

(No Model.)

F. EYLE.

APPARATUS FOR REPELLING BOARDERS AND DISTRIBUTING OIL.

No. 481,615.

Patented Aug. 30, 1892.

Fig. 1.

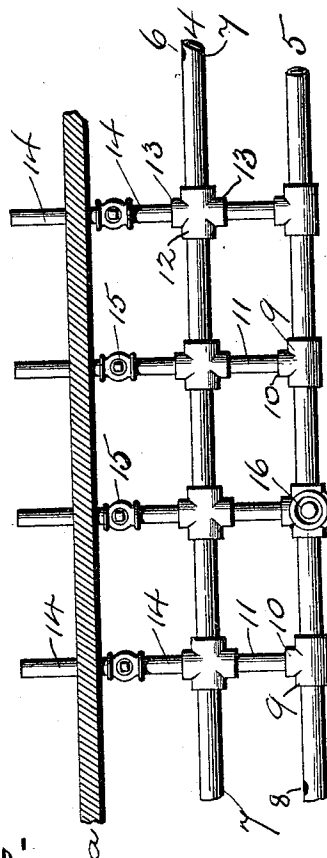
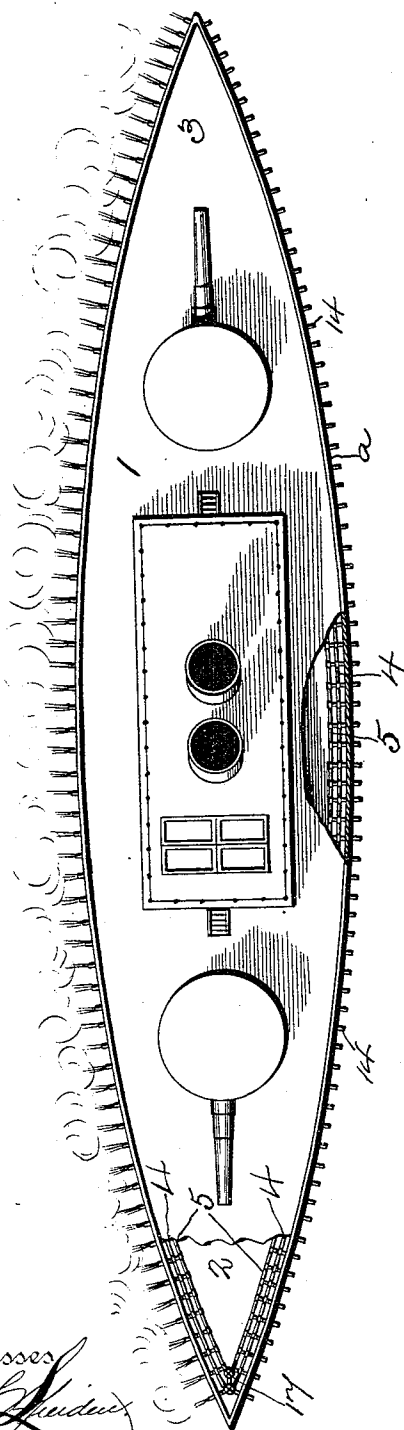


Fig. 2.

Witnesses
[Signature]
C. L. Gooch

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By his Attorney
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UNITED STATES PATENT OFFICE.

FRED EYLE, OF NEW ORLEANS, LOUISIANA.

APPARATUS FOR REPELLING BOARDERS AND DISTRIBUTING OIL.

SPECIFICATION forming part of Letters Patent No. 481,615, dated August 30, 1892.

Application filed May 11, 1891. Serial No. 392,385. (No model.)

To all whom it may concern:

Be it known that I, FRED EYLE, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Apparatus for Repelling Boarders and Distributing Oil; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a novel method and device whereby ships, men-of-war, and other similar navigable vessels may be effectually protected from the incursions of boarders and the unauthorized ascent over the side of the vessel to the deck of persons entirely prevented, part of said invention being also adapted for spreading oil upon the surface of the water surrounding said vessel.

Briefly stated my novel arrangement consists in providing the ship or other similar vessel with two lines of pipes or tubes which horizontally surround the bow, sides, and stern of the vessel, one line of pipe being in the same horizontal plane, but exterior to the other line of pipe. At suitable distances longitudinally of these pipes and in the sides thereof are holes or openings registering with each other. Tubular couplings connect these pipes at the juncture of said openings by which steam contained within the inner pipe may pass to the outer pipe and through the discharge-openings in the outer face thereof. Valve-guarded nozzles project horizontally from the outer side face of the outer pipe, through which oil contained within said outer pipe may flow. These pipes at the bow of the boat are connected, respectively, with oil and steam supplies, the design being to form a surrounding protective safeguard to the vessel against and for repelling the incursions of boarders, the oil as it flows from said nozzles being ignited and the jets of steam as they pass from the inner pipe escaping through the aforesaid couplings into the outer oil-carrying pipe and thence out through the nozzles thereof, thereby projecting the flames resulting from the ignited streams of oil out from the sides, bow, and stern of the vessel. By closing the steam-supply streams of oil may be projected through the nozzles of the

outer oil-conveying pipe onto the surface of the water surrounding the vessel for the purpose of calming its action.

In the accompanying drawings, Figure 1 represents a top plan view of my novel device. Fig. 2 represents, on an enlarged scale, a section of the pipes with couplings and nozzles connected therewith.

1 represents the deck of the vessel, 2 the bow, and 3 the stern.

On either the gun or spar deck or in the scuppers are placed two lines of pipes 4 5 of any suitable material, as iron, running parallel horizontally with each other, as shown, around the sides, bow, and stern of the vessel. They may be braced to each other and secured in position in any convenient or desired manner. These pipes may be constructed in any convenient manner—*i. e.*, either of a single casting or in sections properly joined or coupled together. The outer line of pipe, which is at the bow of the vessel connected with a suitable source of oil supply—as, for instance, an elevated tank or a pump from and through which inflammable oil may be forced into said pipe—has in its outer side face a series of discharge-holes 6, which extend longitudinally the entire length of the pipe and on each side of the vessel. These openings are sufficiently close together to prevent the passage of the body of a man between them. Registering with these discharge-holes 6, but in the rear or inner face of said pipe 4, is a corresponding series of holes 7. The inner line of steam-conveying pipe 5, which at the bow of the vessel is in contact with a suitable supply of either live or exhaust steam, is provided in its outer side face with a series of discharge-outlets 8, corresponding and registering with the openings 7 in the inner face of the outer oil-pipe. Tubular couplings consisting of sleeves 9 on the inner steam-pipe and having a threaded socket 10, within which one end of a tube 11, connecting the two lines of pipes, and a similar series of sleeves 12, carried by the outer oil-pipe and having oppositely-situated threaded sockets 13, with one of which the pipe-connecting tube 11 is engaged, serve to connect the two lines of pipes together at those points thereof where the discharge-ways are therein located.

Secured to and projecting outboard from the

sockets 13 in the outer face of the sleeves 12 are a series of nozzles 14, of sufficient length to insure their mouths extending beyond the bulwarks *a* and ports of the vessel. These
 5 nozzles are provided with suitable cocks or valves 15 to regulate or cut off the discharge of oil therefrom, as desired. The sleeves carried by the steam-pipe may also be supplied with valves, (indicated by 16,) if desired; or a
 10 suitable steam-supply-controlling device may be located at the point of supply 17, as may be desired. By arranging the supply at the bow of the vessel the flow of the oil and steam through the entire length of the pipes is as-
 15 sured.

When it is desired to put my invention and appliance into operation, the cocks or valves in the nozzles 14 are opened, oil allowed to pass into the pipe 4, and the oil issuing from
 20 the said nozzles ignited, commencing at the stern, in order that assurance may be had that the oil-pipe is properly supplied with oil. Then steam is permitted to pass into the inner pipe 5, which steam in its passage there-
 25 through will pass through the respective series of tubes 11 and from thence in a direct line transversely across and through the oil-pipe 4 into and through the series of nozzles, thereby forcing the flames resulting from the
 30 ignited oil a considerable distance outboard—say from two to five feet—according to the pressure of the steam. By this arrangement and method it will readily be apparent that it would be a matter of impossibility when
 35 the jets of oil are so ignited and projected outboard, as herein indicated, for anyone to scale the sides of a vessel and reach the deck.

The arrangement is simple in construction, may be cheaply manufactured and placed in
 40 position, has no complicated parts requiring expert attendants to operate or liable to get out of working order, will take up but very little room, and is always ready for use. The nozzles may be either perfectly straight hori-
 45 zontally, or they may be formed at their mouths at a suitable angle to project the flames cross-wise of each other. By closing the steam-supply oil alone may be conveyed through said oil pipe and projected through the nozzles

thereof either throughout the length of the 50 pipe or through the closing of a portion of the nozzles by the cocks or valves therein, onto the surface of the sea to still the waves thereof and enable the ship to ride easily in rough weather.

What I claim, and desire to secure by Let- 55 ters Patent, is—

1. In combination with a navigable vessel, a plurality of steam and oil pipes extending in an inner and an outer horizontal line cir- 60 cumferentially around the bow, sides, and stern of said vessel, and having registering discharge-openings in their sides, tubular-valved couplings connecting said pipes at said openings, valve-guarded nozzles extending 65 horizontally outward from the outer circumferential pipe, and oil and steam supplies connected to said pipes, respectively, at the bow of the vessel, substantially as and for the pur-
 70 pose set forth.

2. In combination with a navigable vessel, a plurality of steam and oil pipes extending in an inner and an outer horizontal line cir- 75 cumferentially around the bow, sides, and stern of said vessel, and having registering discharge-openings in their sides, tubular couplings connecting said pipes at said open- 80 ings, valve-guarded nozzles extending horizontally outward from the outer circumferential pipe, and oil and steam supplies connected to said pipes, respectively, at the bow of the vessel, substantially as and for the purpose set forth.

3. A navigable vessel, a pipe extending horizontally around the same and having a plu- 85 rality of outboard-extending valve-guarded nozzles, and an oil-supply connected to the bow portion of said pipe, whereby oil may be supplied to said pipe and ejected from said nozzles, substantially as and for the purpose 90 set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRED EYLE.

Witnesses:

WM. JENAUDIN,
 J. BENDERNAGEL.