

(No Model.)

H. E. FOSTER.  
BOAT DETACHING APPARATUS.

No. 385,608.

Patented July 3, 1888.

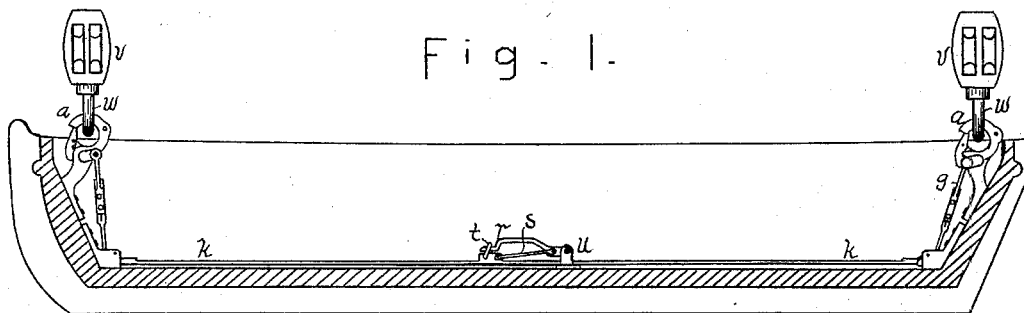


Fig. 2.

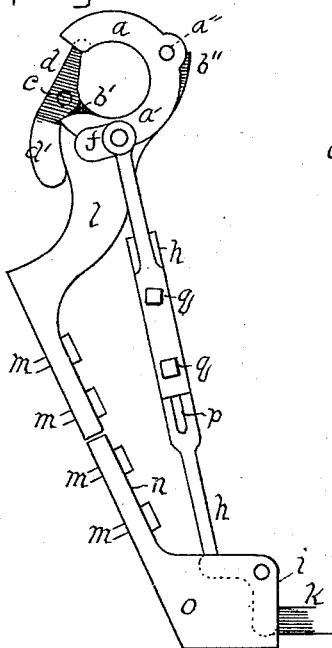


Fig. 4.

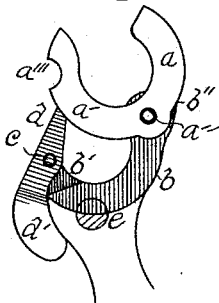
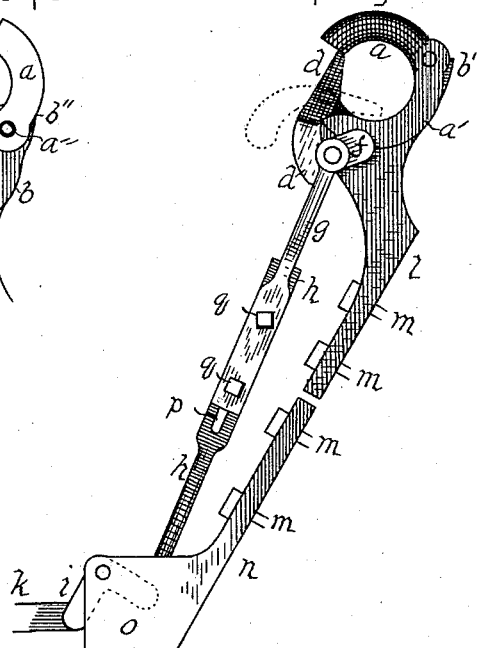


Fig. 3.



ATTEST.

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Fig. 5.



INVENTOR.

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# UNITED STATES PATENT OFFICE.

HICKMAN E. FOSTER, OF DECATUR, ILLINOIS.

## BOAT-DETACHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 385,608, dated July 3, 1888.

Application filed November 7, 1887. Serial No. 254,482. (No model.)

### *To all whom it may concern:*

Be it known that I, HICKMAN E. FOSTER, of the city of Decatur, county of Macon, and State of Illinois, have invented a certain new and useful Boat Appliance, of which the following is a specification.

My invention relates to appliances by means of which a ship's boat may be cast loose at stem and stern simultaneously; and it consists in certain combinations, details of construction, and relative arrangements of parts, as hereinafter set forth in detail and specifically claimed.

In the drawings accompanying and forming a part of this specification, Figure 1 shows a longitudinal vertical section of a boat with my appliance attached. Fig 2 is an enlarged representation of the stem-hook. Fig. 3 is a similar representation of the stern-hook. Fig. 4 represents a fragment of a hook in position to permit the release of the boat, and Fig. 5 is a plan view of a rocking lock-shaft.

The stem-hook and the stern-hook are essentially the same in construction and operation, and their difference in form is only such as the difference in form of stem and stern necessitates.

Brackets *l* are secured by bolts *m*, or other suitable securing devices, to the stem and stern, respectively, of the boat. Each bracket terminates in an arc-formed portion, *b*, which is adapted to conform to the bifurcate extension *a'* of the swinging hook *a*. The hook swings on pin *a''* and is limited in its motion by the stop projection *b''*. Peripheral notch *a'''* coacts with shaft *e* to retain or release the swinging hook. The shaft *e* has oscillatory motion in the bracket at a point corresponding to the position of notch *a'''* when the hook is in operative condition. The cut-away portion of the shaft indicated in Fig. 4, (where the shaft is shown in section,) and clearly shown in Fig. 5, permits the part *a a'* to swing when the shaft is in proper position. When the solid portion of the shaft is turned into the notch *a'''*, the hook is securely locked. A contracted extension of surface *b* is shown at *b'*, and a lock-pawl, *d*, flush with said surface, pivots at *c* on the extension and retains the link of the davit-tackle in the hook. Weighted end *d'* of the lock-pawl holds the same across the open space of the hook, and by its position

with relation to the arc of the bracket assists in preventing the pawl from being forced outward. A bell-crank lever is pivotally supported in heel *o*, which is secured to the boat through upper extension, *n*. Rod *g* connects with the crank *f* of shaft *e*, and is flattened at its lower end to receive bolts *q*. Rod *h* connects with bell-crank lever *i*, and is flattened and slotted at its upper end, as shown at *p*, to receive bolts *q* and permit longitudinal adjustment. At the bottom of the boat, longitudinal therewith, is bar *k*, connected at each end with a bell-crank lever, *i*. Hand-lever *r* is pivoted on standard *u*, and is connected with bar *k* by means of rod *s*. A link, *t*, enables the hand-lever to be locked in position, as shown.

The links *w* of the davit-tackle *v* are placed in the hooks by forcing the lock-pawls into the position indicated by dotted lines in Fig. 3. When the pawls are relieved from pressure, they are carried by their weights into the positions shown by solid lines, and effectively prevent detachment of the links.

To launch the boat, it is lowered to any desired position in the customary manner, and when everything is in readiness the hand-lever is raised. The motion of the hand-lever is imparted to bar *k*, through said bar to the bell-crank levers, and through the bell-crank levers to the shafts *e*. The shafts of both hooks rotate in unison and carry their cut-away portions simultaneously in position to permit the parts *a a'* to swing upward and release the boat from the davit-tackle.

The connections between the bell-crank levers and the cranks of the rock-shafts are made longitudinally adjustable in order that any tendency of the hooks to operate one in advance of the other may be readily remedied. The brackets *l* are made separate from the heel-brackets *n o*, in order that the device may be applied to boats of various sizes or to boats of the same size in various positions of vertical adjustment, and the extensible peculiarity of the connections between the bell-crank levers and the cranks of the rock-shafts make such results practicable.

By the use of my appliance connections may be readily made with the davit-tackle without operating the detaching hand-lever, danger of

accidental detachment is avoided, and simultaneous release of both the stem and the stern connections is assured.

5 This invention is an improvement on the device set forth in Letters Patent of the United States, granted to me February 24, 1885.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 1. In boat appliance, in combination, the hook-brackets, the swinging hooks pivoted thereon and provided with the peripheral notches, the rock-shafts having the cut-away portions, the cranks on the shafts, the bell-crank levers, the bar connected with both  
15 bell-crank levers, and the connections between the bell-crank levers and the cranks of the rock-shafts, as and for the purpose set forth.

20 2. In boat appliance, in combination, the hook-brackets, the swinging hooks pivoted thereon and provided with the peripheral notches, the rock-shafts having the cut-away portions, the cranks on the shafts, the bell-crank levers, the bar connected with both bell-crank levers, and the longitudinally-adjust-

able connections between the bell-crank levers 25 and the cranks of the rock-shafts, as and for the purpose set forth.

3. In boat appliance, in combination, the arc-formed permanent portions, the swinging hooks pivoted thereon and provided with peripheral notches, the rock-shafts in the permanent portions having the cut-away recesses, and the gravity-pawls pivoted to such portions and resting normally across the openings of the hooks, as and for the purpose set forth. 30

4. In boat appliance, in combination, the arc-formed permanent portions, the swinging hooks pivoted thereon and provided with peripheral notches, the rock-shafts in the permanent portions having the cut-away recesses, and the pawls pivoted to such portions and resting normally across the openings of the hooks, as and for the purpose set forth. 35 40

HICKMAN E. FOSTER.

Attest:

I. D. WALKER,  
L. P. GRAHAM.