f*, floating alongside the pontoon. The ballast-tank *g* slopes downwardly from the center line to the sides of the ship. Extending from the deck *h* to the ballast-tank at the places where the doors *e* are situated are trunkways *i*, which project into the hold and have doors *k* making communication with the hold opposite the doors *e*. When the cargo is to be discharged, a man descends the trunkway and prepares the doors *e* and *k* for being opened.

In the modification shown in Fig. 3 there are two pontoons *b'*, and the ballast-tanks *g'* are at the sides of the ship, sloping toward the center line. Between two keelsons at this part are water-tight doors in the bottom of the vessel, situated in the trunkway *i'*, the cover of which has doors making communication with the hold opposite the water-tight doors, respectively. A man entering the trunkway from the stoke-hole or fore-peak prepares both doors so that they may be opened and the cargo discharged into a barge *f'*, floating between the pontoons.

Having thus described the nature of my said invention and the best means I know of carrying the same into practical effect, I claim—

1. A pontoon for lifting loaded ships comprising a body, arms extending laterally therefrom and towers on the said arms; substantially as described.

2. A pontoon for lifting loaded ships comprising a body of a length and width about those of the ship to be lifted, arms extending laterally from both sides thereof, and towers on the said arms, such arms and towers being of dimensions to displace water sufficient to insure the stability of the ship; substantially as described.

3. A pontoon for lifting loaded ships comprising a body, arms extending laterally from one side thereof and towers on the said arms, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT CHARLES AUGUSTUS HOLZAPFEL.

Witnesses:

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WALTER J. SKERTEN.