

No. 793,640.

PATENTED JULY 4, 1905.

J. R. DE MIER.
POWER GENERATING DEVICE.
APPLICATION FILED OCT. 1, 1904.

Fig 1.

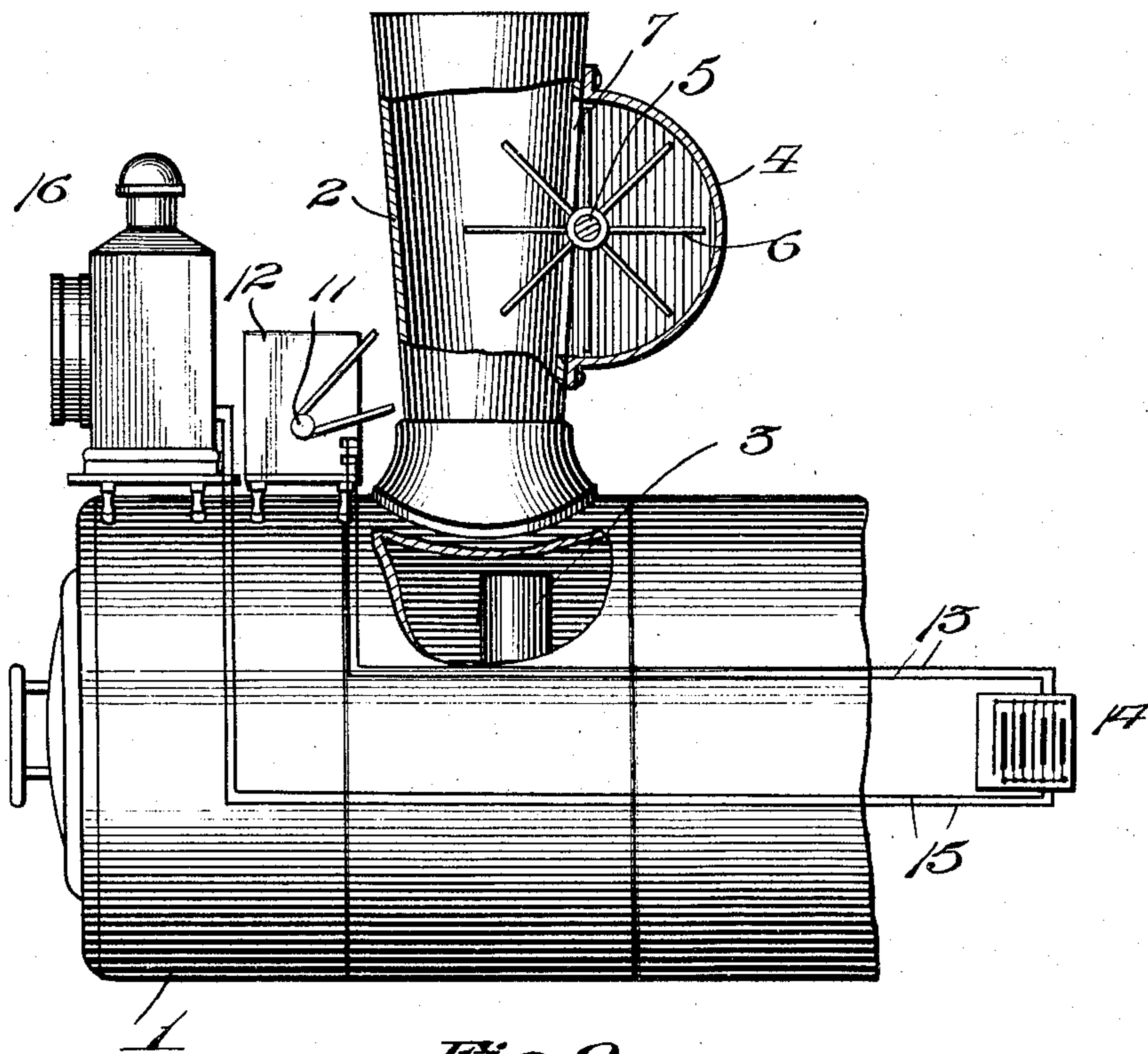
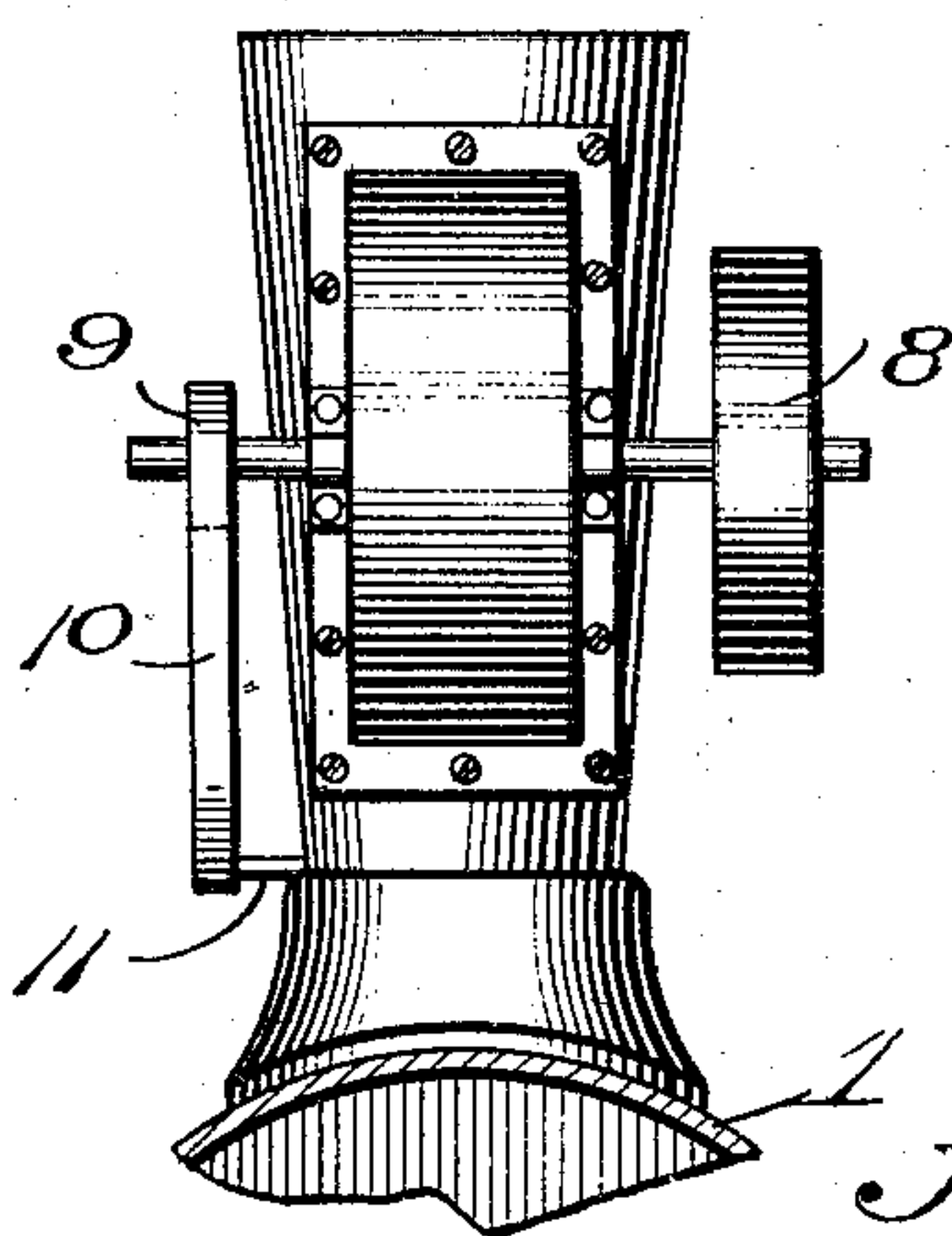


Fig 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN R. DE MIER, OF ALAMOGORDO, TERRITORY OF NEW MEXICO.

POWER-GENERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 793,640, dated July 4, 1905.

Application filed October 1, 1904. Serial No. 226,824.

To all whom it may concern:

Be it known that I, JOHN R. DE MIER, a citizen of the United States, residing at Alamogordo, in the county of Otero and Territory of New Mexico, have invented new and useful Improvements in Power-Generating Devices, of which the following is a specification.

This invention relates to power-generating devices, and has for its objects to produce a simple inexpensive device of this character which may be readily applied to a locomotive or other steam-boiler and in which the exhaust from the engine will serve to operate the device for storing energy to be employed for lighting a lamp or for other desired uses.

To these ends the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of a portion of the locomotive-boiler, illustrating the improved device applied thereto. Fig. 2 is a rear elevation of the boiler-stack and adjacent parts of the mechanism.

Referring to the drawings, 1 designates an engine-boiler having a smoke-stack 2, beneath which is arranged an exhaust pipe or duct 3, leading from the engine-cylinder, (not shown,) these parts, except as hereinafter explained, being of the usual or any appropriate construction and material.

Attached to the smoke-stack 2 is a fan-casing 4, in which is journaled a rotary shaft 5, carrying a fan 6 of any improved construction, the blades of which enter through an opening 7 in the adjacent wall of the stack and lie within the path of the exhaust-steam discharged from the pipe 3 through the stack, whereby rotary motion will be imparted to the fan and its shaft 5. The shaft 5 projects from opposite sides of the casing 4 and has fixed upon one end a balance-wheel 8 and upon its other end a belt-wheel 9, connected by a belt 10 with the armature-shaft 11 of a dynamo 12, suitably sustained upon the boiler adjacent the smoke-stack, this dynamo being

connected by wires 13 with a storage battery 14, which in turn is connected by wires 15 with the carbons of an electric headlight 16, disposed upon the front end of the boiler. It will be understood that the storage battery 14 may in practice be situated in the engine-cab or at other convenient point and be provided with a suitable switch or switches for cutting off the current to the light 16 or otherwise controlling the distribution of the power stored within the battery.

In operation the steam discharged from the exhaust serves to drive the fan 6 and its shaft for in turn operating the dynamo through the medium of the belt 10 to generate power, which of course is stored in the battery 14 to be used as required.

From the foregoing it is apparent that I produce a simple efficient device admirably adapted for the attainment of the ends in view, it being understood that minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention. For example, while I have illustrated the device herein as applied to a locomotive-boiler and the energy stored within the battery 14 to be utilized for lighting the lamp 16 it will be understood that the device may be employed in connection with any approved form of engine for utilizing the exhaust therefrom and that the stored energy may be employed for any desired purpose, such as driving light machinery or the like.

Having thus fully described the invention, what is claimed as new is—

1. An engine-boiler provided with a smoke-stack having an opening through its side wall, a fan-casing attached to the outer wall of the stack over said opening, an exhaust discharging through the stack, a fan rotatively mounted in the casing and having its blades projected through the opening into the stack within the path of the exhaust, a power-generator connected with and driven by the fan, and a storage device connected with the generator.

2. An engine-boiler provided with a smoke-
stack having an opening through its side wall,
a fan-casing connected with the wall of the
stack over the opening, an exhaust discharg-
5 ing through the stack, a fan-shaft rotatively
mounted in the casing, a fan carried by the
shaft and having its blades projected through
the opening into the stack within the path of

the exhaust, and a belt-pulley fixed upon the
fan-shaft externally of the casing. 1c

In testimony whereof I affix my signature in
presence of two witnesses.

JOHN R. DE MIER.

Witnesses:

F. C. ROLLAND,

A. J. ROLLAND.