

(No Model.)

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SULKY.

No. 248,814.

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Fig. 1.

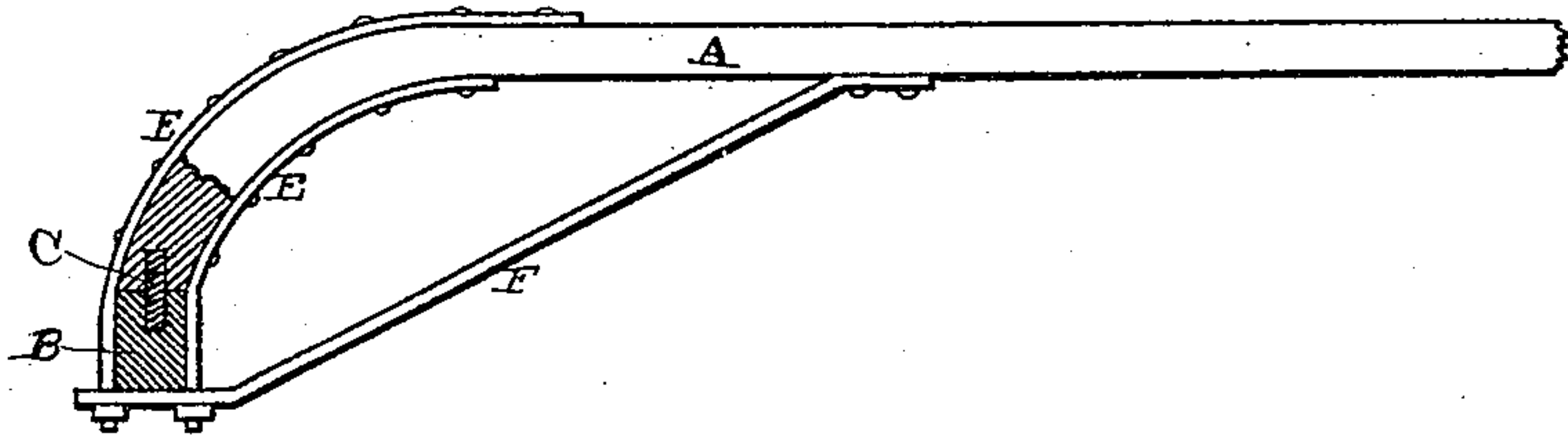


Fig. 2.

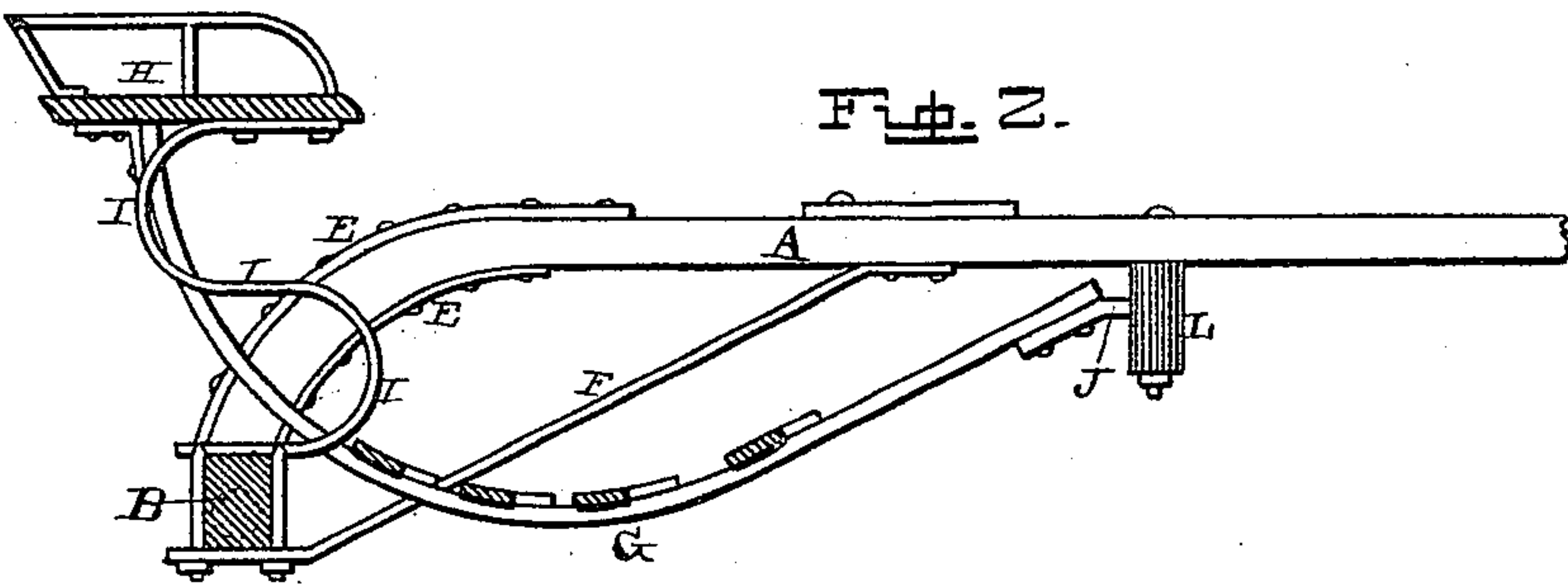


Fig. 3.

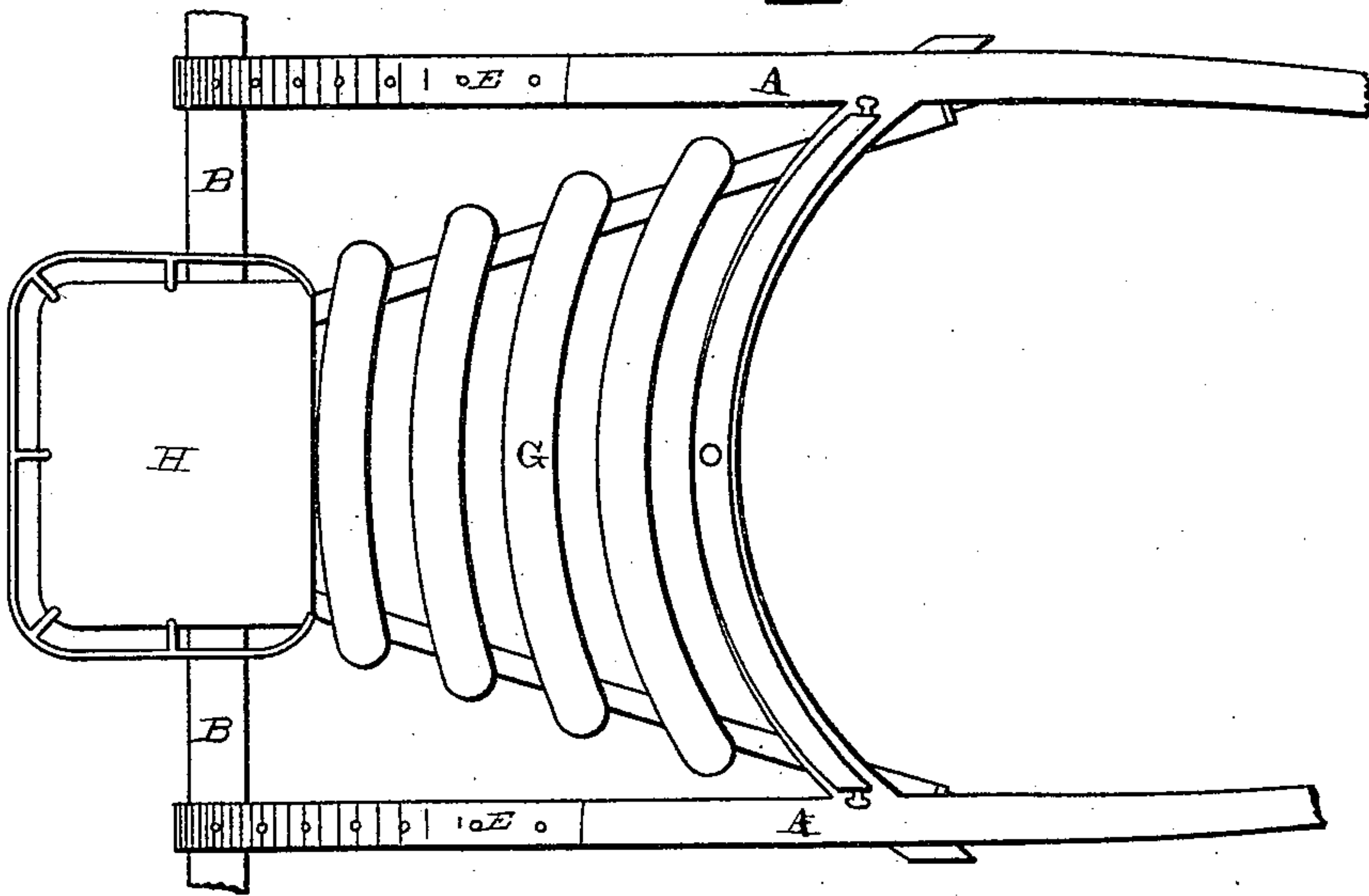
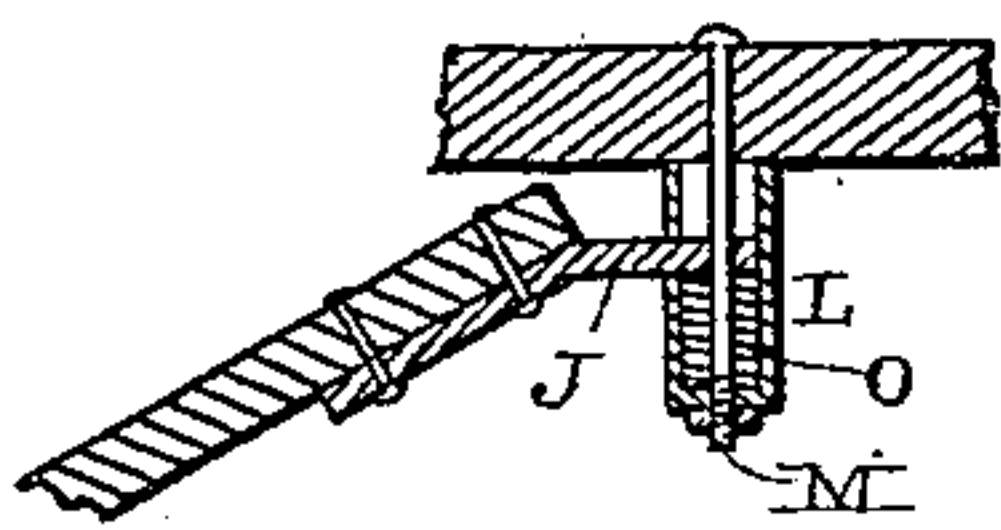


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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SPECIFICATION forming part of Letters Patent No. 248,814, dated October 25, 1881.

Application filed September 10, 1881. (No model.)

To all whom it may concern:

Be it known that we, WM. WALKER, Sr., of Aurora, Kane county, and WM. WALKER, Jr., of Eola, Du Page county, and State of Illinois, have invented certain new and useful Improvements in Two-Wheel Vehicles; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in two-wheel vehicles; and it consists, first, in attaching the shafts directly to the axle by means of suitable plates, which are secured to opposite sides of the shafts and which pass down over the axle, and by means of a dowel-pin or ball, which fits equally in the top of the axle and in the lower ends of each one of the shafts; second, in supporting the seat by means of S-shaped springs which bear directly upon the top of the axle, in combination with the foot-board, which is secured at its rear end to the under side of the seat and loosely attached to the under side of the shafts, whereby all strain is entirely removed from the shafts and transferred directly to the axle.

The object of our invention is to attach the shafts to the axle in such a manner that they will not work loose, and to give the seat-board a free vertical play of its own, and to take all the strain of the rider on the seat from the shafts and to transfer it to the axle, where it should be.

Figure 1 is a vertical section of our invention, taken through one of the shafts. Fig. 2 is a side elevation of our invention complete. Fig. 3 is a plan view of the same. Fig. 4 is a vertical detail view.

A represents the two shafts, and B the axle. In the top of the axle, where the rear end of each one of the shafts comes in contact with it, there is made a suitable hole or recess, in which is placed a dowel-pin, C, a ball, or any other equivalent device. In the rear end of each one of the shafts is made a corresponding hole, in which the upper end of the dowel-pin or top of the ball fits. This pin, ball, or other device prevents any movement on the part of

the shaft, and prevents it from working loose. Upon opposite sides of each shaft are then secured the two metallic plates E, the lower ends of which extend down below the axle, as shown in Fig. 1, like clips, and have the brace-rod F secured to them. This brace-rod extends forward at any suitable angle, and braces the shaft rigidly in position. Where no dowel-pins are used, as are here shown, the shafts in a very short time work loose, and it is impossible to keep them tight.

The foot-supporting frame G is made in the curved form here shown, and has a seat, H, secured to its rear end. Also, secured to the under side of the seat is one or more S-shaped springs, I, which have their lower ends secured directly upon the top of the axle. The front end of the foot-supporting frame has suitable iron rods or guides, J, secured to it, and these guides pass through slots which are made in the rear sides of the barrels L, which are secured to the under sides of the shafts by means of the screw-bolts M. These guides have holes formed through their front ends, so that the screw-bolts can pass down through them, and the guides then rest upon coiled or other suitable springs, O, which are placed in the bottom of the barrel. These guides having a vertical play in the slots which are made in the rear sides of the barrels, it will readily be seen that the seat and the foot-supporting frame move freely together at all times. Were the front end of this supporting frame attached rigidly to the under side of the shafts, as has heretofore been done, no spring could be used on the seat, as is here shown, and the weight of the driver upon the seat would have a tendency to strain the shafts in such a manner as to weaken them very seriously. The foot-supporting frame having a free play at both of its ends, the whole strain of the driver comes directly upon the axle and not upon the shaft, and as the frame has a movement of its own it will move freely with the feet, and thus do away with the greater part of the danger of throwing the rider from his seat should the wheels of the vehicle strike an obstruction of any kind. By giving the foot-supporting frame a free movement at each of its ends the driver can ride as easily while sitting upon the seat

as he could in a phaeton or any other spring-vehicle.

Having thus described our invention, we claim—

5 1. The combination of the seat-supporting frame G, provided with the guides J, the barrel L, spring O, and rod M, substantially as shown.

10 2. The combination of the axle B, one or more S-shaped springs resting thereon for the support of the seat H, the seat-frame G, barrel L, spring O, and guide J, substantially as described.

3. The combination of the axle B, the shaft A, and a dowel-pin or ball, C, which is inserted 15 between the end of the shaft and the top of the axle, the shaft being strengthened by the plates E, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM WALKER, SR.
WILLIAM WALKER, JR.

Witnesses:

ARTHUR TERRY,
JOHN WALKER.