Feb. 26, 1929. 1,703,836

S. M. CARLISLE

BARGE HANDLING DEVICE

Filed May 20, 1927

Fig. 2.

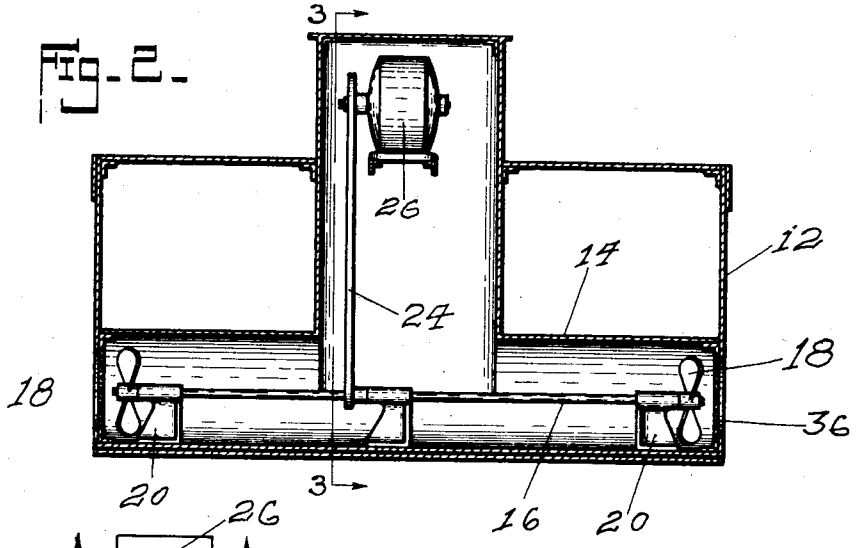


Fig. 1.

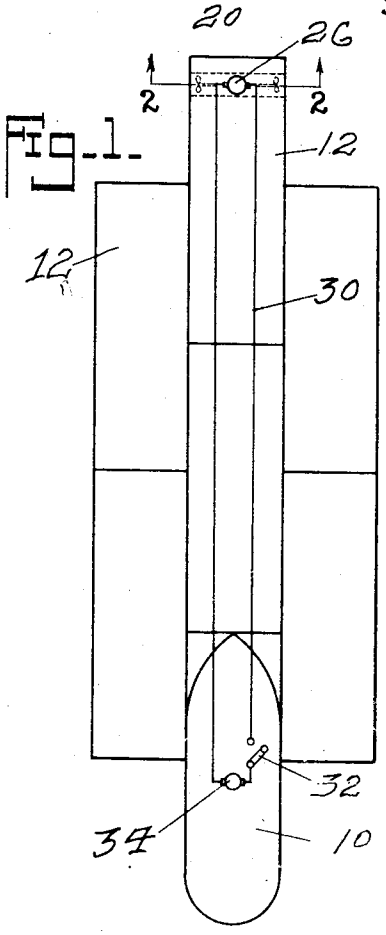
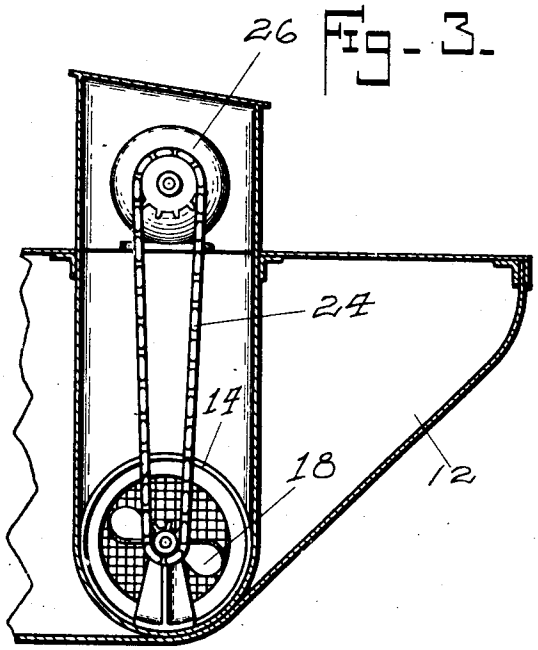


Fig. 3.



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UNITED STATES PATENT OFFICE.

SAMUEL M. CARLISLE, OF LOUISVILLE, KENTUCKY.

BARGE-HANDLING DEVICE.

Application filed May 20, 1927. Serial No. 192,939.

This invention relates to an improved barge handling device, and has for one of its principal objects the provision of means for facilitating the handling of one or more barges by means of a tow boat or the like.

One of the important objects of this invention is to provide, in a simplified apparatus, a means and method for steering and maneuvering barges and the like in a body of water, with much less difficulty than has heretofore been experienced.

Still another and further important object of this invention is to provide, in combination with a barge or the like, means for turning, steering, or changing the direction of same, thereby enabling said barge or similar object and its associated members, composing parts of a fleet of such barges handled by a tow boat, to be steered and maneuvered with much more perfection and with much less difficulty than has heretofore been encountered.

Other and further important objects of the invention will be apparent from the disclosures in the accompanying drawings and following specification.

The invention, in a preferred form, is illustrated in the drawings and hereinafter more fully described.

In the drawings:

Figure 1 is a diagrammatic top plan view of a tow boat and an associated fleet of barges illustrating the improved device of this invention applied thereto.

Figure 2 is a vertical cross section of the device, taken approximately on the line 2—2 of Figure 1.

Figure 3 is a cross-section, taken on the line 3—3 of Figure 2.

As shown in the drawings:

The reference numeral 10 indicates generally a tow boat or the like commonly used in rivers or similar bodies of water for transporting fleets of barges, such as are represented diagrammatically at 12 in Figure 1. It is the usual custom to handle such fleets of barges by pushing the same with a tow boat as illustrated, the steering being accomplished solely by the rudder of the tow boat or boats.

The improved barge handling device of this invention comprises essentially a cylindrical tube or the like, as shown at 14, adapted to be either built into the head barge or associated therewith in some convenient way, the tube 14 being located below the water line.

Mounted in the tube 14, and corresponding with the longitudinal axis thereof, is a shaft 16, at each end of which is mounted a propeller 18, the shaft being itself supported by suitable bearings or the like 20. Motion may be imparted to the shaft 16 and its associated propellers 18 by means of a chain or the like 24 operated by an electric motor 26 suitably mounted in proper position above the shaft and either on the barge 12 or in a removable device adapted to be associated with the barge.

Control wires 30 lead from the motor 26 rearwardly to a switch or the like 32 mounted on the tow boat 10 and current is supplied to the motor from a generator 34 likewise mounted in the tow boat and which can form part of the regular equipment thereof.

The cylindrical compartment 14 is protected by means of screens or the like 36 mounted at each end thereof whereby drift and débris is prevented from entering the same and fouling the propellers.

When the propellers 18 are set in motion the entire fleet of barges can be much more easily manipulated and maneuvered than in the present system of handling the whole fleet by the tow boat alone, and the direction of steering of the head barge can, of course, be readily reversed by reversing the current flowing through the motor 26.

It is evident that one or more propellers may be used, and also one or more of the component devices may be used with a fleet of barges and the same may be made removable to be attached to any certain barge at will.

It will be seen that herein is provided a means and method for facilitating the handling of a fleet of barges propelled by one tow boat, and that with this device a fleet of such barges can be maneuvered in the minimum of space and with a maximum of safety and also much more readily than has heretofore been considered possible.

I am aware that many changes may be made and numerous details of construction varied throughout a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon otherwise than as necessitated by the prior art.

I claim as my invention:

In combination with a tow boat and an associated fleet of barges, said barges being positioned ahead of the tow boat, means on the first barge for forcing water through the same transversely in either direction to assist in steering the fleet, said means including a

straight tube positioned transversely across the barge below the water line, a propeller in each end of the tube, guards for the propellers at the ends of the tube, electrically driven means for operating the propellers, said means comprising a motor positioned in a housing on the barge connecting with said tube, sprocket and chain connections between the motor and the propeller shaft, an electrical current generating unit on the towboat and current control means on the towboat electrically connected with the motor, for rotating the said propellers to force water through the tube.

In testimony whereof I affix my signature.

SAMUEL M. CARLISLE