

J. JAENSCH.
 APPARATUS ARRANGED ON LOCOMOTIVES AND OTHER POWER PROPELLED VEHICLES FOR
 UTILIZING THE RESISTANCE OF THE AIR.

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1,042,795.

Patented Oct. 29, 1912.

FIG. 1.

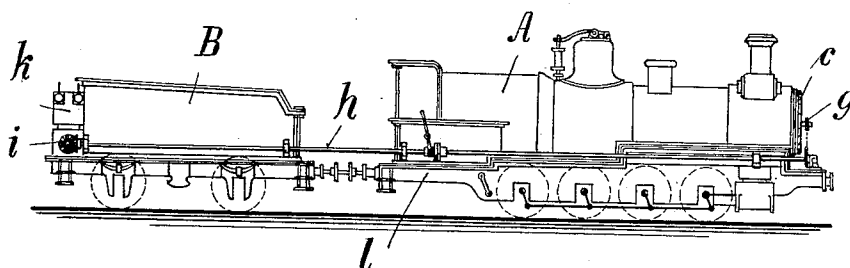


FIG. 2.

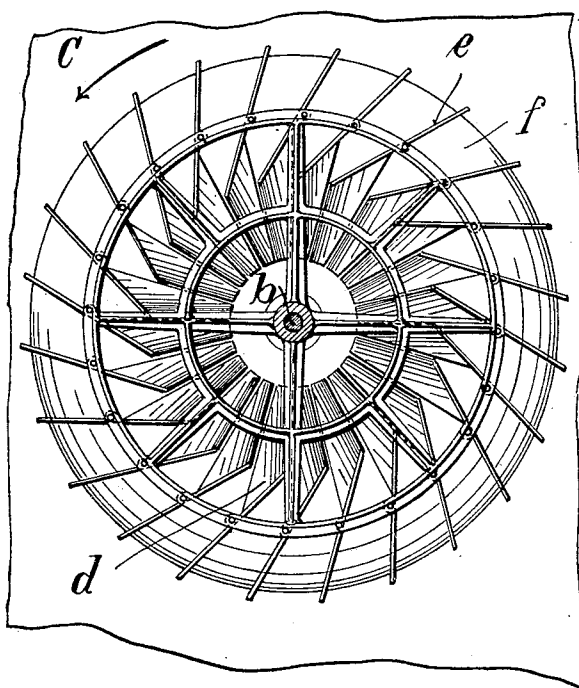
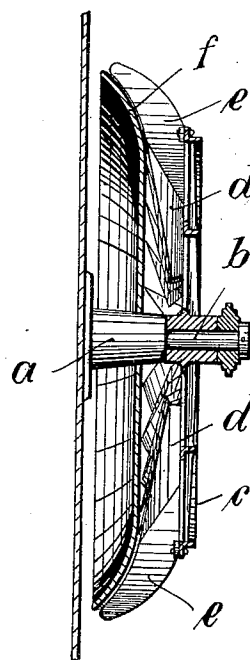


FIG. 3.



Witnesses:
Frank W. Ritz
Brins Whitney

Inventor:
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UNITED STATES PATENT OFFICE.

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APPARATUS ARRANGED ON LOCOMOTIVES AND OTHER POWER-PROPELLED VEHICLES
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Specification of Letters Patent.

Patented Oct. 29, 1912.

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To all whom it may concern:

Be it known that I, JULIUS JAENSCH, gentleman, a subject of the Emperor of Germany, residing at 71 Kaiserstrasse, Breslau, Germany, have invented certain new and useful improvements in apparatus arranged on locomotives and other power-propelled vehicles for utilizing the resistance of the air; 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.

This invention consists in an apparatus for use on locomotives and other vehicles, which, in consequence of their great speed are exposed to considerable counter pressure from the air, and is an improvement on apparatus of the kind comprising a wind wheel which is mounted in front of the locomotive or in front of a conical plate, in which the head of the vehicle terminates and drives a dynamo for supplying electricity.

Now according to my invention I provide a wind turbine with blades arranged in part perpendicularly to the plane of rotation of the propeller, but obliquely to the radii of the latter, for in this case the air strikes directly behind the propeller, and is diverted toward the sides, so that with this arrangement of the propeller, the air that still encounters its blades opposite to the direction of traveling would only have but little effect.

Figure 1 of the drawing illustrates the novel apparatus arranged on a locomotive. Fig. 2 is a plan of the propeller. Fig. 3 a longitudinal section of the same.

On the front of the locomotive A a bearing *a* is fixed, on the shaft *b* of which the propeller *c* is rotatively arranged. In this form of the invention the propeller blades have two differently directed propeller surfaces *d* and *e*, the surfaces *d* being situated obliquely toward the direction in which the train is moving while the surfaces *e* are arranged perpendicularly to the plane of rotation of the propeller, and obliquely to the radii of the same. The propeller is backed by a sheet metal plate *f* that is arched in the direction of traveling, and insures, a path for the current of air forced aside by the locomotive, which is favorable for the outer propeller blades. With the propeller a chain-wheel *g* is firmly connected. This

wheel transmits the movement of the propeller to a gear *h*.

In this form of the invention a dynamo *i* is arranged on the tender B to be driven by the propeller. This machine feeds the accumulators *k* from which the current can be taken for the purposes of lighting, heating, and the like.

On the foot plate of the locomotive a clutch *l* is arranged, by means of which the transmission of motion from the propeller to the dynamo machine can be interrupted.

The air strikes in the direction of travel of the train against the plate *f*, and is diverted by the latter to the side. In the middle of the propeller the current of air still acts in part perpendicularly on the latter, and consequently by means of the blades *d* sets the propeller in rotation in the direction of the arrow *c*, while the current of air diverted to the side by the plate *f* comes sidewise against the outer blades *e* of the propeller, and thereby causes a rotation of the propeller in the same direction.

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:—

A device for utilizing the resistance of the air in connection with locomotives and other quick traveling power driven vehicles by means of a wind turbine which is actuated by the air which acts as a resistance, comprising in combination a baffle plate for the air curved backward and fixed in front of the vehicle, a turbine revolubly mounted in front of said baffle plate, the vanes of said turbine composed of two parts, the inner radial part which is inclined with regard to the baffle plate so that it is acted upon and revolved by the air current and the outer part which stands perpendicular to the baffle plate but obliquely to the inner part so that it is acted upon by the air current laterally directed by said curved baffle plate, and means for connecting the wind wheel with a dynamo, substantially as described and shown and for the purpose set forth.

In testimony whereof I have affixed my signature, in presence of two witnesses.

JULIUS JAENSCH.

Witnesses:

ERNST KATZ,

BRUNO HOHLING.