

(No Model.)

2 Sheets—Sheet 1.

G. TROMBLY & J. J. KINSMAN.
CARRIAGE GEAR.

No. 464,050.

Patented Dec. 1, 1891.

FIG. 1.

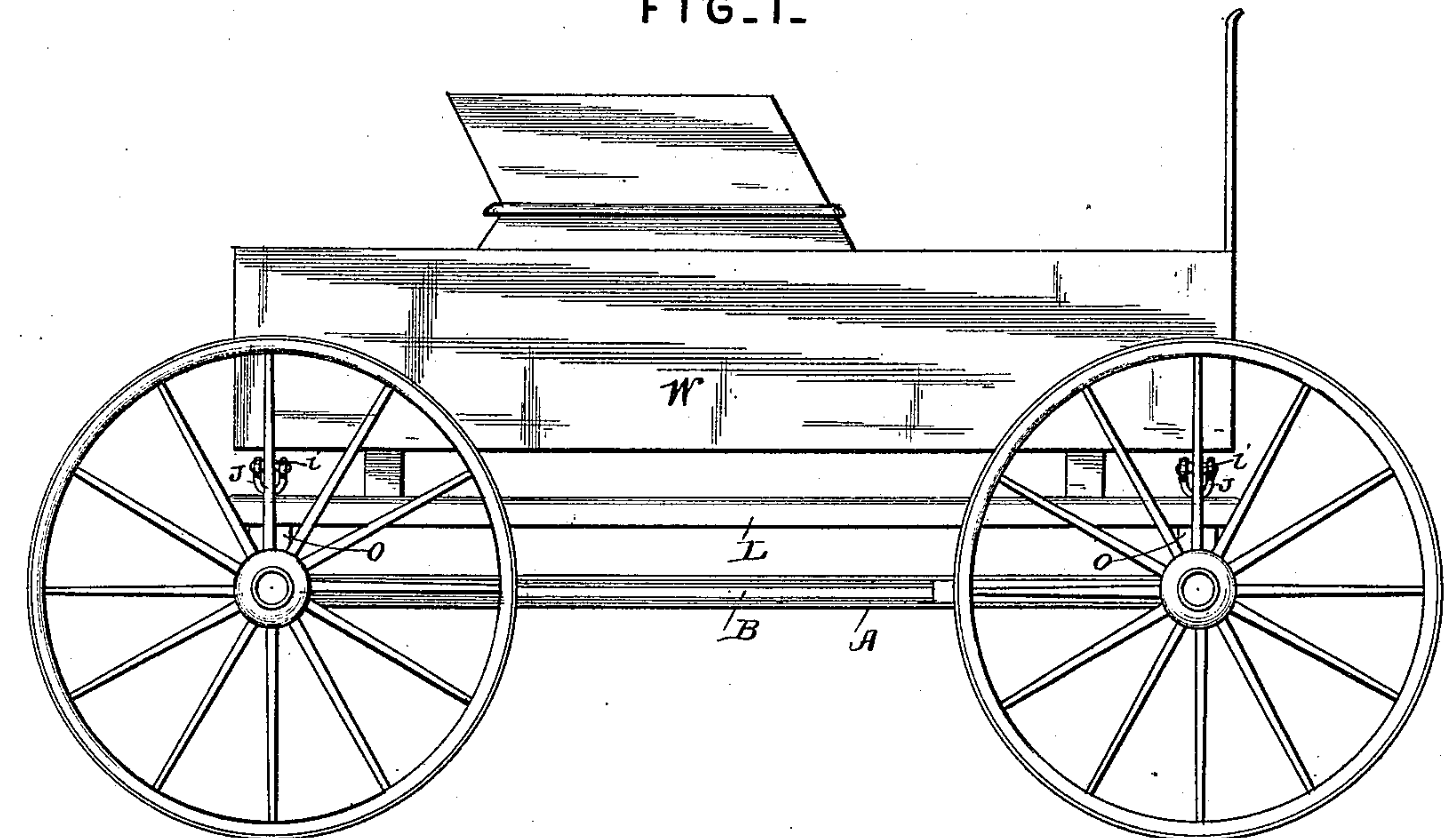


FIG. 6.

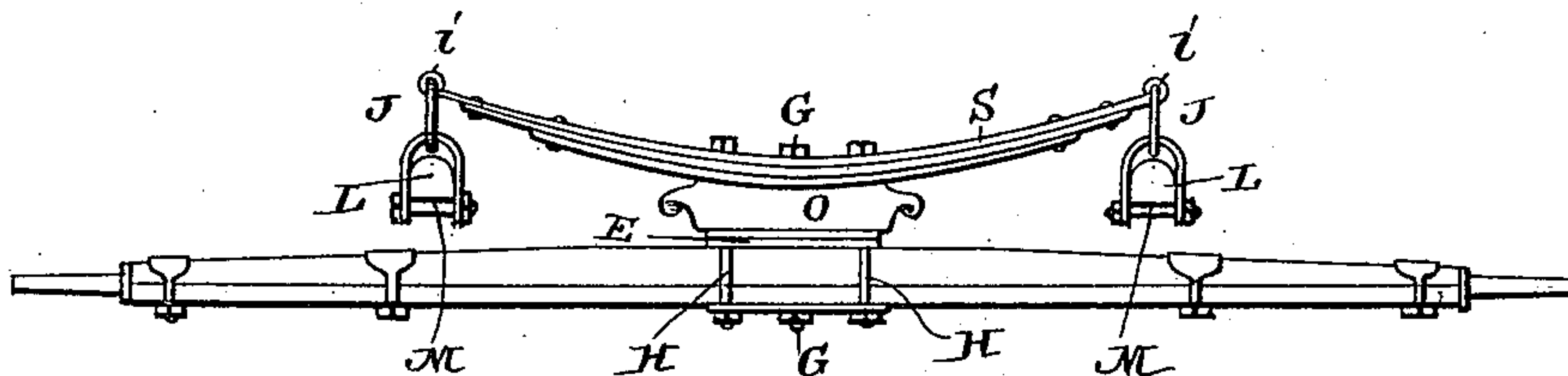
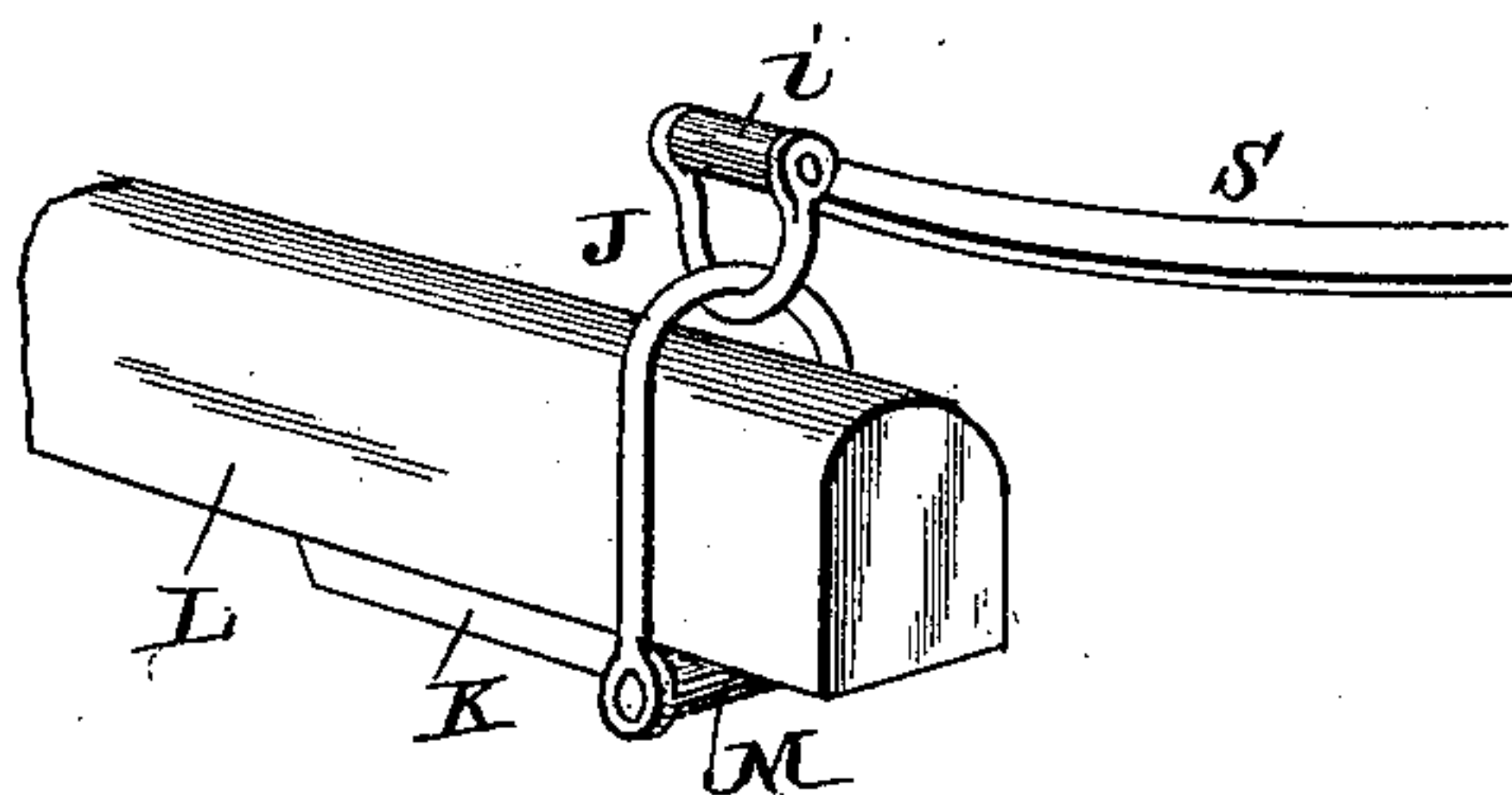


FIG. 7.



Witnesses

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2 Sheets—Sheet 2.

G. TROMBLY & J. J. KINSMAN.
CARRIAGE GEAR.

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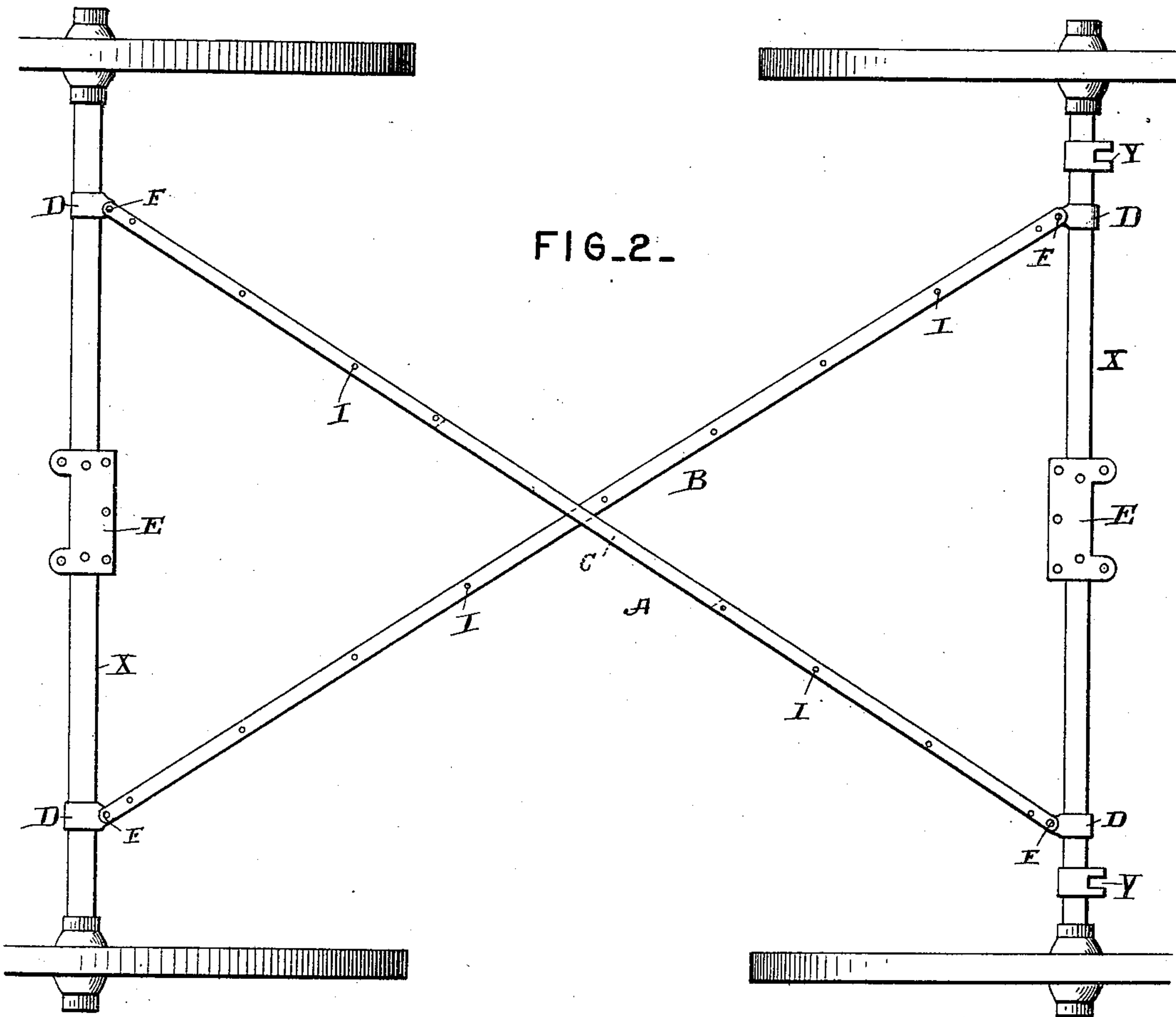


FIG. 2.



FIG. 3.



FIG. 4.

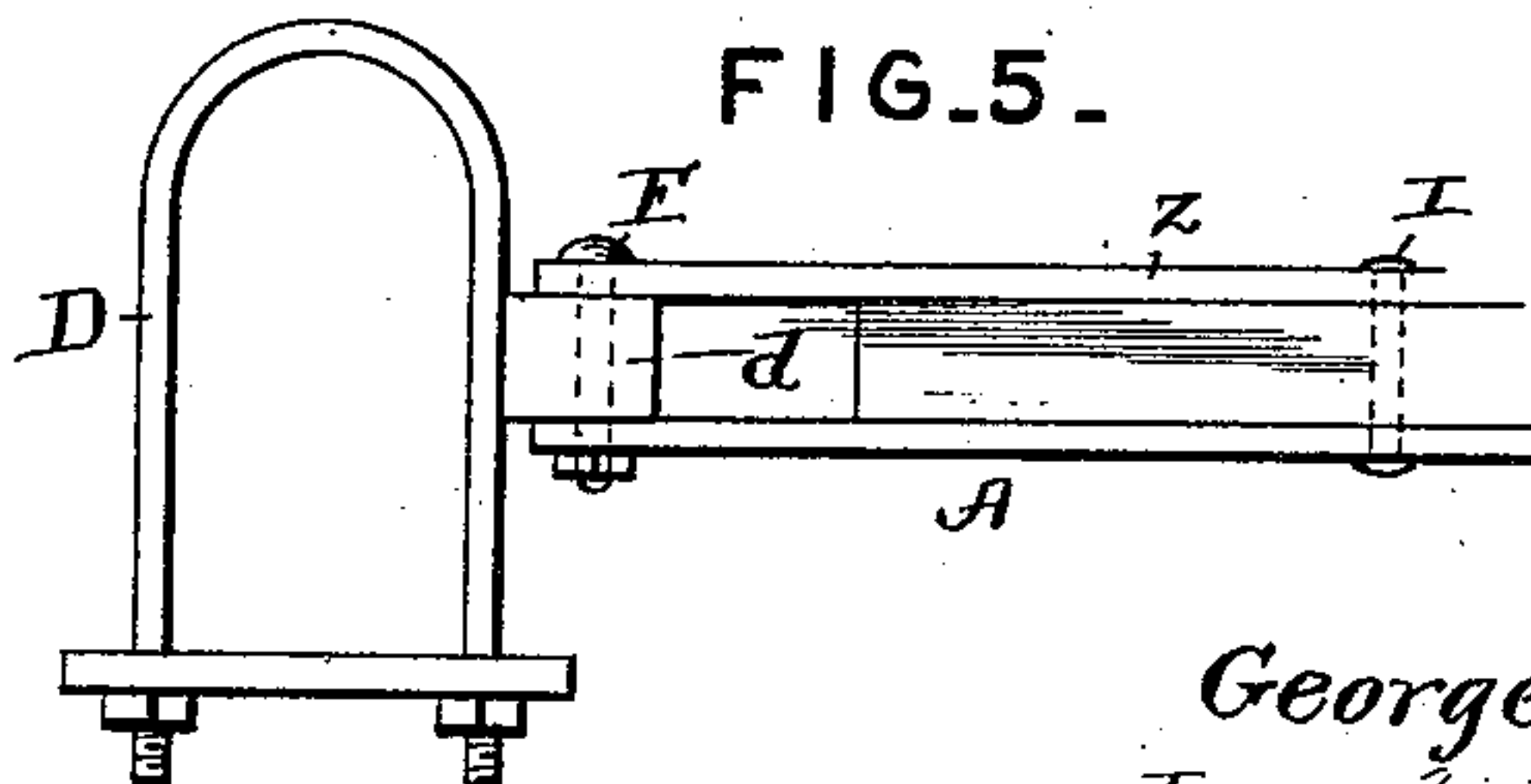


FIG. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE TROMBLY AND JOSEPH J. KINSMAN, OF TAMPA, FLORIDA.

CARRIAGE-GEAR.

SPECIFICATION forming part of Letters Patent No. 464,050, dated December 1, 1891.

Application filed June 9, 1891. Serial No. 395,699. (No model.)

To all whom it may concern:

Be it known that we, GEORGE TROMBLY and JOSEPH J. KINSMAN, citizens of the United States, residing at Tampa, in the county of Hillsborough and State of Florida, have invented a new and useful Carriage-Gear, of which the following is a specification.

This invention relates to carriages and wagons, and more especially to the running-gear thereof; and the object of the same is to provide an improved doubled and crossed perch connecting the axles.

To this end the invention consists in devices of this character of the specific construction hereinafter more fully described and claimed, and as illustrated on the two accompanying sheets of drawings, wherein—

Figure 1 is a side elevation of a side-bar buggy constructed in accordance with our invention. Fig. 2 is a plan view of the two axles and the perches connecting them. Fig. 3 is a side elevation of the inner, and Fig. 4 of the outer, perch. Fig. 5 is a side elevation of the end of one perch with its attaching-clip. Fig. 6 is an elevation of one axle, showing the means for attaching the side bars to the spring thereon. Fig. 7 is a perspective detail, on an enlarged scale, of the end of one side bar, showing the manner of attaching the spring thereto.

Referring to the said drawings, the letter A designates the outer, and B the inner, perch, each of which comprises a wooden body faced on its upper and lower edges with metallic straps Z, secured thereon by bolts I, the outer perch being slightly thicker than the inner and having a portion of its wooden body omitted near its center, as at C, through which portion the inner perch B passes, thus forming an X-shaped figure, as seen in Fig. 2.

X X are the axles, over which near their ends pass ordinary clips D, having projections *d* on their inner sides, and over these projections the ends of the metallic facings Z of the several axles are passed, as shown, vertical pivot-bolts F passing therethrough. By this construction it will be seen that as the right end of the axle is borne to the rear the left end of the other axle will be similarly moved, and the opposite ends of these axles will move in the opposite directions.

E E are plates secured by clips H upon the

centers of the axles, and which form the lower members of fifth-wheels, it being understood that each axle has such a fifth-wheel, and G G are the king-bolts passing through these plates and through the bolsters O.

S are the springs secured upon the bolsters in any preferred manner, and these springs may support the wagon-body direct, or, as seen in Fig. 6, they may support side bars, which carry the wagon-body W. In the latter case each end of the spring is provided with an eye *i*, to which is pivoted the end of a clevis, whose body engages another clevis, and thereby forms a swinging shackle J, the lower end of the lower clevis standing astride the side bar L, and being pivoted, as at M, to a plate K, secured to the lower face of the side bar L.

In use the pole or the thills are connected to the front axle at points Y, and the vehicle is drawn over the ground. As this axle is turned on its king-bolt the other axle is turned in the opposite direction through the instrumentality of the crossed perches, the metallic facing-straps Z of the inner perch B sliding against the inner faces of the similar straps of the outer perch A and passing through the opening C, as will be understood, whereby undue wear of the parts is prevented. The pivot-bolts F permit the ends of the perches to turn on the projections *d* of the clips D near the ends of the axles, and the king-bolts and fifth-wheels permit the axles to turn beneath the springs, as may be necessary; but in turning to so great an extent a considerable movement will be imparted to the springs around their king-bolts, and this the swinging shackles J permit. They also permit slight longitudinal and transverse movements of the wagon-body W on the running-gear, while they do not interfere with the cushioning action of the springs.

The device is simple and inexpensive in construction, and it will involve but slight additional labor and outlay to apply it to vehicles in the course of their manufacture.

What is claimed as new is—

In a vehicle, the combination, with the axles, a bolster pivotally mounted on the center of each axle, and a spring carried thereby and having eyes at its ends, of a clevis pivotally mounted in each of said eyes and de-

pending therefrom, another clevis linked into
the first, side bars passing loosely through the
lower clevises, plates on the lower faces of the
side bars pivotally connected with the lower
5 clevises, and a wagon-body supported by the
side bars, substantially as hereinbefore de-
scribed.

In testimony that we claim the foregoing

as our own we have hereto affixed our signa-
tures in presence of two witnesses.

GEORGE TROMBLY.
JOSEPH J. KINSMAN.

Witnesses:

GEORGE R. MACFARLANE,
D. S. MACFARLANE.