

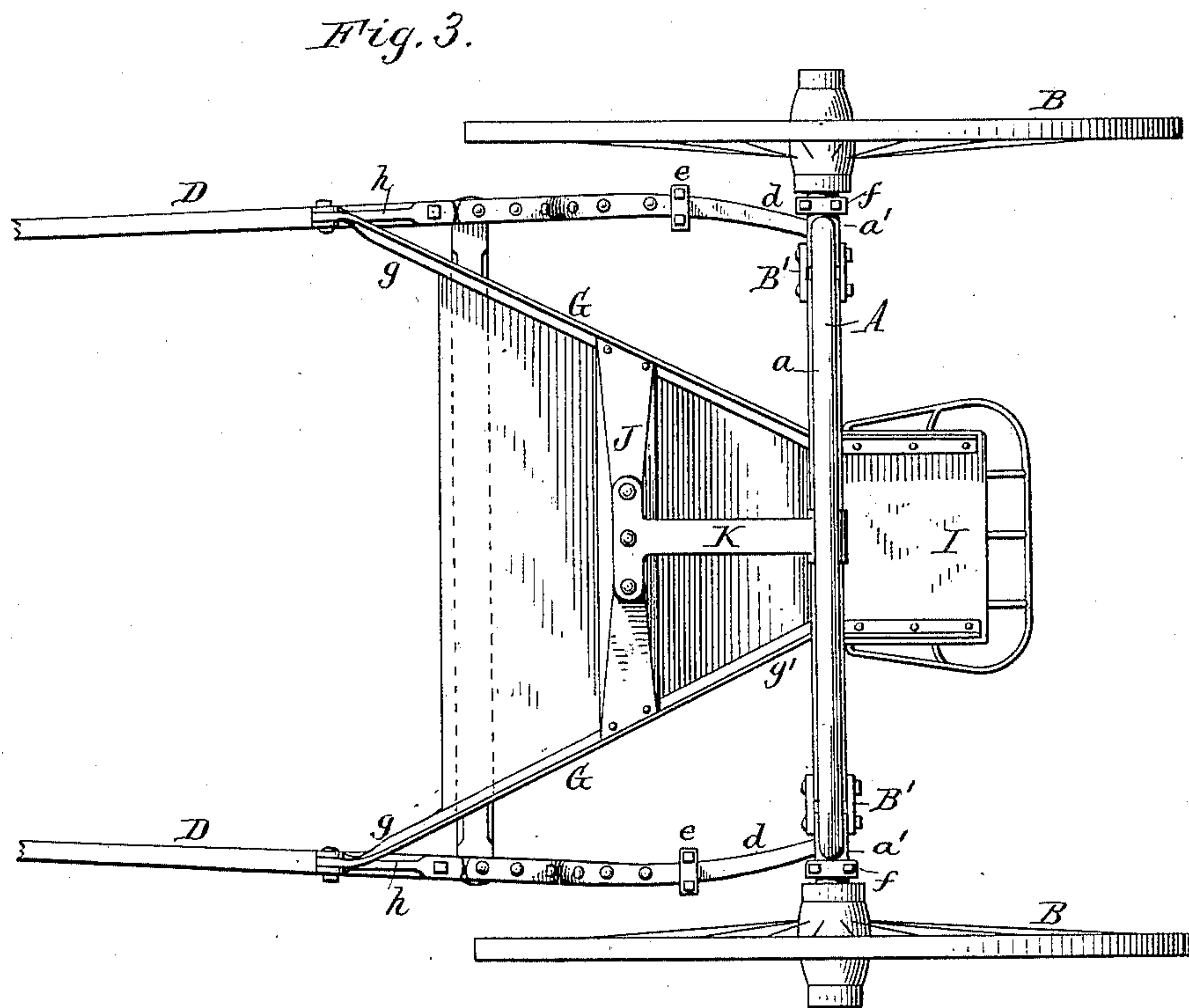
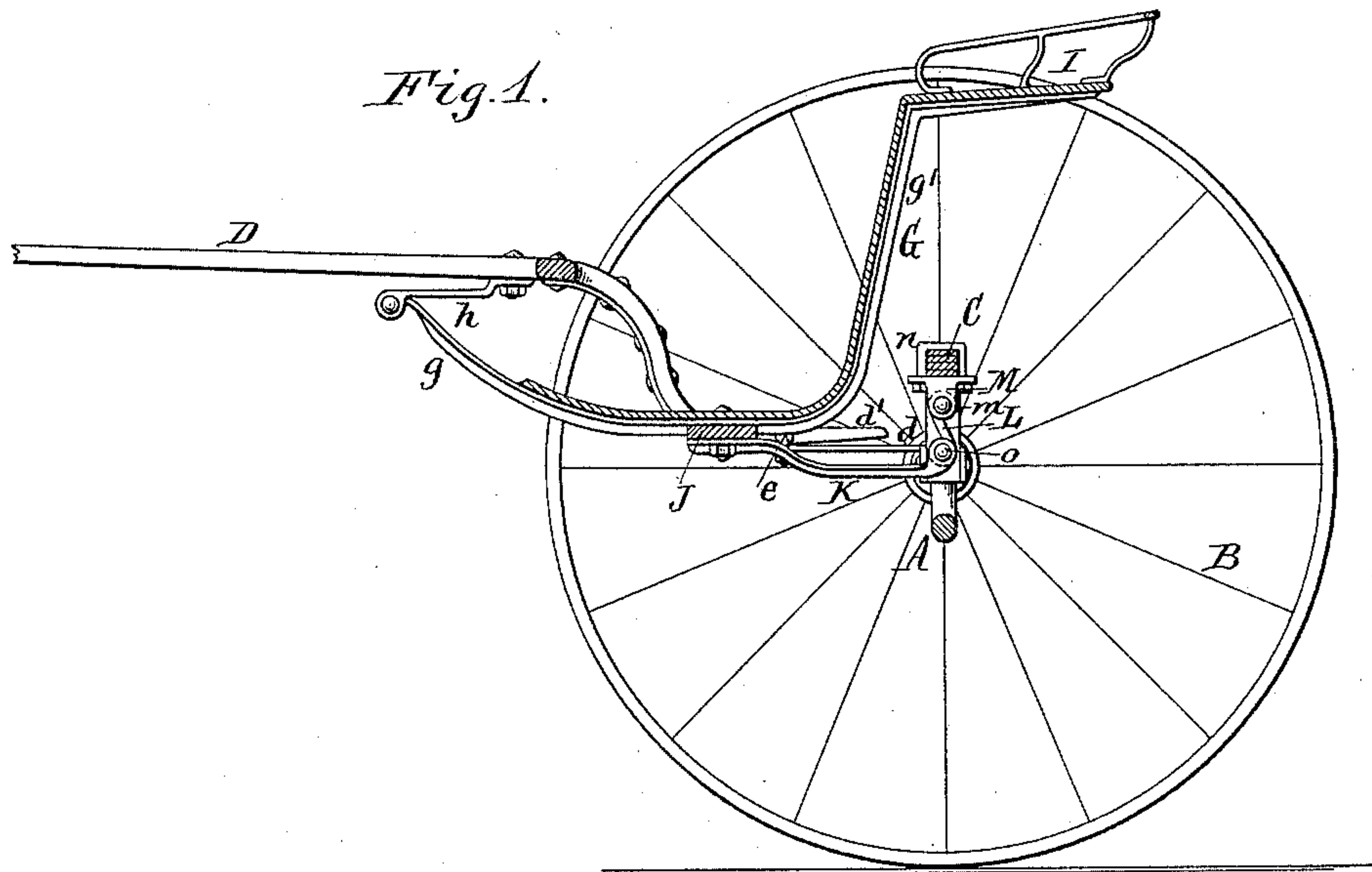
(No Model.)

3 Sheets—Sheet 1.

C. C. BRADLEY.  
ROAD CART.

No. 432,595.

Patented July 22, 1890.



Witnesses:

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Geo. J. Buchheit Jr.

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By Wilhelm Ranner.  
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(No Model.)

3 Sheets—Sheet 2.

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Fig. 2.

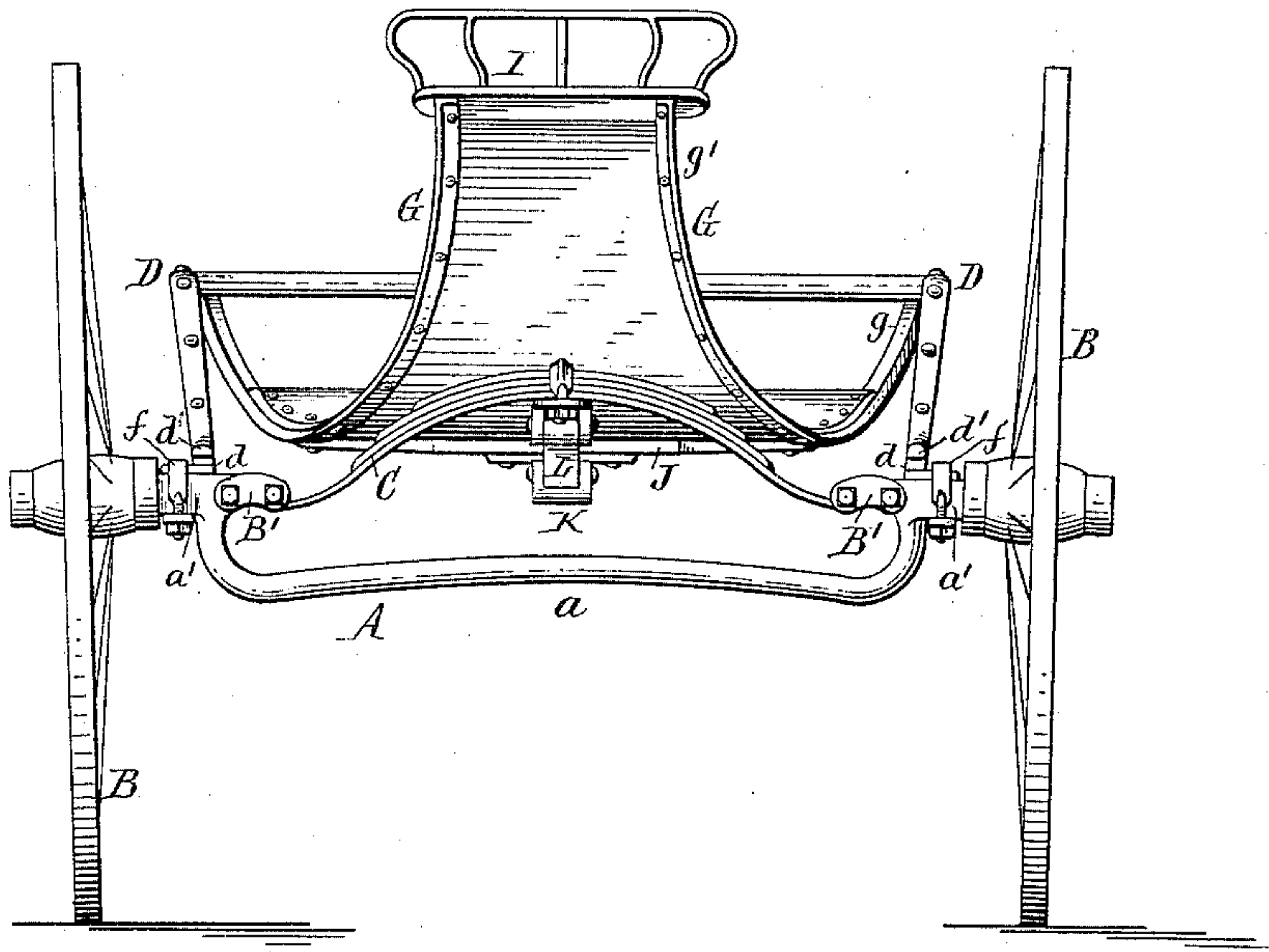


Fig. 4.

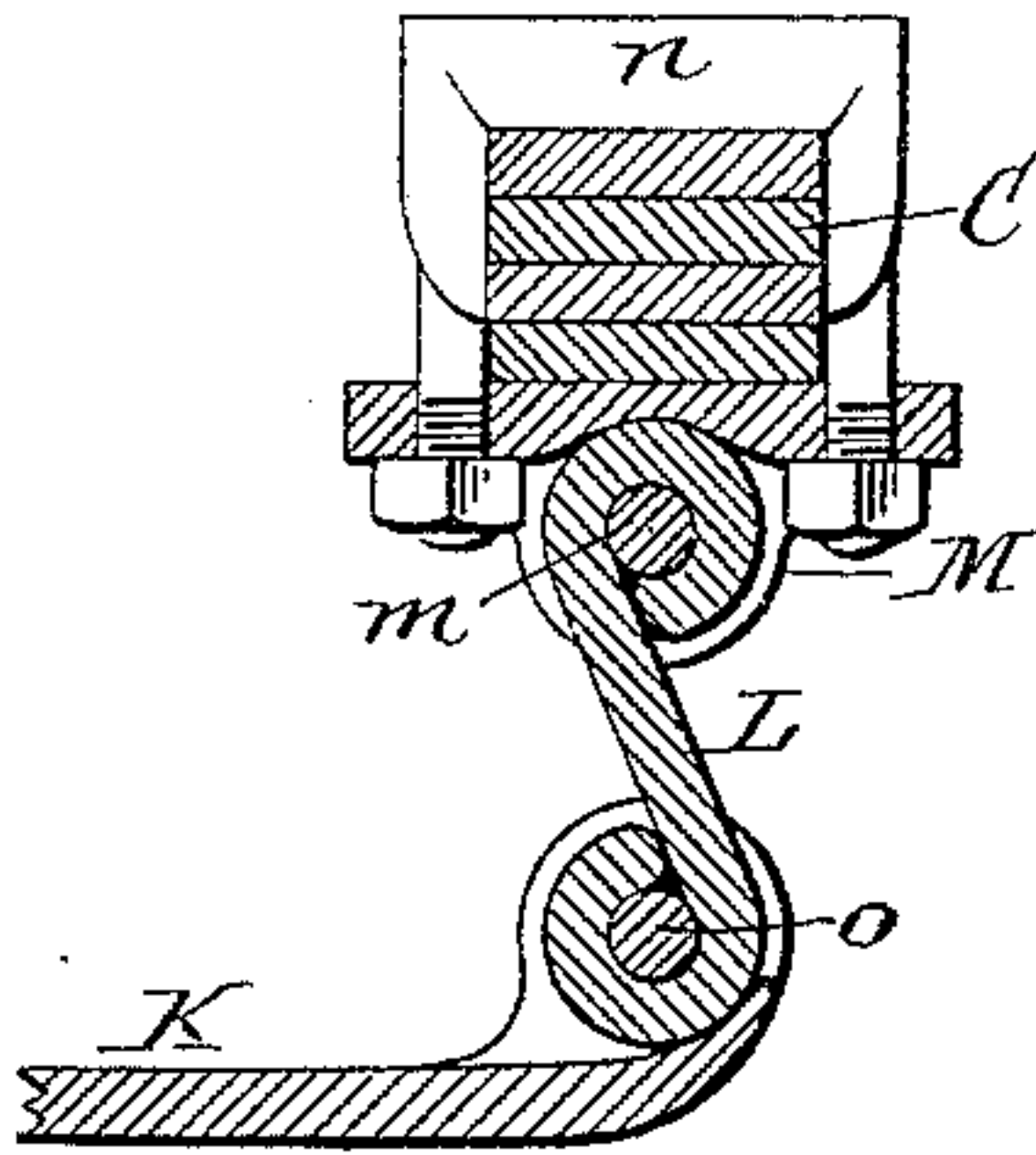


Fig. 5.

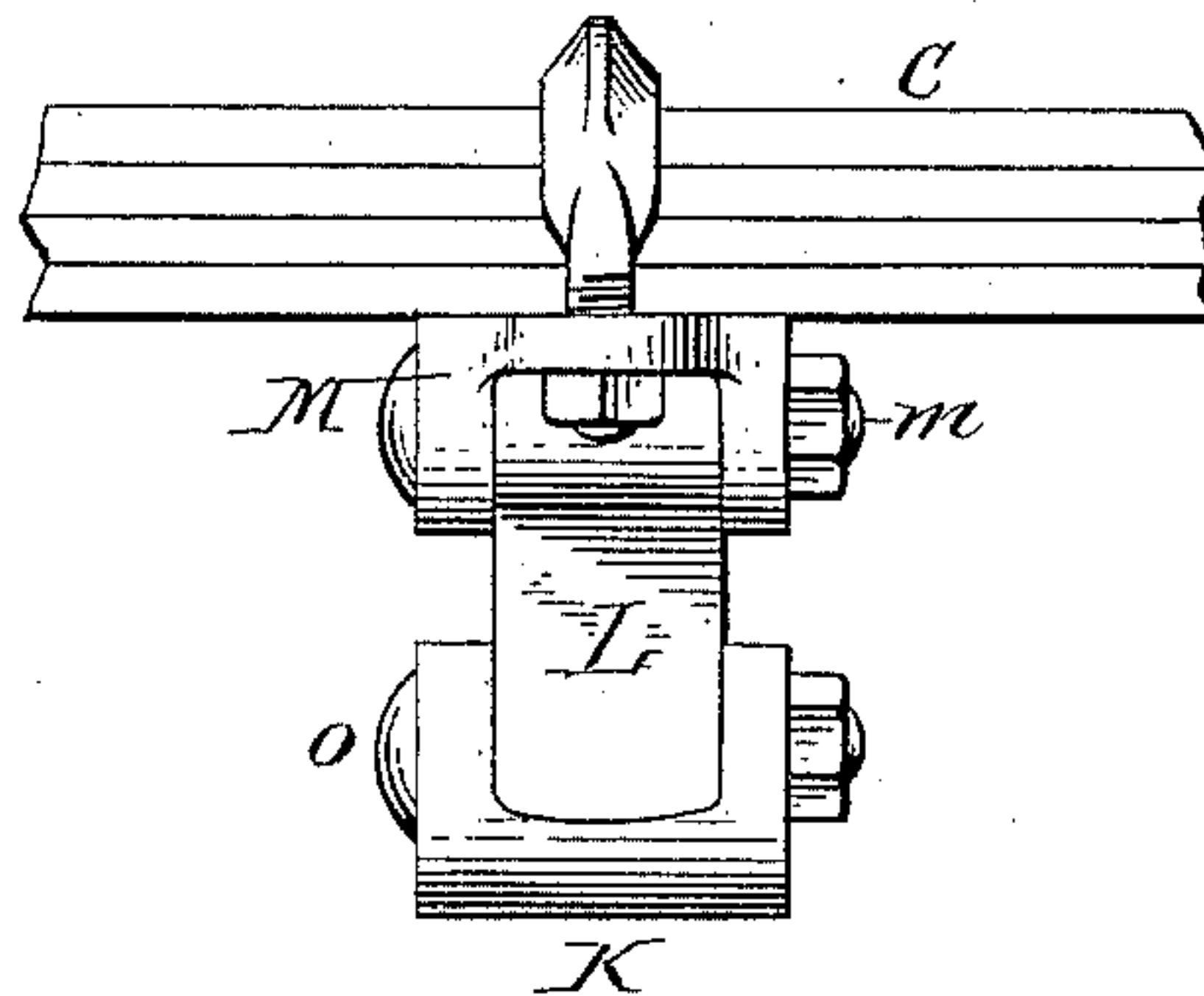


Fig. 6.

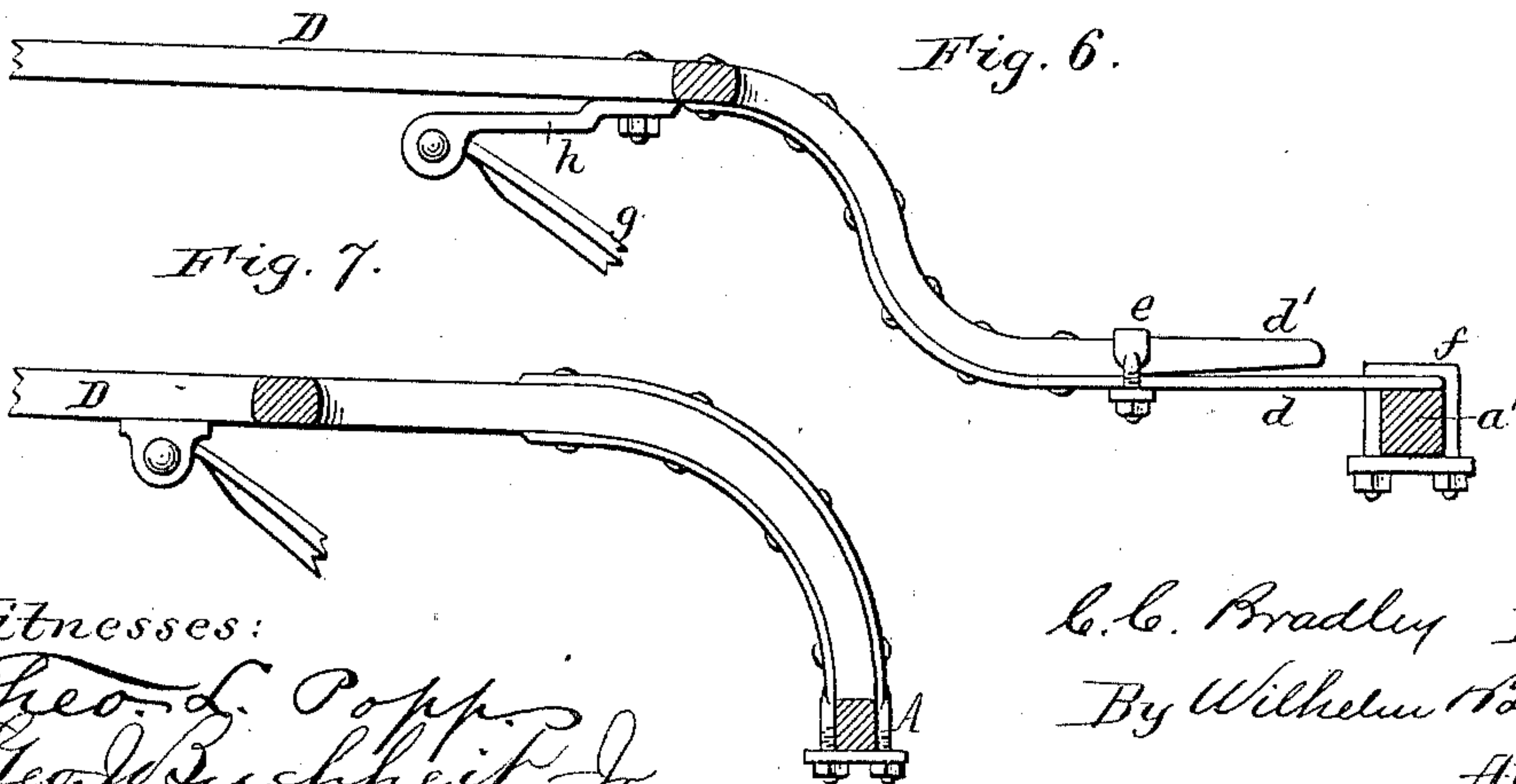


Fig. 7.

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(No Model.)

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Fig. 8.

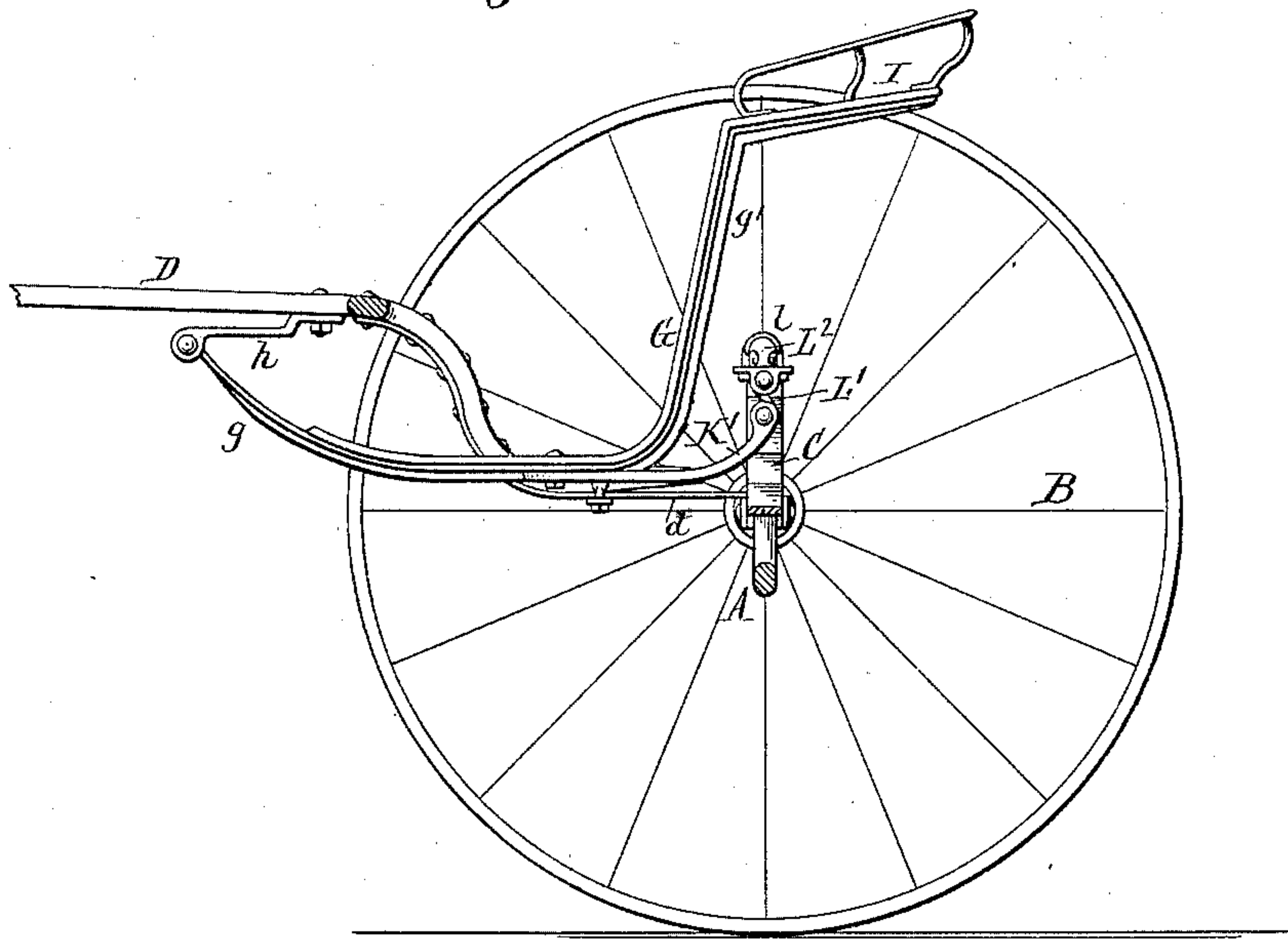
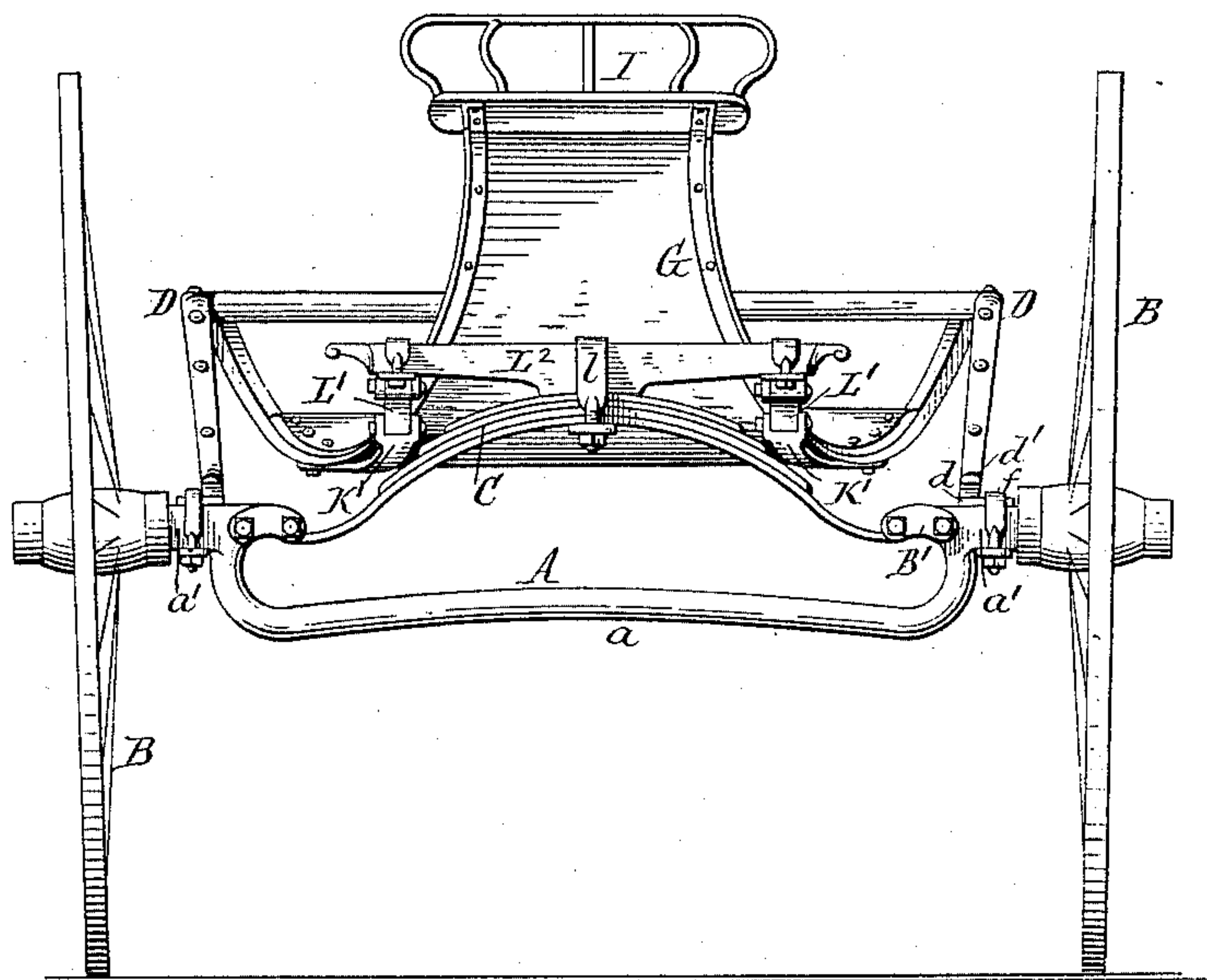


Fig. 9.



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# UNITED STATES PATENT OFFICE.

CHRISTOPHER C. BRADLEY, OF SYRACUSE, NEW YORK.

## ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 432,595, dated July 22, 1890.

Application filed October 15, 1887. Serial No. 252,418. (No model.)

*To all whom it may concern:*

Be it known that I, CHRISTOPHER C. BRADLEY, of the city of Syracuse, in the county of Onondaga and State of New York, have invented new and useful Improvements in Road-Carts, of which the following is a specification.

This invention relates to that class of two-wheeled carts in which the rear ends of the thills are attached to the axle, and which are provided with a seat-frame which is suspended between the thills.

The object of my invention is to produce a cart of simple and compact construction in which the seat has an easy carrying motion, and in which the vibration of the seat-frame and the horse motion are materially reduced.

My invention consists of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, consisting of three sheets, Figure 1 is a longitudinal sectional elevation of a road-cart provided with my improvements. Fig. 2 is a rear elevation thereof. Fig. 3 is a bottom plan view of the cart. Fig. 4 is a vertical longitudinal section of the parts whereby the seat-frame is connected with the transverse spring, on an enlarged scale. Fig. 5 is a rear elevation of said parts. Fig. 6 is a longitudinal sectional elevation of the rear portion of one of the thills and connecting parts. Fig. 7 is a similar view showing a modified construction of the rear ends of the thills. Fig. 8 is a longitudinal section, and Fig. 9 is a rear elevation showing a modified construction of the parts connecting the seat-frame with the transverse spring.

Like letters of reference refer to like parts in the several figures.

A represents the axle, provided with a bent depressed body *a* and shanks *a'*, which are arranged above the axle-body and carry the arms or spindles on which the wheels B are mounted. The shanks *a'* are provided at their inner ends with ears, to which are pivoted links B', which connect the ends of the transverse main spring C with the axle. The bent axle-body *a*, the shanks *a'*, and the spring C are arranged in a vertical plane, the spring being arranged above the depressed axle-body, as clearly shown in Fig. 2.

D D represent the thills, which are connected at their rear ends to the shanks *a'* of the axle by means of spring bars or straps *d*, as represented in Figs. 1 and 6. The spring-bars *d* are secured to the under side of the bent rear portions of the thills, and the heel portions *d'* of the thills are raised above the spring-bars *d* in rear of the clip *e*, so that the thills can yield vertically to the motion of the horse without changing the position of the axle and seat-frame. The spring-bars are secured to the axle-shanks *a'* by clips *f*. This connection of the thills with the axle reduces the horse motion materially; but for a less expensive construction the thills may be rigidly secured to the axle, as represented in Fig. 7.

G G represent the side bars of the seat-frame, arranged between the thills and connected with their front ends to the same by spring-bars *h h*. The latter are secured with their rear ends to the under side of the thills and pivoted with their front ends to the front ends of the side bars G. The front portions *g* of the side bars G are arranged below the thills, while their rear portions *g'* extend upwardly in front of the axle A and spring C and carry the seat I, which latter is arranged above the axle and spring. The side bars G converge rearwardly toward the seat, as represented in Fig. 3.

J represents a cross-piece connecting the depressed front portions *g* of the side bars G near the ascending rear portions *g'* thereof, and K represents a central arm which is secured with its front end to the cross-bar J and extends rearwardly therefrom, terminating underneath the spring C and above the depressed axle-body *a*.

L represents a link or hanger which connects the rear end of the arm K with the central portion of the spring C. The upper end of the hanger L is connected to the spring C by a transverse bolt *m* and a bifurcated bearing M, which is secured to the under side of the spring by a clip *n*. The lower end of the hanger L is connected with the bifurcated rear end of the arm K by a transverse bolt *o*. The hanger L swings lengthwise of the cart and imparts an easy carrying motion to the seat-frame, prevents twisting of the transverse spring, and provides, in connection with



the arm K, a compact arrangement of the parts, whereby the seat-frame is attached to the main supporting-spring C. The front springs *h*, which connect the front end of the seat-frame to the thills, reduce the vibration of the foot end of the seat-frame and assist in imparting an easy motion to the seat-frame in connection with the arm K, hanger L, and main spring C.

10 Instead of connecting the seat-frame with the transverse spring directly by a single hanger L, these parts may be connected indirectly by two hangers *L'*, two arms *K'*, and a cross-piece *L<sup>2</sup>*, which is secured at its center to the transverse spring by a clip *l*, and connects at its ends with the hangers *L'*, as represented in Figs. 8 and 9.

I claim as my invention—

1. The combination, with the axle, the thills attached thereto, and the transverse

main spring arranged above the axle, of the seat-frame arranged between the thills, and a hanger L, suspended from the main spring and connected with the seat-frame below the main spring, substantially as set forth.

2. The combination, with the thills and the bent axle provided with a depressed body *a* and elevated shanks *a'*, of a transverse spring C, connected with the shanks *a'* by links *B'*, a hanger L, depending centrally from the spring, and a seat-frame arranged between the thills and provided with a rearwardly-extending arm *K*, connected with the hanger L below the spring C, substantially as set forth.

Witness my hand this 28th day of September, 1887.

CHRISTOPHER C. BRADLEY.

Witnesses:

CALVIN S. BUNNELL,  
ORLANDO C. WEST.