Flowers & Patten
Boat Detaching.

No. 29,264. Patented Jul. 24, 1860.

Fig. 2.

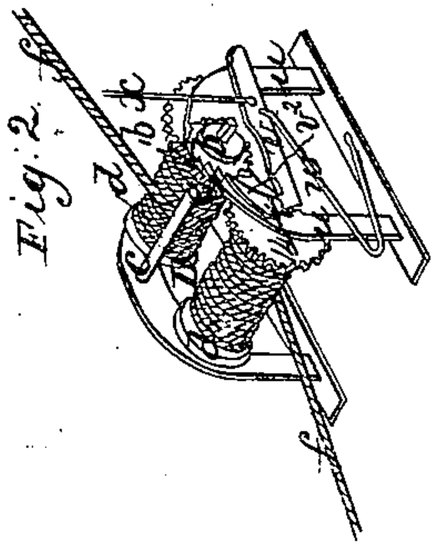


Fig. 3.

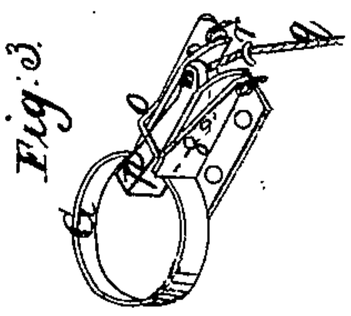
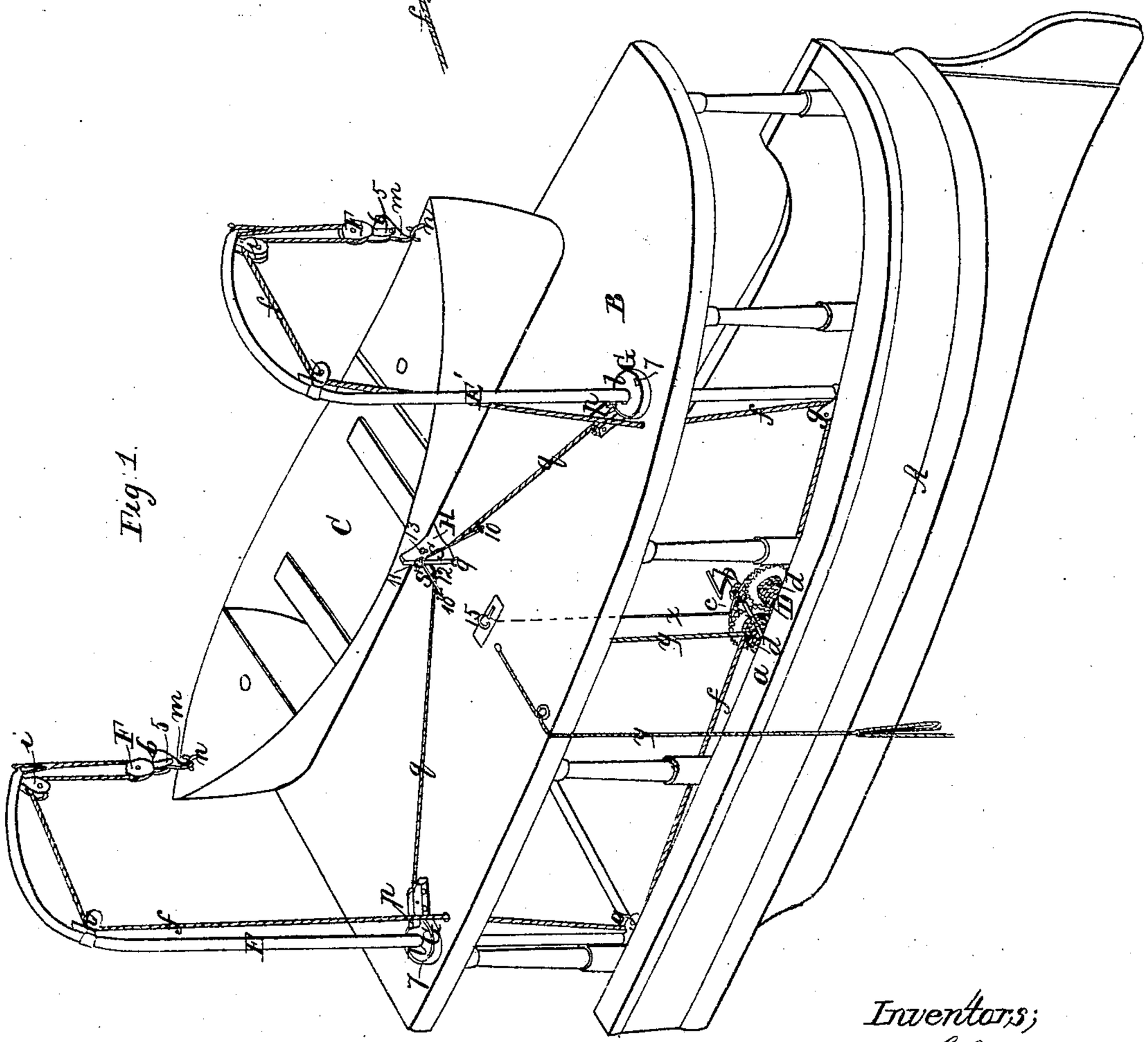


Fig. 1.



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UNITED STATES PATENT OFFICE.

WM. FLOWERS AND Z. S. PATTEN, OF BANGOR, MAINE.

BOAT-LOWERING APPARATUS.

Specification of Letters Patent No. 29,264, dated July 24, 1860.

To all whom it may concern:

Be it known that we, WILLIAM FLOWERS and ZEBULON S. PATTEN, of Bangor, in the county of Penobscot and State of Maine, have invented certain Improvements in Apparatus for Hoisting in or Lowering Boats from Vessels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a view of the after part of a steamboat with our improved apparatus attached; Fig. 2, a view of the double winch by which the small boat is hoisted; Fig. 3, detail to be hereafter referred to.

On steamboats and other vessels where the small boat is carried either on deck or suspended from davits which swing around so as to project inboard, it is desirable (as in case of accident) to be able to launch the boat, that is to get her beyond the side of the vessel and lower her into the water with as small an expenditure of time and labor as possible.

To accomplish this is the object of our present invention, which consists in certain devices by which the boat may be expeditiously and safely lowered.

That others skilled in the art may understand and use our invention we will proceed to describe the manner in which we have carried out the same.

In the said drawings A, represents the hull of a steamboat; B, the upper deck; C, the boat; D, a double winch for hoisting the boat. It is secured to the inner side of the rail *a* and is operated by a crank *b*, on a shaft *c*. A pinion *e* on this shaft engages with a cog wheel on each barrel *d*.

E, E′ are two davits, which rest in suitable steps on the inside of the rail *a*. They pass up through the upper deck B, and revolve freely when not held by pawls to be presently described.

A rope or fall *f* is led from each barrel *d*, through a sheave *g*, thence up through the deck B, through sheaves *h*, *i*, on each davit, and is rove through a block F, the end of the rope being secured to the end of the davit at *k*. The block F is furnished with a hook *m* pivoted at 5, the head 6 of the hook being weighted so that when the strain is taken off from the fall the hook will upset and detach itself from the staple *n* in the boat to which the block F, is hooked for hoisting the boat. Each davit has attached to it a disk *l* which revolves freely in a collar G, secured to the deck B. A notch 7 is made in opposite sides of the disk to receive a pawl *p*, which is pivoted at 8, to one side of the collar G, a spring *o* holds this pawl down. When the pawl *p*, is in one of the notches 7, as shown in Fig. 1, the davit cannot revolve. A tripping line *q* is secured to the end of the pawl *p*, and passes through a staple *r* in the deck, so that when this line is pulled the pawl will be lifted out of the notch 7.

A cradle H, is pivoted at 9 to the deck B. It is secured in its upright position by a brace S pivoted at 10 to the deck, an eye passing over a staple 11 on the end of the cradle. When carried inboard as shown in Fig. 1, the boat C is suspended from the davits E, E′, and rests on the cradle H, which prevents its swinging about. The lines *q* are led, one through a staple 12 on the deck and the other under the cradle H, to which they are both attached at 13 so that when the cradle is freed from the brace S and is laid down flat on the deck to clear it from the boat, the lines *q*, will be pulled and the pawls *p* will be raised out of the notches 7.

The shaft *c* of the winch D, has a ratchet wheel *t*, (Fig. 2,) on it outside of the frame *u* of the winch. A lever *v* pivoted at 14 to the frame *u* is bent back forming a pawl *v′* which is kept in contact with the ratchet wheel *t* by a spring *w;* a cord or wire *x* attached to the lever *v*, is led to the deck B at 15. By pulling this cord the pawl *v′* is disengaged from the wheel *t* and the barrels *d* are free to revolve. A further movement of this cord however brings the lever *v* against a drum 16 on the shaft *c*, and acts as a brake to regulate the speed of the barrels *d*, as the boat is lowered, or a rope *y* may be used as a brake. It is passed down through a hole in the deck B, and has two or three turns around the shaft *c*. It is then fastened to the lower deck or some rigid part of the winch frame. This latter rope may also be used by a person lowering himself down while in the boat, as it is of sufficient length to reach the water.

The following is the operation of lowering the boat C, (which may be accomplished in ordinary cases by one person). The boat as represented in Fig. 1, is suspended from the davits E, E′, with enough of her weight resting on the cradle H, to prevent her

swinging about. The davits are locked by the pawls *p*, which fall into the notches 7. (We may here remark that it is customary to secure the davits from swinging around by rods or guys which must be removed before the boat can be swung overboard.) To get the boat overboard the cradle H, is freed from the brace S. It is then thrown down in the direction of its arrow flat on the deck. This movement of the cradle pulls the lines *q* and lifts the pawls *p* out of the notches 7 leaving the davits E, E′, free to swing around. The boat is now pushed endwise until one end can pass the davit. The boat is then pushed out between the davits which swing around to follow it, until it hangs suspended beyond the side of the vessel. The cord *x*, is now pulled by the handle 15. This trips the pawl *v′* of the winch and lowers the boat, its descent being checked by the brake lever *v;* or if the person lowering the boat wishes to descend in it, he uses the rope *y* to check the revolutions of the barrels *d*. When the boat reaches the water and the strain of her weight is removed from the falls, the hooks *m*, of the blocks F, detach themselves in the manner before explained.

When the davits E, E′ are in the reverse position from that shown in Fig. 1, or hanging overboard, they may be again locked by raising the cradle H, which allows the pawls *p* to fall in the notches 7 on the opposite side of the disk *l*.

In hoisting the boat on board, the blocks F are hooked on to the boat which is raised by the winch D, to a proper height. The pawls *p* are raised and the boat is swung inboard and lowered onto the cradle H, the raising of the cradle again locking the davits.

What we claim as our invention and desire to secure by Letters Patent is—

1. The disks *l* and pawls *p* for locking the davits E, E′, operating substantially in the manner described.

2. Lifting the pawls *p* by the movement of the cradle H, substantially as set forth.

3. The above described boat lowering apparatus, consisting of the davits E, E′, with their locking apparatus, the winch D with its pawl *v′*, and brake lever *v* and the falls *f* arranged and operating in the manner substantially as specified.

4. The blocks F, with their hooks *m*, substantially as described.

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