J. Rowland.

Cable Stopper.

No. 5,147. Patented Jun. 5, 1847.

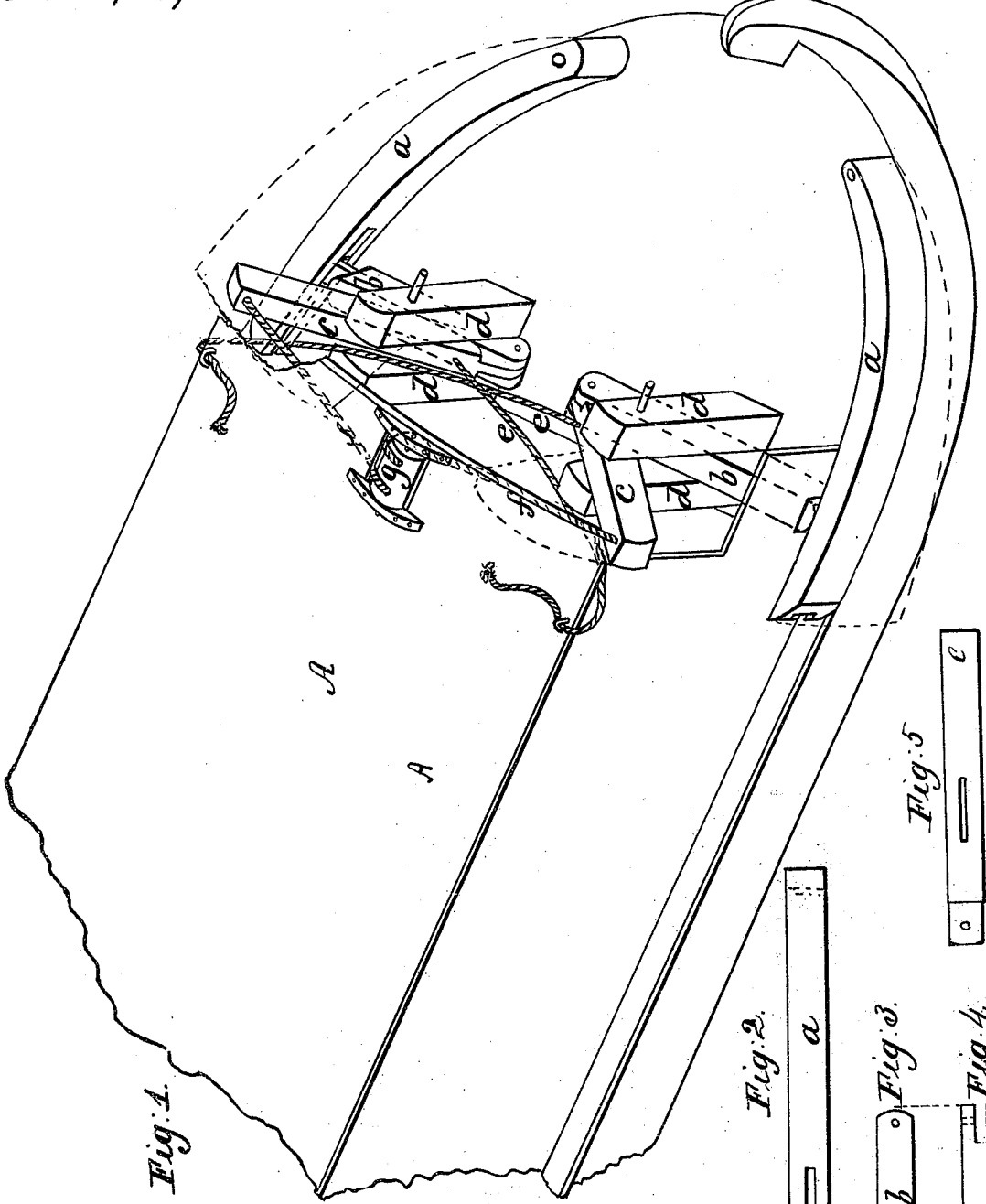

Fig. 1.

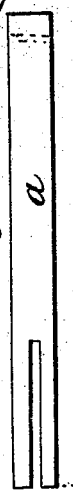

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

UNITED STATES PATENT OFFICE.

JOSEPH ROWLAND, OF HANCOCK, MARYLAND.

FENDER FOR CANAL-BOATS.

Specification of Letters Patent No. 5,147, dated June 5, 1847.

To all whom it may concern:

Be it known that I, JOSEPH ROWLAND, of Hancock, in the county of Washington and State of Maryland, have invented a new and useful Machine for Snubbing Canal-Boats and Barges when Entering Locks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view, Fig. 2 is a view of the inside face of two movable fenders *a a* Fig. 1, Fig. 3 is a view of their connection with two arms *b b* Fig. 1, Fig. 4 is a view of the inside ends of arms *b b* Fig. 1, Fig. 5 is a view of two levers *c c*, in Fig. 1, with their long mortises.

Large A is a section of the upper deck of a canal boat or barge.

In Fig. 1 *c c* are levers, *d d d d* are uprights supporting the fulcrums of the levers *c c*, *e e* are ropes passing from the lower ends of the levers *c c* through the top deck of the boat on opposite sides, *f f* are ropes passing from the top ends of the levers *c c* to the capstan *g*, *b b* are arms connected on the inside ends with the levers *c c* and on the outside ends with the movable fenders *a a* as shown at Fig. 3, *a a* are movable fenders fastened to the edge of the front part of the bow deck shown at Fig. 1 and extending back, generally, about one foot beyond opposite where arms *b b* are placed.

The nature of my invention consists in placing on the back part of the bow deck of a canal boat, or barge, a machine by which movable fenders can be projected against the face of a lock when the boat is entering it, and by their friction against its sides to snub the boat.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my canal boat or barge, in any of the known ways, the movable fenders *a a* arms *b b* and levers *c c* shown at Fig. 1 I generally make of tough timber from 3 to 4 inches square, the length of which will depend on the width of the boat and lock though generally ranging from 4 to 6 feet in length, my movable fenders *a a* I generally fasten on the top of the bow deck with a bolt as shown at Fig. 1. I frame 4 uprights *d d d d* Fig. 1 into the back part of the bow deck of the boat of sufficient strength to support the fulcrums of the levers *c c* Fig. 1 and wide enough apart to admit the arms *b b* and levers *c c* to pass between them, I make a long mortise through each lever *c c*, shown at Fig. 5, the length of which must be the difference of the length between the perpendicular and hypothanuse of the triangle formed by the arms *b b* uprights *d d d d* and levers *c c* when the arms are at their home position, through which their fulcrums pass, I make a tenon on the end of each lever *c c* as shown at Fig. 5 and an open mortise on the end of each arm as shown Fig. 4 and fasten the levers *c c* and arms *b b* hinge fashion Fig. 1 so that they can be worked to and fro at pleasure. I fasten on the outside ends of the arms *b b* an iron T or cross, shown at Fig. 3, and I make a long mortise on the inside face of the movable fenders *a a* at the back end as shown Fig. 2 the length of which will depend on the distance the movable fenders are to be projected beyond the sides of the boat before they strike the face of the lock, as the T or cross on the ends of the arms *b b*, already described are to fit into and connect with it as shown Fig. 3 and have room to play to and fro as the arms are projected and force the movable fenders against the face of the lock.

I place on the top deck of the boat over the above described mauhinery a capstan *g* Fig. 1 to which one end of the ropes *f f* Fig. 1 are fastened and with their other ends fastened to the top ends of the levers *c c* Fig. 1. I fasten the ropes *e e* Fig. 1 to the bottom of the levers *c c* passing them through the top deck of the boat on opposite sides as shown Fig. 1. When the capstan *g* is turned the ropes *f f* are wound up the levers *c c* brought to a perpendicular position the arms *b b* forced out beyond the sides of the boat and thus they force the movable fenders *a a*, by their connection with them, against the face of the lock when the boat is entering it thereby snubbing the boat. Then to bring back again to their home position the different parts mentioned the ropes *e e* Fig. 1 are pulled until the movable fenders *a a* are brought back to their home position.

What I claim as my invention and desire to secure by Letters Patent, is—

The attaching to, a canal boat and barge, movable fenders as herein described, in combination with the arms, levers, ropes and uprights as herein described.

JOSEPH ROWLAND.

Witnesses:

E. C. WELLS,

GEO. W. GRASH.