

No. 744,160.

PATENTED NOV. 17, 1903.

J. B. BLAIR.

MEANS FOR TURNING OR SWINGING SHIPS WHEN NOT UNDER WAY.

APPLICATION FILED MAY 13, 1903.

NO MODEL.

Fig. 1.

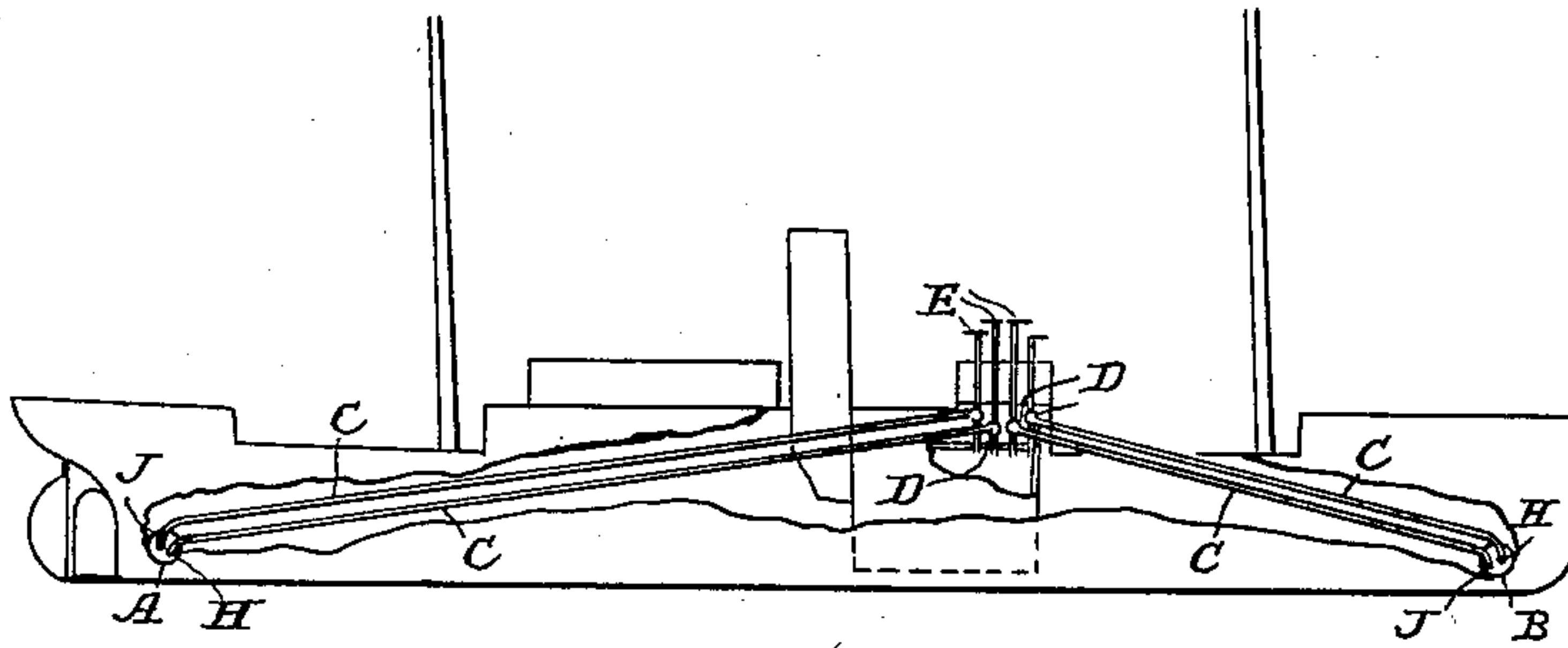
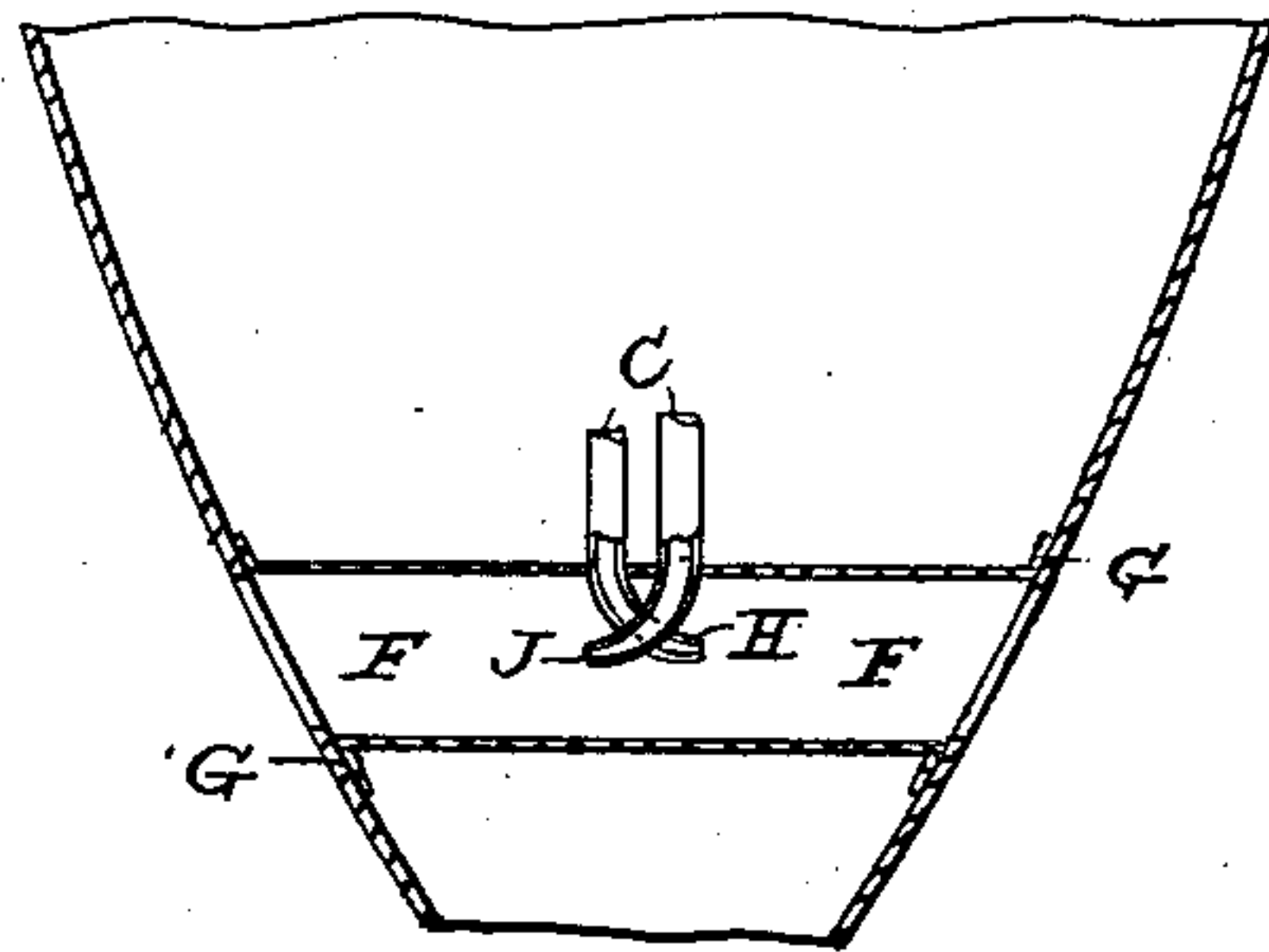


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN BICKERS BLAIR, OF INDOOROPILLY, QUEENSLAND, AUSTRALIA.

MEANS FOR TURNING OR SWINGING SHIPS WHEN NOT UNDER WAY.

SPECIFICATION forming part of Letters Patent No. 744,160, dated November 17, 1903.

Application filed May 13, 1903. Serial No. 156,997. (No model.)

To all whom it may concern:

Be it known that I, JOHN BICKERS BLAIR, accountant, residing at Station Road, Indooroopilly, Queensland, Australia, have invented certain new and useful improvements in means for turning or swinging a ship when not under way by power of main engines, applicable also as auxiliary or emergency steering-gear; 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.

It frequently happens that it is necessary to move a ship without steerage-way, and consequently without the aid of the helm. This may happen in port or at sea while the engines are unavailable or inapplicable or while they or the boilers supplying them are broken down or being overhauled.

It is the object of my invention to produce means within the ship of turning, swinging, and controlling herself without the aid of tugs and hauling-lines.

My invention can also be used to accelerate the operation of the helm or in case of emergency to control the ship when the ordinary steering-gear may have been rendered inoperative.

The invention consists of the application of steam from the main boilers or donkey-boiler by pipe direct to a suitable position at both ends and on each side of the ship or into a trunk or pipe running through the ship from side to side and opening as deeply as possible into the external waters at right angles to the longitudinal axis of the ship. In each trunk two nozzles pointing in opposite directions and placed centrally are connected to the source of steam-supply controlled by valves operated from the bridge.

In order to more clearly disclose my invention, I will now describe it, reference being made to the accompanying drawings, in which—

Figure 1 is a diagrammatic view of a ship with the approximate preferable position of the trunks shown at A and B, steam-piping C, valves D, and controlling-levers E on the bridge. Fig. 2 is a section of a trunk with portion of hull-plating attached.

It will be obvious that there will be many

possible variations to this invention, but I have only shown one method and that the best one to apply.

F is a trunk made of plating suitable to the size of the ship extending from side to side and riveted to the hull-plating, as at G. In each trunk are two nozzles H J, placed as nearly central as possible, one pointing to starboard and one to port. These nozzles are connected by suitable piping to the main boilers and donkey-boiler, each pipe being controlled by a valve readily worked from the navigating-bridge, where they may be operated in combination or separately, as desired. The relation of nozzle to trunk cannot be expressed definitely, but can roughly be said to be about one to fifty.

The operation of my invention is as follows: In the case of a steamer lying with her starboard side to a wharf and wishing to swing or turn round the officer in charge from the bridge after letting go the lines turns the steam onto the nozzle that discharges toward the starboard side. By so doing steam under considerable pressure is blown out of the trunk, carrying with it a column of water that finds easy access to the trunk in a direct line. This water and steam impinging against the water outside the ship gradually moves the vessel's bow over to port. When the vessel is at about right angles to the wharf, the officer in charge would turn the steam onto that nozzle in the stern that discharges on the port side, so turning the vessel in her own length, subsequently stopping the port after-nozzle and opening the starboard after-nozzle and so bringing the vessel alongside the wharf again end for end. Similarly, a ship wishing to leave a wharf or river-bank can be made to turn her head or stern outward before starting the propeller, so obviating the necessity for hauling-lines or tug.

It will be obvious that many variations of pipe, or trunk, or nozzle, or relative positions can be devised and the positions varied, including a separate trunk for each nozzle.

It will be understood that compressed air would operate equally as well as steam and might be used under circumstances when steam was not available.

I am aware that patents have been granted

for propelling vessels by means of water driven through movable and fixed nozzles; but I do not claim anything covered by these patents.

5 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A trunk, placed at or near the extreme
10 ends of a ship, so that the water from either side can flow directly through said trunk, having two nozzles placed centrally within and arranged to discharge on either side, said
15 nozzles being connected to suitable steam-supply and provided with valves controllable

from the bridge as herein described and illustrated.

2. An apparatus for turning ships comprising a trunk having communication with both sides of the ships and one or more nozzles with- 20 in said trunk, said nozzles being connected to a suitable fluid-supply, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHN BICKERS BLAIR.

Witnesses:

CHARLES S. WEINAY,
ALEXANDER ANDERSON.