

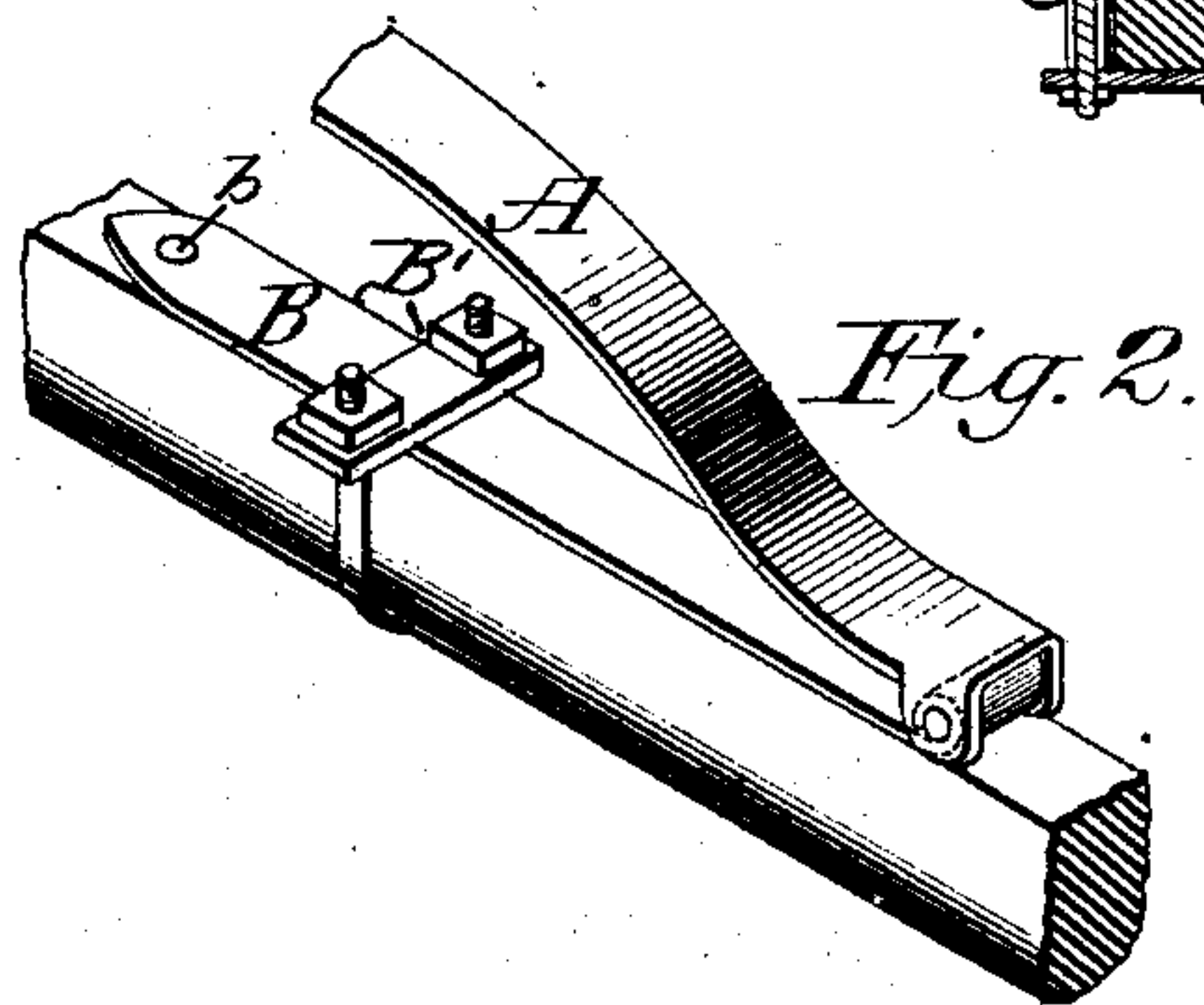
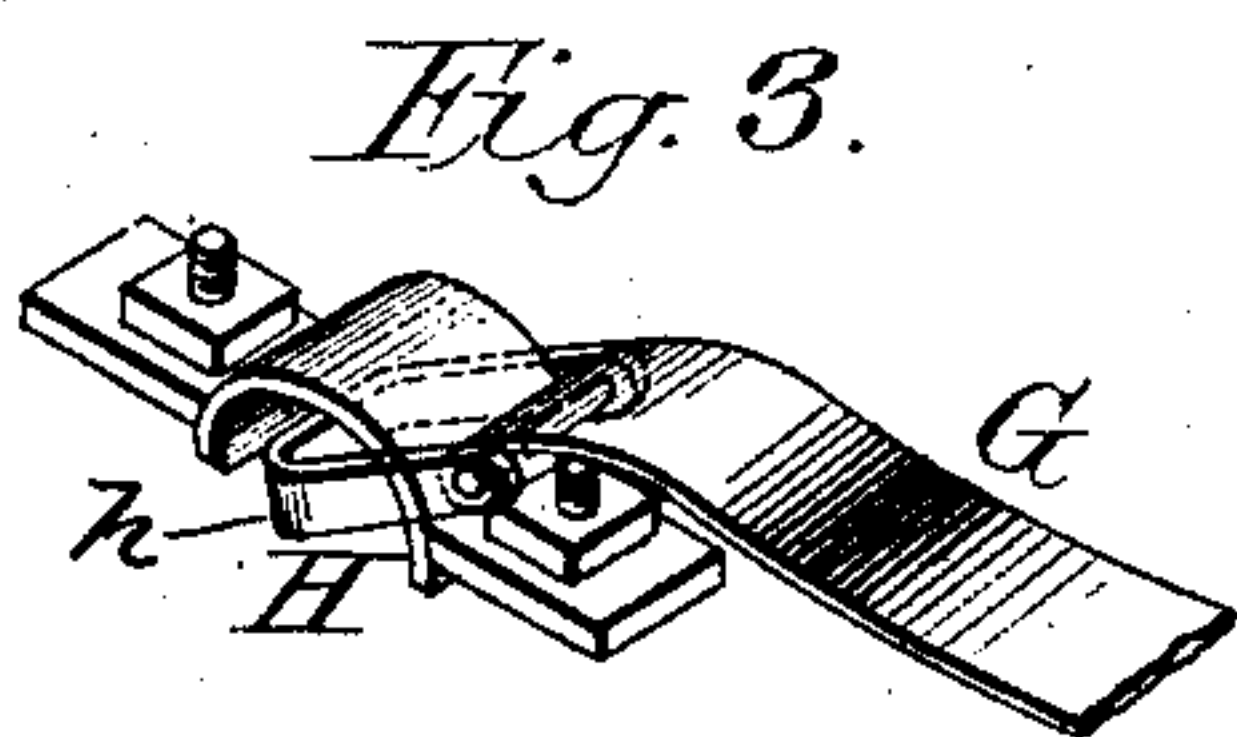
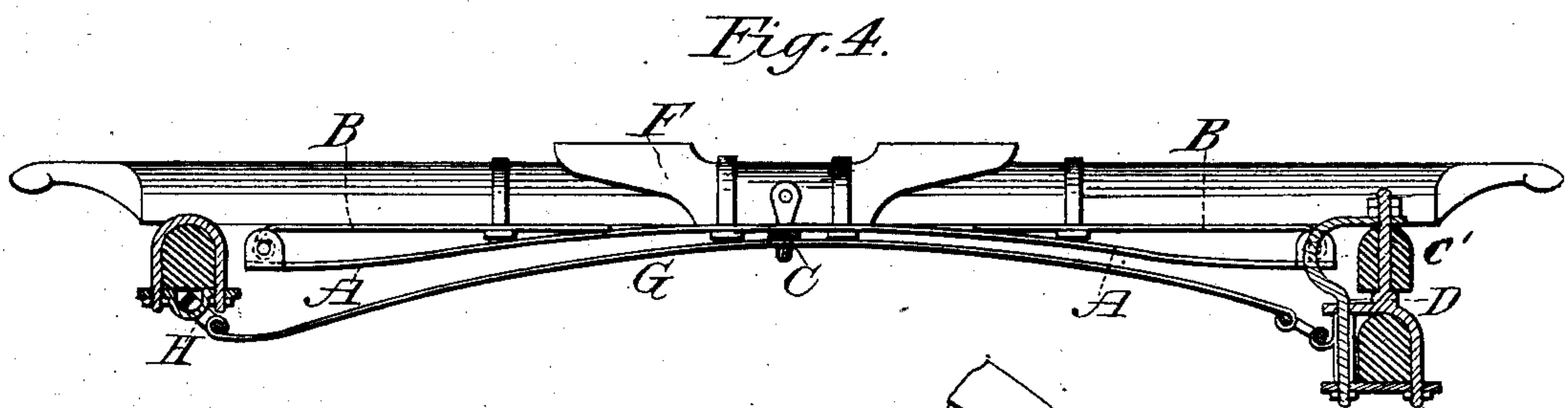
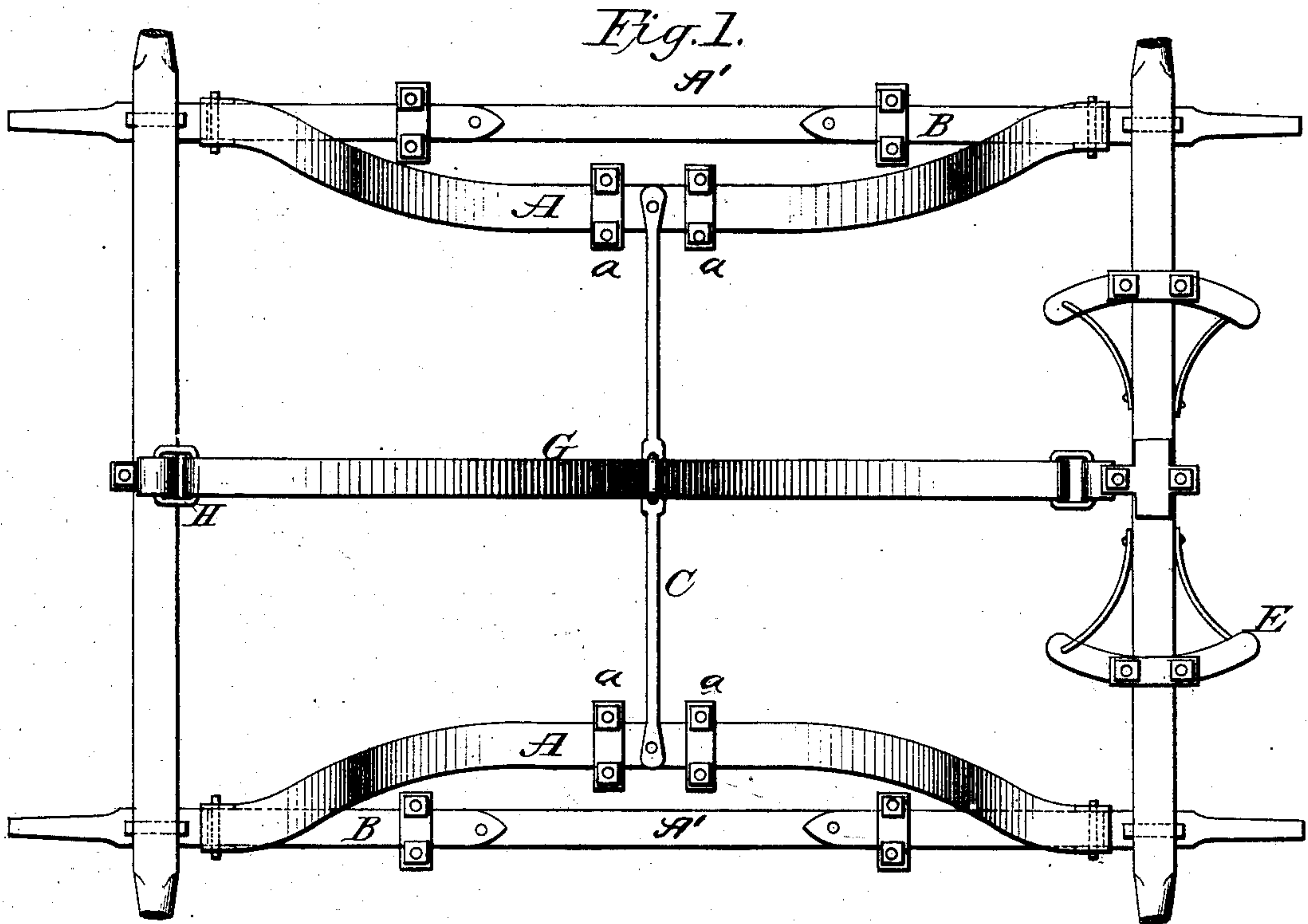
(Model.)

A. B. WEBSTER.

CARRIAGE SPRING.

No. 244,960.

Patented July 26, 1881.



Witnesses:
Frank E. Stowell
Chas. L. Durgin

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UNITED STATES PATENT OFFICE.

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CARRIAGE-SPRING.

SPECIFICATION forming part of Letters Patent No. 244,960, dated July 26, 1881.

Application filed June 21, 1880. (Model.) Patented in Canada November 23, 1880.

To all whom it may concern:

Be it known that I, ALBERT B. WEBSTER, a citizen of the United States, and a resident of Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Carriages; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention has relation to the spring-supports of carriage-bodies, and has for its object to provide such an improved arrangement of springs that the carriage-body will be more evenly supported and a uniform motion of the springs will be attained.

My invention consists, first, in the combination, with the side bars, of longitudinal semi-elliptical springs bent laterally, inwardly, and also upwardly to support the sills, and pivoted at their ends to supplemental springs attached to the side bars; second, in the combination, with the side bars carrying the supplemental springs and the semi-elliptical springs bent laterally, inwardly, and upwardly, of a central longitudinal spring secured to a central cross-bar uniting the semi-elliptical springs, said central spring having its ends connected with links, a deep-bowed yoke receiving said links and admitting of the free play of the same, substantially as hereinafter described; third, in the combination, with the side bars of springs bent laterally, inwardly, and upwardly, of supplemental springs secured at their inner ends to the side bars, and clips embracing the side bars and supplemental springs, and adjustably secured in place in order to vary the length of the free ends of the supplemental springs, all as hereinafter more fully described.

In the accompanying drawings, Figure 1 is a plan view of the under side of the frame, showing my invention. Fig. 2 is a portion of one of the side bars, showing the end of one of the semi-elliptical springs secured to the spring-plate. Fig. 3 is a detail of the link-connection of the central spring, showing the deep-bowed yoke. Fig. 4 is a longitudinal central section through Fig. 1 in inverted position.

A A indicate two semi-elliptical flat side springs having their central portions extending inwardly to permit their free vertical play

and upwardly to support the sills F, to which the body of the vehicle is attached. These springs A are united by a rigid cross-bar, C, to which a central spring, G, is suitably secured. The ends of the springs A are pivoted to the free end of the supplemental springs B, the latter being secured at their inner ends to the side bars by bolts *b*, and further connected with the said side bars by the clips B', which can be adjusted by loosening the nuts and sliding the clip along the side bar, in order to vary the length of the free ends of the springs B, whereby the length of the semi-elliptical springs will be practically increased or decreased according to the adjustment of the said clips. By this means the tension of the springs may be regulated to accommodate them to different loads. The ends of the spring G are loosely connected, the rear end being pivotally secured to the cross-pin of a U-shaped link, which rests loosely in a deep-bowed yoke, H, which is secured to the rear axle.

The sill-pieces for supporting the body are secured by clips *a* to the springs A at their central portion. The forward ends of the side bars, A', rest on the bolster C', while their rear ends rest on the rear axle, as usual.

The deep-bowed yoke H permits of a free movement of the link *h* resting therein, so that the longitudinal play of the central spring, G, may be greatly increased.

By the above construction and arrangement the jar and shocks incident to rough roads are more evenly distributed, the force applied to the springs A being taken up partly by the supplemental spring-plates. The backward and forward motion and swaying of the body of the vehicle so common to other carriages are avoided by this construction.

Prior to my invention vehicle-springs have been secured to yokes or clips by means of links, and the running-frame of the vehicle has also been provided with a central longitudinal spring; also, the central portions of side springs of a vehicle have been bent outwardly and upwardly, the ends of said springs being pivoted to bearing-pieces secured to the under side of the vehicle-body. Hence these features are not broadly claimed in this application.

What I claim is—

1. The combination, with the side bars connected with the front and rear axles, of the longitudinal semi-elliptical springs having their central portions bent inwardly and upwardly adjacent to the side bars, for supporting the side sills of the body parallel to the side bars, and having each of their ends attached to a supplemental spring-plate, B, connected with the under side of the side bars, substantially as shown and described.

2. The combination, with the side bars carrying the supplemental springs and the springs A, of the central longitudinal spring G, secured to cross-bar C, uniting the springs A and having its ends connected with links, and the deep-bowed yoke H, receiving said links and admit-

ting of the free play of the same, substantially as described.

3. The combination, with the side bars of the springs A, bent laterally, inwardly and upwardly, of the supplemental springs B, secured at their inner ends to the side bars, and the clips B', embracing the side bars and the supplemental springs, and adjustably secured in place, in order to vary the length of the free end of the supplemental springs, substantially as described.

ALBERT B. WEBSTER.

Witnesses:

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