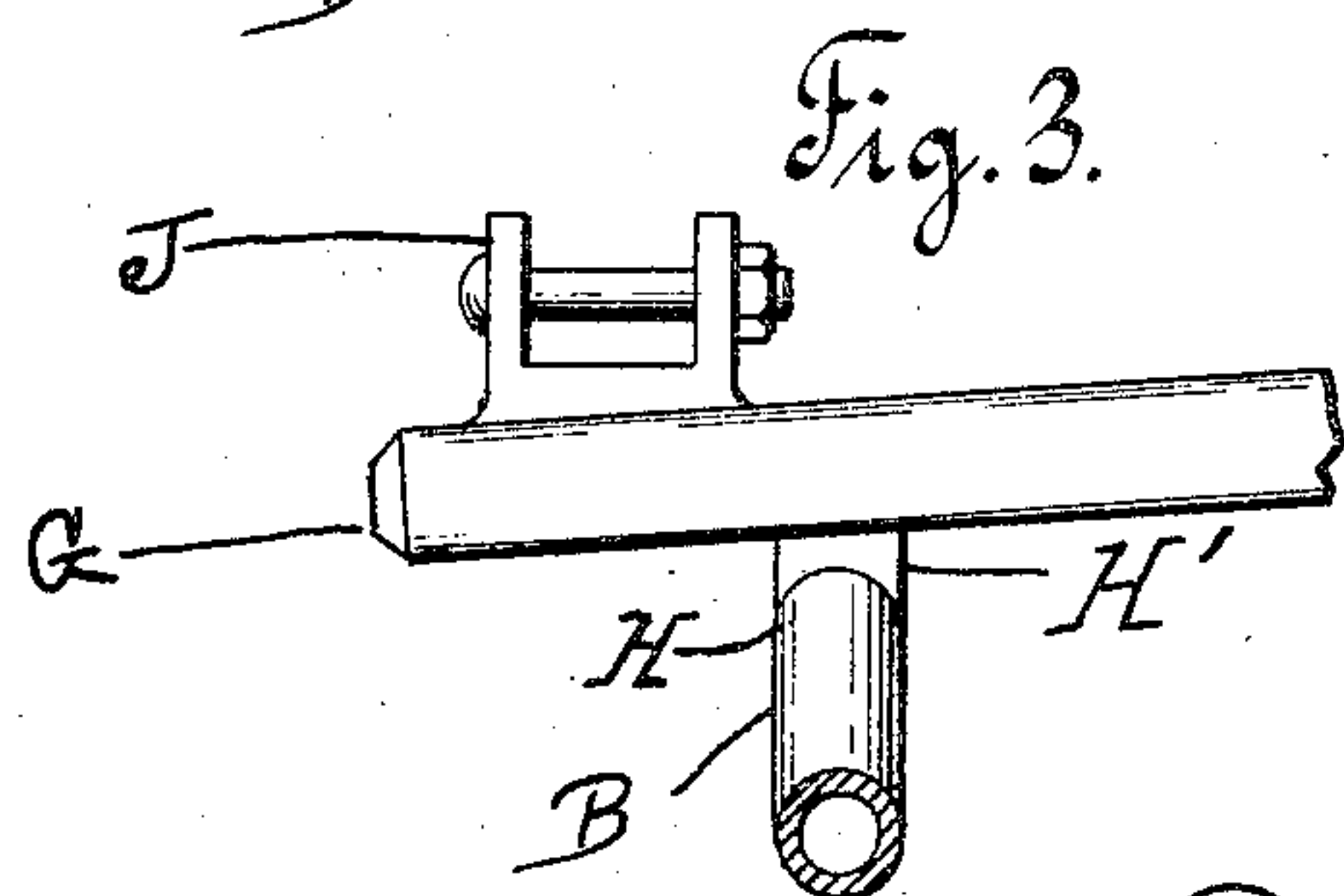
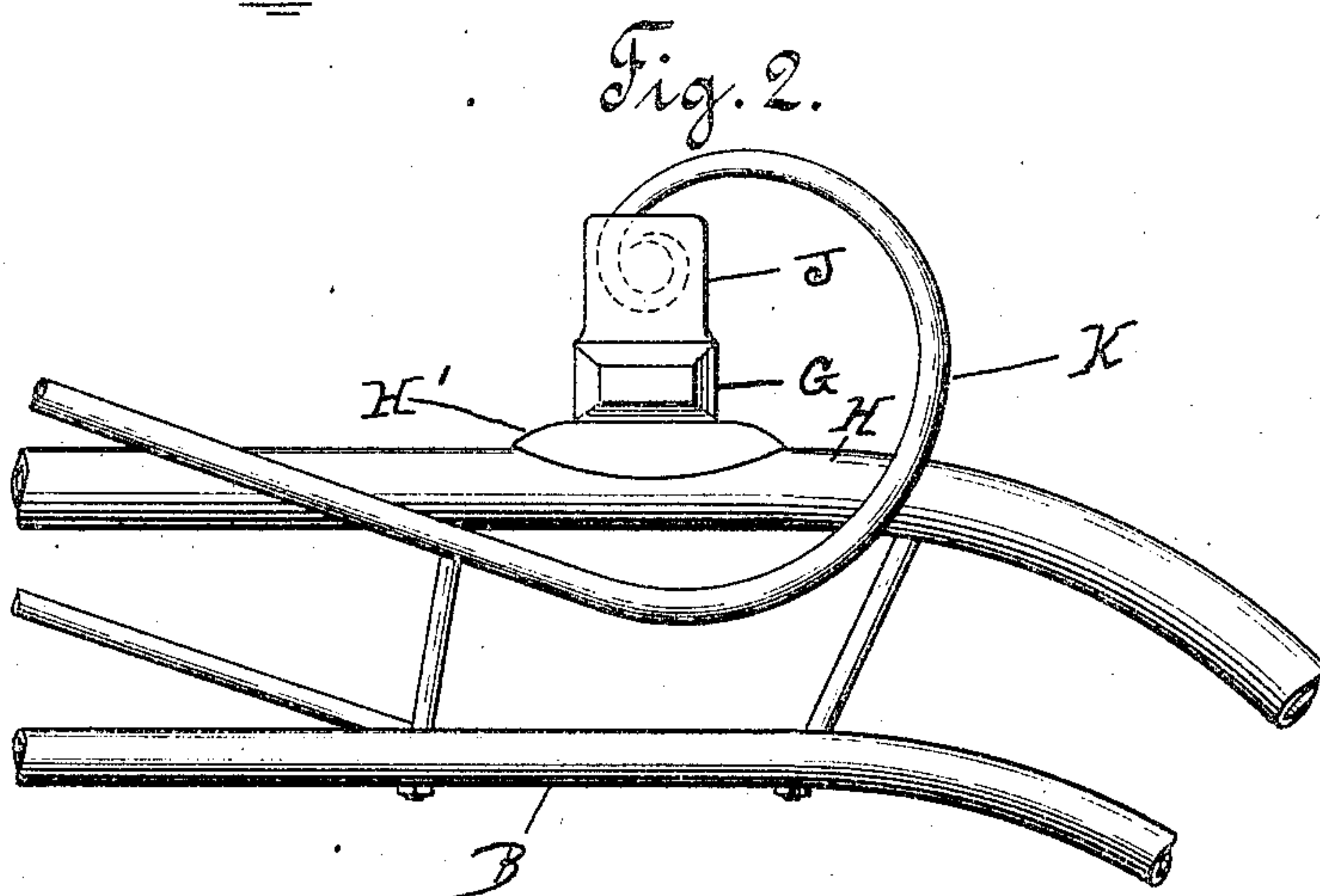
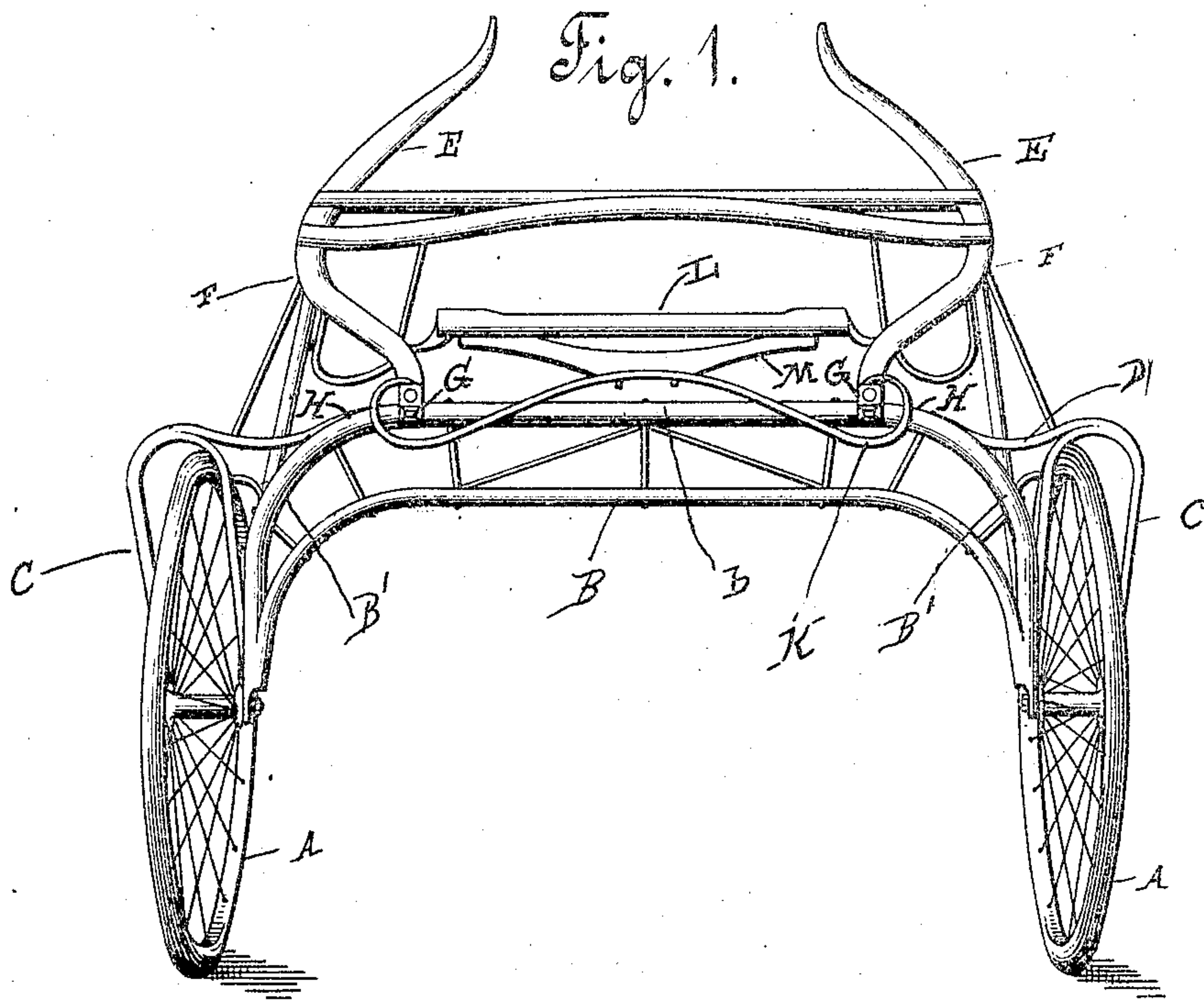


No. 789,900.

PATENTED MAY 16, 1905.

J. S. COATES.  
ROAD CART.

APPLICATION FILED SEPT. 29, 1904.



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# UNITED STATES PATENT OFFICE.

JOSEPH S. COATES, OF GOSHEN, NEW YORK.

## ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 789,900, dated May 16, 1905.

Application filed September 29, 1904. Serial No. 226,428.

*To all whom it may concern:*

Be it known that I, JOSEPH S. COATES, a citizen of the United States of America, residing at Goshen, in the county of Orange and State of New York, have invented a new and useful Improvement in Road-Carts, of which the following is a specification.

My invention relates, as the above title indicates, to what is known as "road-carts." These vehicles are intended for the training and speeding of trotting horses; and my particular invention consists in certain novel devices and constructions whereby advantages which I have heretofore aimed at are now for the first time brought into complete and final form and in a new manner entirely satisfactory to the trainer.

My new construction, as herein shown, described, and claimed, is directed more particularly to the advantages secured by reason of a light structure, at the same time a structure of such a nature which though light, as stated, is not impaired in any manner as regards its strength, and which also at the same time conforms to the important conditions of being and going easy to the trainer and to the horse.

To the above ends I employ an arched truss-axle with pneumatic-tired wheels. With this I so arrange the shafts, the spring-supported seat, the spring itself, and the other parts and so combine them as to produce the aforesaid desirable structure, which structure, as I shall hereinafter particularly point out, conforms to the conditions of lightness, strength, durability, elegance of appearance, and easiness of action.

In constructing this cart I bend the shafts so that as they extend rearwardly they bend inwardly and toward each other and at their rear ends slightly outwardly, and I seat them upon the top of the truss-axle aforesaid, their rear ends protruding somewhat rearwardly of said truss-axle. Upon the rear ends of the shafts and back of the truss-axle aforesaid I provide seating for the terminals of the seat-supporting spring. These parts, arranged and combined in the manner I have indicated, provide a road-cart superior to those hereto-

fore in use in the qualities and conditions above rehearsed.

In order the more exactly to understand my said invention, I will proceed to more particularly describe it in connection with the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents a rear elevation of my said invention or improved road-cart, and Figs. 2 and 3 are detail views.

In the drawings, A represents the wheels of a pneumatic-tired road-cart. This cart is provided with an arched truss-axle B, having its crown located slightly above the tops of the wheels. This truss-axle and its connection with the aforesaid wheels is strengthened by the yokes C, which extend over the top of both of the said wheels A and down to the axes thereof. The crowns of the yokes are located at approximately the same height as the crown of the truss-axle. Bridge-pieces or braces D, which extend horizontally and are curved downwardly, connect the crowns of the yokes C with the shoulders H H of the truss-axle aforesaid, thus strengthening the structure at these points.

At E E, I show drafts which, as they extend rearwardly, are bent inwardly from the points F, terminating at their rear ends in the portions G, which bend slightly outwardly again, the said shafts resting upon the bolsters H' of the shoulders H H of the truss-axle aforesaid. By "shoulders" I mean those parts of the truss-axle which lie at the point of divergence between the horizontal central point b of the truss and the curved and downwardly-extending portions B' B', as shown. As stated, I locate and seat the rear ends of the shafts at these points—that is, upon these shoulders. It will be seen also by referring to the drawings that the said shafts extend rearwardly far enough to provide seats for the surmounting or superposed hangers J of the seat-supporting spring K. The seat is shown at L and a bolster at M, which bolster rests upon and is centrally attached to the spring K. The spring K extends downwardly and outwardly in both directions and under and beyond the lateral lines of the rear ends of the shafts. It then



extends upwardly and is rounded over to points above the rear ends of the shaft and is there at its terminals swung by suitable means in the hangers aforesaid. By this means  
 5 I provide a spring of the right length to afford the proper cushioning, and I also by the arrangement shown and described produce a light and durable structure.

I locate all of the parts in such a way as to  
 10 have the right balance at the seat and at the same time secure a proper ease in the vehicle both to the driver and to the horse. It should be borne in mind that by reason of the fact that I bend my shafts inwardly at the rear  
 15 ends and support them upon the shoulders of the truss-axle I produce strength and lightness also at these points.

Having thus described my invention, the following is what I claim as new therein and  
 20 desire to secure by Letters Patent:

1. In a road-cart, the combination of a truss-axle having shoulders, the shafts extending inwardly and toward each other at their rear ends and mounted upon the shoulders of  
 25 the truss-axle, and a seat-supporting spring extending transversely beyond the shafts, beneath, up, and over said shafts and seated upon said shafts.

2. In a road-cart, the combination of a  
 30 truss-axle having shoulders, the shafts extending inwardly and toward each other and then slightly outwardly again at their rear ends, and mounted upon the shoulders of the truss-axle, and a seat-supporting spring extending  
 35 transversely beyond the shafts, beneath, up, and over said shafts and seated upon said shafts.

3. In a road-cart, the combination of a  
 40 truss-axle having shoulders, the shafts extending inwardly and toward each other at their

rear ends and mounted upon the shoulders of the truss-axle and protruding rearwardly thereof, and a seat-supporting spring located at the rear of the truss-axle and extending  
 45 transversely beyond the protruding ends of the shafts, beneath, up, and over said ends and seated upon said ends.

4. A road-cart comprising wheels, an arched truss-axle, bolsters secured upon the crown of the truss-axle, shafts bent inwardly at their  
 50 rear parts, secured to the bolsters upon the truss-axle and having their rear ends protruding beyond the truss-axle, hangers seated upon the rear ends of the shafts, a spring extending beneath the rear ends of the shafts  
 55 and beyond, around, and over the same and having its ends secured to the hangers, a bolster secured upon the spring and a seat supported upon the bolster.

5. A road-cart comprising wheels, an arched  
 60 truss-axle having its crown located slightly above the tops of the wheels, yokes extending over the tops of the wheels and having their crowns located at approximately the same  
 65 height as the crown of the truss-axle, and downwardly-curved horizontal braces extending from the crown of the truss-axle to the crowns of the yokes, shafts bent inwardly at their rear parts secured to the truss-axle, and  
 70 having their rear ends projecting beyond the truss-axle, hangers seated upon the rear ends of the shafts, a spring extending beneath the rear ends of the shafts, and having its ends secured to the hangers, a bolster secured upon the spring and a seat supported upon the bol-  
 75 ster.

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Witnesses:

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