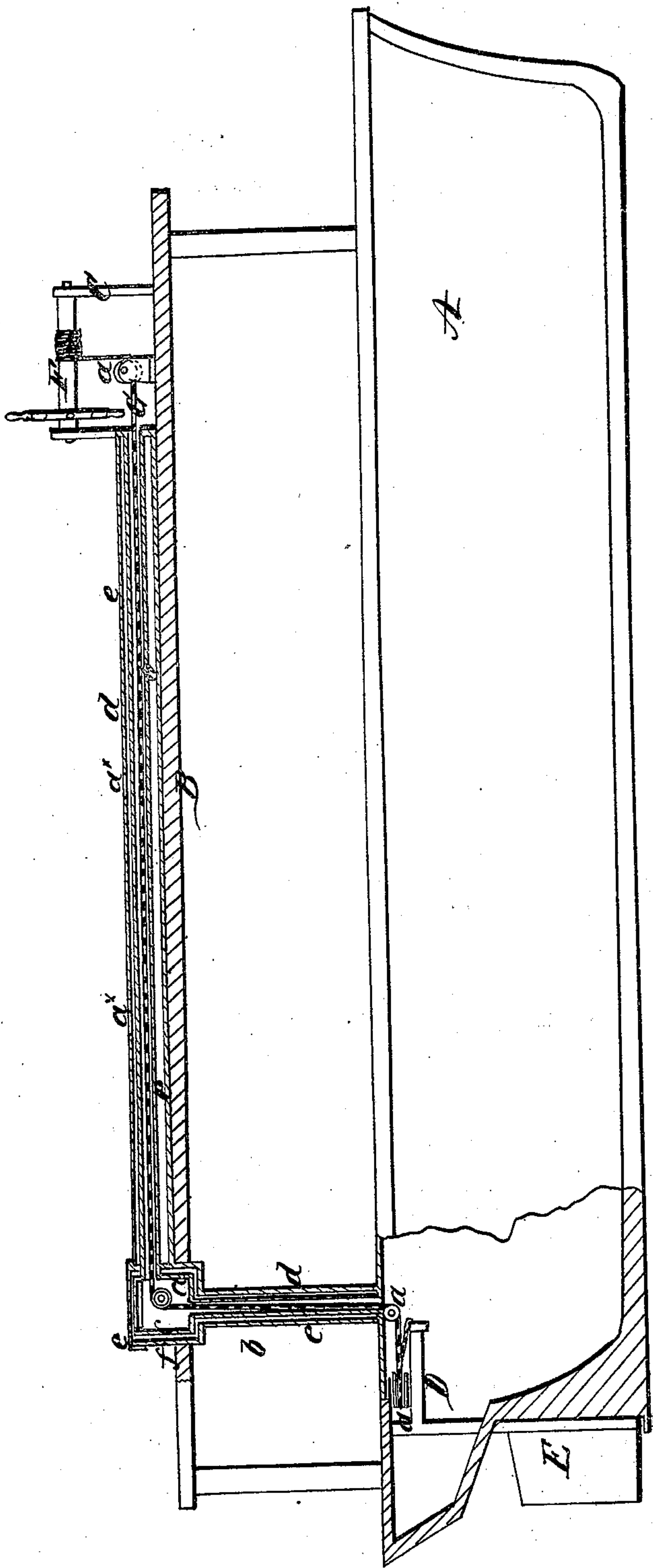


W. V. Gill,
Steering

No 19,841.

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UNITED STATES PATENT OFFICE.

W. Y. GILL, OF HENDERSON, KENTUCKY.

MEANS FOR PROTECTING TILLER-ROPE OF VESSELS FROM FIRE.

Specification of Letters Patent No. 19,841, dated April 6, 1858.

To all whom it may concern:

Be it known that I, W. Y. GILL, of Henderson, in the county of Henderson and State of Kentucky, have invented a new and
5 useful Improvement in Arranging or Laying Down the Tiller-Ropes of Steam Vessels for the Purpose of Protecting Them from Fire; and I do hereby declare that the following is a full, clear, and exact description
10 of the same, reference being had to the annexed drawing, making a part of this specification, said drawing being a vertical central section of my improvement.

This invention consists in having the tiller
15 ropes fitted in metal tubes, which tubes are inclosed by other tubes of larger diameter so that a space is allowed between them to be filled with any proper non-conducting material. These tubes are to extend from
20 the wheel house to the tiller, so that the entire length of the ropes, or the parts most exposed, will be fully protected.

To enable those skilled in the art to fully understand and construct my invention I
25 will proceed to describe it.

A, represents the hull of a steam vessel. B, the upper deck. C, the pilot wheel frame at the front part of the vessel and D, the tiller which is connected with the rudder E
30 as usual. The above parts do not require to be constructed nor arranged in any peculiar way in order to favor the application of my invention and therefore a particular description of them is not necessary.

F, is the drum of the pilot wheel, which is fitted up within the pilot house as usual and G, is the tiller rope which is wound
35 around the drum F, and extends along at each side of the vessel to its stern, passing
40 over and around the necessary pulleys *a*, and attached to the tiller D, at opposite sides.

The rope G is inclosed at each side of the vessel by a metal tube *b*, the internal diam-
45 eters of which are sufficiently large to allow the rope to work freely in them. These tubes *b*, extend from the pilot house to the tiller and the necessary elbows may be formed by having boxes *c*, placed at the
50 turns the tubes *b*, fitting into the sides of the boxes which are made of sufficient capacity to receive the pulleys and to allow the rope to work freely around them as shown clearly in the drawing.

55 The tubes *b*, may be formed of suitable lengths fitted or jointed together in any

proper way, and the tubes *b*, are encompassed by tubes *d*, of larger diameter so as to allow a space between them to be filled with plaster of Paris or any suitable non-
60 conducting material *e*. The boxes *c*, are also encompassed by boxes *f*, of larger capacity, the spaces between being also filled with non-conducting material *e*.

The tubes which inclose the ropes may be
65 laid, hung, or supported in any proper way, due provision being made against the falling of the same, in case of a vessel taking fire by the burning of contiguous wood work. In many cases metal columns or pillars may
70 be used with advantage, in other cases the construction of the vessel will afford facilities for securely laying the tubes. A proper mode of laying the tubes however will suggest itself to any mechanic after an exami-
75 nation of the construction of the vessel to which the improvement is to be applied. The tiller ropes thus inclosed and protected will be prevented from burning until the
80 upper portion of the vessel is nearly destroyed and sufficient time will be allowed in almost every case for the pilot to run the vessel aground or to a landing where the passengers and property may be saved. The great danger attending the burning of
85 vessels is owing to the burning of the tiller ropes. Those hitherto have been exposed directly to the flames and all communication between the tiller and the pilot-house being soon cut off, the vessels have been left to
90 burn to the water's edge, all command of them being lost when the rudder cannot be operated.

I would remark that the great number of lives and the vast amount of property de-
95 stroyed by the early burning of the tiller ropes of vessels as the vessels take fire has previously awakened the attention of persons directly interested and metal chains were for a time substituted for ropes, but
100 were necessarily abandoned on account of not being sufficiently flexible. Ropes are now invariably used, and by my improvement being sufficiently protected from fire, the only but great objection to their use is
105 obviated. I would also remark that in order to facilitate the filling of the space between the tubes, apertures *a'*, may be made in the outer tube *d*.

I do not claim broadly the protecting of
110 articles from fire by inclosing the same within a double case the space between its sides

being filled with a non-conducting material, for this is a well known means of protecting articles from heat, and may be seen in the various fire-proof safes, refrigerators, water
5 coolers, &c., in common use; but,

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

0 Inclosing the tiller ropes G, of steam vessels by a double tubing *b*, *d*, connected with double boxes *e*, *f*, or their equivalents to

form the necessary elbows the spaces between the tubes and boxes being filled with a proper non-conducting material *e*, and the whole arranged and applied substantially as here- 15 in shown and described for the purpose set forth.

W. Y. GILL.

Witnesses:

CHAS. T. STARLING,
JOSEPH GRANT.