

H. H. Pember.

Hanging Rudders.

N^o 75964

Patented Mar. 24, 1868.

Fig:1.

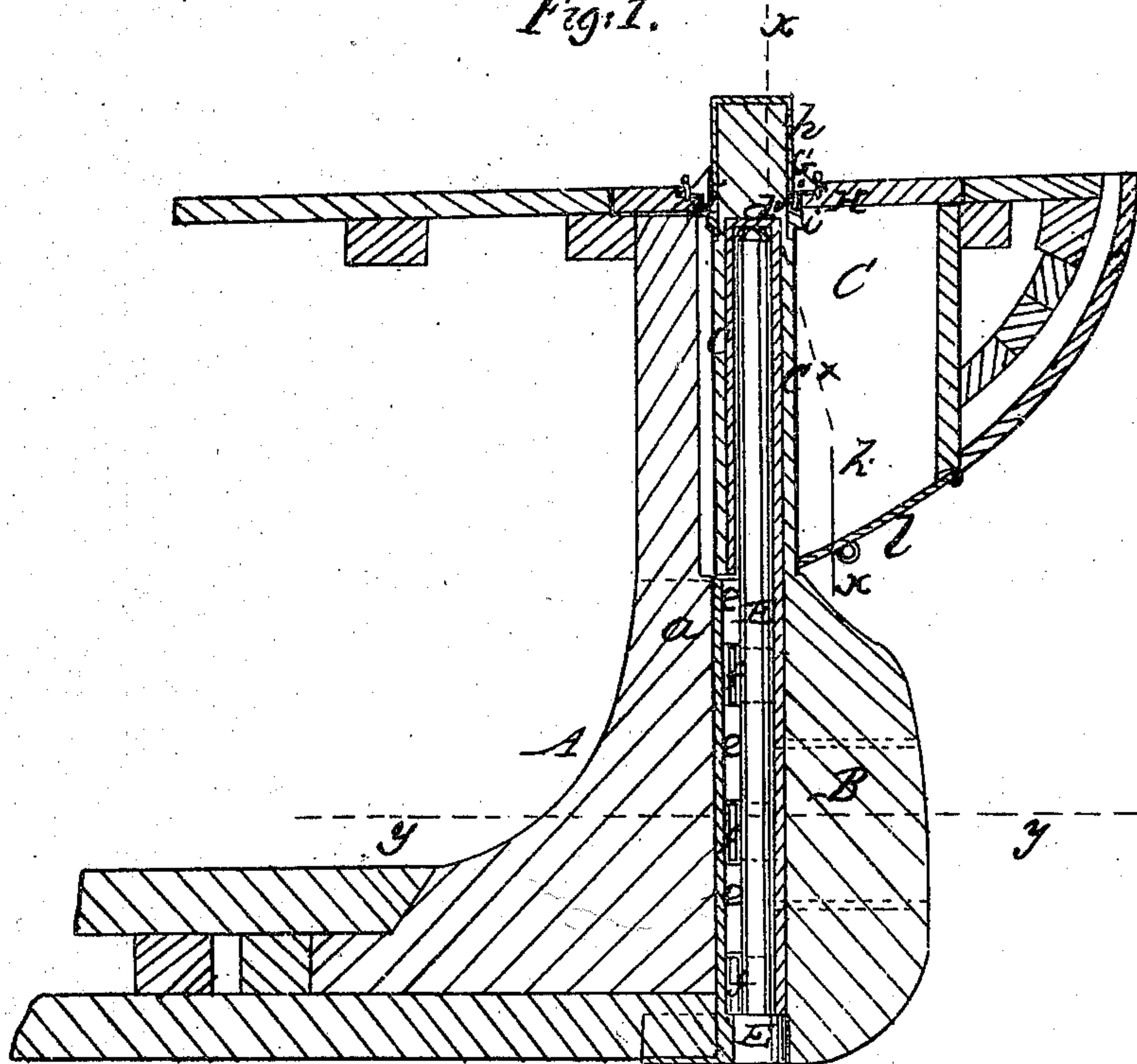


Fig:2.

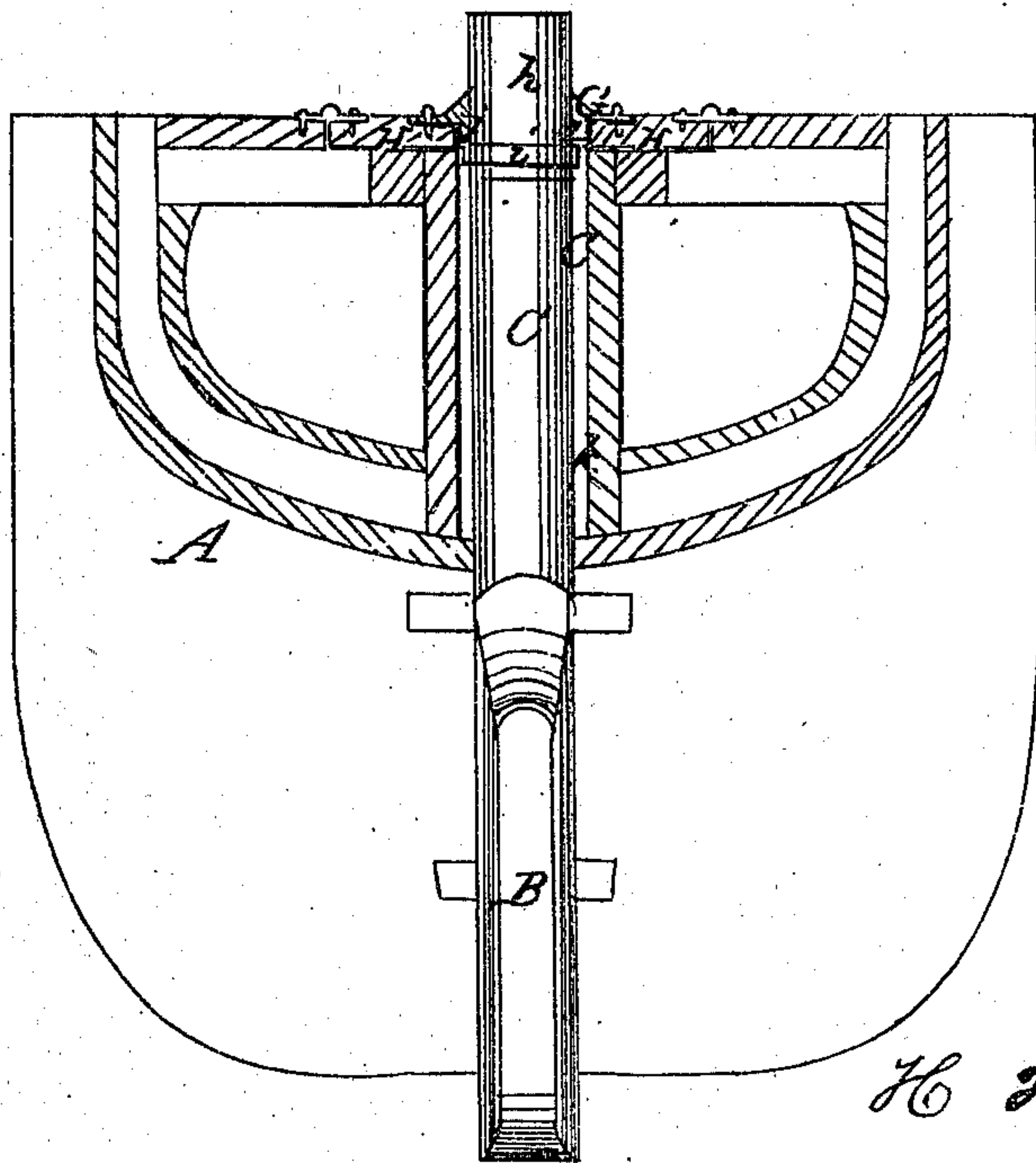
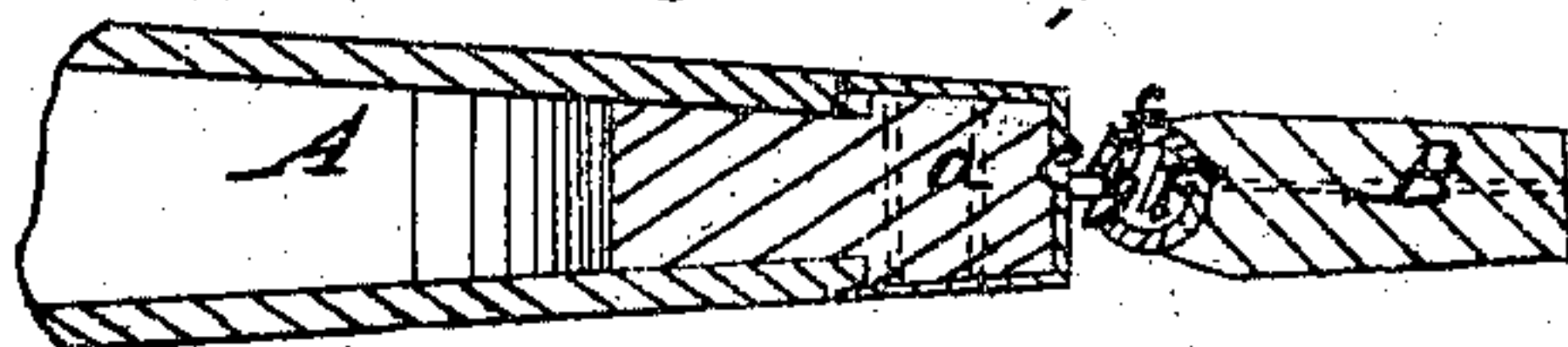


Fig:3.



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Witnesses

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Letters Patent No. 75,964, dated March 24, 1868.

IMPROVEMENT IN HANGING RUDDERS.

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, HENRY H. PEMBER, of the city, county, and State of New York, have invented a new and useful Improvement in Hanging or Applying Rudders to Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved mode of hanging rudders to vessels, as hereinafter fully shown and described, whereby a rudder may be unshipped and shipped with far greater facility than hitherto, so much so as to admit of a rudder, in case of being damaged and rendered unserviceable at sea, being unshipped and drawn directly up through the rudder-port upon deck, (for the purpose of shipping a spare rudder,) without the trouble and danger of lowering a boat and making chain or rope connections, with a view of drawing the rudder up at the other side of the vessel.

Besides this advantage, the invention consists of the rudder being unshipped without being lowered, the necessity of which requires the vessel to be in deep water, in order that the rudder-stem may be drawn down out from the rudder-port, and hence, when a vessel lying in port requires to have its rudder unshipped for repairs, it is very often necessary to draw off into deep water in order to accomplish that end. In the accompanying sheet of drawings—

Figure 1 is a side sectional view of the rear part or stern of a vessel having its rudder hung or applied according to my invention.

Figure 2 a transverse vertical section of the same, taken in the line *x x*, fig. 1.

Figure 3 a horizontal section of the same, taken in the line *y y*, fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the rear portion of a vessel, *a* being the stern-post, B the rudder, and C the rudder-port. (See more particularly fig. 1.) The rudder may be of the usual form or shape, but it is hung in a novel manner, as follows: The rear end of the keel D has a metallic extension, E, firmly secured to it, and this extension has an upright rod, F, firmly attached, said rod being parallel with the stern-post *a*, and extending upward nearly to the level of the deck of the vessel, as shown in fig. 1. The rudder B has its post C^x made tubular, to receive a metal tube, *c*, the internal diameter of the tube being equal to the rod F, so that the latter may fit in the former, the rudder resting on a metal bearing, *d*, as shown in fig. 1. By this means the extension E is relieved of the weight of the rudder. The rod F is stayed by metal braces or bars, *e*, which are attached to the stern-post *a*, and the tube *c* has eyes *f* attached, which are fitted and work on the rod F, said eyes having vertical slots *g* made in them, to admit of their passing down over the braces or bars *e*, the eyes, when the rudder is turned, turning between the braces or bars *e*. The rudder-post C^x passes up through the deck of the vessel, and has a metal cap, *h*, secured upon its upper end. This cap has a flange, *j*, on its lower end, extending all around it, and an annular rim, *j'*, on a collar, G, bears upon this flange *j*, the collar being bolted down upon doors H in the top of the rudder-port C, the bolts passing into the timbers of the deck. This collar prevents the rudder from being thrown upward under the action of the sea or from other causes. The rudder-port C has an opening, *k*, extending vertically through it. This opening is of sufficient dimensions to admit of the rudder being drawn directly up through the port, when the doors H are opened or raised. This will be fully understood by referring to fig. 1. The bottom of the opening *k* has a port or door, *l*, which is designed to keep out the water from the port. This port or door may have a cord or chain attached, for the convenience of opening it from the deck when the rudder is to be unshipped and raised.

This invention admits of a metal rudder being used, if desired, the rudder being cast with a hole or opening in it to receive the rod F, which admits of its turning on a centre, as the rudders now in use. In this instance the rod F cannot be braced from the stern-post, but such bracing is not indispensably necessary, as the rudder is prevented from moving laterally owing to the confinement of its stem by the collar G.

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

The collar G, in connection with the flange *j* on cap *h* of rudder-post C^x, and the rod F attached to the keel, all arranged substantially in the manner as and for the purpose set forth.

Witnesses:

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