

W. Hagerly.
Ram for Vessel.

N^o 72391

Patented Dec. 17, 1867.

Fig. 1

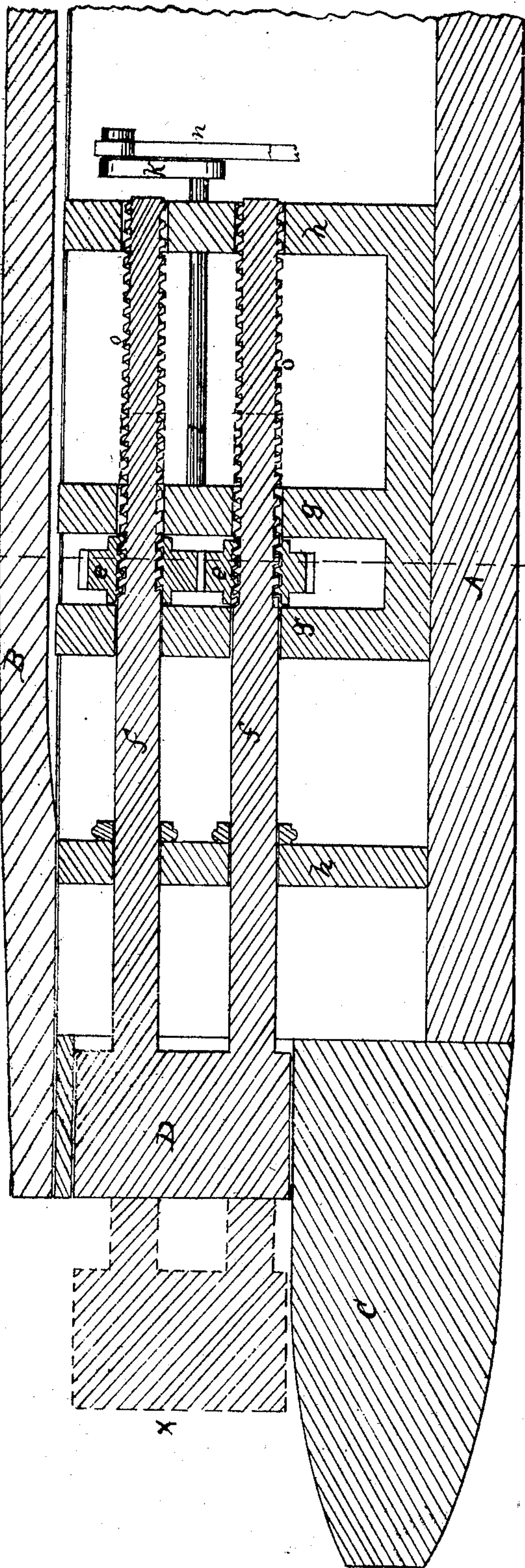
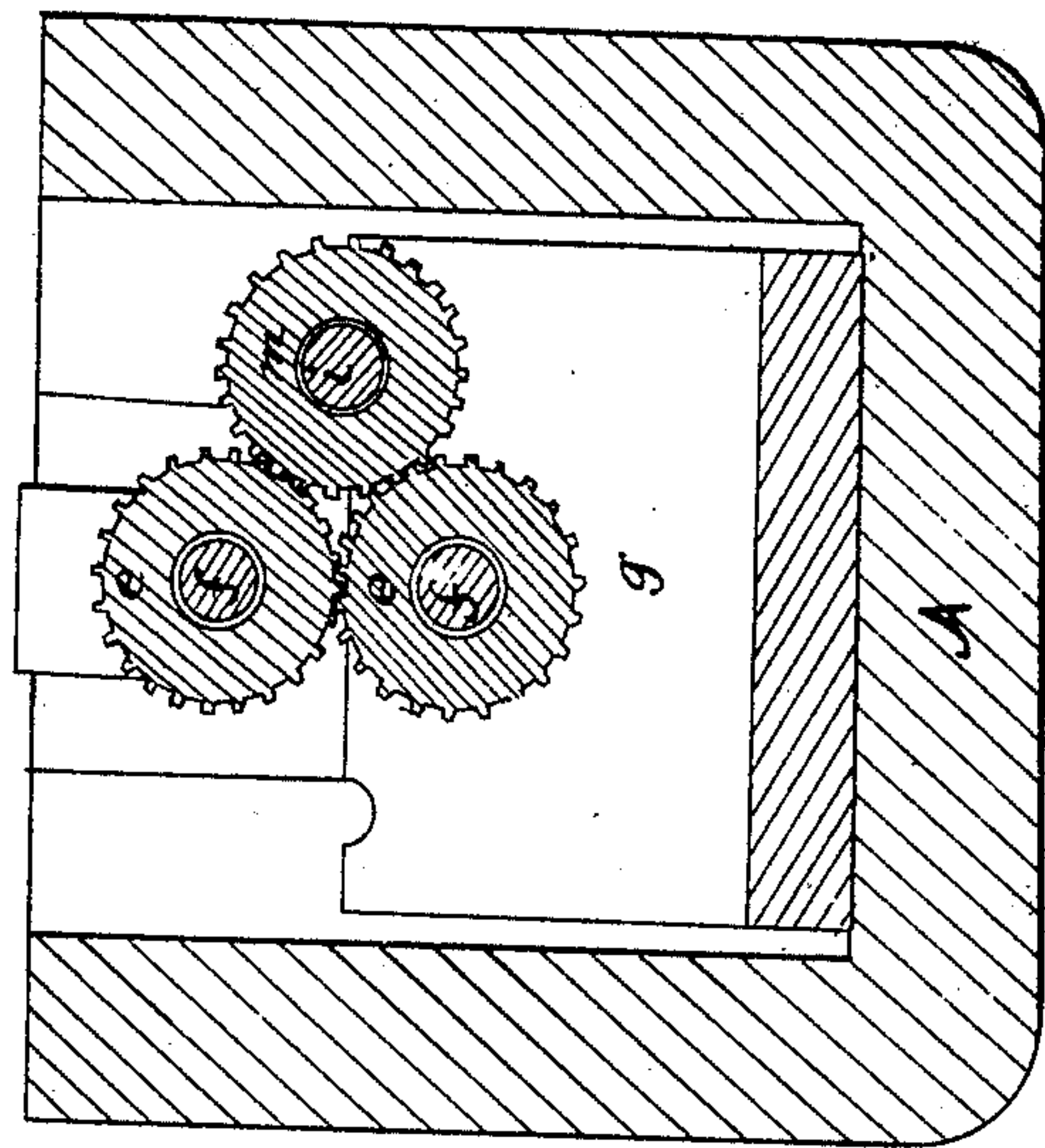


Fig. 2



Inventor

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Witnesses

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WILLIAM HAGERTY, OF MONONGAHELA, PENNSYLVANIA.

Letters Patent No. 72,391, dated December 17, 1867.

IMPROVEMENT IN RAMS FOR VESSELS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM HAGERTY, of Monongahela, Washington county, in the State of Pennsylvania, have invented a new and useful Improvement in Rams for "Iron-Clads;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in combining a releasing-ram with the prow of "iron-clads," or other war-vessels, said releasing-ram and prow being constructed, arranged, and operating in the manner and for the purpose hereinafter described.

To enable others skilled in the art of constructing "iron-clads," and other war-vessels, to make and use my invention, I will proceed to describe its construction and operation. In the accompanying drawings, which form part of my specification—

Figure 1 represents a longitudinal section of the front of an "iron-clad" provided with a prow and my improvement in releasing-ram.

Figure 2 represents a transverse section of the same when cut through at line R of fig. 1.

In the drawings, A represents the hull of the vessel. B represents the deck. The hull and deck of the vessel may be constructed in any of the known forms, and of any suitable material. C represents the prow, which may be made in any desired form, and secured to the vessel by any known means. D represents the releasing-ram, which is fitted into a recess made in the bow of a vessel. The ram D is provided with two shafts, *f*, which are furnished with screw-threads *o*, to which are fitted nuts *e*, provided with cogs or teeth, which gear into the teeth of the wheel *m* on the shaft *i*, which is provided with a crank, *k*, to which is connected a pitman, *n*, of a steam-engine. *g* and *h* are supports and guides for the shafts *f* of the releasing-ram D. The nuts *e* are held in the desired position on the shafts *f* by being placed between the supports *g*, as shown in fig. 1. The shafts *f*, where they project out through the hull of the vessel, should be provided with packing-boxes, or other device for making the joints around the shafts *f* water-tight.

As the skillful mechanic will readily understand the construction and arrangement of the several parts of my improvement in releasing-rams from the foregoing description, and by reference to the accompanying drawings, I will, therefore, without further description of its construction, proceed to describe its operation.

When the prow C has pierced an opposing ship or "iron-clad," motion, through the medium of a steam-engine, is imparted to the shaft *i*, which will revolve the wheel *m*, and the revolving of wheel *m* will revolve the nuts *e*, and the revolving of the nuts *e* will force the releasing-ram D out on a line parallel with the longitudinal plane of the prow C, as indicated by the red lines *x*, shown in fig. 1; and the releasing-ram D, coming in contact with the hull of the opposing vessel, will force it off, and thereby withdraw the prow C, releasing it from any entanglement which may take place by the piercing of the opposing vessel.

The danger of entangling the ship or "iron-clad" with the vessel pierced has been a very serious objection to the use of penetrating prows on "iron-clads" and other war-vessels, for the vessel which has penetrated its opponent is very liable to be carried down with its pierced and sinking adversary. This danger of entanglement is entirely overcome by the use of my improved releasing-ram.

Having thus described the nature, construction, and operation of my improvement, what I claim as of my invention, is—

The releasing-ram D, provided with shafts *f*, furnished with screw-threads *o*, said ram being made operative through the medium of the revolving nuts *e*, the whole being constructed and arranged substantially as herein described and for the purpose set forth.

WM. HAGERTY.

Witnesses:

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