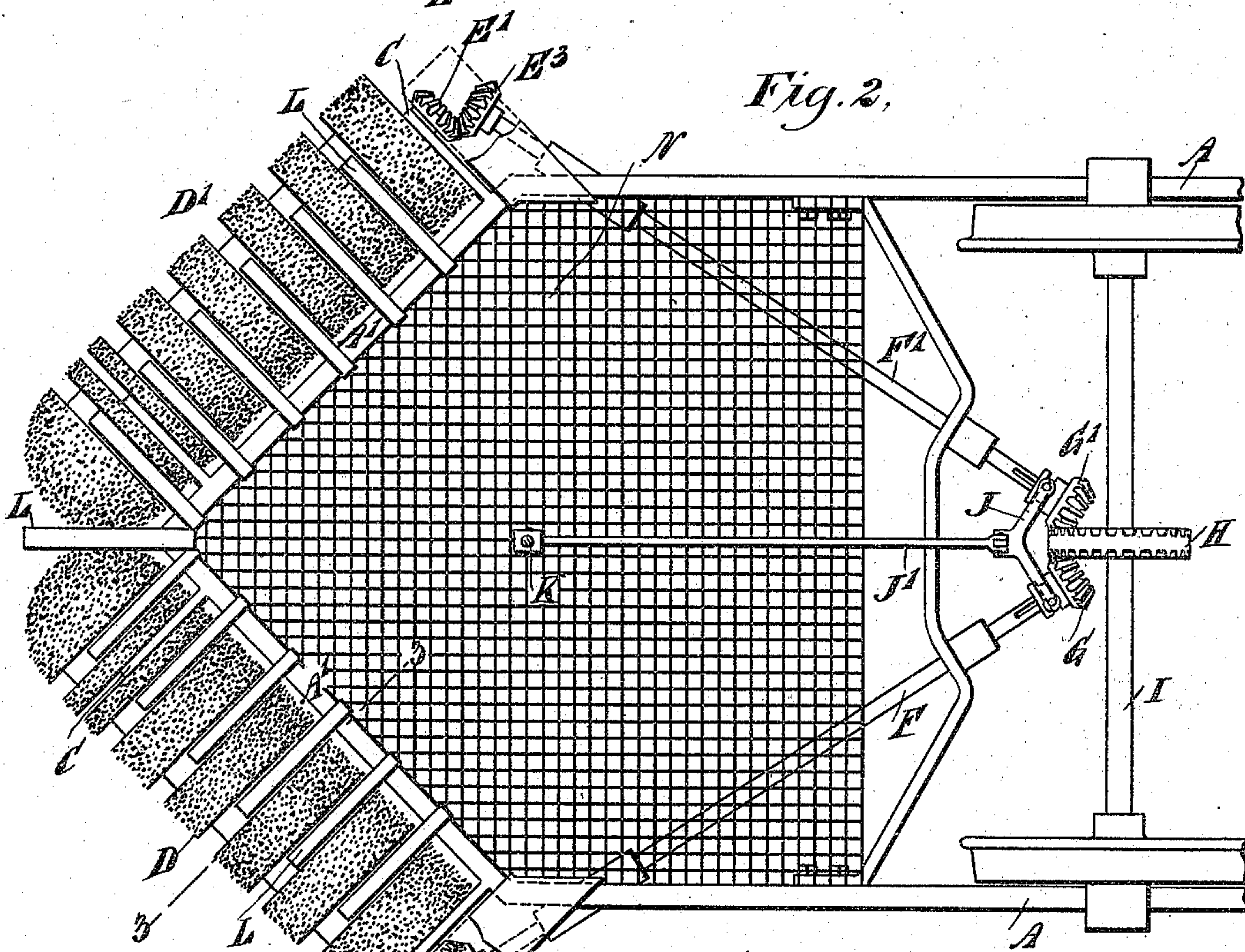
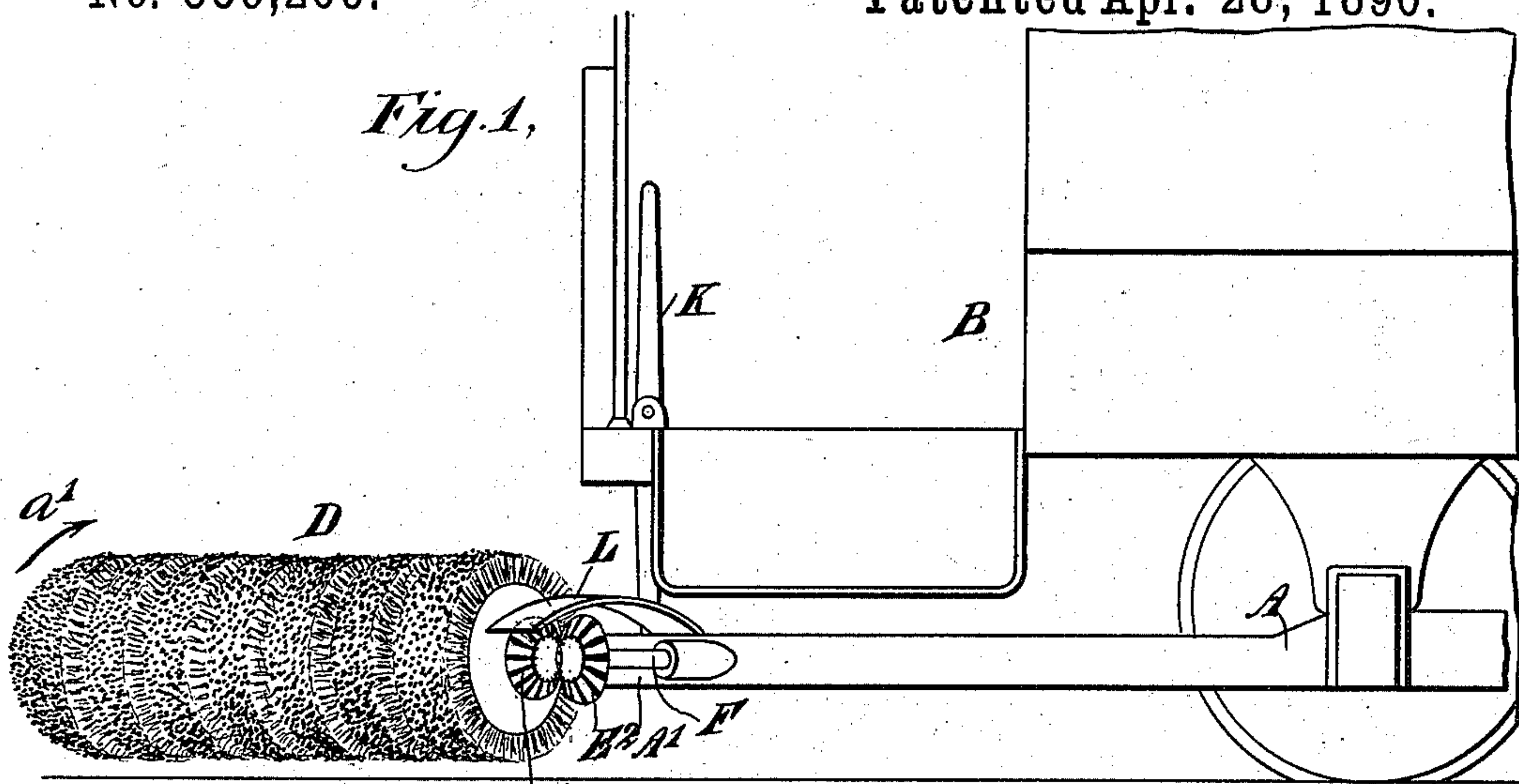


(No Model.)

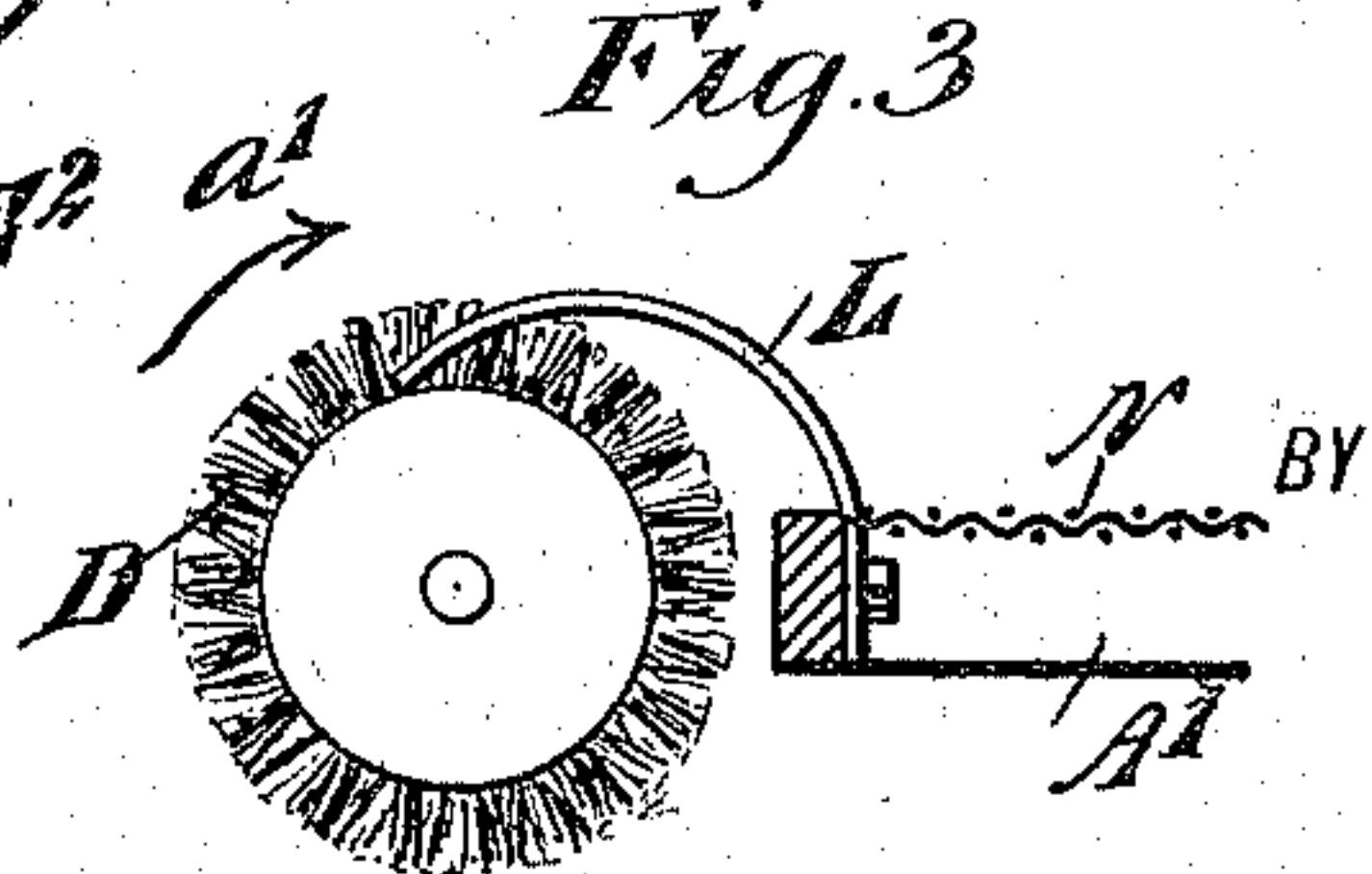
P. DUNWALD.
CAR FENDER.

No. 559,269.

Patented Apr. 28, 1896.



WITNESSES:
Edward Thorpe.
Geo. H. Foster.



INVENTOR
P. Dunwald.
BY *Mum*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER DUNWALD, OF RIO, NEW YORK.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 559,269, dated April 28, 1896.

Application filed January 16, 1896. Serial No. 575,670. (No model.)

To all whom it may concern:

Be it known that I, PETER DUNWALD, of Rio, in the county of Orange and State of New York, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved car-fender which is simple and durable in construction and arranged to prevent an obstruction in the path of the car from being run over by the latter and injured.

The invention consists of one or more revoluble brushes extending obliquely in front of a car and revolved from the running-gear thereof.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Figure 1 is a side elevation of the improvement as applied. Fig. 2 is a plan view of the same with the car-body revolved, and Fig. 3 is a sectional side elevation of part of the improvement on the line 3 3 of Fig. 2.

The truck-frame A of the car B is extended at each end to form a peak-shaped extension A' in the front of the dashboard of each car, as indicated in Fig. 2, and on said extension A' are secured bearings C, in which are journaled the brushes D D', arranged obliquely relatively to the track and at angles one to the other, as plainly indicated in Fig. 2. The outer ends of the brushes D D' come close together, and said brushes are preferably rounded off at their front ends, as indicated in said Fig. 2. On the rear ends of the brushes D D' are secured beveled gear-wheels E E', respectively in mesh with beveled gear-wheels E² E³, respectively secured on the outer ends of shafts F F', respectively journaled in suitable bearings in the extension A' of the truck-frame. The shafts F F' are inclined inwardly and rearwardly and carry at their inner ends beveled gear-wheels G G', respectively in mesh with a double-beveled gear-wheel H, secured on the axle I of the car, so that when the latter is in motion said double-beveled gear-wheel H transmits a rotary motion by the beveled gear-wheels G G' to the shafts F F', and the rotary motion of the latter is transmitted by the beveled gear-wheels E² E³ and E³ E' to the brushes D D', so that the lat-

ter are rotated in the direction of the arrow a', indicated in Figs. 1 and 3.

The beveled gear-wheels G G' can be moved out of mesh with the double-beveled gear-wheel H whenever desired, and for this purpose I mount said gear-wheel by keys and keyways on the shafts F F' to permit of sliding the gear-wheels on the shafts, so as to move the same in and out of mesh with the double-beveled gear-wheel H. The beveled gear-wheels G G' are loosely engaged by forked arms J, pivotally connected by a link J' with a lever K, fulcrumed on the platform of the car B and under the control of the operator, so that the latter by moving the lever K forward or backward can shift the beveled gear-wheels G G', so as to move the latter in or out of mesh with the double-beveled gear-wheel H.

On the extension A' are secured curved guard-arms L, extending with their free ends into annular recesses formed by removing some of the bristles in the brushes D D' to permit an obstruction swept over by the brushes upon said guard-arms to fall into a basket N, formed of netting or other suitable material, in the extension of the truck-frame, as plainly indicated in Fig. 2.

Now it will be seen that when the car is in motion and the gear-wheels G G' are in mesh with the gear-wheel H the brushes are revolved in the manner indicated, and any obstruction in the path of the car when struck by the brushes is brushed upwardly and inwardly to pass over the guard-arms L and into the basket N. Thus it will be seen that by the arrangement described a person in the path of the car and struck by the brushes is not liable to be injured by being run over, as the person is swept off the track or landed in the netting, as above described.

It is understood that the revoluble brushes at the rear end of the car do not revolve, as the beveled gear-wheels G G' for said brushes are out of mesh with the double-beveled gear-wheel H.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a car-fender, the combination of an axle having a gear-wheel provided with gear-teeth at opposite sides, a fender-frame carried

by the car, brushes mounted to turn in front of the fender-frame and having their axes extending at angles to each other, shafts carried on the fender-frame and provided with
5 gear-wheels at opposite ends, one gear-wheel of each shaft being arranged to engage the gear-face on one side of said gear-wheel on the axle, and the gear-wheel on the other end of the shaft being operatively connected to
10 and arranged to turn one of the brushes, substantially as set forth.

2. In a car-fender, the combination of an axle having a gear-wheel provided with a double gear-face, a fender-frame carried by the
15 car, brushes mounted to turn in front of the

fender-frame, bevel-gears carried by the brushes, shafts journaled in the fender-frame and provided with bevel-gears meshing with the bevel-gears on the brushes, bevel-gears mounted to slide on the said shafts and arranged to turn therewith, said last-named bevel-gears being adapted when moved in one direction to engage the respective gear-faces on the gear-wheel on the axle, and means for simultaneously sliding said bevel-gears on the shafts, substantially as set forth.

PETER DUNWALD.

Witnesses:

THEO. G. HOSTER,
JNO. M. RITTER.