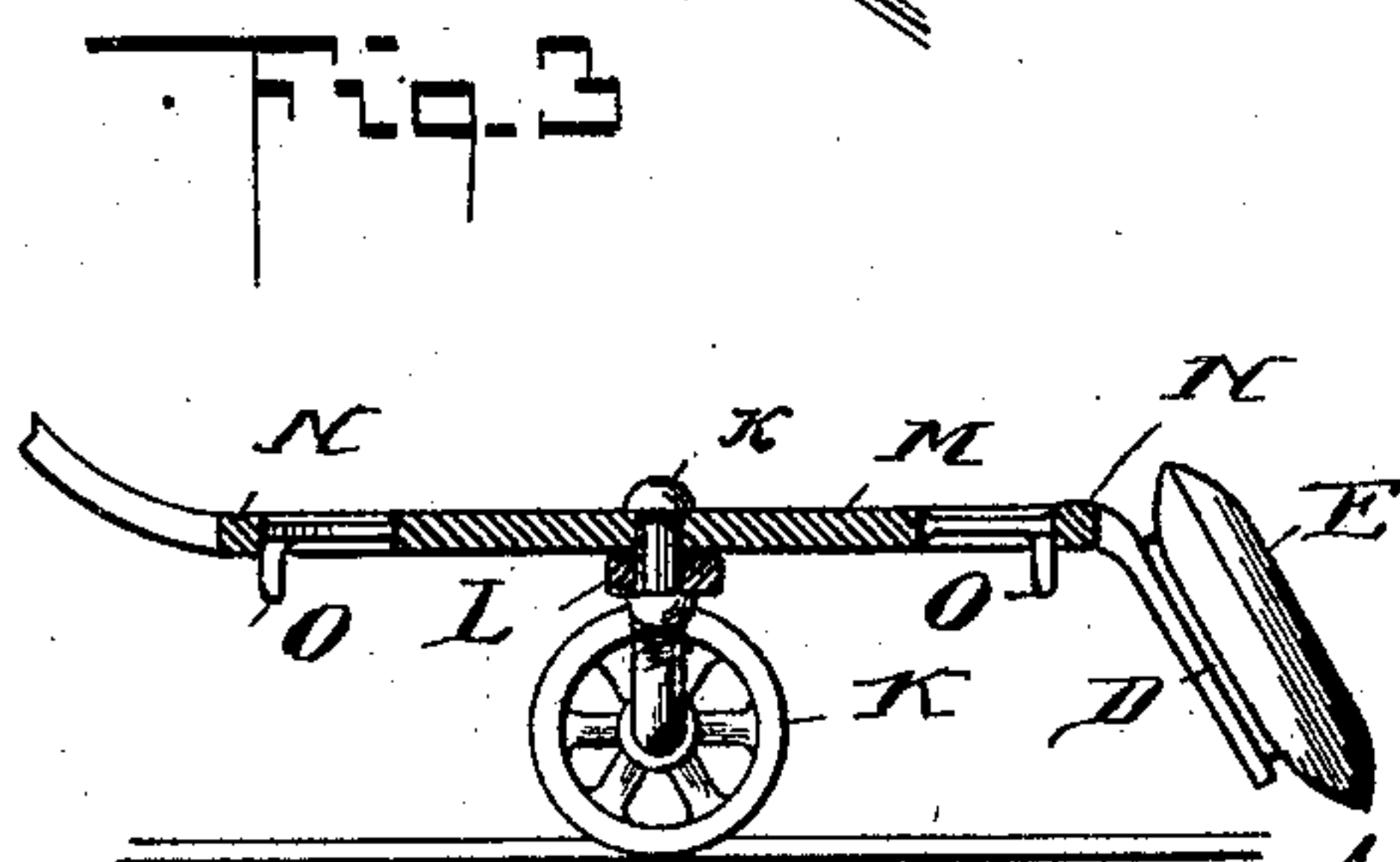
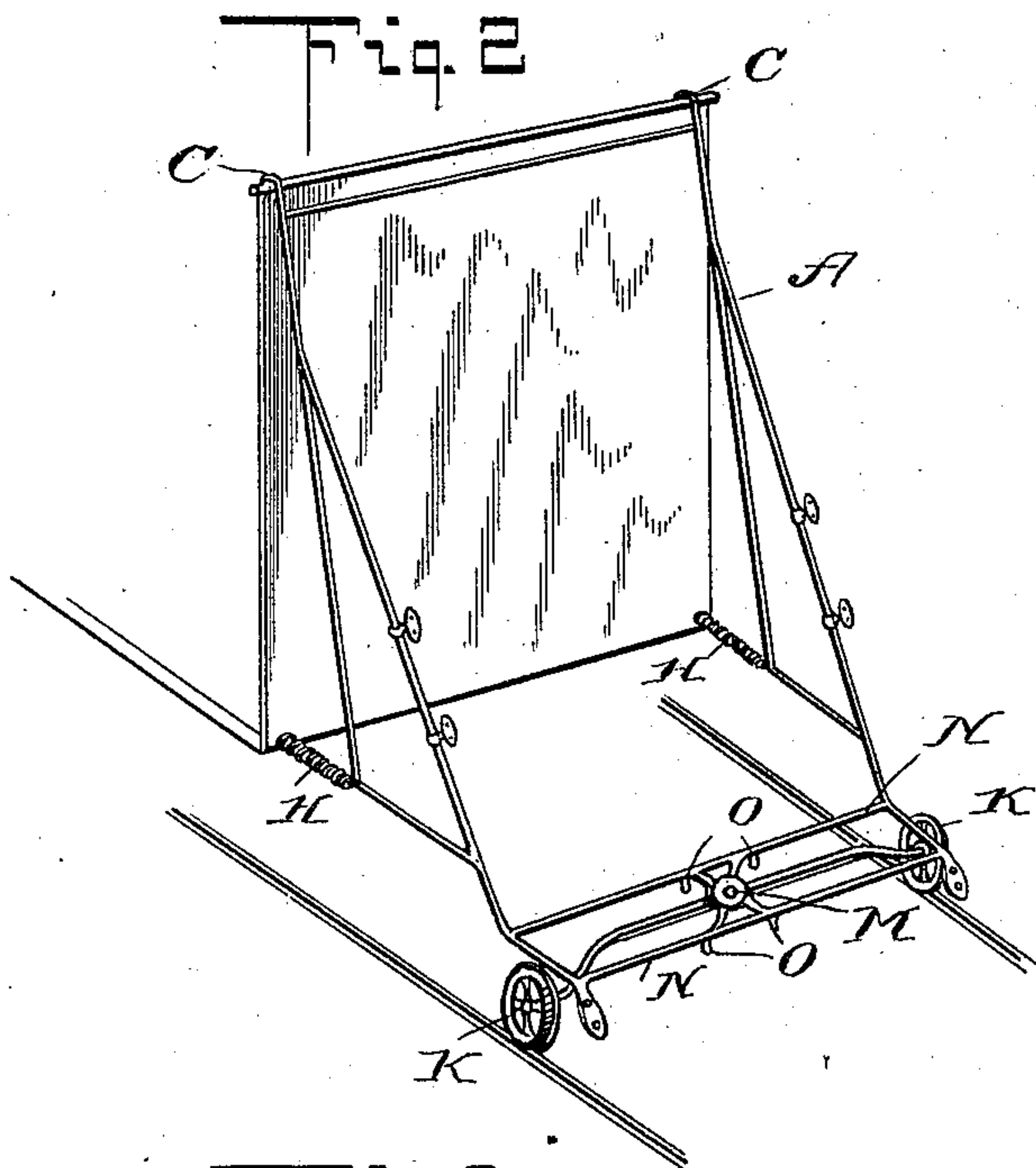
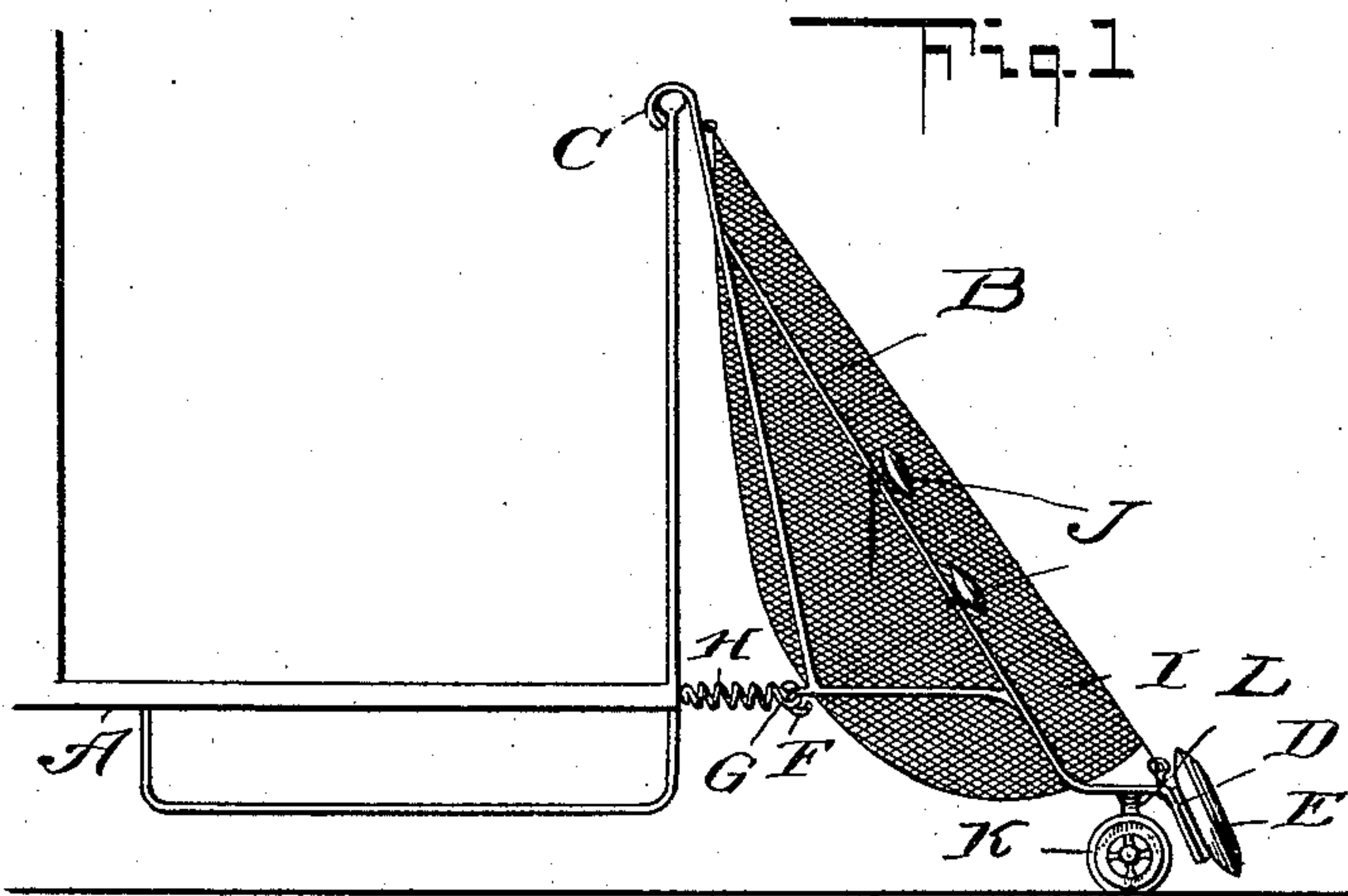


(No Model.)

N. T. MACFERRON.
CAR FENDER.

No. 577,140.

Patented Feb. 16, 1897.



Witnesses
Edmund A. Stansbury,
L. M. Graves

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UNITED STATES PATENT OFFICE.

NORMAN T. MACFERRON, OF ALLEGHENY, PENNSYLVANIA.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 577,140, dated February 16, 1897.

Application filed July 8, 1896. Serial No. 598,463. (No model.)

To all whom it may concern:

Be it known that I, NORMAN T. MACFERRON, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders; and I 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 appertains to make and use the same.

This invention relates to certain new and useful improvements in car-fenders; and it has for its objects, among others, to provide a simple and cheap construction of fender that can be readily applied to a car and which will prevent injury to and loss of life to persons caught upon the track. I provide a pneumatic cushion or cushions which extend below the bottom edge of the fender and so mount the lower end of the fender that it shall have a sufficient yielding play to take up the sudden jar or shock occasioned by sudden contact with an object.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention in this instance resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation showing the fender applied to a car. Fig. 2 is a skeleton view of the frame in perspective. Fig. 3 is a vertical section.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the front portion of a car of known construction and over the upper edge of which the upper portion of the frame of the fender is designed to be engaged. The frame may, however, sometimes be permanently attached to the car in any desired manner.

B is the frame of the fender. It is preferably of slender rods of spring-steel, although other metal might be employed. When detachably mounted on the car, the rear of the frame is provided at its upper end with the hooks or analogous means C to engage over the upper edge of the dash, and at the front, at the lower end, is secured the transverse board D, which extends to within about two inches, more or less, of the track, and to this board is affixed in any suitable manner a pneumatic cushion E of any suitable size and character. It may be of a width to extend up a greater or less distance and of a length to extend beyond the ends of the fender, if desired. The frame at its rear lower side is provided with the hooks F, which are designed to engage in the eyes or loops G, formed on the coiled springs H, which are secured to the front of the car. These springs allow for a free and yielding movement of the fender when the car is on a downgrade. The lower end, however, may be attached to the car by other means.

I is a netting secured to the frame of the fender in any of the well-known ways.

Additional pneumatic cushions J may be employed, as indicated in the drawings, although it may sometimes be found sufficient to provide only that at the lower front end of the fender.

K are wheels or rollers designed to travel upon the rails. They may be mounted in any suitable manner, but preferably as seen in Fig. 2, where they are shown as attached to an axle L, curved upward and flattened at its highest point and attached by a pivot k to the circular plate M, which is supported between the two parallel rods N.

O are projections from the lower surface of the rods to prevent the axle from turning completely around, but yet to allow the necessary movements for the rounding of curves.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is—

1. The combination with the fender-frame, of an axle curved as shown and pivotally mounted centrally and forwardly of the fender, a plate, rods supporting the same, and

projections extending from the lower surface of said rods, substantially as and for the purpose specified.

2. The combination with the fender-frame of an axle curved as shown and pivotally mounted centrally and forwardly of the fender, a circular plate, rods connecting the same, the axle being flattened at its highest point and pivoted to said plate, substantially as herein shown and described.

3. The combination with the fender-frame of an axle curved as shown and pivotally mounted centrally and forwardly of the fen-

der, a circular plate, rods connecting the same, the axle being flattened at its highest point and pivoted to said plate, and projections extending from the lower surfaces of said rods to limit the movement of the axle, substantially as herein shown and described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

NORMAN T. MACFERRON.

Witnesses:

FERDINAND MALSCH,
EDWARD T. MCILVAIN.