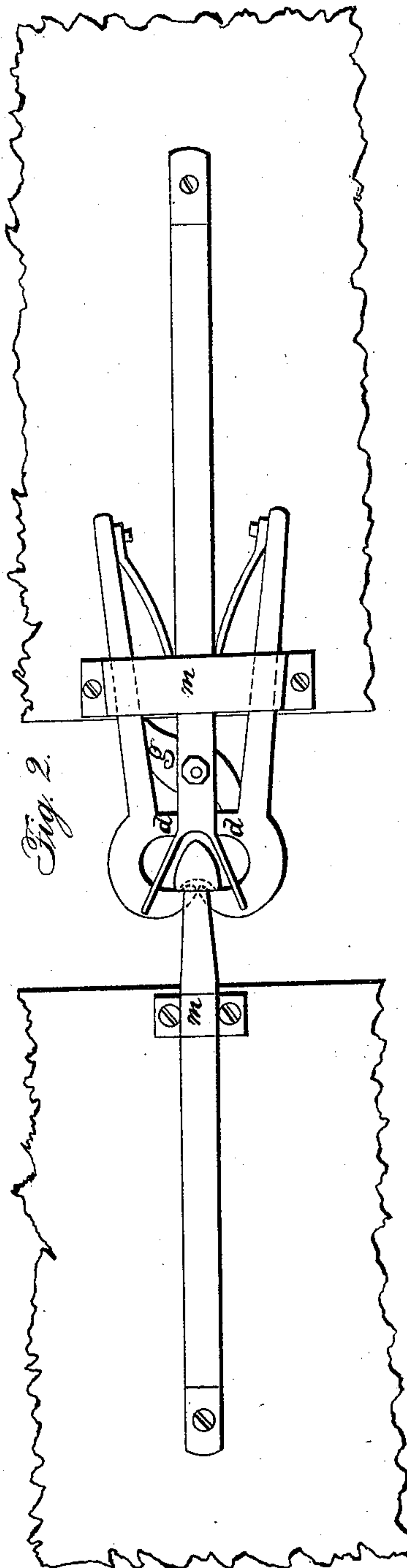
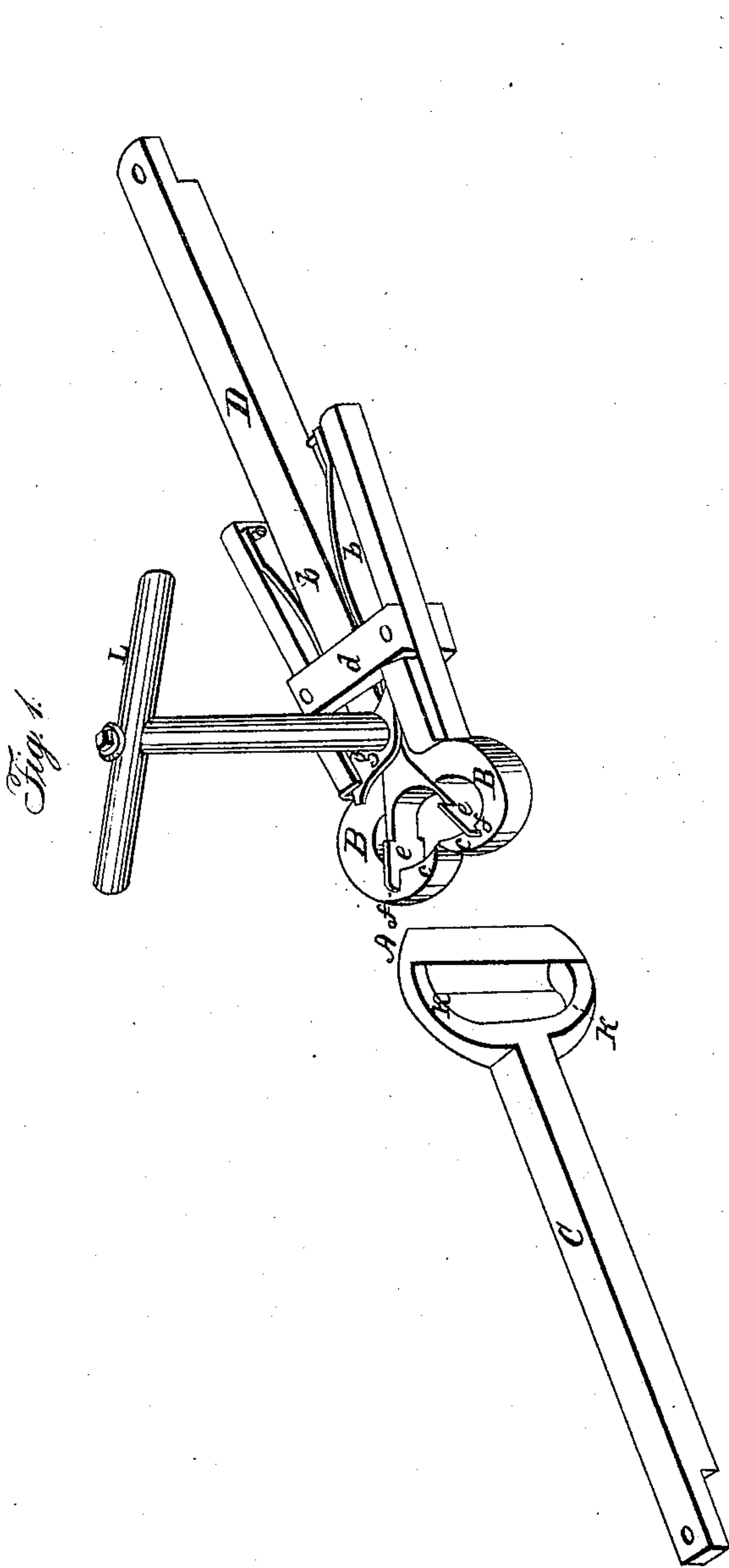


F. STEINHART.

Car Coupling.

No. 23,793.

Patented Apr. 26, 1859.



Witnesses:

H. C. Griffiths
M. C. Fuller

Inventor:

F. Steinhart

UNITED STATES PATENT OFFICE.

F. STEINHART, OF DANSVILLE, NEW YORK.

SPRING CAR-COUPLING.

Specification of Letters Patent No. 23,793, dated April 26, 1859.

To all whom it may concern:

Be it known that I, FRANK STEINHART, of Dansville, county of Livingston, and State of New York, have invented certain new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a plan of coupling embracing my improvement, and Fig. 2 represents a plan of the under side of the coupling which is connected with the car.

My improvements in car couplings relate to spring jaws and self connecting couplings, in which the spring jaws form one part of the coupling and a spear headed or wedge shaped bolt, the other part. In these couplings, as heretofore constructed, the spring jaws are generally inclosed in a coupling box, the end of which forms the buffer to the cars, and the points of the jaws instead of meeting close upon are kept apart by the shank of the bolt. From the necessity of inclosing these jaws in a coupling box to form the buffer, the weight and expense of the coupling is very much increased and from the shank of the bolt entering between the jaws, the strain is thrown on the point of the jaws which is the weakest part, and in passing round sharp curves one jaw is thrown back by the shank of the bolt which renders the cars, on that account liable to uncouple.

To overcome these objections in the spring couplings is the principal object of my improvements; and my invention for effecting these objects consists, first, in arranging between the jaws of the spring clutch radial fenders or guides which are connected with the front end of the draw bar form a support to the jaws of the clutch—act as guides to the bolt in entering the jaws and prevent the back of the bolt from catching the points of the jaws as it is withdrawn or uncoupled. Second, constructing the head of the bolt with an open and recessed back, so that the jaws of the nipper coupling may close around the bolt head and meet each other on the back of the bolt while at the same time the bearing of the bolt head will be back of the joint between the jaws.

In the accompanying drawings a car coupling with my improvements is represented. This consists of two principal parts,

a wedge shaped bolt (A,) forming the head of a draw bar (C) attached to one end of the car, and a pair of spring jaws or nippers (B) attached and forming the head of the draw bar (D) on the opposite end of the car.

The shank of the nippers is pivoted to a cross piece (a) on the draw bar, and the jaws (c) curve around and meet in front of the draw bar which extends forward between the projections (d) on the rear of the jaws that act as stops to prevent the end of the jaws from being battered in closing, and also prevent either jaw from passing the center line of the bar.

Two guide plates (e) with notches (f) in their ends radiate from the draw bar, and through these notches the jaws of the nippers play, they supporting the jaws and preventing them from twisting while at the same time they act as guides to the bolt preventing it from striking the inside of the jaws as it enters the nipples and guiding it to the center of the draw bar which forms a buffer to receive the shock of the cars. On opening the nipples to uncouple the cars, these guide plates (e) also prevent the corner of the bolt from catching the points of the jaws, as they recede back of the face of the plate and leave an even surface.

The jaws of the nippers are closed by springs (s) attached to the shank and are opened to release the bolt by a cam (g) operated by a handle (z). The bolt consists of a wedge shaped head (h) connected with the draw bar (c) at the top and bottom by the shanks (k) which leave an opening between the back of the bolt head and the draw bar so that the points of the nippers come together when the cars are coupled, meeting each other on the back of the bolt head, by which arrangement the bolt head is free between the jaws, so that it may turn or move laterally in the jaws without tending to force them open,—as is the case when the shank of the bolt passes between the jaws, keeping them apart.

In the back of the bolt head is a recess (e') opposite the joint between the jaws when the bolt head is within the nippers by which means the bearing of the bolt head in the jaws is on the sides of the joint and at the points of the jaws curve slightly inward, the draft on the bolt tends to hold the jaws closed.

The rear end of both draw bars are bolted to the flooring timbers of the car and sustained beneath the end timber by a bracket (m) which is sufficiently wide around the nippers to allow them to slightly vibrate laterally so that when the cars come together and the bolt is not directly opposite the center of the nippers they will be deflected by the bolt and brought into line and the bolt pass between the jaws and couple the cars.

The great depth given to the bolt head insures the coupling of the cars when the platforms stand at different levels.

Having thus described my improvements in car couplings, what I claim therein as

new, and desire to secure by Letters Patent is—

1. The combination of the radial fenders or their equivalent arranged as described with the jaws of the nippers for the purpose set forth. 20

2. Constructing the bolt head with an open back and also with a longitudinal recess in its back for the purpose described. 25

In testimony whereof I have subscribed my name.

FRANK STEINHART.

Witnesses:

H. I. GRIFFITHS,
W. C. TRULL.