

(No Model.)

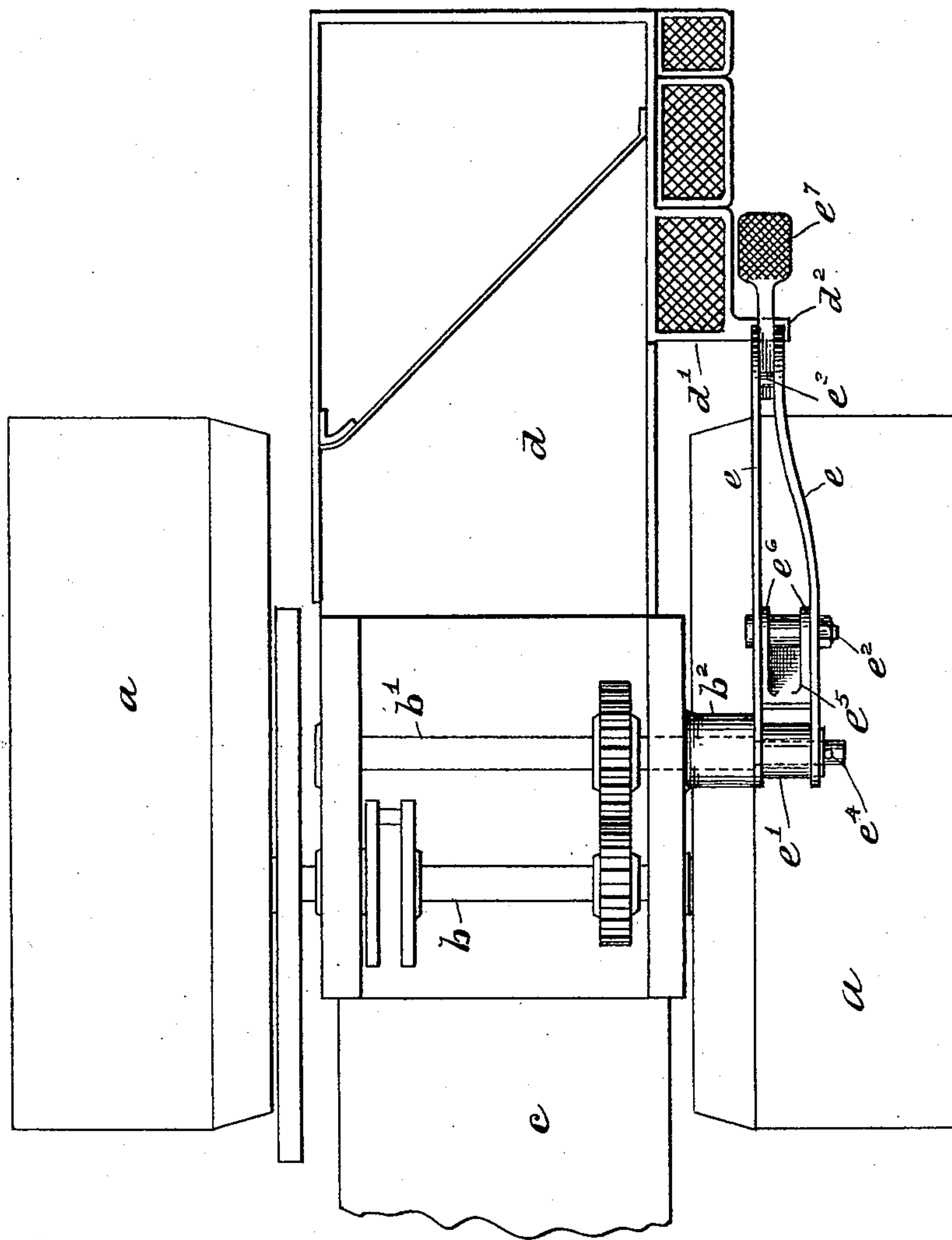
2 Sheets—Sheet 1.

E. T. WRIGHT.  
BRAKE FOR ROAD ENGINES.

No. 539,013.

Patented May 7, 1895.

Fig. 1



WITNESSES:

*G. M. Bradley*  
*G. Bohnenkemper*

INVENTOR

*Edward T. Wright*

BY

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(No Model.)

2 Sheets—Sheet 2.

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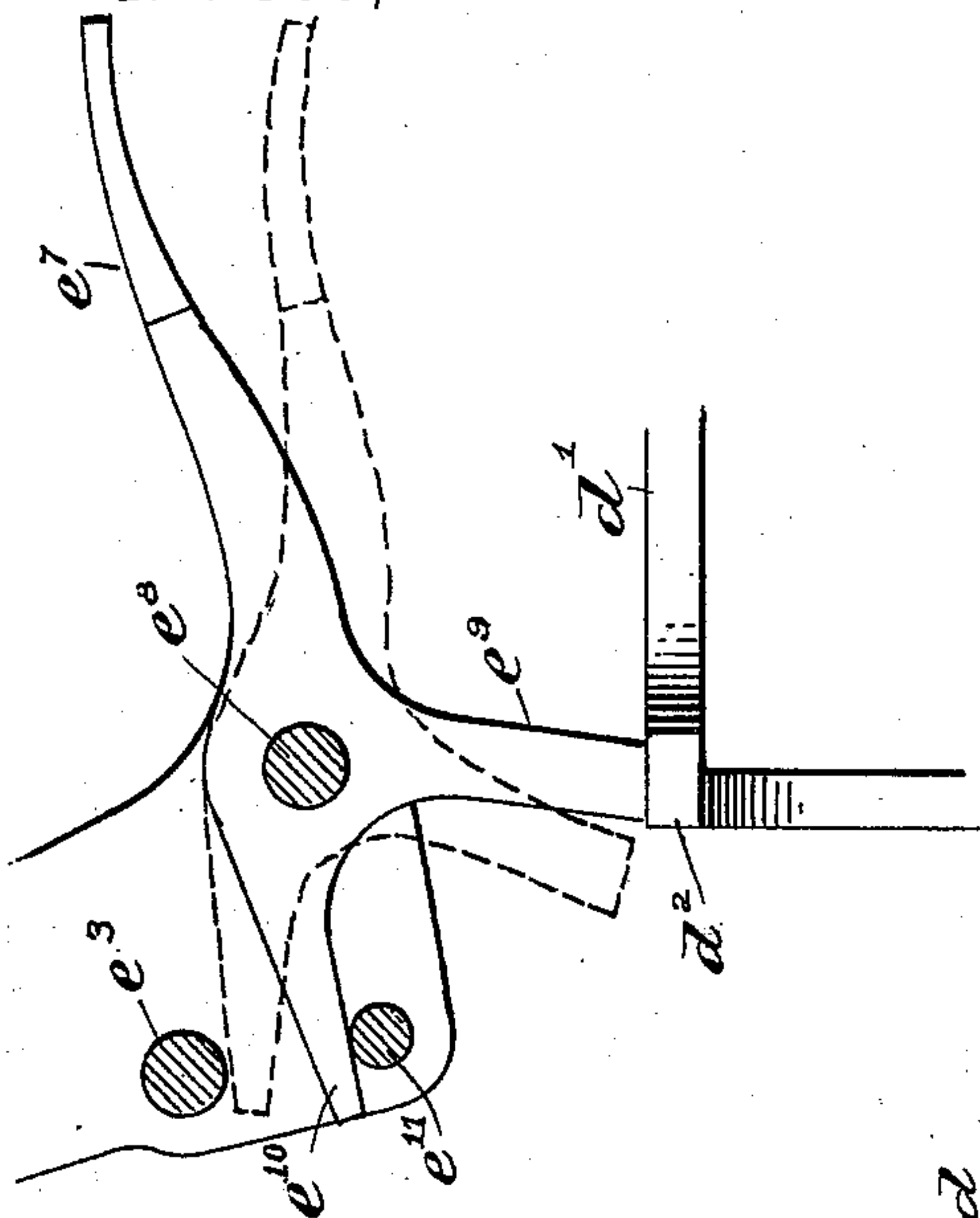


Fig. 3.

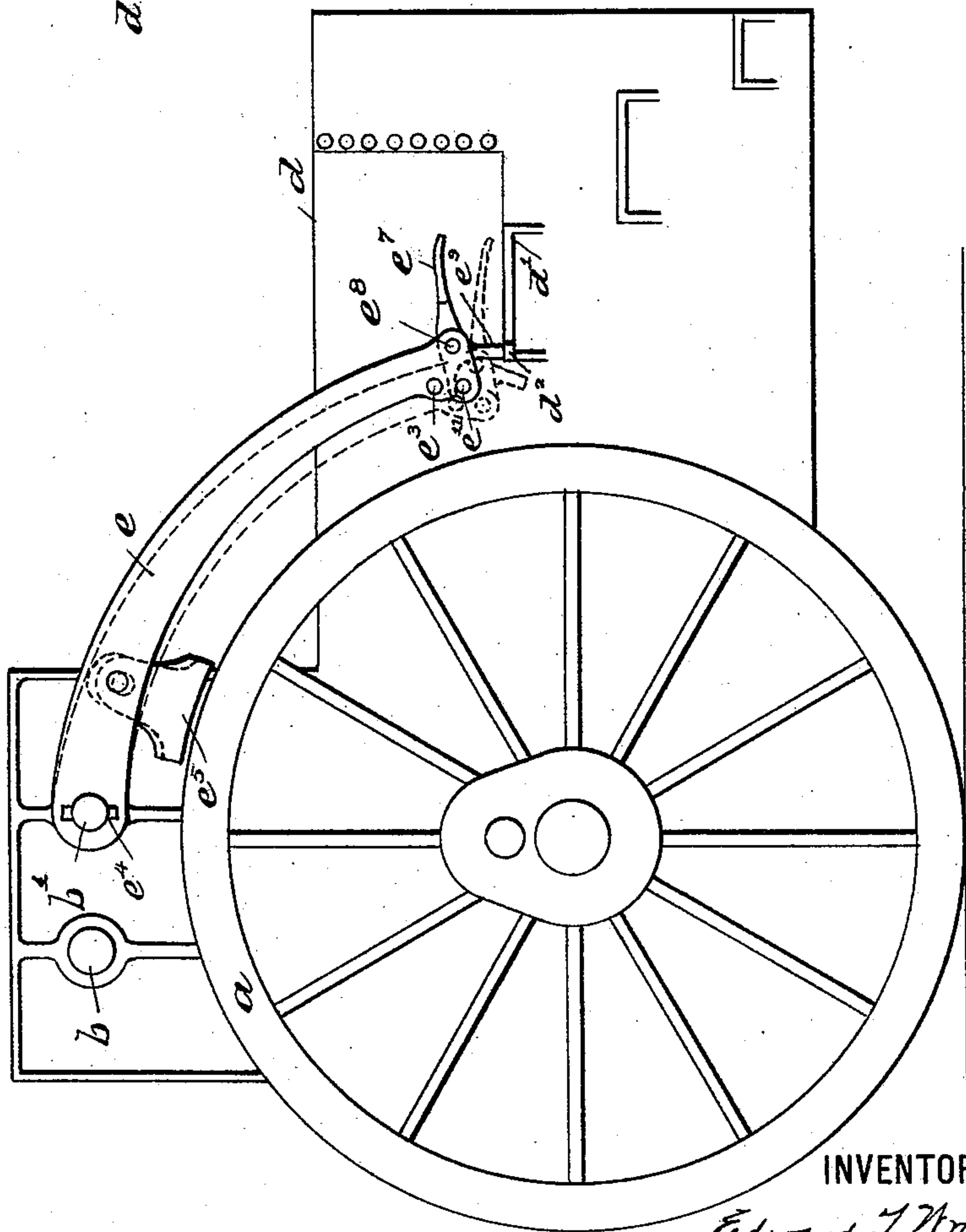


Fig. 2.

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# UNITED STATES PATENT OFFICE.

EDWARD T. WRIGHT, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE O. S. KELLY COMPANY, OF SAME PLACE.

## BRAKE FOR ROAD-ENGINES.

SPECIFICATION forming part of Letters Patent No. 539,013, dated May 7, 1895.

Application filed March 11, 1895. Serial No. 541,372. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD T. WRIGHT, a subject of the Queen of Great Britain, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Brakes for Road-Engines, of which the following is a specification.

My invention relates to improvements in brakes for road engines, and the object of my invention is to provide a brake device which is simple in its construction, effective in its operation, and of a construction and arrangement which can be applied to road engines of the ordinary type without any material change in their construction.

My invention consists in the constructions and combinations of parts hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of the rear portion of a road engine or roller to which my invention has been applied. Fig. 2 is a side elevation of the same. Fig. 3 is a detail view, partly in section, of a part of the brake-operating devices.

Like parts are represented by similar letters of reference in the several views.

In the said drawings, *a a* represent the main or driving wheels of a road engine or roller, which are operated in any well-known manner from the engine crank shaft *b*, preferably through the medium of suitable gearing of which the counter-shaft *b'* forms an important part; these crank and counter shafts being arranged above the boiler *c* on which the engine is supported in the usual manner. In the rear of the boiler *c* is a tender *d*, having the usual foot board *d'*.

My improved brake consists essentially of a frame *e*, preferably formed of wrought iron bars connected together at one end by a sleeve *e'*, and at other points by bolts or bars *e<sup>2</sup> e<sup>3</sup>*.

In applying my improved brake I extend the counter-shaft *b'* beyond its supporting bearings and over one of the driving wheels *a*. This counter-shaft is preferably shouldered down where it projects beyond its bearing *b<sup>2</sup>*, and the sleeve *e'* at the end of the frame *e* is journaled thereon, the frame being held against lateral movement by a pin *e<sup>4</sup>*, or any other suitable device. Journaled to the frame *e*, preferably on the bolt *e<sup>2</sup>* which connects the

side bars thereof, is a brake shoe *e<sup>5</sup>* which is provided with upwardly-extending ears *e<sup>6</sup>*, perforated to receive the bolt *e<sup>2</sup>*, and is formed at the bottom with a concave seat to correspond to the periphery of the driving wheel *a*. At the outer or lower end of the frame *d* is pivoted a foot lever *e<sup>7</sup>*, journaled on a suitable pin or pivot *e<sup>8</sup>*, which extends through the frame, and having an extension *e<sup>9</sup>*, which normally rests in contact with the foot board *d'*, or extension *d<sup>2</sup>* thereof. The foot lever *e<sup>7</sup>* is also extended forwardly, as shown at *e<sup>10</sup>*, so as to contact with the bolt or pin *e<sup>3</sup>* when the foot lever is depressed; a stop pin *e<sup>11</sup>* being also preferably provided in the frame *e* to limit the movement of the foot lever in the opposite direction.

The operation of the device is as follows: The brake shoe is normally held out of contact with the wheel, *a*, by the stop *e<sup>9</sup>* on the foot lever *e<sup>7</sup>*, which rests against the foot board *d'*. The operator, standing on the foot board *d'*, operates the brake by simply placing his foot on the lever *e<sup>7</sup>* and pressing down thereon. The lever *e<sup>7</sup>* turning on its pivotal connection *e<sup>8</sup>*, the projection *e<sup>9</sup>* is moved away from the foot board *d'*, bringing the extension *e<sup>10</sup>* in contact with the pin *e<sup>3</sup>* and permitting the frame *e* to drop, so as to bring the brake shoe in contact with the wheel. By continuing the pressure on the foot lever *e<sup>7</sup>*, any required amount of pressure may be applied to the brake shoe *e<sup>5</sup>* on the periphery of the wheel *a*.

This brake mechanism, it will be seen, is extremely simple, and being applied to the periphery of the driving wheel is very effective. By having the frame journaled on the counter-shaft, as described, which is a part of the connection between the engine and the driving wheels, a certain amount of friction is also applied to said shaft, which aids to a certain extent in stopping or retarding the movement of the engine.

Having thus described my invention, I claim—

1. In a road engine, in combination with its driving wheel, of a pivoted frame having a brake shoe pivoted therein, a pivoted foot lever at the outer or free end of said frame, said foot lever having a projection adapted to



rest in contact with a stationary support to hold said frame in an elevated position, said foot lever being further capable of a limited movement which will disengage said projection and cause said lever to operate said frame, substantially as specified.

2. In a road engine, the combination with a driving wheel, of a frame having a pivoted brake shoe therein, and a shaft above said driving wheel forming a part of the connection between said driving wheel and the motive power, said shaft being extended over the driving wheel to form a journal or trunnion for said brake frame, substantially as specified.

3. In a road engine, the combination with a driving wheel, and a shaft forming part of the driving connection for said driving wheel, of a brake frame journaled on said shaft, a pivoted brake shoe in said frame, and a pivoted foot lever having a limited movement also connected to said frame, and a projection on said foot lever to normally support said frame, substantially as specified.

4. In a road engine, the combination with a pivoted frame, and a driving wheel, a pivoted brake shoe in said frame, and a pivoted foot lever also connected to said frame, a foot board in proximity to said brake frame, and

a projection on said foot lever to engage said foot board, stop projections on said frame to limit the movement of said lever whereby said lever is caused to operate said frame after it is disengaged from said foot board, substantially as specified.

5. In a road engine, the combination with a main driving wheel, and a shaft forming part of the driving mechanism thereof, said shaft being extended over said driving wheel, of a frame journaled on the end of said shaft, a pivoted brake shoe in said frame in proximity to said journal, and a pivoted foot lever in the outer or free end of said frame, a projection on said foot lever to engage a stationary part and hold said frame in an elevated position, stops on said frame to limit the movement of said foot lever and cause said lever to operate said frame after the projection thereon has been removed from the stationary support by the limited movement of said foot lever, substantially as specified.

In testimony whereof I have hereunto set my hand this 25th day of February, A. D. 1895.

EDWARD T. WRIGHT.

Witnesses:

OLIVER H. MILLER,  
CHAS. I. WELCH.