No. 674,401. Patented May 21, 1901.

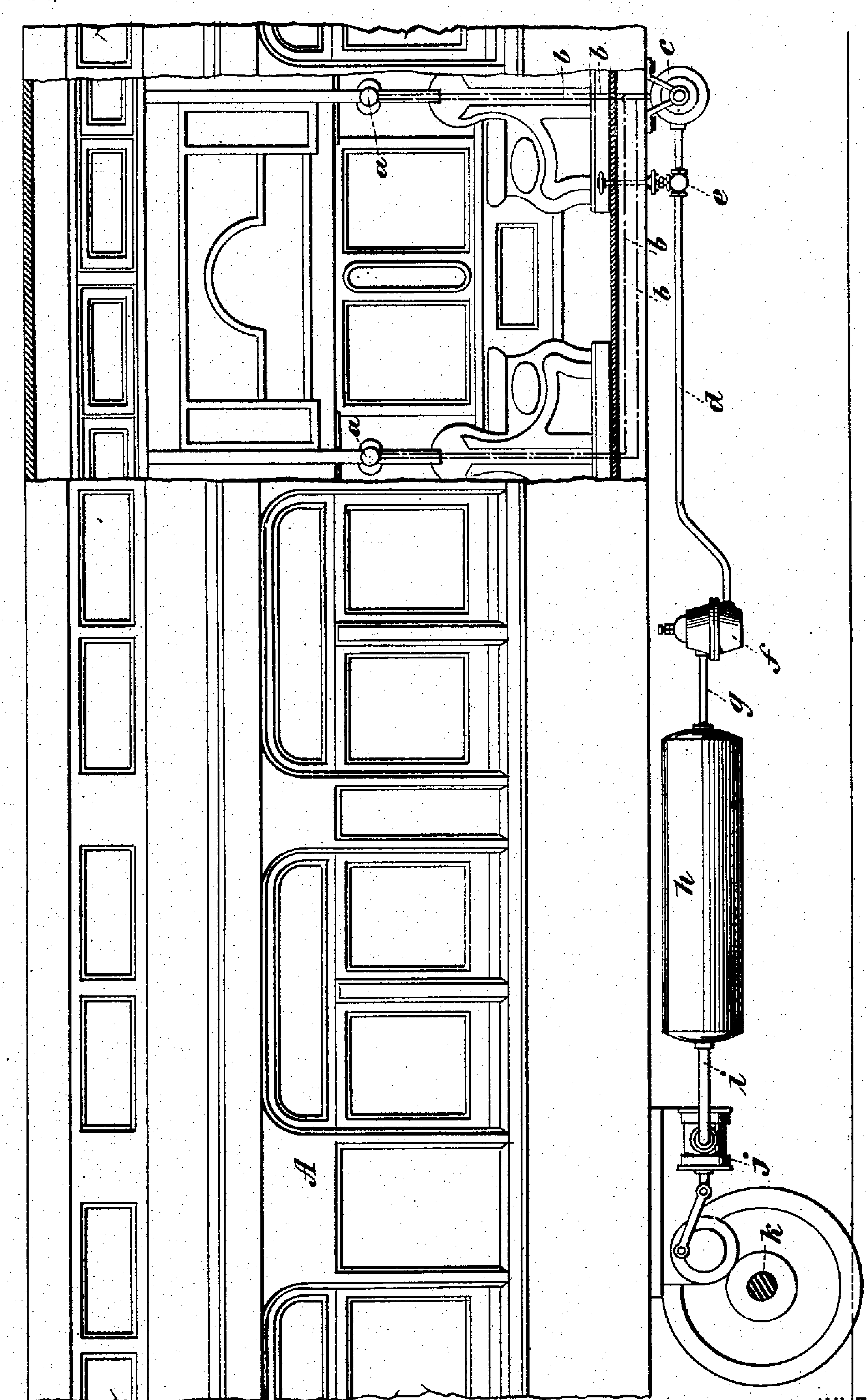
R. M. DIXON.

CAR LIGHTING.

(Application filed Nov. 20, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



WITNESSES:

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[illegible]

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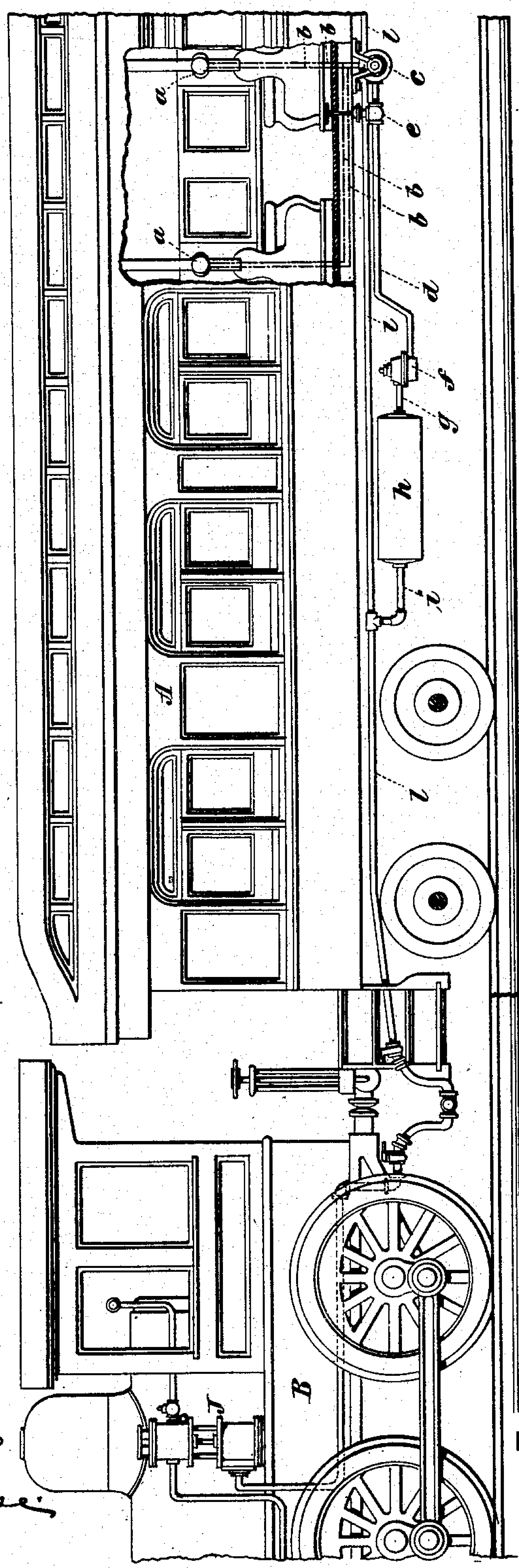
Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT M. DIXON, OF EAST ORANGE, NEW JERSEY.

CAR-LIGHTING.

SPECIFICATION forming part of Letters Patent No. 674,401, dated May 21, 1901.

Application filed November 20, 1900. Serial No. 37,109. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. DIXON, a citizen of the United States, and a resident of East Orange, Essex county, New Jersey, have invented certain new and useful Improvements in Car-Lighting, of which the following is a specification.

My invention relates to improvements in the art of lighting railroad-trains, and particularly with reference to berth-lights.

In the accompanying drawings, in which like reference-letters indicate like parts in both figures, I have shown a portion of a railroad-train and sufficient elements of a lighting system to enable my invention to be understood.

In the drawings, Figure 1 is a broken-away elevation of a portion of a railroad-car, showing my invention; and Fig. 2 is a broken-away elevation of a portion of a train, showing my invention.

In Fig. 1, A represents a fragmentary portion of a railroad-car, and *a* suitable berth-lights arranged therein. These berth-lights, which are in addition to and independent of the ordinary lighting system of the car, may be of any desired construction and are herein shown as properly fixed and shrouded incandescent lights. These lights receive current through wires *b* from a suitable miniature lighting system comprising a combined dynamo and pneumatic motor *c* hung beneath the body of the car. The pneumatic motor receives air from a pipe *d*, controlled by a suitable valve *e*, which pipe is in communication with a pressure-regulator *f*, which communicates by a pipe *g* with a storage or reservoir tank *h*, which receives air through a pipe *i* from an air-compressor *j*, driven from an axle *k* of the car. The functions of the various parts of the system will be readily understood. It is to be observed, however, that the lights will not be affected by a reversal of the movement of the car nor by stoppage of the car, as the reservoir *h* will store up a sufficient quantity of air to last during stops of the train. The invention is primarily designed to supply berth-lights with electric current. As these berth-lights are used but little, a large installation will not be required in order to supply them with current. Each car, therefore, will be a complete lighting system in itself, wholly independent of the ordinary lighting system of the train. The operating parts of the pneumatic motor and dynamo are preferably carried beneath the floor of the car, that being the most suitable and accessible location.

It is obvious that the air-compressor may be otherwise located and driven and that the pneumatic motor may be driven by storage supply in the tank *h*. Such an arrangement is shown in Fig. 2, wherein the air-compressor *j* is carried on the locomotive B and communicates by a train-pipe *l* with the storage-reservoirs *h* under the various cars. A supply of air may be carried in the storage-reservoir *h* to run the lights when the air-compressor is inactive or when no air-compressor is carried on the train. In the latter case the reservoirs might receive their supplies of air from an air-compressor or storage-tank in the railroad-station.

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

1. In a car-lighting system, the combination in addition to the ordinary lighting system of the train, of a miniature lighting system, in each car, wholly independent of the ordinary lighting system of the car, comprising one or more berth-lights, located between adjacent berths, a pneumatically-driven dynamo, an electrical connection with the said light or lights and located beneath the floor of the car, means for controlling the said pneumatically-driven dynamo from within the car and air compressing, storing and regulating means, substantially as described.

2. The combination of a passenger-car, having a lighting system, of a miniature lighting system, in each car, wholly independent of the ordinary lighting system of the car, comprising one or more berth-lights in addition to the lighting system of the car, located between the berths of the said car, a pneumatically-driven dynamo supplying current to the said light or lights and located beneath the floor of the car, an air-compressor driven from the axle of a moving part of the train and in regulatable communication with the pneumatically-driven dynamo.

3. A car-lighting system comprising in addition to the ordinary lighting system, a mini-

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ature lighting system, in each car, wholly independent of the ordinary lighting system of the car, comprising a means for supplying compressed air, a train-pipe, pneumatically-driven dynamos one for each car, berth-lights driven from the said dynamos, and means on each car for governing its dynamo independently of the other dynamos of the train.

4. In a car-lighting system, the combination, in addition to the ordinary lighting system, of a miniature lighting system, in each car, wholly independent of the ordinary lighting system of the car, comprising a source of air pressure or supply carried by the train, a train-pipe, an electric-lighting circuit on the individual coaches, individual pneumatically-driven dynamos, one upon each of the coaches of the train, a train-pipe for communicating air-pressure to the said pneumatically-driven dynamos, and means upon each car for governing or controlling its individual dynamo independently of the other dynamos of the train.

ROBERT M. DIXON.

Witnesses:
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