

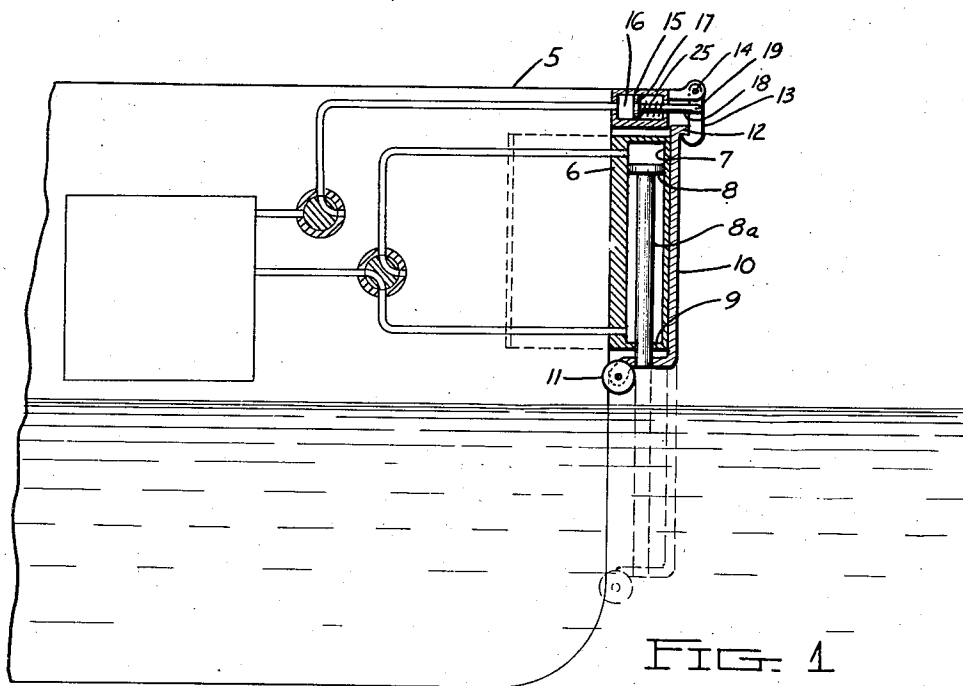
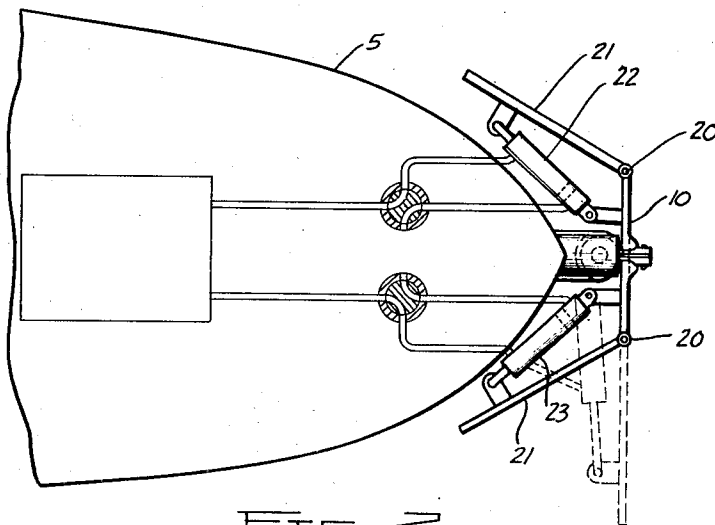
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SHIP BRAKE

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SHIP BRAKE

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4 Claims. (Cl. 114—145)

This invention relates to improvements in brakes for ships and the like.

An object of the invention is to provide a simple, practical and efficient device of the character described.

Another object is to provide an improved device for assisting the braking action of a ship under emergency circumstances.

Other objects and advantages will appear and be brought out more fully in the following specification, reference being had to the accompanying drawing wherein

Fig. 1 is a fragmentary side view of the bow of a ship illustrating my invention in connection therewith and

Fig. 2 is a plan view of the same.

Referring more particularly to the drawing, I show the bow portion of a boat 5 having housing 6 secured at the apex thereof above the water line. Housing 6 is provided with cylinder 7 containing a piston 8 having a piston rod 8A which extends through an aperture 9 in the bottom thereof and which is connected to a frame 10 provided with a pair of guide rollers 11, the frame 10 extending upwardly along the housing 6 and provided with an abutment 12 adapted to be held by a hook 13 pivoted at 14 to a cylinder housing 15. Cylinder 15 is provided with an air compression chamber 16 and a piston 17 connected to a piston rod 18 pivoted at 19 to hook 13. Frame 10 is hinged at either side at 20 to a pair of brake fins 21, compressed air cylinders 22 and 23 being secured between frame 10 and fins 21 and adapted to swing the latter to the extended position shown in dotted lines in Fig. 2 for braking use.

The operation of the invention should be apparent from the foregoing description. It will be understood that compressed air may be supplied to cylinders 7, 16, 22 and 23 by any suitable means, and suitably controlled. The device will normally be kept above the water line as shown in Fig. 1, however, whenever it is desired to be used, air pressure will be supplied to cylinders 7 and 16, the latter causing the release of hook 13, thus permitting frame 10 together with fins 21 to be dropped into the water at the position indicated by dotted lines in Fig. 1. The air pressure in cylinder 7 will expedite this movement. Either or both of fins 21 can thereupon be extended by operation of air cylinders 22 and 23 and effective braking action of the ship will result. By using only one of the fins 21, considerable steering effect may be released to assist the normal steering means of the ship. The fin mechanism

may be returned to normal position out of the water by supplying air pressure to cylinder 7 below piston 8 and frame 10 will thereupon be held by hook 13 by engagement with abutment 12, hook 13 being returned to normal position by a spring 25 on rod 18 in cylinder 16. From the foregoing description it will be clear that I have provided a very effective ship brake mechanism and that in case of a collision, small damage would be done by the blunt formation of the ship brake instead of the sharp prow formation of most ships.

It will be understood that the foregoing description is illustrative only and not restrictive of my invention and that changes and modifications may be made without departing from the spirit and scope of the subjoined claims, for example: the fins may be actuated by other means such as electrically, mechanically, hydraulically or otherwise.

Having described my invention, what I claim is:

1. A ship brake of the class described, comprising, a housing secured above the water line of the bow of a ship, said housing being formed with a cylinder, a piston operable within said cylinder, a frame carried by said piston and having slidable engagement with said housing, a pair of fins pivotally attached to said frame, means for retaining said frame in raised position, and means for causing the lowering of said frame and fins.

2. A ship brake of the class described, comprising, a housing secured above the water line of the bow of a ship, said housing being formed with a cylinder, a piston attached to one end of a rod operable within said cylinder, a frame carried by the other end of said rod and having slidable engagement with the exterior of said housing, a pair of fins pivotally attached to said frame, means for actuating said fins, means for retaining said frame in raised position, and means for causing the lowering of said frame and fins.

3. A ship brake of the class described, comprising, a housing secured above the water line of the bow of a ship, said housing being formed with a cylinder, a piston attached to one end of a rod operable within said cylinder, a frame carried by the other end of said rod and having slidable engagement with the exterior of said housing, a pair of fins pivotally attached to said frame, means for actuating said fins, means for retaining said frame in raised position, said means including a cylinder disposed above said

housing, a piston operable therein, a hook carried by one end of said second-mentioned piston having engagement with the upper end of said frame, and means for releasing said hook for causing the lowering of said frame and fins.

5 4. A ship brake of the class described, comprising, a housing secured above the water line of the bow of a ship, said housing being formed with a cylinder, a piston operable within said
10 cylinder, a frame carried by said piston and hav-

ing slidable engagement with said housing, a pair of fins pivotally attached to said frame, means for actuating said fins, said means including compressed air cylinders having one end attached to said frame and the other end 5 attached to said fins, means for retaining said frame in raised position, and means for causing the lowering of said frame.

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