

No. 699,187.

Patented May 6, 1902.

P. KENNEDY.

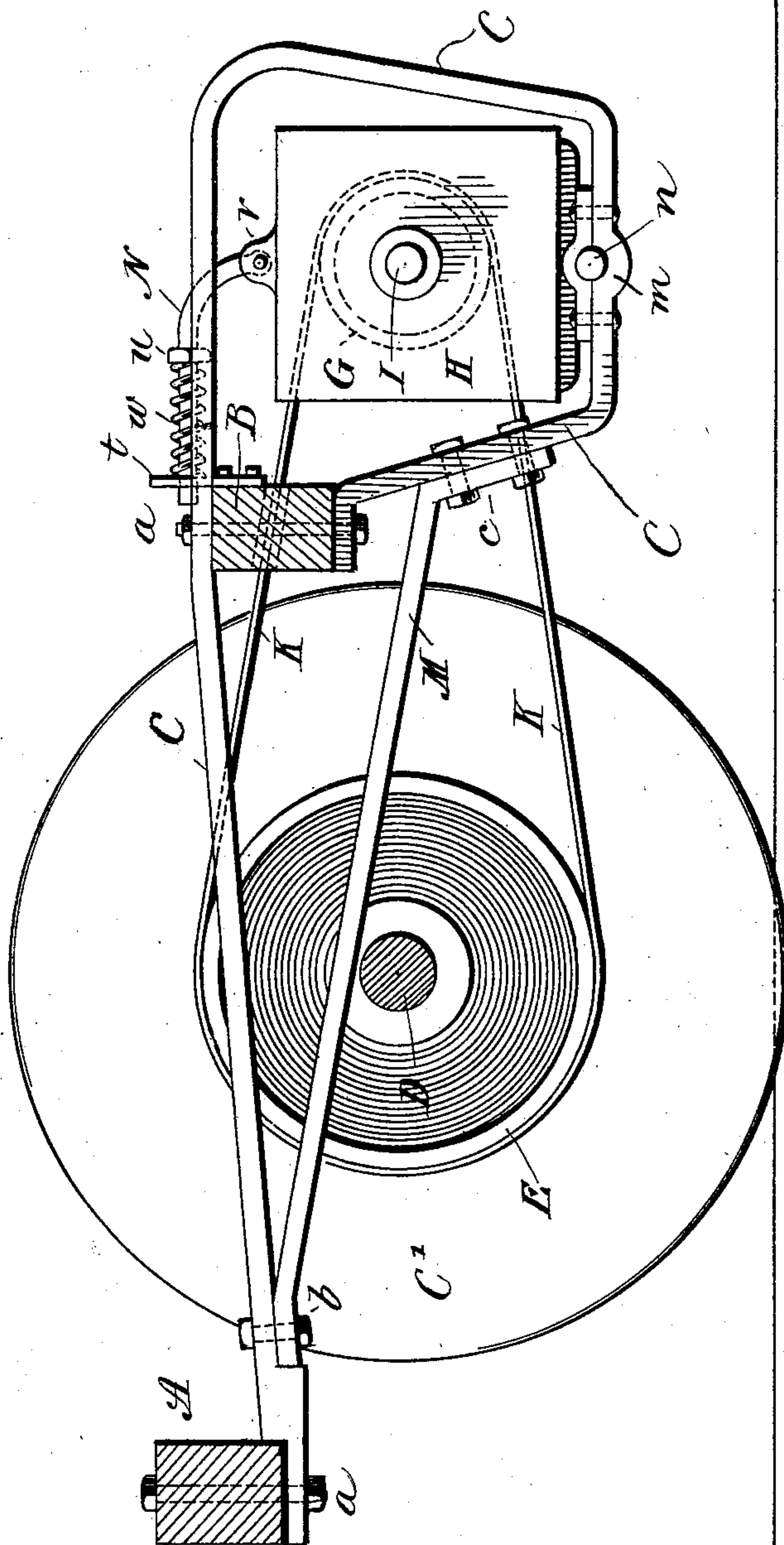
MEANS FOR CONNECTING DYNAMOS WITH TRUCKS OF RAILWAY CARS.

(Application filed Aug. 17, 1901.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



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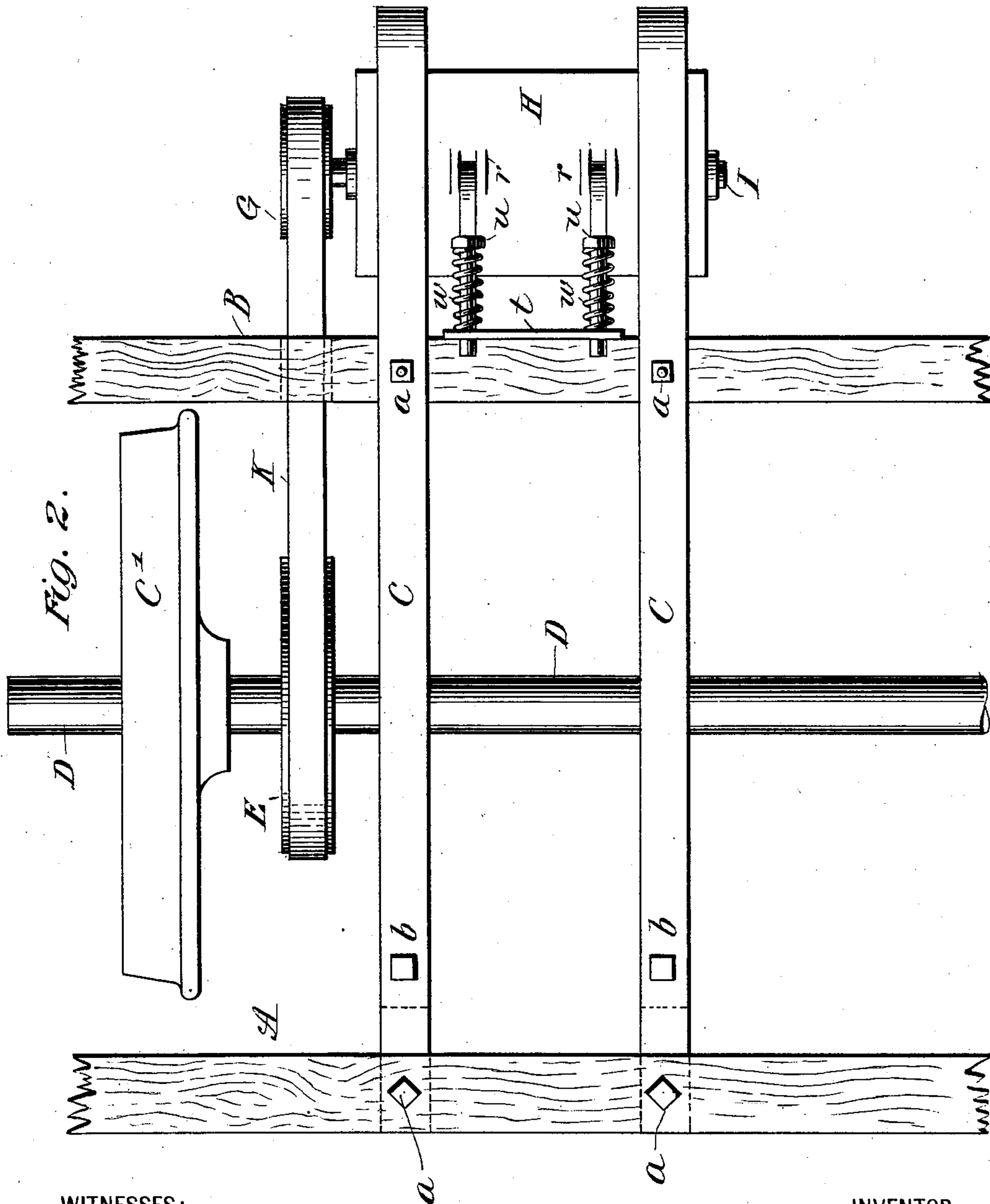
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3 Sheets—Sheet 2.



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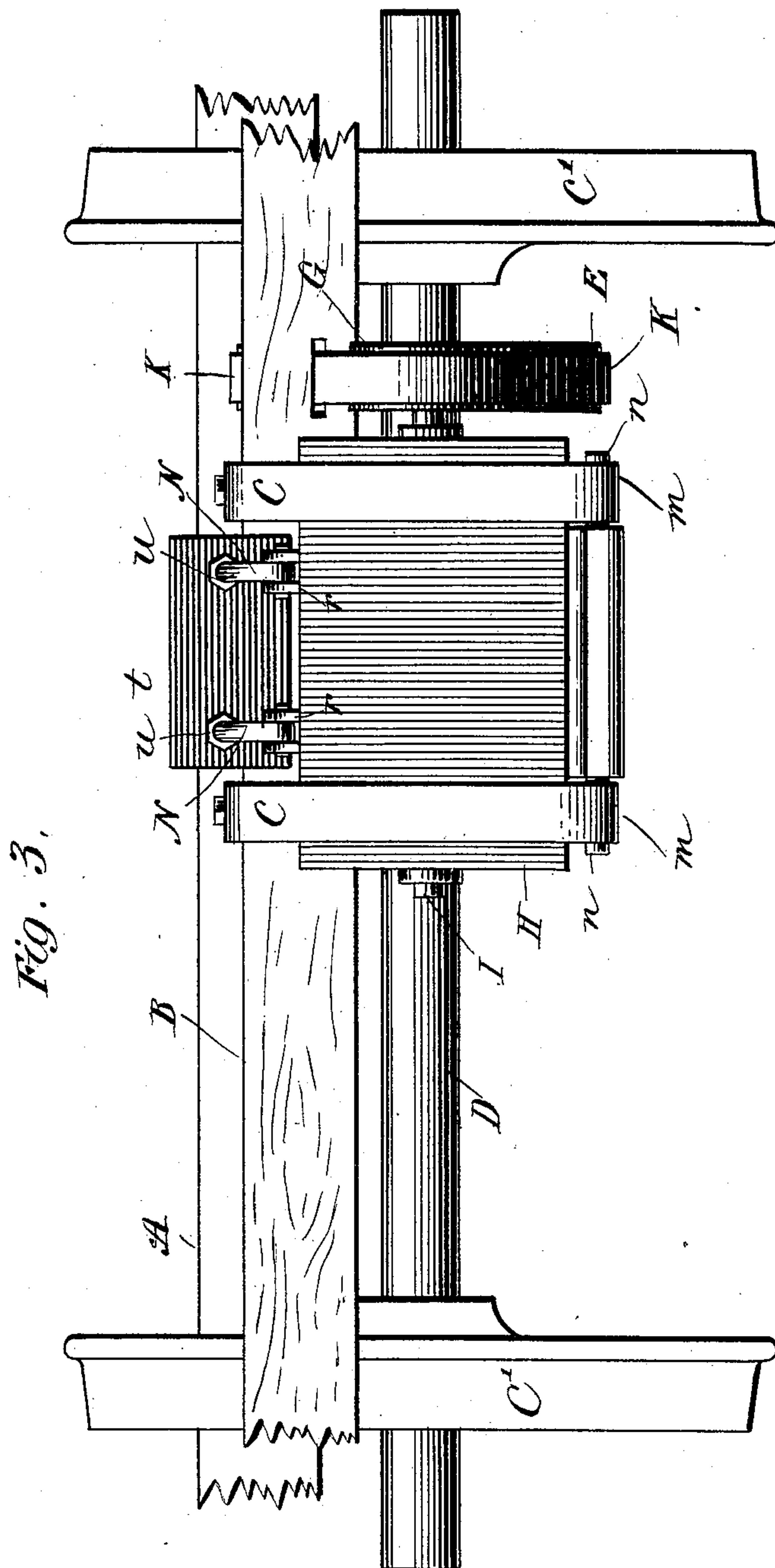
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3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

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MEANS FOR CONNECTING DYNAMOS WITH TRUCKS OF RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 699,187, dated May 6, 1902.

Application filed August 17, 1901. Serial No. 72,373. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK KENNEDY, a citizen of the United States, and a resident of the borough of Brooklyn, in the city and State of New York, have invented certain new and useful Improvements in Means for Connecting Dynamos with the Trucks of Railway-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal sectional view of an apparatus made according to my invention. Fig. 2 is a plan view of the same. Fig. 3 is a front view of the same.

This invention relates to the transmission of power and motion from railway-car axles to dynamos carried by car-trucks, to the end that the currents generated from the dynamos may be applied to electric lighting or other purposes in the cars while the same are in motion.

The object of my invention is to provide mechanism for such purpose which shall be strong, simple, and durable and not liable to get out of order under the rough usage to which apparatuses for such purposes are necessarily subjected. To this end my said invention comprises certain novel combinations of parts hereinafter fully set forth and shown.

A and B are cross-beams which form parts of the frame of a railway-truck, which latter may be of any suitable construction. As such trucks are well known in the art, it is thought that further description or illustration of the truck is here unnecessary. In the drawings, A is what, for convenience, I term an "inboard beam," while B, being at the end of the truck, I term an "outboard beam." C C are the wheels of one of the axles of the trucks, said axle being shown at D. This axle D has fast thereon a pulley E. At H is a dynamo, which has the usual driving or operating pulley G fast on its shaft I. For convenience I designate this pulley as the "dynamo-pulley." Ordinarily this dynamo-pulley is of smaller diameter than the pulley E on the axle. From the pulley E to the dy-

namo-pulley G extends a driving belt or strap K.

The dynamo is placed on a cage, which is suspended by its inboard side from the end of the truck outside of or beyond the same. The manner and means by which this is done are as follows: 4 4 are bars, preferably of wrought-iron and each integral throughout its length and conformation. These are placed parallel, or practically so, with each other. Each bar has its inboard end bolted to the under side of the inboard beam A. Then it extends outward over the outboard beam B, thence farther outward beyond the end of the truck, then curved and downward, then inward horizontally, then upward, and then with its end portion against the under side of the beam B, all as shown in Fig. 1. One or more bolts *a* are passed through the beam and through the bar above and below the beam, thereby firmly securing the bar to the beam. At the back or inboard side of the suspended portion of each bar is a brace M, one end of which is riveted or bolted, as at *c*, to the said portion of the bar, while the opposite or inboard end is in like manner made fast, as at *b*, to the inboard end of the said bar. The effect of these braces is to stiffen the suspended portions of the bars C C against thrust in an inward direction. To further strengthen this operation of the braces, each has at the upper side of its inboard end a shoulder *f*, which rests against the lower part of the beam A, and at its under side a shoulder *g*, against which abuts the end of the contiguous brace M, said end being bolted, as just mentioned, to the bar C.

It will be seen that the outboard portions of the bars C C being parallel, of like size and shape, provide, so to speak, a "cage" for the reception of the dynamo, said cage being, as it were, suspended by its inboard side outside the truck as distinguished from being placed directly upon the frame of the truck itself. At the bottom of the cage are provided bearings *m* for a shaft *n*, which extends from one of the bearings *m* to the other. The dynamo is so connected with this shaft *n* that it is capable of a rocking movement, which



may be secured either by permitting the shaft *m* to move in the bearings *n* or by permitting the dynamo to turn in opposite directions upon the shaft. At the top of the dynamo  
 5 (as here used the term "dynamo" includes the frame or inclosing shell of the dynamo proper) are lugs *r*, to each of which is pivoted the outboard end of a slide *N*, the opposite  
 10 end portion of which works in a guide *s*, fixed above or adjacent to the dynamo. This guide may be provided by a vertical plate *t*, bolted to the outboard beam *B* and having a hole or opening through which the inboard portion  
 15 of the slide is passed. The slide has a strap *u*, between which and the guide *s* is a spring *w*, which presses in an outward direction—that is to say, against the strain exerted upon the dynamo by the tension of the belt *K*.

In the operation of the apparatus the motion transmitted from the axle *D* to the dynamo-shaft *I* actuates the dynamo, from which the current may be transmitted by any usual or suitable means. The driving-belt *K* is kept at a substantially uniform tension at all times.  
 25 The dynamo being held between the tension of the belt and the elastic pressure of the spring is less subject to the detrimental effects of jar and concussion than is possible with a more rigid support. The mechanism  
 30 is extremely strong and durable and with practically a minimum of essential parts, so that a high degree of permanence, stability, and durability is secured notwithstanding the more or less rough usage to which apparatuses for such purposes are necessarily subjected under the severe conditions of actual  
 35 use.

What I claim as my invention is—

1. The combination with a railroad-truck, a  
 40 driving-pulley fast on an axle of the truck, a dynamo carried by the truck, and a driving-belt from the pulley on the axle to the dynamo-pulley, of a support for the dynamo outside of the truck composed of bars fast at  
 45 their inward ends to an inward cross-beam of the truck, extended outward over an outboard beam of the truck and beyond the latter and thence shaped to form a cage for the dynamo, then inward and back to the truck,  
 50 means for attaching the said bars to the truck, and means for releasing the dynamo in the cage, as described.

2. The combination with a railroad-truck, a  
 driving-pulley fast on an axle of the truck, a  
 55 dynamo carried by the truck, and a driving-belt from the pulley on the axle to the dynamo-pulley, of a support for the dynamo outside of the truck composed of bars fast at their inward ends to an inboard cross-beam of  
 60 the truck, extended outward over an outboard beam of the truck and beyond the latter, then shaped to form a cage for the dynamo and thence inward and back to the truck, means for securing said bars to the truck, braces extended from the inward side of the cage to  
 65 the inboard ends of the bars, and means for

securing the respective ends of said braces to the adjacent portions of the bars, as described.

3. The combination with a railroad-truck, a  
 driving-pulley fast on an axle of the truck, a  
 70 dynamo carried by the truck and a belt from the pulley on the axle to the dynamo-pulley, and a support for the dynamo composed of bars extended from an inboard cross-beam of  
 75 the truck outward over an outboard cross-beam of the same to and beyond the end of the truck, then bent to a shape requisite to form a cage for the dynamo, and thence inward back to the truck, of a pivotal support for the dynamo at the bottom of the cage, and  
 80 means for elastically pressing the dynamo in a direction against the strain exerted by the tension of the belt, as described.

4. The combination with a railroad-truck, a  
 driving-pulley fast on an axle of the truck, a  
 85 dynamo carried by the truck, and a belt from the pulley on the axle to the dynamo-pulley, of a support for the dynamo outside of the truck composed of bars extended outward from an inboard cross-beam of the truck over  
 90 an outboard cross-beam through and beyond the truck and then bent to the shape requisite to form a cage for the dynamo, and then back to the truck, of a transverse shaft for pivotally supporting the dynamo at the bottom of the cage, bearings for said shaft, a  
 95 slide at the top of the cage having one end pivoted to the top of the dynamo, and a spring provided to the slide to press the same and consequently the dynamo in a direction  
 100 against the strain exerted by the tension of the driving-belt, as described.

5. The combination with a railroad-truck, a  
 driving-pulley fast on an axle of the truck, a  
 105 dynamo carried by the truck, and a belt from the pulley on the axle to the dynamo-pulley, of a support for the dynamo outside of the truck composed of bars extended outward from an inboard cross-beam of the truck over  
 110 an outboard cross-beam thereof and beyond the truck and thence bent to the shape requisite to form a cage for the dynamo, and then back to the truck, of a transverse shaft for pivotally supporting the dynamo at the bottom of the cage, bearings for said shaft, a  
 115 slide at the top of the cage having a strap thereon and having one end pivotally connected with the top of the dynamo, a guide for the opposite end of the slide, and a spring applied between the guide and the strap on  
 120 the slide to press the latter and consequently the dynamo in a direction opposite the strain exerted by the tension of the belt, as described.

6. The combination with a railroad-truck, a  
 driving-pulley fast on an axle of the truck, a  
 125 dynamo carried by the truck, and a belt from the pulley on the axle to the dynamo-pulley, of a support for the dynamo composed of bars each of which at its inboard end is shouldered  
 130 at its upper side to abut against the bottom portion of an inboard cross-beam of the truck



to which said end of the bar is bolted and  
also shouldered at its under side to become  
the abutting end of a brace, each bar extend-  
ed over an outboard cross-beam of the truck,  
5 then outward beyond the end of the truck and  
then bent to the shape requisite to form a  
cage for the dynamo and then inward to the  
under side of said outboard cross-beam, bolts  
extended through said cross-beam and  
10 through the bars above and below the same to  
secure the bars to said beam, braces extended  
from the inward side of the cage to the shoul-  
ders on the under sides of the bars, and bolt-  
ed to the said bars a transverse shaft at the

bottom of the cage to pivotally support the 15  
dynamo from below, a slide at the top of the  
cage having a strap thereon and at one end  
pivotally connected with the top of the  
dynamo, a guide through which is passed the  
opposite end of the slide, and a spring be- 20  
tween the guide and the strap on the slide to  
press the latter and consequently the dynamo  
in a direction opposite the strain exerted by  
the tension of the belt, as described.

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Witnesses:

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