T. H. NEAL.

VEHICLE PROPELLERS.

No. 180,259. Patented July 25, 1876.

Fig. 1.

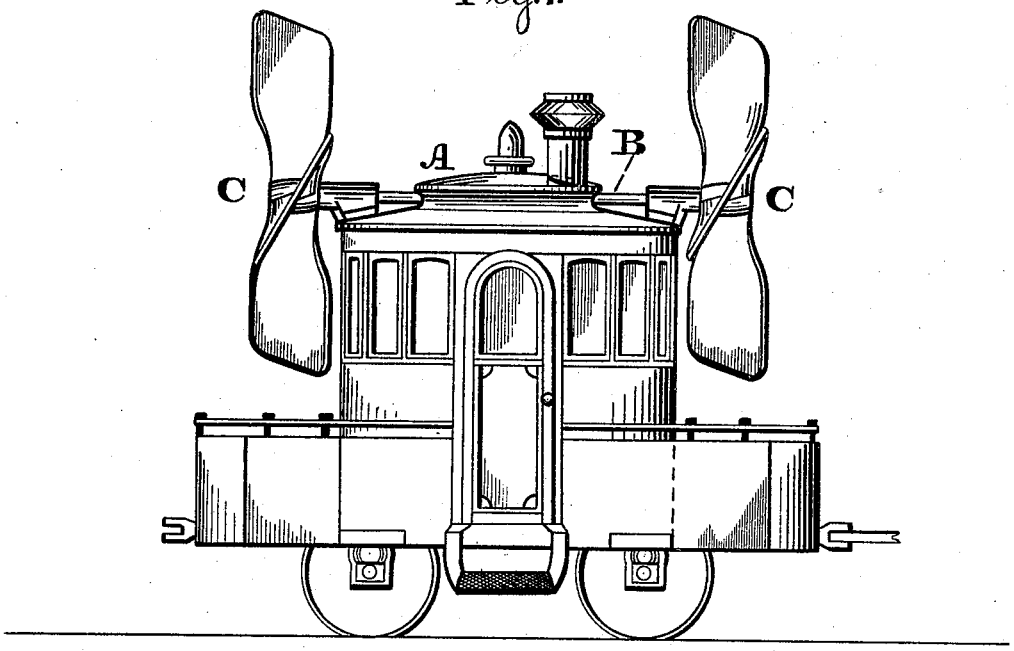
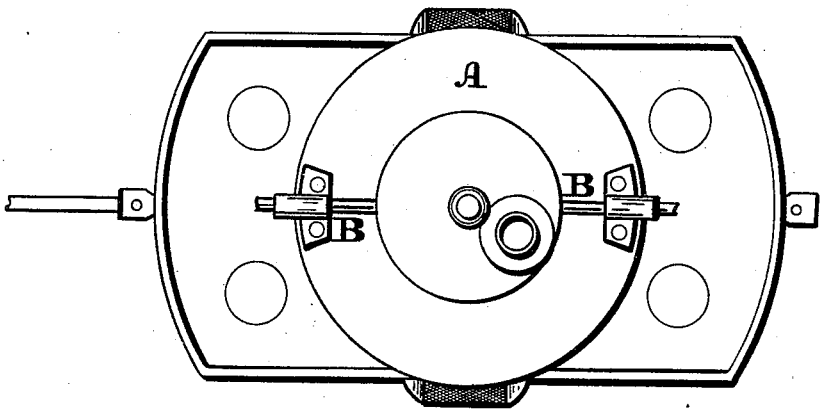


Fig. 2.



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UNITED STATES PATENT OFFICE.

THOMAS H. NEAL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO MARCUS F. RICHARDSON, OF SAME PLACE.

IMPROVEMENT IN VEHICLE-PROPELLERS.

Specification forming part of Letters Patent No. **180,259**, dated July 25, 1876; application filed October 23, 1875.

To all whom it may concern:

Be it known that I, THOMAS H. NEAL, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Propulsion of Land Conveyance; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of a vehicle having my invention applied thereto. Fig. 2 is a top or plan view thereof.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists in obtaining a traction upon the atmosphere in order to propel land conveyance. For this purpose I employ two atmospheric propellers, which are arranged at the front and rear of the conveyance, and, operated by a small mechanical power, transmit the power directly created by said propellers to the conveyance, and uniformly and powerfully propel the same. In combination therewith I use an engine or pilot-house of circular form, so that air will not be deflected from the rear propeller, and the engineer can have full observation of all points.

Referring to the drawings, A represents the body of the vehicle, on which will be supported a shaft, B, which extends longitudinally, and its ends project in front and rear of said body.

The body is of circular form, and is provided with windows or openings on all sides, so that the engineer occupying the body can observe what occurs at all points. The body will be denominated the "pilot-house" or "engine," and within the same will be located the machinery for imparting rotation to the shaft B, the engineer, and all appliances that are necessary in the premises. On the two ends of the shaft B there are keyed, or otherwise secured, propellers or screws C, which rotate in the same direction. These propellers will rotate with great velocity or high rate of speed, and obtain traction upon the atmosphere, the power created thereby being imparted to the vehicle, and thus causing the propulsion thereof.

It will be seen that I employ two propellers—one at each end, and adapt the same to maintain a uniform line of motion of the vehicle, thus overcoming the disposition of a single propeller to impart lateral motions to the vehicle. It will also be seen that the circular house A permits air to pass freely to the rear propeller, instead of being deflected therefrom, and thus the two propellers will act in harmony, combining their power, which is exerted uniformly on both ends of the house, and correspondingly on the vehicle, and producing a cheap medium of propulsion at the expense of a small mechanical power.

If desired, the propellers may be surrounded or inclosed by open-end tubes, the operation being similar to that stated.

I employ two propellers of uniform construction, one in front and the other at the rear of the body A, and operate them simultaneously in the atmosphere, for the reason that if a propeller is employed solely in front, the remainder of the vehicle will act as a rudder, and cause the vehicle to move from a direct line, and run the vehicle laterally or from the track. A propeller solely at the rear of a car body will act as a powerful rudder, and cause the front of the car quickly to climb the track, and consequently run off therefrom. Again, by these means the combined power of two equal propellers is obtained, and a rudder is dispensed with.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The vehicle-body A, constructed of circular form, in combination with two air-propellers of uniform construction, and mechanically operated, one of said air-propellers being located in front of the body, and the other air-propeller at the rear thereof, the whole arranged and operating as herein set forth, and for the purpose described.

THOMAS H. NEAL.

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