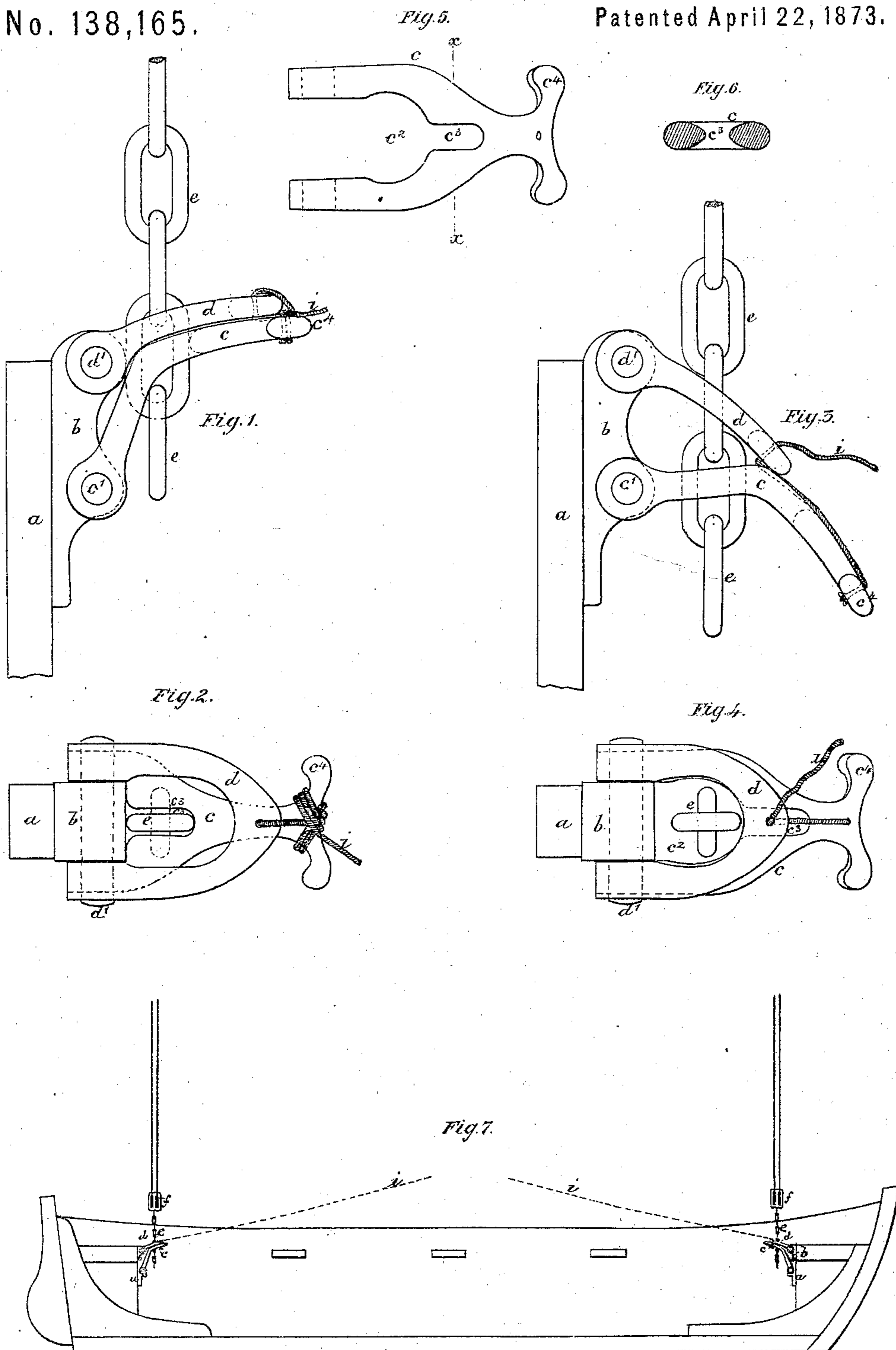


J. M. KILNER.
Boat-Detaching Apparatus.

No. 138,165.

Patented April 22, 1873.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES M. KILNER, OF CHESTER CASTLE, CHESTER, GREAT BRITAIN.

IMPROVEMENT IN BOAT-DETACHING APPARATUS.

Specification forming part of Letters Patent No. **138,165**, dated April 22, 1873; application filed April 18, 1873.

To all whom it may concern:

Be it known that I, JAMES MAZE KILNER, chaplain of Chester Castle, Chester, in the Kingdom of Great Britain, have invented certain Improved Boat-Detaching Apparatus, of which the following is a specification:

My invention relates to apparatus which I call a "grab-link," and whereby a boat may be securely suspended from a ship's davits or other suitable supports, and lowered therefrom into the water, and which will detach or disengage both ends of the boat simultaneously at the proper moment.

The said apparatus is clearly illustrated in the accompanying drawing, which I will now proceed to describe.

Figure 1 is a side view of the apparatus, showing the parts in the position they occupy when supporting the boat. Fig. 2 is a plan, showing the parts of the apparatus in the same position. Fig. 3 is a side view of the said apparatus with the parts adjusted to release or disengage the boat. Fig. 4 is a plan of Fig. 3. Fig. 5 shows one part of the apparatus detached. Fig. 6 is a transverse section on the line *xx*, Fig. 5. Fig. 7, which is drawn to a reduced scale, shows a boat suspended by my apparatus.

Like letters indicate the same parts throughout the drawing.

a is an upright post or support secured to the keel of the boat or otherwise securely fixed in the same. *b* is a metal bracket attached to the said post. *c* is a shackle jointed to the bracket at *c*¹. *d* is another shackle jointed to the top of the bracket at *d*¹. *e* is a strong chain attached to the block *f*, which is suspended from the ship's davits in the usual manner. By referring to Fig. 2 it will be seen that the shackle *d* is of such a form and size as to allow the chain to pass freely through it. The chief peculiarity, however, of my apparatus lies in the formation of the shackle *c*, which, as clearly shown in Fig. 1, is curved or bent nearly to a right angle, and has its aperture of a peculiar shape, as shown in Fig. 5, one portion, *c*², being large enough to allow the chain to pass freely through it, while the other portion, *c*³, is only just wide enough to receive one link flatwise. By this peculiar formation of the said shackle and its aperture, and the combination of the same with the other shackle, I obtain the desired object—

namely, the secure retention of the boat when suspended, and its instantaneous release when it falls properly into the water—that is to say, when the end of the chain has been passed through the shackles, as shown in Fig. 1, and the weight taken by the chains, the latter cannot by any means be disconnected from the shackles, as the greater the weight upon the apparatus the more forcibly it will gripe the chain; but if the chains are relieved of the weight, the shackles will fall into the position shown in Fig. 3, and the chains will then rise freely out of the said shackles, and the boat will be detached. The inner edges of the shackle *c* are preferably made sharp or V-shaped, as shown in the section, Fig. 6, so that when a close-link chain is used the said shackle will fit closely between the links.

To insure the safe retention of the boat till both ends are fairly supported in the water, or until the command is given to "let go," and its instantaneous and simultaneous detachment at both ends at the proper moment, I secure the shackles by a lanyard, *i*, as shown in Figs. 1 and 2, attached to one shackle, and made fast to the cross-piece *c*⁴ of the other shackle, the lanyards at both ends being released simultaneously at the proper moment; or I may have lanyards held at the center of the boat, as shown in Fig. 7, by a man who can release both simultaneously when the boat touches the water; or I may have the shackles at both ends of the boat held by men who will release them simultaneously at the word of command from the officer in charge.

Claims.

1. The shackles *c d*, jointed or pivoted to a suitable support attached to the boat, and formed and arranged to operate on a chain and in combination with each other, substantially as set forth.

2. The shackle *c* formed with the V-shaped edges *c*³ and with the cross-piece *c*⁴, for the purpose specified, in combination with a pivoted shackle, *d*, substantially as described.

JAMES MAZE KILNER.

Witnesses:

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