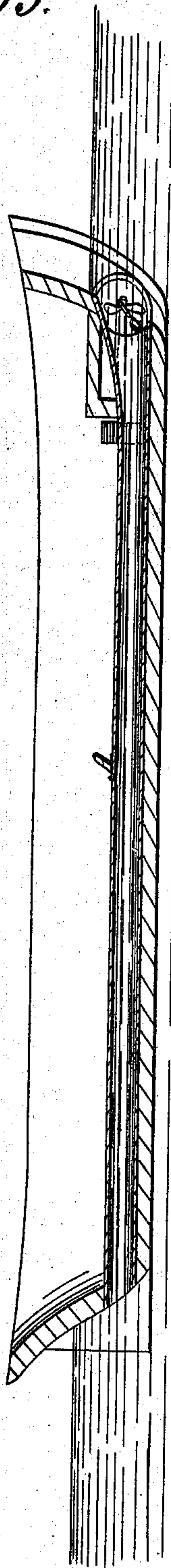


*E. C. Gregg.*  
*Propeller.*

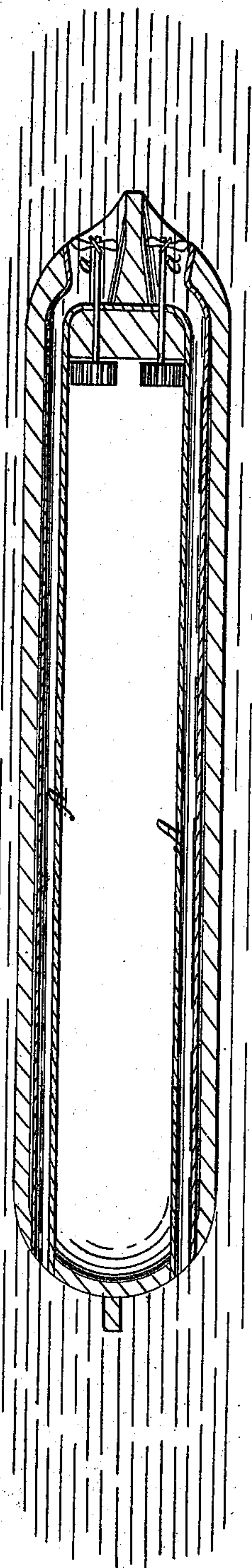
*Nº 112,335.*

*Patented Mar. 7, 1871.*

*Fig. 1.*



*Fig. 2.*



*Witnesses,*

*H. C. Asketon*  
*Chas. Enche*

*Inventor,*  
*E. C. Gregg.*

*per*

*M. H.*  
*Atty.*



# UNITED STATES PATENT OFFICE.

ERASTUS C. GREGG, OF TRUMANSBURG, N. Y., ASSIGNOR TO ALEXANDER H. GREGG AND CHAUNCY P. GREGG, OF SAME PLACE.

## IMPROVEMENT IN SCREW-PROPULSION.

Specification forming part of Letters Patent No. **112,335**, dated March 7, 1871.

I, ERASTUS C. GREGG, of Trumansburg, Tompkins county, New York, have invented an Improved Propulsion of Vessels, of which the following is a specification:

My object is to propel a vessel by taking away the water from the bow of the vessel and forcing it to the rear through two pipes, and out by two separate vents in the rear; and the nature of my invention will be apparent as I describe it.

Figure 1 is a side elevation of a vessel with my appliances or device in it; Fig. 2, a sectional view, looking down on the same.

In Fig. 1, A is one of two similar water pipes or passages, commencing at the bow by enlarged chambers, which chamber or chambers are large enough to admit any suitable forcing apparatus—as, for example, screw-propellers, force-pumps, wheels, or other water-forcing means. The said chamber or chambers contract by a funnel-shaped lessening when they are attached to the rear pipes or the main rear portion of the passage or passages, and thence go to any convenient but separated rear discharge orifices or vents.

The object of the separated discharge-vents is, in part, to aid in the steering or turning of the vessel by lessening or stopping the discharge through one or the other of the rear vents.

The letters *a a* indicate two screw-propellers, attached each to their shafts, on the interior ends of which are independent cog-wheels that can be driven in unison or separately, and by which the screws are driven.

The drawing is more particularly designed for a canal-boat, and the arrangement of the pipes A is on the sides of the boat, in the angle made by the bottom and sides of the boat, as is more clearly seen in Fig. 2.

Fig. 2 shows the same parts by the same letters.

It will be noticed that the opening or openings in the bow are comparatively large, and should be grated to prevent admission of large objects, and that the water enters freely; that the drawing in of the water, in fact, draws the vessel forward, while the forcing the water out in the rear pushes the vessel onward, thus producing two effects at the same time—drawing and propulsion—and the third effect of relief of the thrust, in part, of the water against the bow of the boat.

The further advantages and uses of my invention are apparent to those skilled in the art to which it appertains.

I am aware that long ago the main principle of the use of a current of water to propel a vessel has been made with approximations toward my invention.

### *Claim.*

The arrangement and combination of the whole, consisting of the anterior chamber or chambers, the funnel-shaped contractions, and the separated rear vents, as set forth.

ERASTUS C. GREGG.

Witnesses:

CHAS. CLAPP,  
D. P. SHARP.