

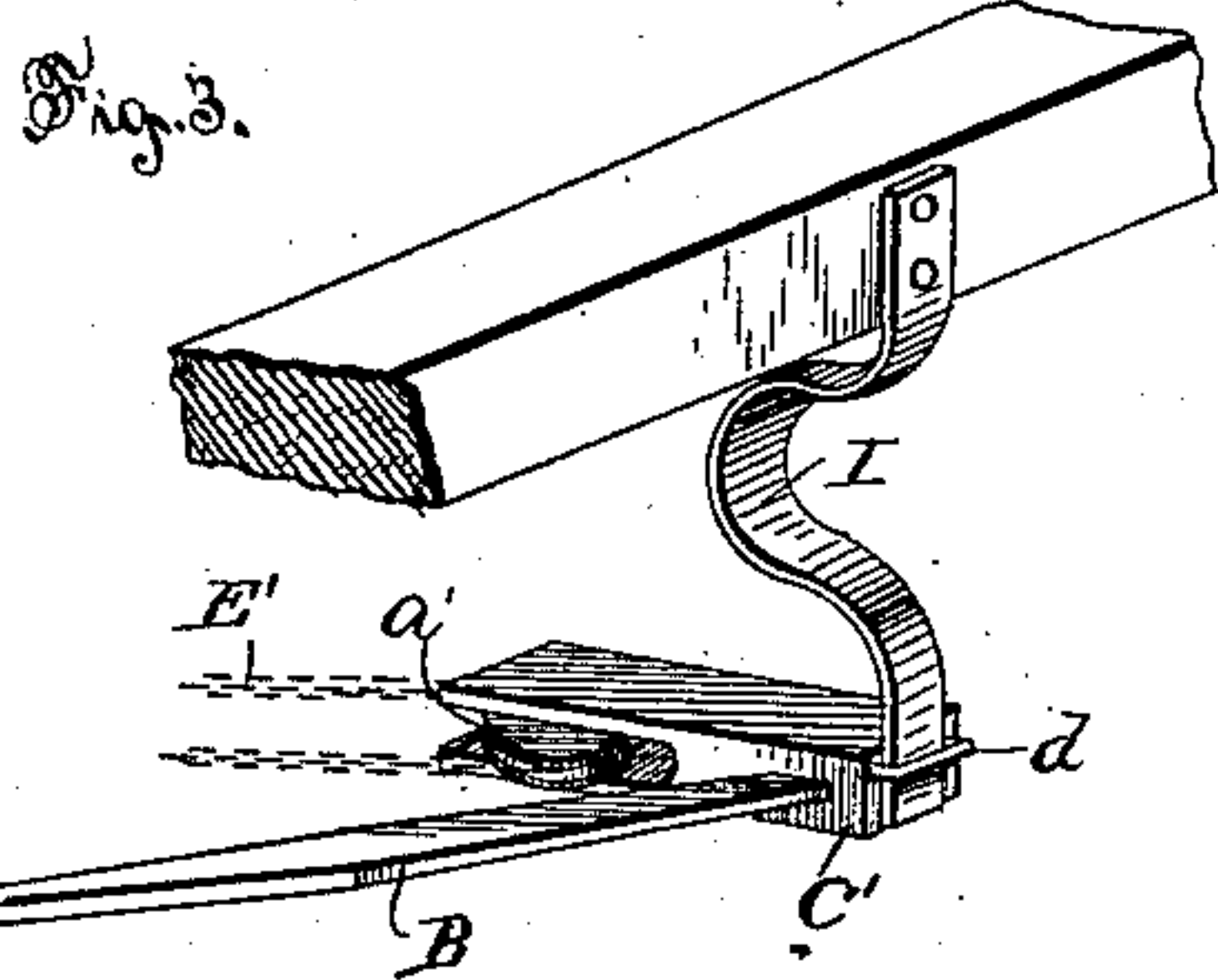
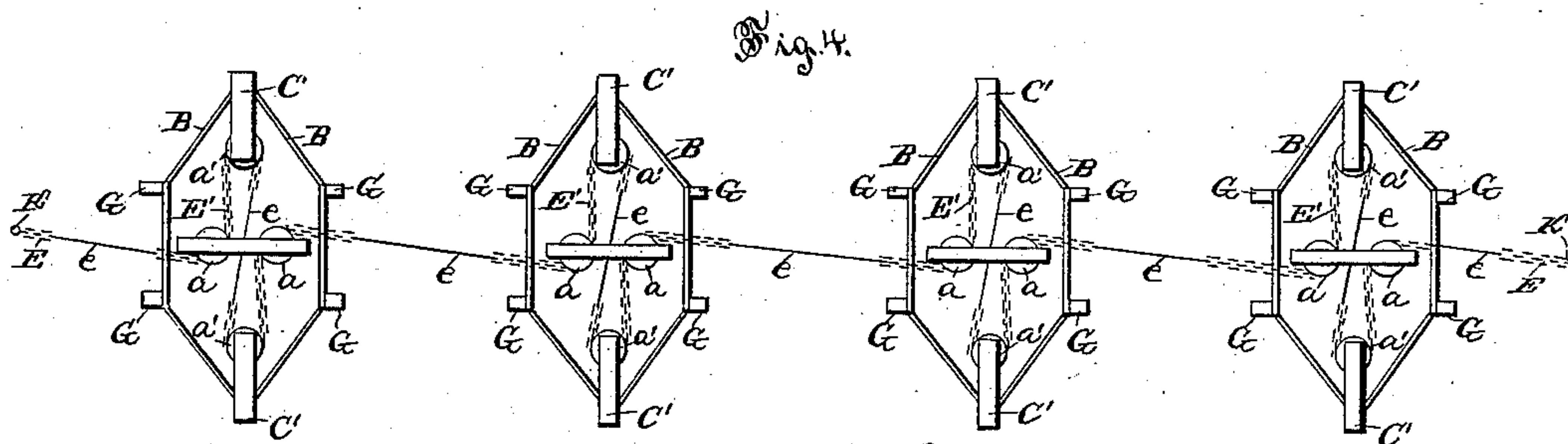
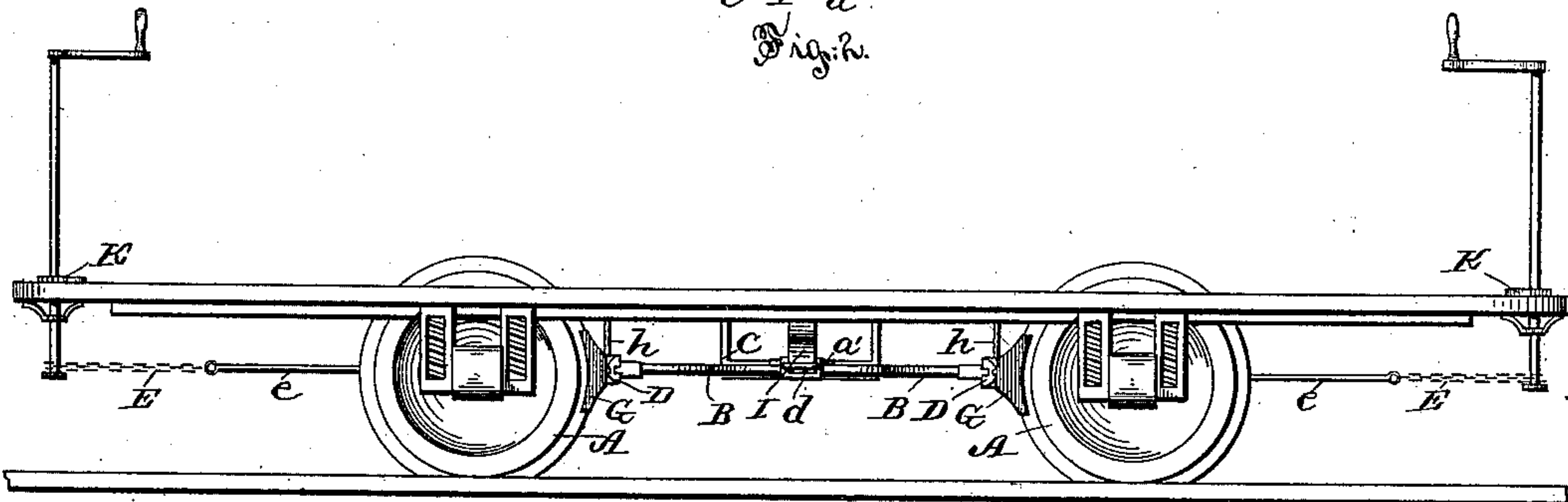
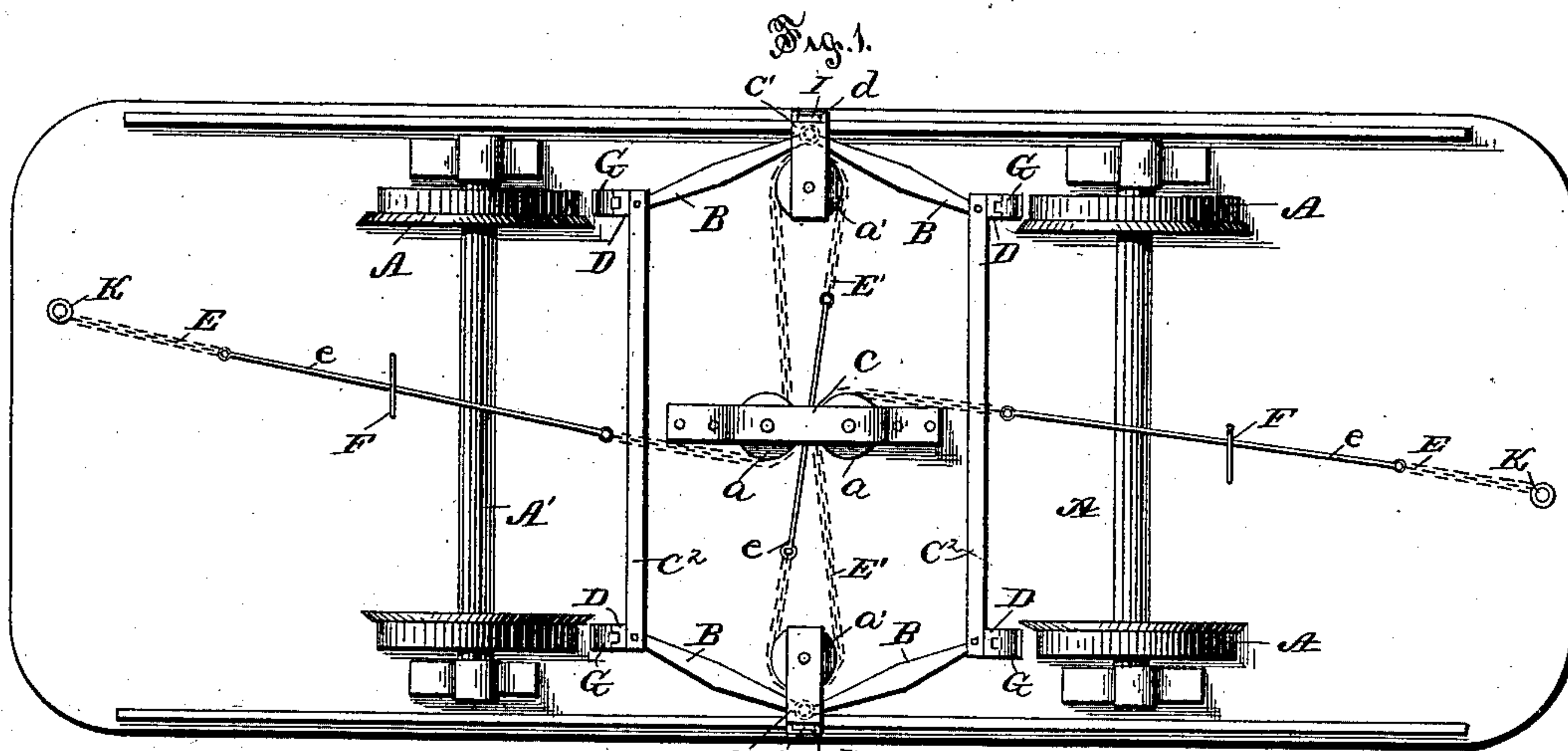
(No Model.)

J. W. GREER.

CAR BRAKE.

No. 360,803.

Patented Apr. 5, 1887.



Witnesses:
F. L. Ourand
F. E. Gaither.

Inventor:
John W. Greer
per Edw W Down & Co
Attys.

UNITED STATES PATENT OFFICE.

JOHN WILLIAM GREER, OF AUSTIN, TEXAS, ASSIGNOR OF ONE-HALF TO
WILLIAM H. TOBIN, OF SAME PLACE.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 360,803, dated April 5, 1887.

Application filed September 9, 1886. Serial No. 213,135. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAM GREER, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Car-Brakes or Brakes for Wheeled Vehicles; 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.

My present invention is an improvement in brakes for railroad-cars and other vehicles, which may be generally and specifically described as follows:

The brake-shoes of my device are jointed by pivots to brake-blocks of the usual form, which are suspended from the truck-timbers by suitable suspending links or clevises, so that they may have a free longitudinal movement when acted upon by the actuating mechanism, and said blocks and brake-shoes are separated by transverse brake-bars, in order that they may be kept truly in line with the car-wheels at all times.

To the under side of the car or vehicle, at a central point, is a housing, which serves as a guide for a chain, hereinafter to be mentioned, and at the same time forms sheaves for two pulley-wheels, horizontally placed, about which the said chain passes. Opposite to this housing-guide and sheaves laterally—one upon one side and one upon the other—are two other housings, forming sheaves to horizontally-pivoted pulley-wheels. These latter housings are provided with loose links at their outer ends, which are taken hold of by certain crooked springs secured firmly to the timbers of the vehicle above. Lever-arms, four in number, connect by suitable pins the latter-named housings to the brake-blocks in pairs longitudinally, said levers being pivoted also in their respective housing-blocks.

To the platforms of the car or vehicle, at the ends, are located, in the usual manner, crank-posts and cranks secured thereto, and to these posts is secured a chain made up of links and long bars. The said chain has its ends which connect with the crank-posts made up of short links. The middle of the same is formed of a long bar, and between this and

long bars which connect with the said end portions are portions made up of short links, which are adapted to pass around the pulley-wheels previously mentioned. The middle long link finds its support in the central housing, and the intermediate long bars are supported in suspending-straps secured to the bottom of the vehicle. When either of the cranks is moved or revolved to the right, the lateral pulleys are drawn together, and the brake-shoes, all four, are forced against the car-wheels simultaneously. The crank-posts are provided with the usual pawl-and-ratchet device to check a back movement of the brakes.

In the drawings illustrating my invention, Figure 1 is a plan or bottom view of a railroad-car truck, showing the brake mechanism. Fig. 2 is a side elevation of the same. Fig. 3 is a perspective view showing the manner of attaching one of the lateral pulley-housings. Fig. 4 is a diagram showing several car-trucks arranged in a line, illustrating the manner of operating the set by the operation of one of the cranks.

Referring to the drawings, A are the truck-wheels, secured in the usual manner to axles A'. To one of the timbers of the truck is properly secured a housing, C, and pivoted horizontally in this housing are friction-pulley wheels *a a*. Crooked strap-springs I drop down from the superstructure of the truck at points laterally opposite to the housing C, and these springs connect with loops *d*, pivoted to the outer ends of sheaves or housings C'. Within the housings C' are pivoted pulley-wheels *a'*.

G are brake-shoes, formed in the usual manner, to fit against the treads of the wheels, and hinged to brake-blocks D. The said brake-shoe blocks are suspended from timbers by links *h* and held together in pairs by bars C². Lever-arms B are pivoted in pairs to the housings or sheaves C' and blocks D. The pulleys *a* and *a'* are grooved in their annular edges and adapted to receive the chain which passes about them. The two pulleys pivoted in the housing C are fixed as to their housing, but those of *a'* have lateral movement with reference to the said fixed pulleys, being kept normally at a given distance from a longitudinal central line of the truck by the spring I.

K are the winding-posts for the brake-chain,

located at the outer ends of the car-platforms, and to these posts are secured suitable cranks, by which they are operated in the hands of the brakeman. A ratchet device of common
 5 form, composed of wheel a^3 and pawl a^4 —the former fixed to the said post and the latter pivoted to the platform—may be applied to hold the brake-shoes to position against their respective wheels.

10 In connection with the winding-posts K, secured thereto in the usual manner, are the link portions E of a chain, and connected with said portions E are link-bars e , which find support in loops or hangers F secured to the bot-
 15 tom of the car.

E' are chains connected with link-bars e , and also with a link-bar, e' . The chains E' each pass around pulleys a and a' .

20 In the operation of my brake, to check the movement of the vehicle the operator or driver revolves the crank at either end of the car and winds up said chain, the opposite one at the time being unwound from its post. The pulleys a' , being by this movement drawn in-
 25 ward, operate upon the four lever-arms B to effect a movement to bars C^2 and bring the brake-shoes G to impingement upon their respective wheels. By releasing the crank or staying-ratchet of the crank-post the chain at
 30 that end is uncoiled, and the springs I now act to draw the brake-shoes from the wheels.

35 In forming the continuous chain E E' e e' it is my purpose to make the same of such a length that when the brakes are not in actual use the slack may be entirely taken up by the recoil of the springs I, which move the pulleys
 40 a' away from the central line of the truck and at the same time withdraw the brake-shoes from contact with all of the wheels.

45 Some of the advantages to my brake may be mentioned, as follows: In the use of long solid bars with the chain the chain may be kept up snugly to the bottom of the car, and hence be at all times out of the way. If the
 50 chain should be broken in one of its parts E, composed of small links, it would be kept by the said long bars from being rendered unserviceable for braking purposes, as it would be held by the pulleys and sheaves and be still
 55 operative from the opposite end. From the nature of the arrangement for taking up the slack of the chain, the levers will always act promptly without lost motion. All four brake-shoes being operated by a single crank-move-
 ment, the pressure upon the wheels will be uniform. When one end of the chain is drawn in the act of braking the opposite end of said chain is locked against a possibility of

motion, so that braking is always positive. Finally, by applying my brake to a number of
 60 trucks, as illustrated in Fig. 4, their brakes may be operated from a single point of operation. By securing the chain to a fixed point at one end of a car the brake may be oper-
 65 ated successfully from a single crank-post at the opposite end of same.

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

1. The combination, with a chain secured
 70 to winding-posts which are located at suitable points in a vehicle, of suitable pulleys, substantially as described, located centrally be-
 75 neath said vehicle, laterally-opposite pulley-blocks provided with pulleys suspended from said vehicle-body by laterally-movable springs, and opposite double lever-arms operated by
 80 means of said chains and winding-posts, substantially as described, whereby the brake-shoes, substantially as described, are moved
 to brake the said vehicle-wheels and automatically release said shoes from contact with said wheels, as set forth.

2. In a wheeled vehicle-brake, the combi-
 85 nation, with a chain fixed to a suitable post or posts located at convenient points, and means for winding said chain, of centrally-located bearing-pulleys for said chain, a housing, sub-
 90 stantially as described, serving as a sheave for said pulleys and a guide for said chain, lateral pulleys for said chain, and laterally-lo-
 95 cated sheaves for said pulleys, brake shoes adapted to bear upon the vehicle-wheels, blocks connecting with said shoes, means, sub-
 100 stantially as described, for keeping said blocks to position with relation to each other, and lever-arms pivoted in said lateral sheaves and corresponding brake-blocks, and means, sub-
 105 stantially as described, for suspending said lateral sheaves to the vehicle-body, as and for the purpose set forth.

3. The combination, with a vehicle-body provided with wheels, springs I, connected therewith, and pulley-carrying housings C, fixed thereto, of pulleys a , housings C' , pulleys
 110 a' , pivoted therein, lever-arms B, bars C^2 , brake-shoes G, and a continuous chain passing over said pulleys operated from suitable winding mechanism, as and for the purpose set forth.

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

JOHN WILLIAM GREER.

Witnesses:

H. A. FITZHUGH,
 H. W. BELL.