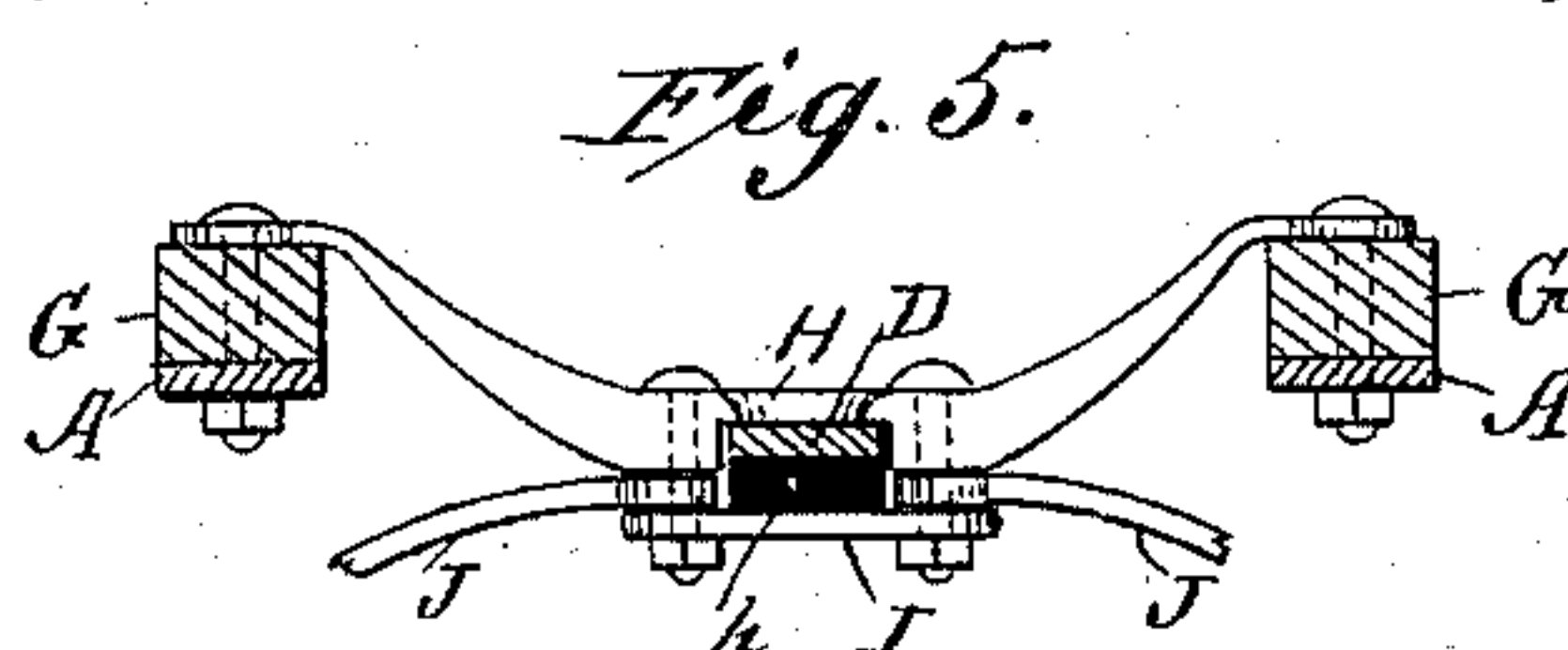
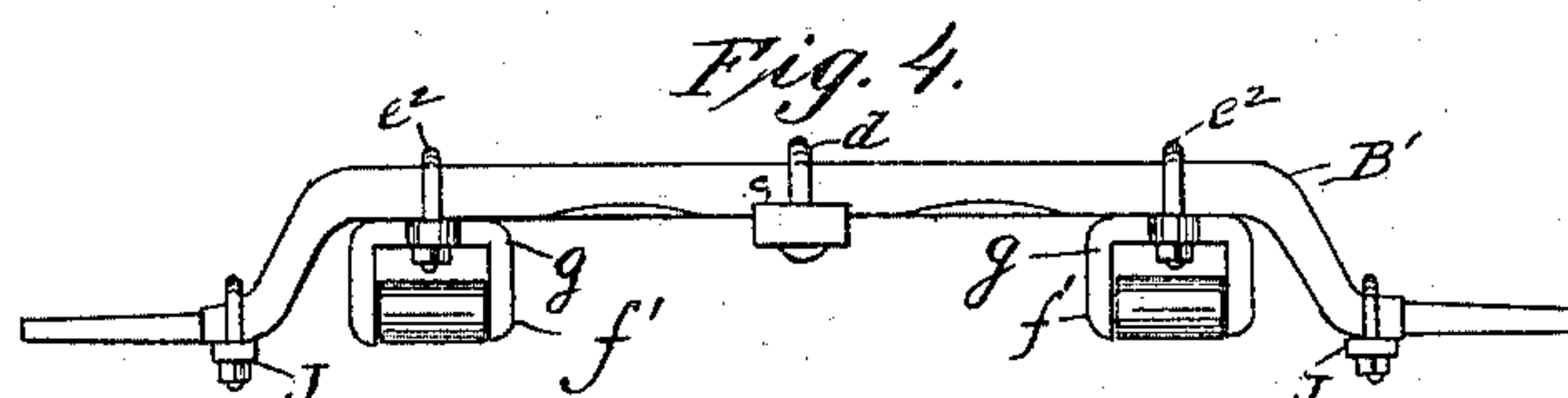
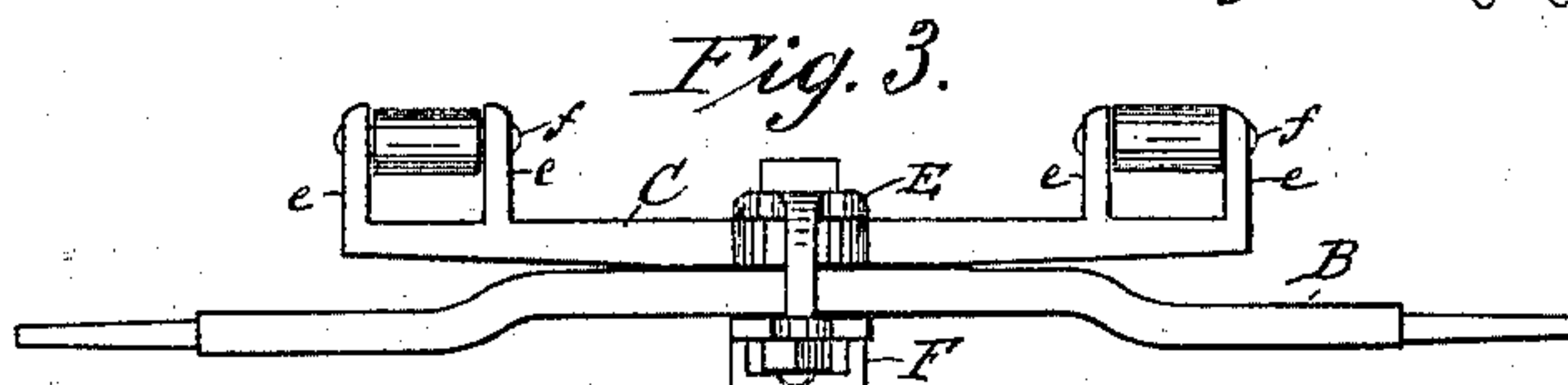
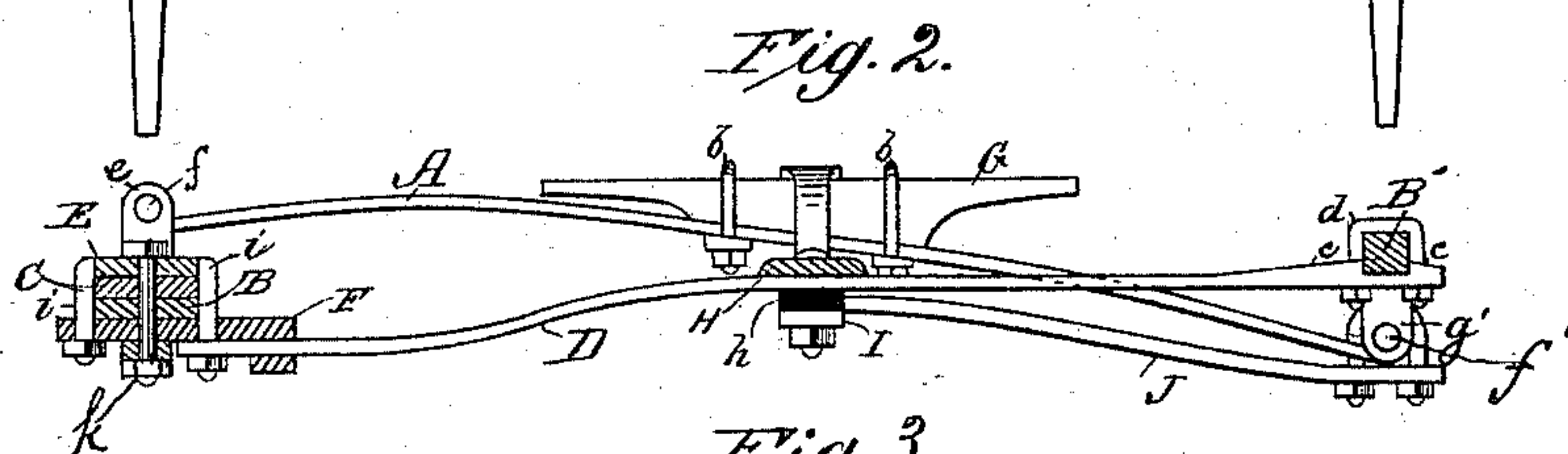
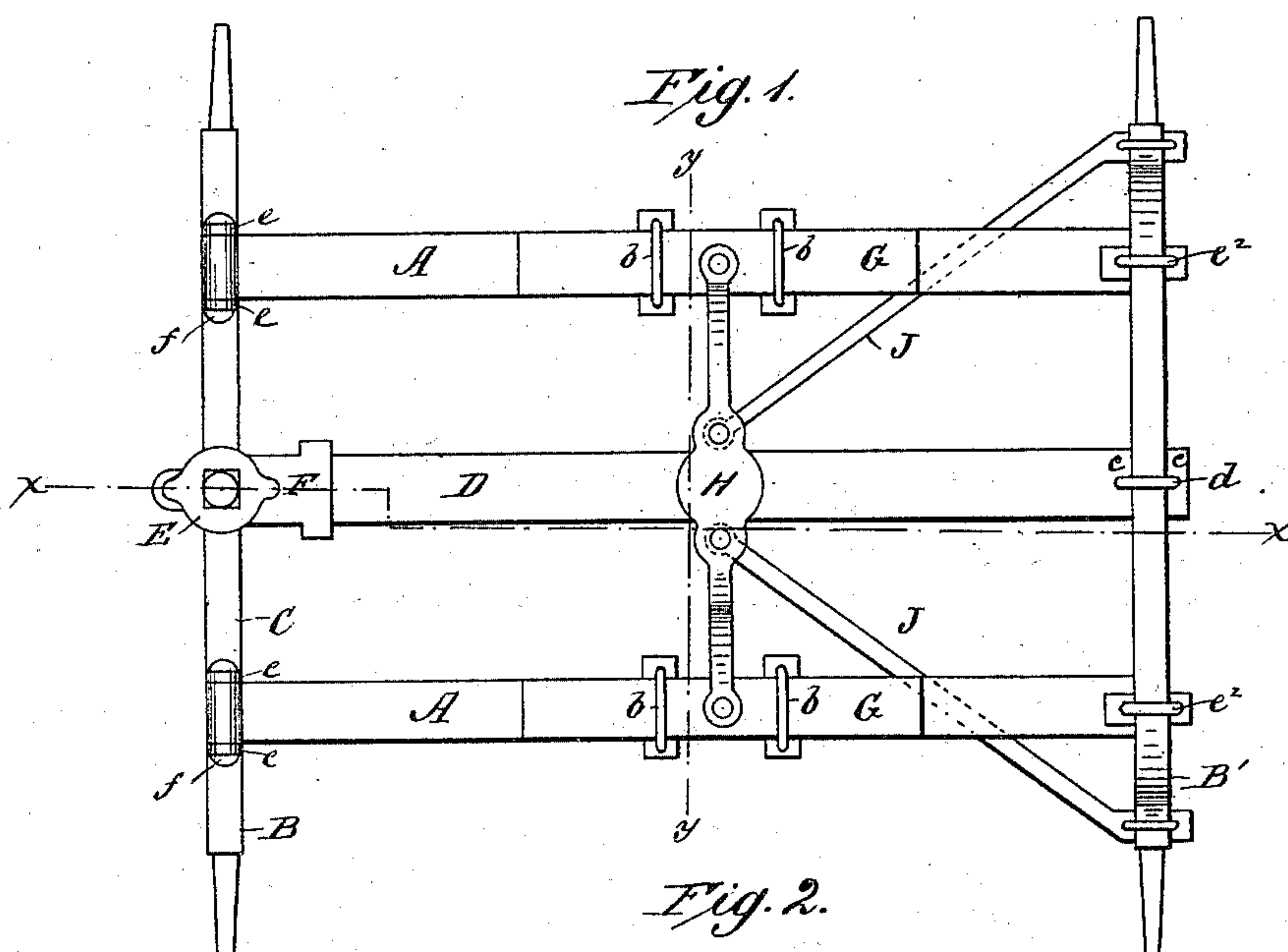


(No Model.)

E. SQUIRES.
CARRIAGE GEAR.

No. 344,689.

Patented June 29, 1886.



WITNESSES:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDWARD SQUIRES, OF BEAVERTON, OREGON.

CARRIAGE-GEAR.

SPECIFICATION forming part of Letters Patent No. 344,689, dated June 29, 1886.

Application filed September 29, 1885. Serial No. 178,600. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SQUIRES, of Beaverton, in the county of Washington and State of Oregon, have invented a new and useful Improvement in Running-Gears, of which the following is a description.

My invention is in the nature of a single-reach side-spring carriage-gear designed with regard to simplicity, cheapness, durability, and finish, and adapted to secure the strongest and best action of side springs.

It consists in the peculiar construction and arrangement of parts, which I will now proceed to describe with reference to the drawings, in which—

Figure 1 is a plan view; Fig. 2, a longitudinal vertical section through line *x x*; Fig. 3, a front end view; Fig. 4, a rear end view, and Fig. 5 a transverse vertical section through line *y y*.

A A represent the two side springs, and B B' represent the two axles. Over the front axle, B, is arranged the cross-bar C. At the ends of this cross-bar and on the upper side thereof are formed lugs *e e*, between which the eyes in the front ends of the side springs are contained and secured by a bolt, *f*, forming an articulation or hinge-joint. About the middle of these side springs are head blocks G G, for attachment to the bottom of the carriage-body, which head-blocks are fastened to the side springs by clips *b b*. At the rear end of the side springs their eyes are secured by pivot-bolts *f' f'*, between the lugs of plate *g*, which latter are secured to the under side of the rear axle by clips *e' e'*, which rear axle is cranked or bent upwardly in the middle.

D is the reach, which is in the nature of a spring. This reach at its rear end is provided with a notch, forming shoulders *c c*, which fit around the axle, and which reach at this point is secured to the under side of the axle by a clip, *d*. This shouldered connection of the reach prevents any looseness or endwise motion between the reach and axle in the springing of the reach up and down. The front end of the reach passes through a socket in the rear end of a plate, F, which latter is secured beneath the front axle, B. This front axle has in the middle a flattened boss or disk, which acts as a turn-table between a similar disk in the middle of cross-bar C and the plate F, and these parts are connected together by the two-pronged clip E and the king-bolt *k*,

which latter passes through this clip, the cross-bar C, the axle B, and the plate F, the front end of the reach being secured in the socket of plate F by the rear prong of the clip E.

From the head-block G of one side spring to the corresponding head-block of the other side spring there extends a middle cross-bar, H, which on its under side is recessed to receive and hold the reach, and which reach is inclosed at this point by a plate, I, under the reach, which plate is bolted to the cross-bar H, and secures also the oblique side braces, J J, which run to the outer ends of the rear axle, and are secured thereto by clips. Between the reach and the bottom plate, I, a soft rubber block, *h*, is inserted, which allows the proper springing motion of the reach to freely take place.

This construction of single-reach side-spring gear brings the body of the carriage low down, and makes an easy up-and-down motion free from side play and loose joints.

Having thus described my invention, what I claim as new is—

1. The combination, with the front axle, B, and cross-bar C and the rear cranked axle, B', of the reach D, connecting the middle of the two axles, and the two side springs, A A, connected at the front to the cross-bar C above the front axle, and connected at the rear end by clips underneath the rear or cranked axle, and the two head-blocks G G, arranged parallel above the side springs in the middle thereof, substantially as and for the purpose described.

2. The combination, with the front axle, B, and cross-bar C and the rear cranked axle, B', of the reach D, connecting the middle of the two axles, the two side springs connected at their front ends to the cross-bar C, above the axle, and connected at their rear ends by clips to the under side of the cranked axle, the middle cross-bar, H, braces J J, and the inclosing-plate I, the said plate and braces being secured to bar H by the same bolts, as shown and described.

3. The combination of cross-bar C, axle B, reach D, plate F inclosing the reach, clip E, with king-bolt *k*, and prongs *i i*, securing the reach, plate F, and the cross-bar, substantially as shown and described.

Witnesses: EDWARD SQUIRES.

J. Y. POWELL,
JUSTUS KRUMBLISS.