

No. 746,169.

PATENTED DEC. 8, 1903.

W. H. ROTHWELL.
RELEASING DEVICE FOR SHIPS' BOATS.

APPLICATION FILED APR. 16, 1903.

NO MODEL.

4 SHEETS—SHEET 1.

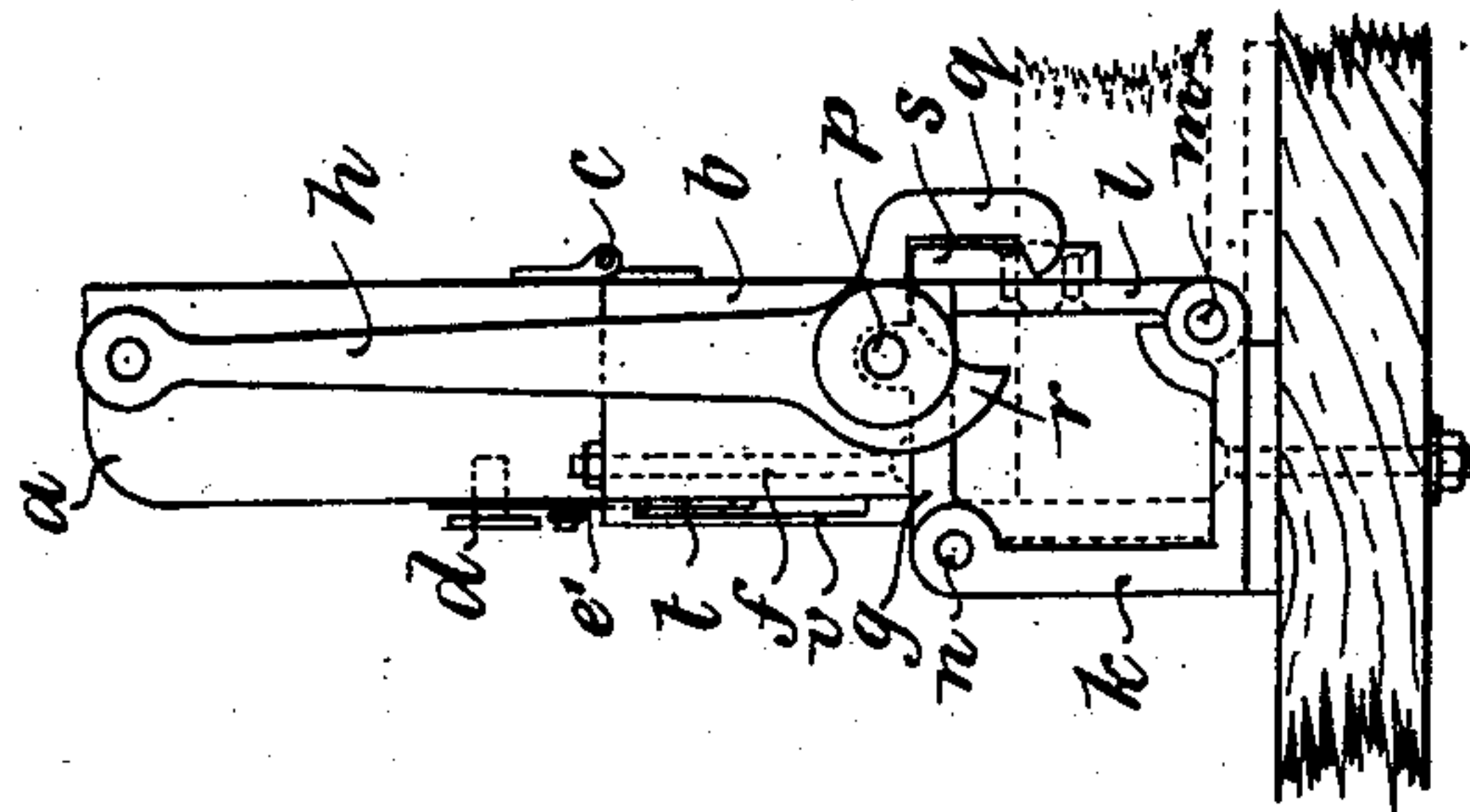


Fig. 2.

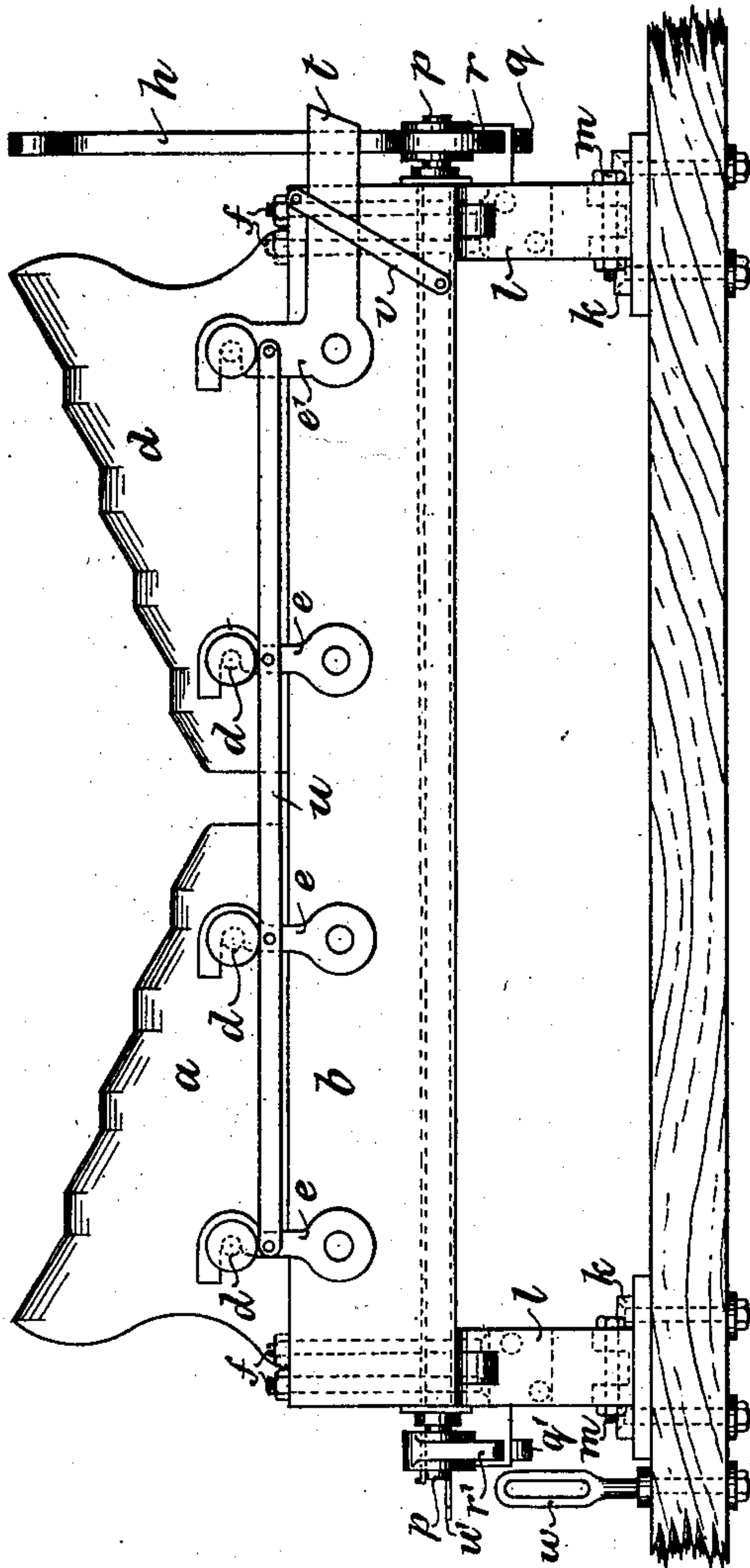
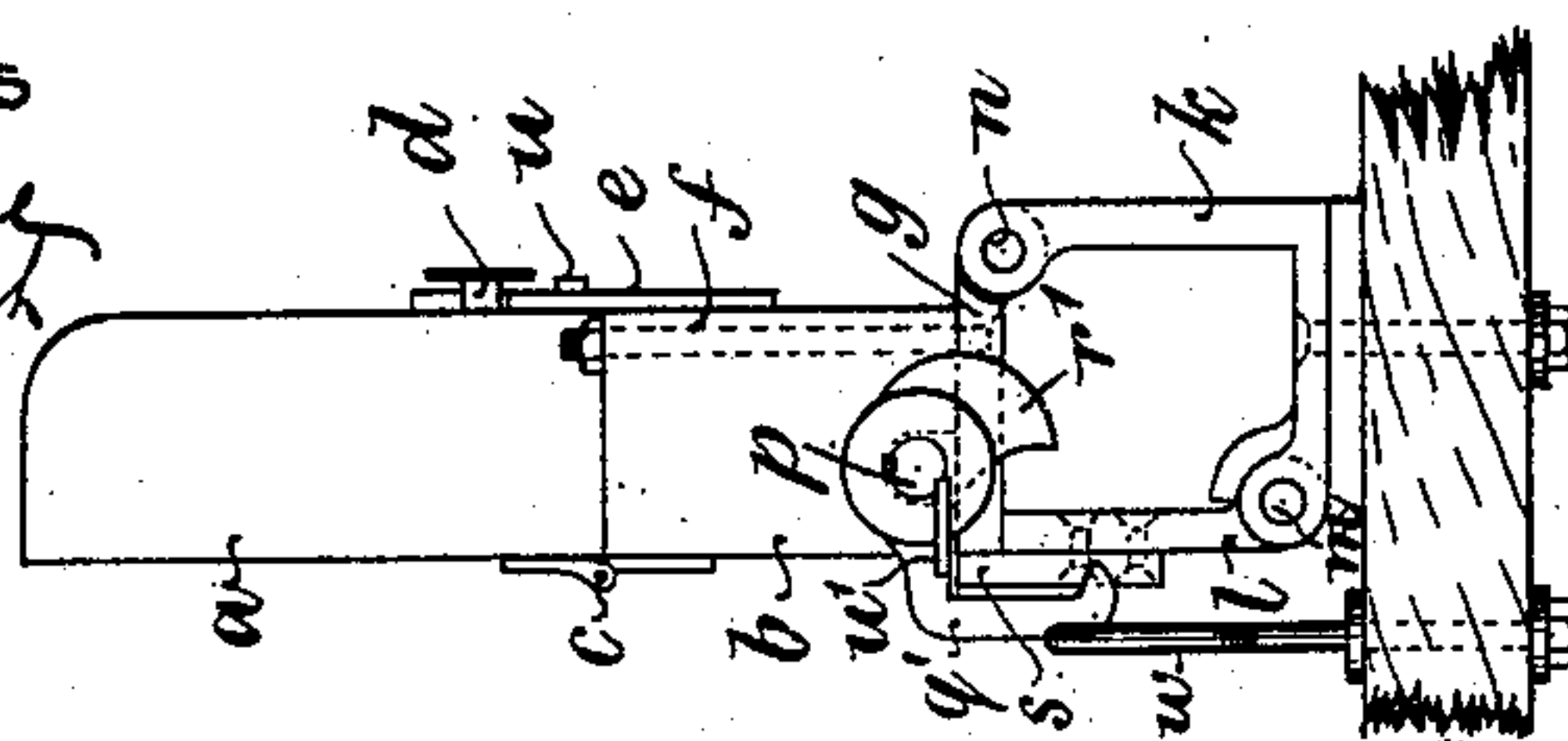


Fig. 1.

WITNESSES

H. M. Kuehn
Dr. Ida Welch



INVENTOR
William Henry Rothwell

Fig. 3.
By *Richard R.*

ATTORNEYS

No. 746,169.

PATENTED DEC. 8, 1903.

W. H. ROTHWELL.
RELEASING DEVICE FOR SHIPS' BOATS.

APPLICATION FILED APR. 16, 1903.

NO MODEL.

4 SHEETS—SHEET 2.

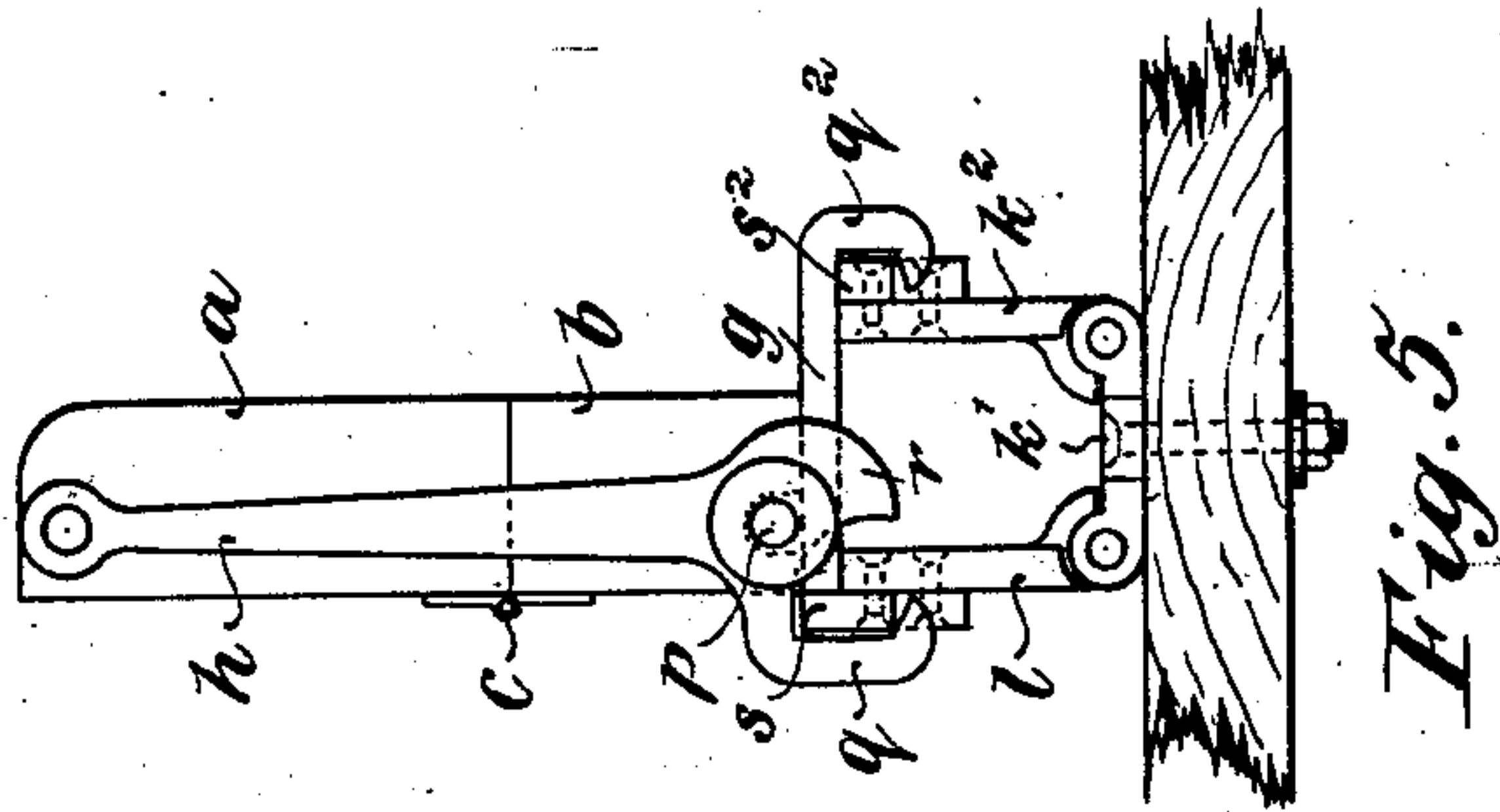


Fig. 5.

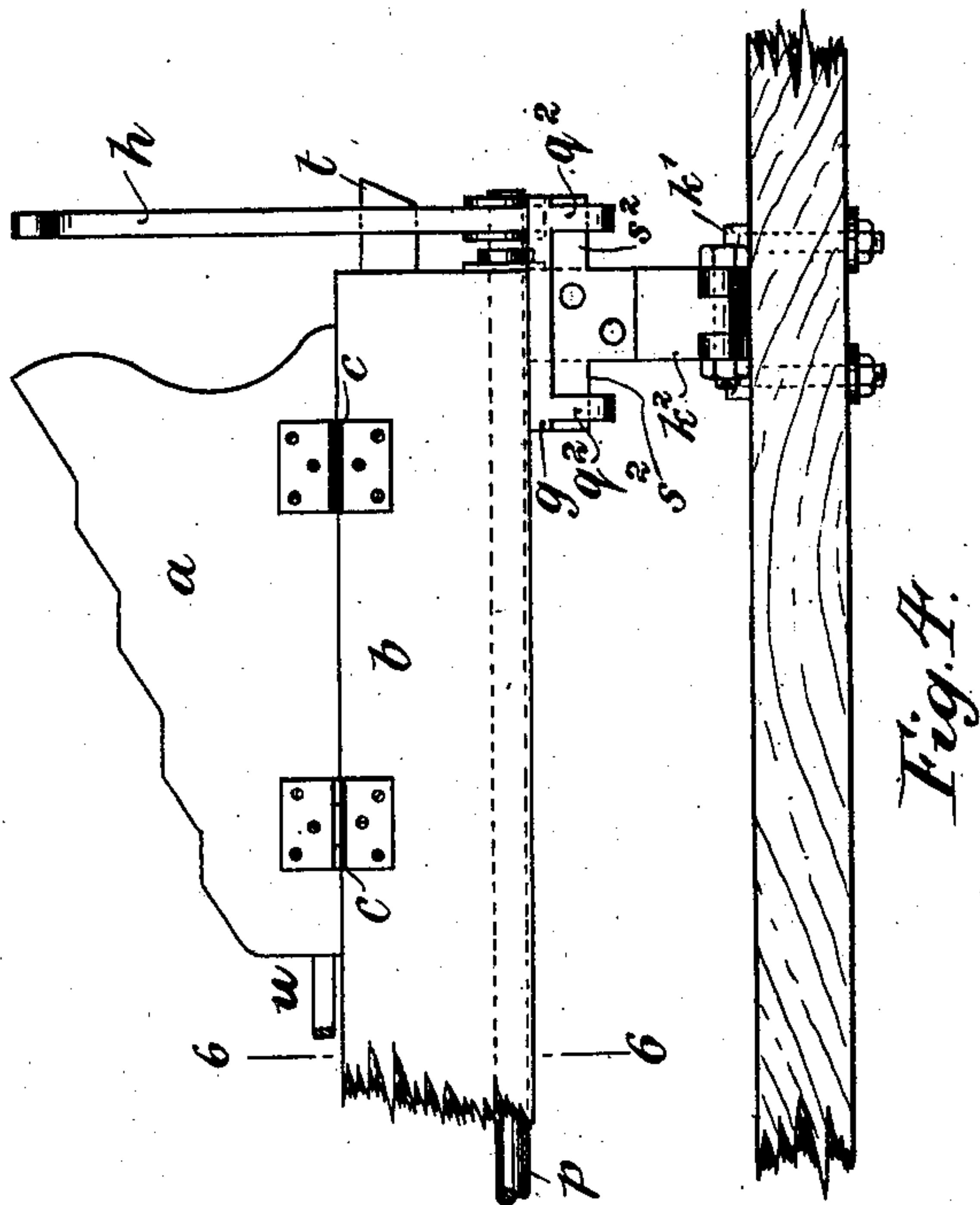


Fig. 4.

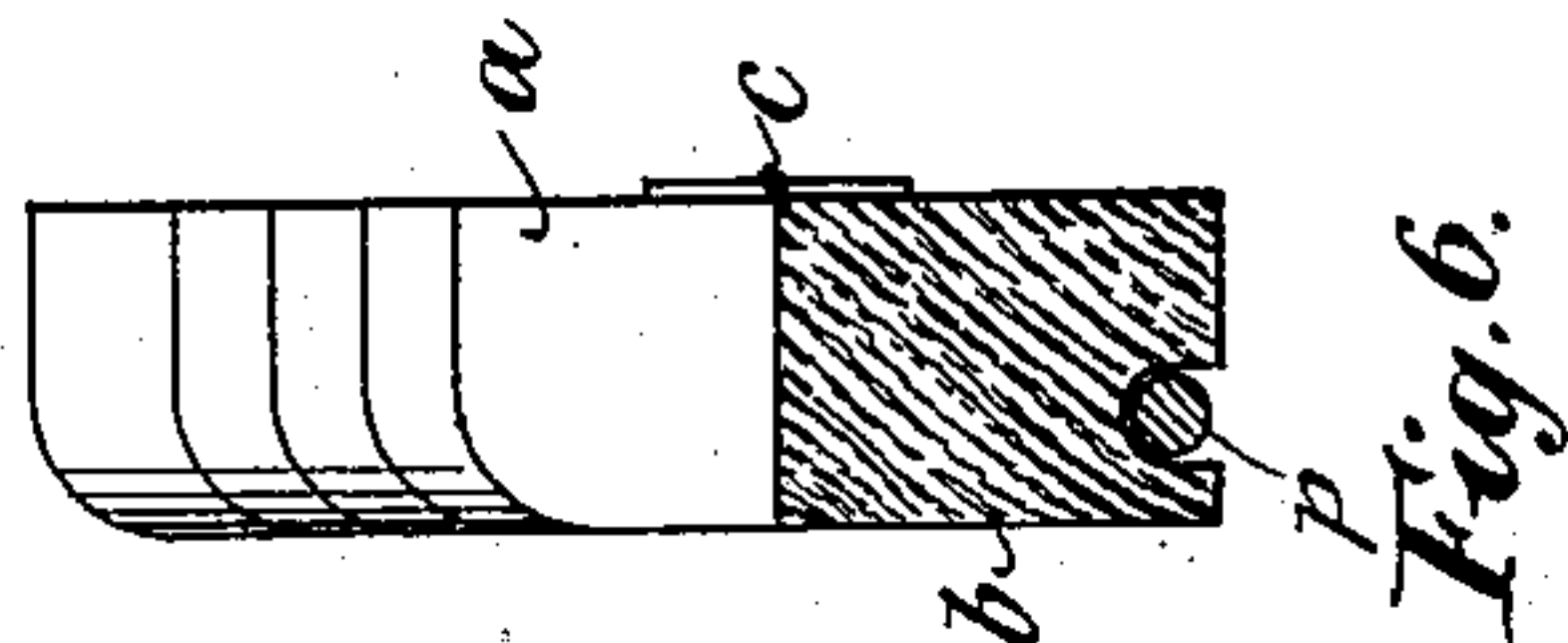


Fig. 6.

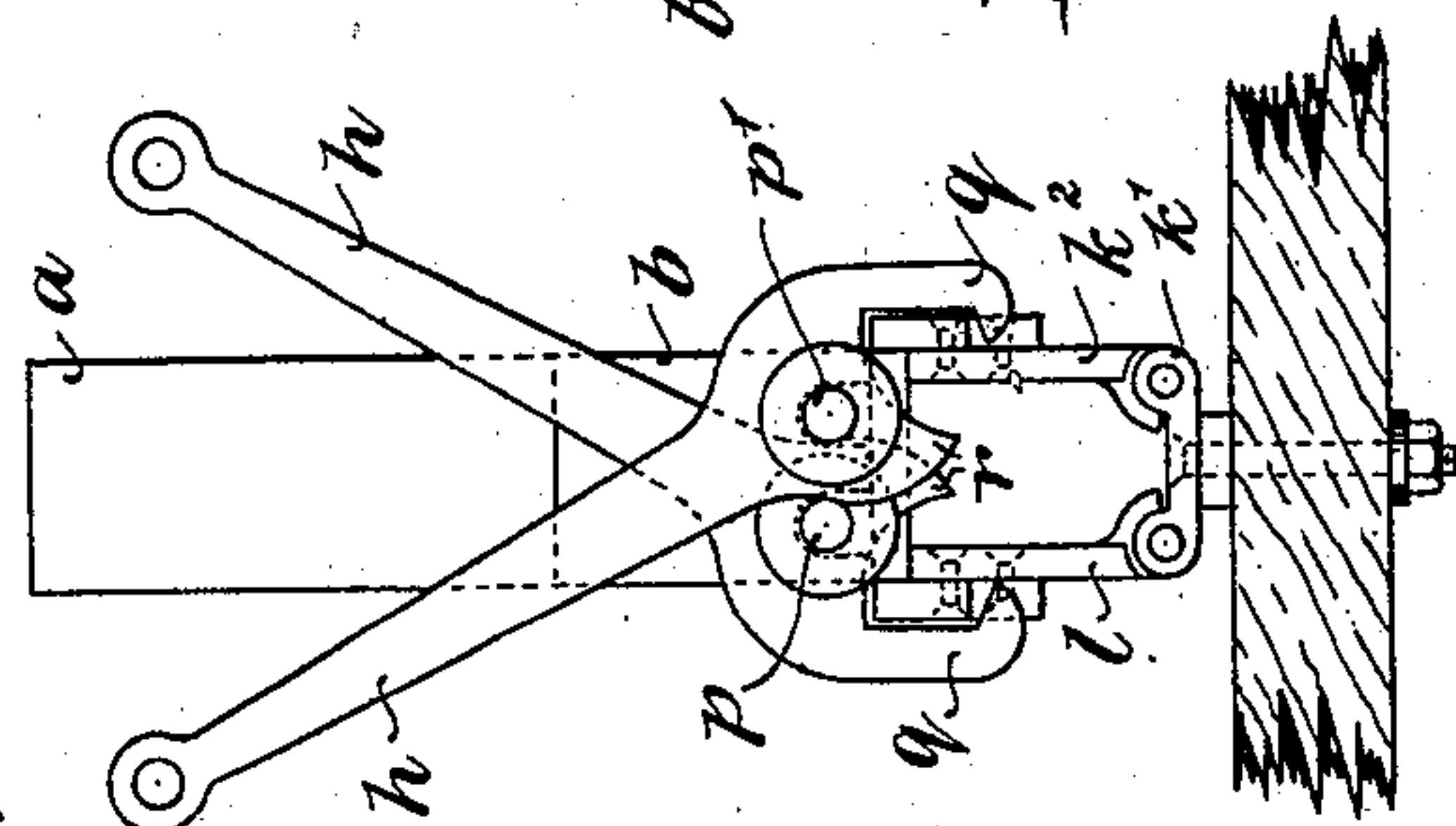


Fig. 7.

WITNESSES

H. M. Kuehne
M. Ida Welch

INVENTOR

William Henry Rothwell

BY *Richardson*
ATTORNEYS

No. 746,169.

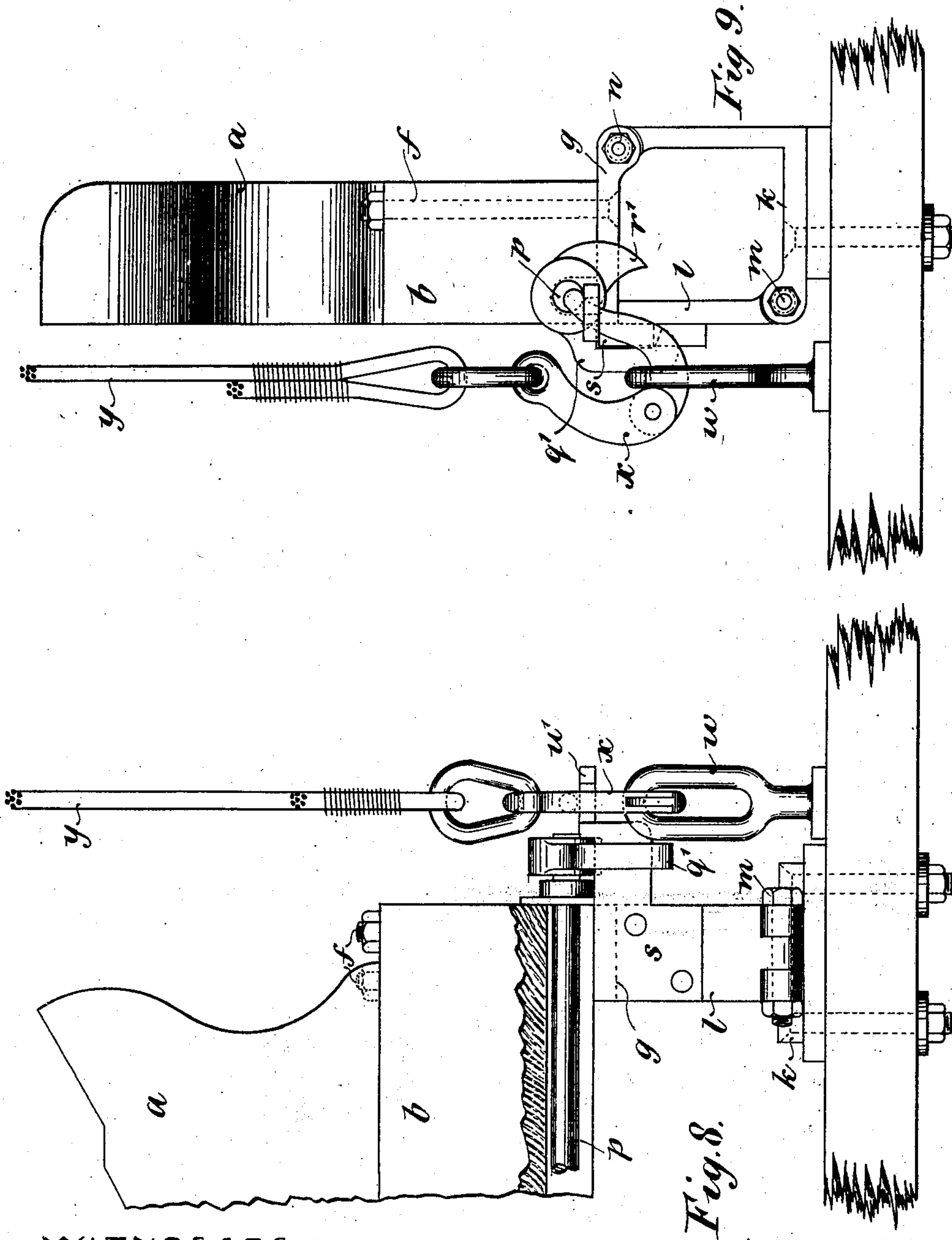
PATENTED DEC. 8, 1903.

W. H. ROTHWELL.
RELEASING DEVICE FOR SHIPS' BOATS.

APPLICATION FILED APR. 16, 1903.

NO MODEL.

4 SHEETS—SHEET 3.



WITNESSES

H. M. Kuehne
M. Ida Welch

INVENTOR

William Henry Rothwell

BY *Richard A.*

ATTORNEYS

No. 746,169.

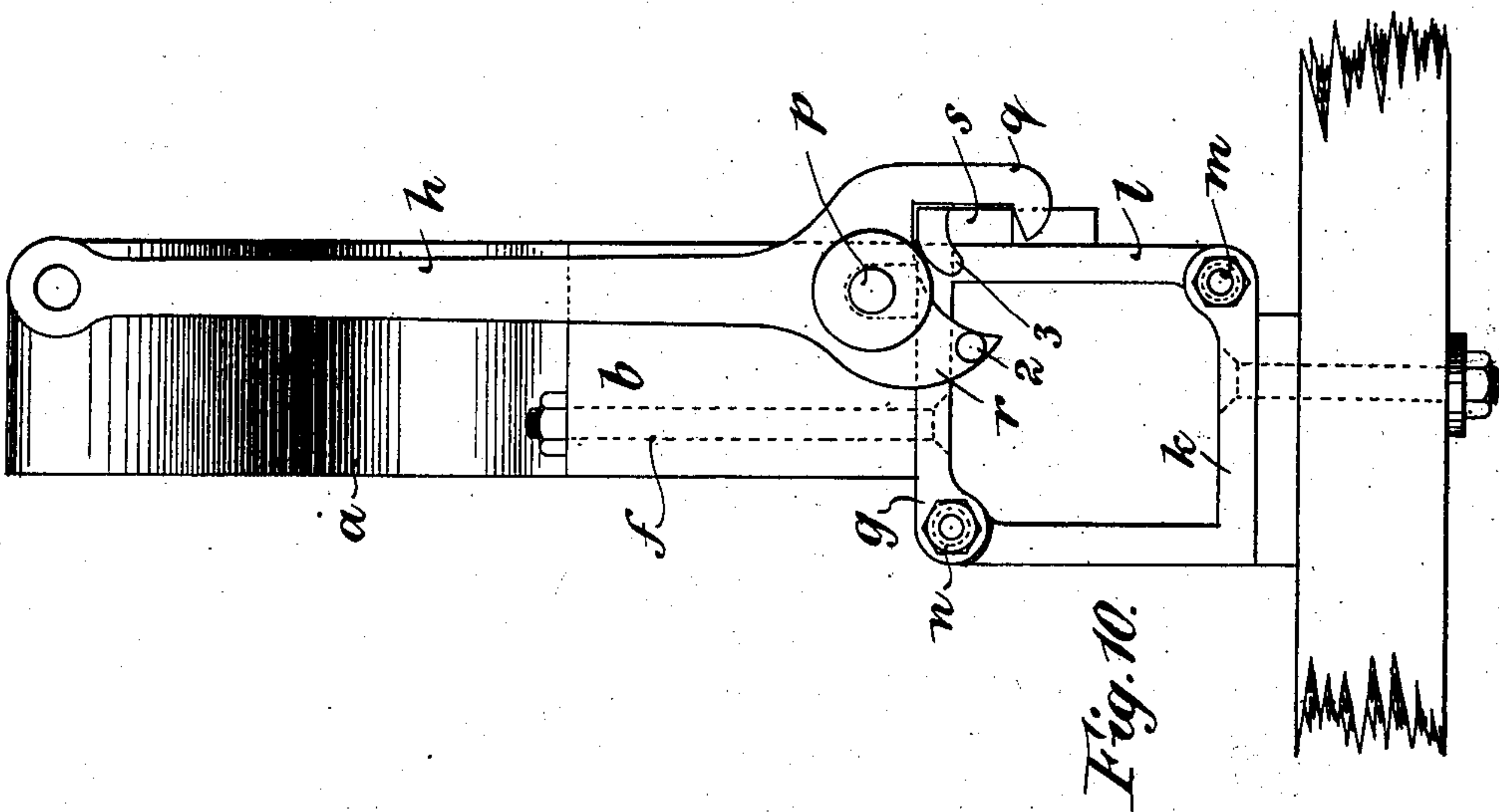
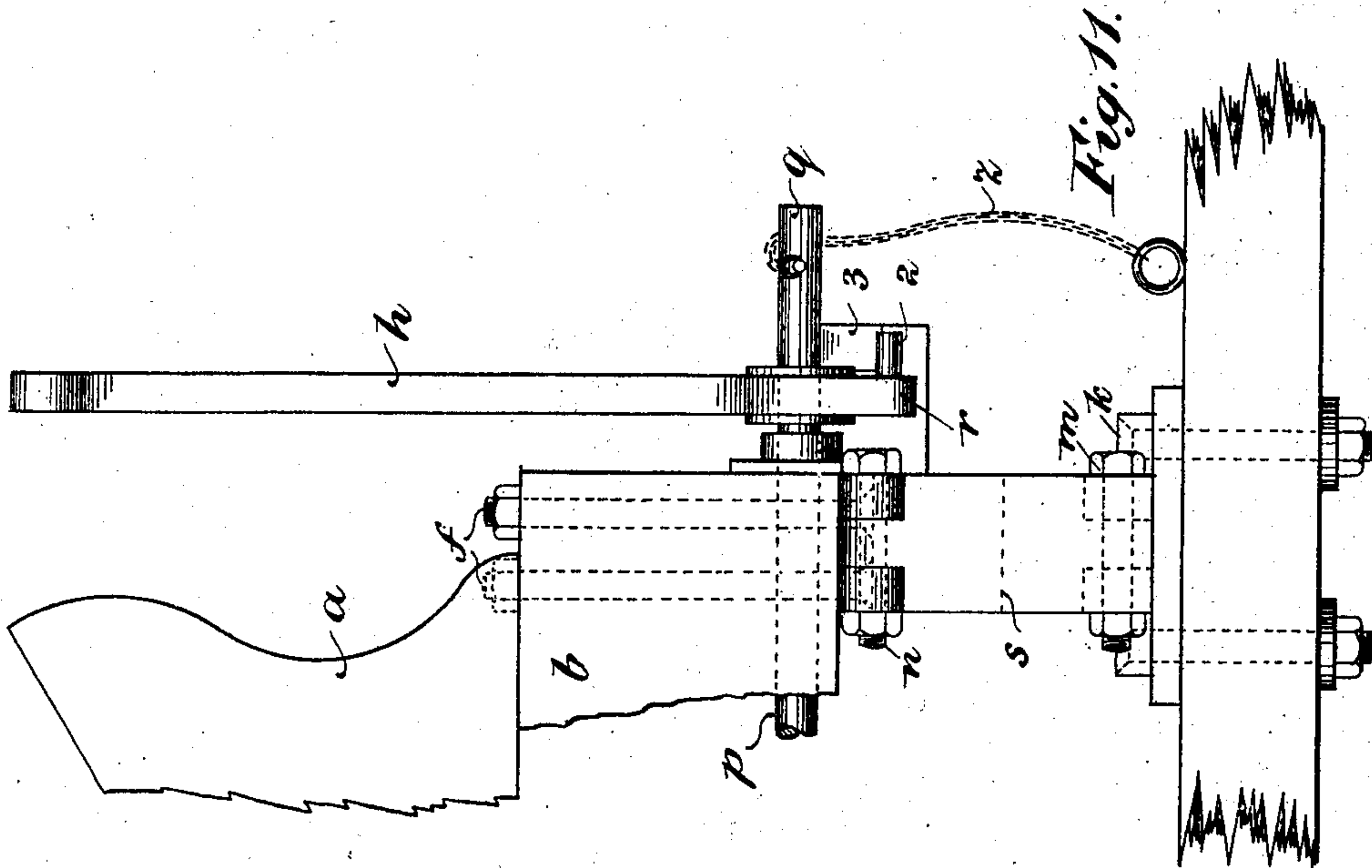
PATENTED DEC. 8, 1903.

W. H. ROTHWELL.
RELEASING DEVICE FOR SHIPS' BOATS.

APPLICATION FILED APR. 16, 1903.

NO MODEL.

4 SHEETS—SHEET 4.



WITNESSES

J. M. Kiehn
Eda Helch

INVENTOR

William Henry Rothwell

By *Richard L.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM H. ROTHWELL, OF LONDON, ENGLAND.

RELEASING DEVICE FOR SHIPS' BOATS.

SPECIFICATION forming part of Letters Patent No. 746,169, dated December 8, 1903.

Application filed April 16, 1903. Serial No. 152,881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY ROTHWELL, R. N. R., master mariner, commander in the service of the British India Steam Navigation Company, whose registered address is No. 9 Throgmorton avenue, London, England, E. C., have invented a certain new and useful Improved Releasing Device for Ships' Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices whereby a boat which is supported on chocks and securely lashed in a rigid manner in its place on a vessel or wharf may be immediately released to hang freely from its davits, the supporting-chocks falling prostrate and allowing the davits to swing readily outboard into position for lowering the boat. For the purpose of describing how this desirable effect may be practically accomplished reference will now be made to the accompanying drawings, in which—

Figure 1 is an elevation showing a pair of chocks for the support of one end of a boat as viewed when looking from the center toward one end thereof, the left hand being the outboard side of the boat. Fig. 2 is a side elevation of the same support as viewed from inboard looking outward. Fig. 3 is a side elevation of the same support as viewed in a direction opposite to that of Fig. 2. Fig. 4 is a part view of an end elevation of a modified form of the collapsible support, Fig. 5 being a side elevation of the same modification as seen from inboard. Fig. 6 is a section along 6 6 of Fig. 4. Fig. 7 is an alternative construction to that of Fig. 5. Figs. 8 and 9 show, on a larger scale, the device for the detachment of the grip and lashing by which the boat is normally rigidly secured. Figs. 10 and 11 are views of additional subsidiary devices for insuring the collapse of the supports at the desired instant when the boat is required to be freely suspended from the davits.

In the figures, *a a* are chocks which are shaped to fit the profile of the boat to be supported. The chocks are secured to a cross-beam *b* by means of hinges *c c* on one side and studs *d d* and links *e e'* on the other side.

The beam *b* is secured by bolts *f f* at each of its two ends to a plate *g*, which is normally sustained by a collapsible support, but from which by the angular movement of a lever *h* the support can be instantaneously thrust away; causing the beam *b* and chocks *a a* to fall prostrate on the deck of the vessel or wharf by turning outward from the middle toward the ends of the boat, thus permitting the boat to be suspended from its davits. As shown in Figs. 1, 2, and 3, the collapsible support consists of a casting *k*, which is bolted to the deck, and a plate *l*, which is united to *k* by a hinge *m*. The plate *g* is hinged at *n* to the casting *k* and is normally supported by resting on the upper edge of *l*. When the plate *l* is thrust outward, the plate *g* drops by turning about the hinge *n*, the beam *b* descends with *g*, and the chocks *a a* fall by turning outward toward the end of the boat, as shown in dotted lines in Fig. 2.

The device whereby the support is caused to collapse when required and to be normally secured in the erect position consists of a lever *h*, which is secured to the inboard end of a shaft *p*, which is mounted in a groove formed in the beam *b*. This lever *h* is, on the one hand, provided with a hook *q*, which secures the erect position of the support under normal circumstances, a shoulder at the hinge *m* preventing the plate *l* from being moved inward beyond the vertical position, and, on the other hand, with a cam *r*, where with the supporting hinged plate *l* is thrust aside when desired. The plate *l* has a lug *s* riveted thereto. This is embraced by the hook *q*, so that the outward movement of *l* is prevented until the lever *h* has been rotated sufficiently to withdraw the hook *q* from underneath the lug *s*. A continuation of the movement of the lever *h* will cause the cam *r* to thrust the lug *s*, and with it the plate *l*, outward and let the chocks fall. To assist in the collapse and to lessen the strain on the parts, the chocks *a a* are hinged to the beam *b*, and until the appropriate moment they are also clasped by the links *e e'* to the studs *d d*. The link *e'* has a horizontal arm *t* projecting in the way of the lever *h*. All the links *e e'* are connected together by the link *u*. On depressing the lever *h* the arm *t* will be thrust downward and the links withdrawn from the

studs. v is a guide for the arm t . To further facilitate the outward angular movement of the chocks, the inner upper edge is rounded. The supports for both ends of the beam b are caused to collapse at the same instant by securing to the other end of the shaft p a piece provided with a corresponding hook q' and a cam r' .

The construction of the collapsible support may be modified, as shown in Figs. 4 and 5, in which the casting k is replaced by the deck-fastening k' , to which are pivoted two vertical plates k^2 and l . The plate g , to which the beam b is secured, rests on the upper edges of both k^2 and l . The hinged plate l is secured normally in position and thrust away at the desired moment in the manner previously described. The plate k^2 is secured in the vertical position by means of hooks q^2 q^2 , which are formed on the plate g , which engage with lugs s^2 s^2 , which are secured to k^2 . On rotating the lever h the first effect will be the withdrawal of the hook q from the lug s . This will be followed by the outward thrust of the plate l , permitting the left side, Fig. 5, of the plate g to drop, whereon the pressure on the plate k^2 will be obliquely applied and cause it to give way by turning to the right, completing the collapse of the support. In Fig. 7 is shown a modification of the construction of this form of the collapsible support in which there are two shafts p and p' , each carrying a lever with a hook and a cam, whereby normally the plates l and k^2 are secured in the erect position and displaced when required, as previously described.

Referring now to Figs. 8 and 9, the device by which the detachment is effected of the grips and lashing which secures the boat will be described. w is an eyebolt which is secured to the deck of the vessel or to the wharf. Into this is passed a jointed slip-hook x , the lip of which is supported on a spur u' , which is formed in one with the lug s . When it is desired to lash the boat firmly in place on its chocks, the slip-hook x is inserted within the eyebolt w , as shown, and the lashing y hauled taut in the usual way. When it is desired to free the boat in order that it may be lowered overboard, the tackle by which the boat is suspended from the davits is first drawn hand-taut and then the lever h is rotated, which causes the collapse of the supports, as previously described. The dropping of the plate l takes away the support u' of the lip of the slip-hook x , which thereupon draws through the eyebolt w , and the boat will be left suspended on the davits entirely free to be swung outboard.

By making the spur u' in one with the lug s instead of simply securing it to the beam a certain amount of resistance will be offered to the movement of the lever h and the displacement of plate l , and thus avoid an unintentional displacement; but the gripping device will be sufficiently yielding to a lateral force to permit of the necessary small move-

ment of l to let down the chocks. Only a small displacement of plate l is required to let down the chocks, and this will take place while the movement of the lug s is nearly horizontal.

By the heat of the sun or otherwise the chocks are liable to get stuck to the boat. This should be guarded against by black-leading the contact-surface of the chocks, and to still further insure their fall when desired devices shown in Figs. 10 and 11 may be added, whereby the chocks are pulled away from the boat. A short chain z is secured to the deck by an eyebolt and to the shaft p in such a way that on rotating the shaft by the lever h the chain will wrap around the shaft, and thus be subjected to tension, the force of which will drag the shaft downward and with it the beam and chocks. The other device, which effects the same purpose, consists of a stud 2, which projects from the cam r , and a projection 3, which is secured to the lug s . On the rotation of the lever h the stud 2 inserts itself underneath the projection 3 and forms a temporary fulcrum to the lever h , enabling the thrust which is applied to it to force the shaft p downward and with it the beam and chocks, the hook q allowing the plate l to be displaced far enough to clear the edge of the plate g , so that it may be dragged down in the event of the chock sticking to the boat.

In order that the supports of both ends of the boat may collapse at the same time, ropes fastened to a lever h at each end of the boat are led to a central point and pulled together.

I claim—

1. In combination in a releasing device for boats, chocks for holding the boat, a beam supporting the chocks, supports for said beam and a lever for collapsing said supports, substantially as described.

2. In combination in a releasing device for boats, chocks for the boat, a beam supporting the chocks, collapsible supports for the beam comprising a number of plates hinged together, a lever, a shaft connected thereto and means on the lever and shaft for collapsing said support, substantially as described.

3. In combination in a device for releasing boats, collapsible supports therefor, an eyebolt, lashings for the boat, a jointed slip-hook secured to the lashings and adapted to enter said eyebolt, a spur projecting from the support, said spur engaging the slip-hook to retain it in the eyebolt, and means for collapsing said supports whereby the spur will be disengaged from the hook and the latter withdrawn from the eyebolt, substantially as described.

4. In combination in a device for releasing boats, chocks for holding the boat, a beam supporting the chocks, a number of plates hinged together forming a rectangular support for the beam, one of said supports being at each end of the beam, a lever, a shaft connected thereto, hooks carried by said lever and shaft, lugs secured to one plate of each series

of supporting-plates, said lugs being engaged
by said hooks when the supports are in nor-
mal position but being disengaged therefrom
when the supports collapse, a series of links
5 secured to the beam, a link *u* connecting said
links together, a series of studs secured to the
chocks and adapted to engage with the links,
one of said links having an arm projecting
into the path of the lever whereby when the
10 lever is operated said links will be disengaged

from the studs, and cams carried by said lever
and its shaft for collapsing the supporting-
plates, substantially as described.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing 15
witnesses.

W. H. ROTHWELL.

Witnesses:

HORMUSJEE R. PATEL,
VERSIMAL TELARAM.