H. DUTCHER.

Car-Couplings.

No. 158,409. Patented Jan. 5, 1875.

Fig. 1

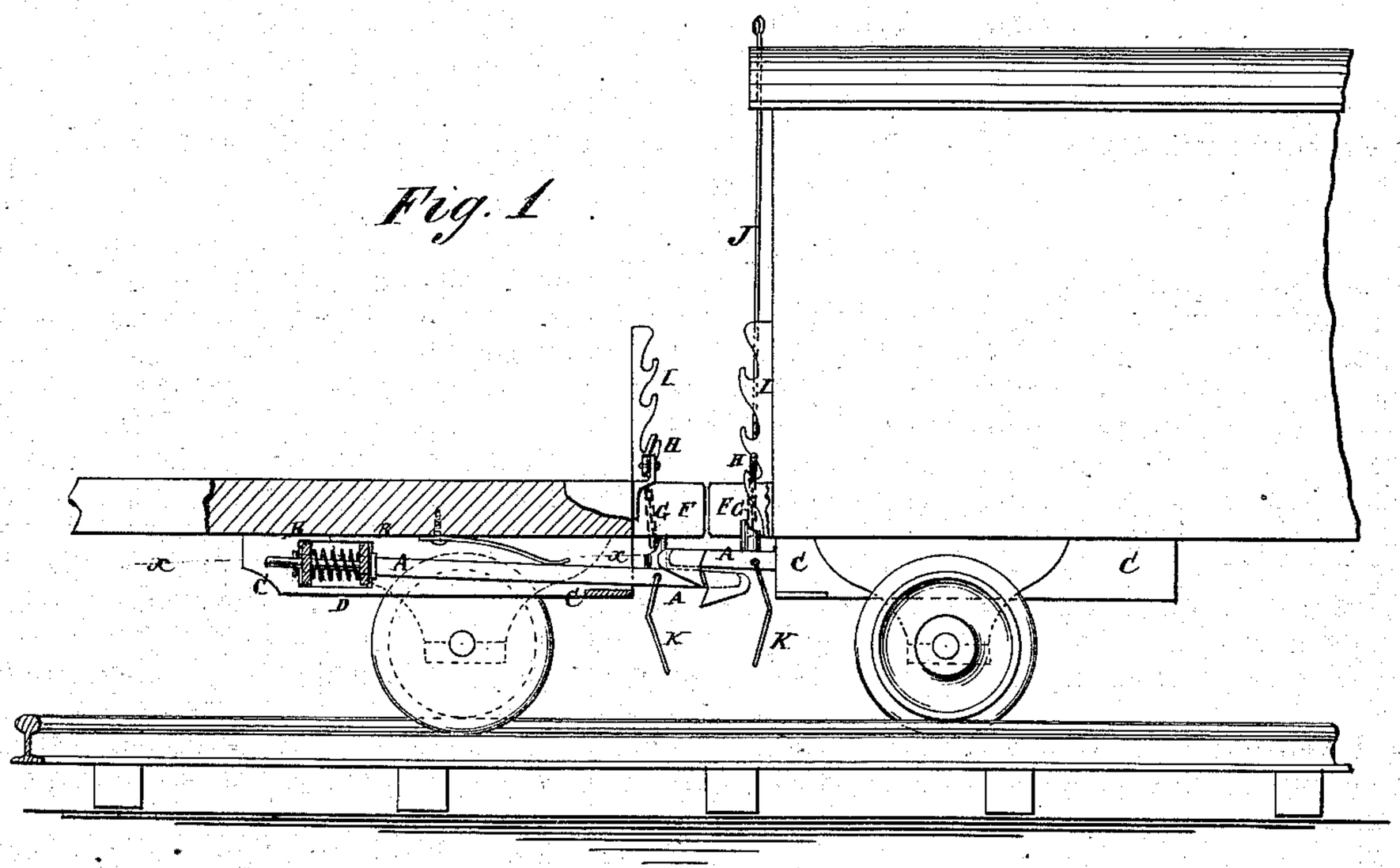


Fig. 2

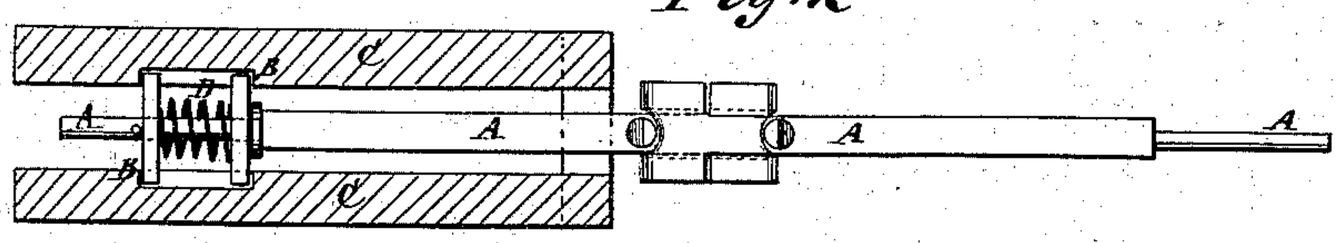
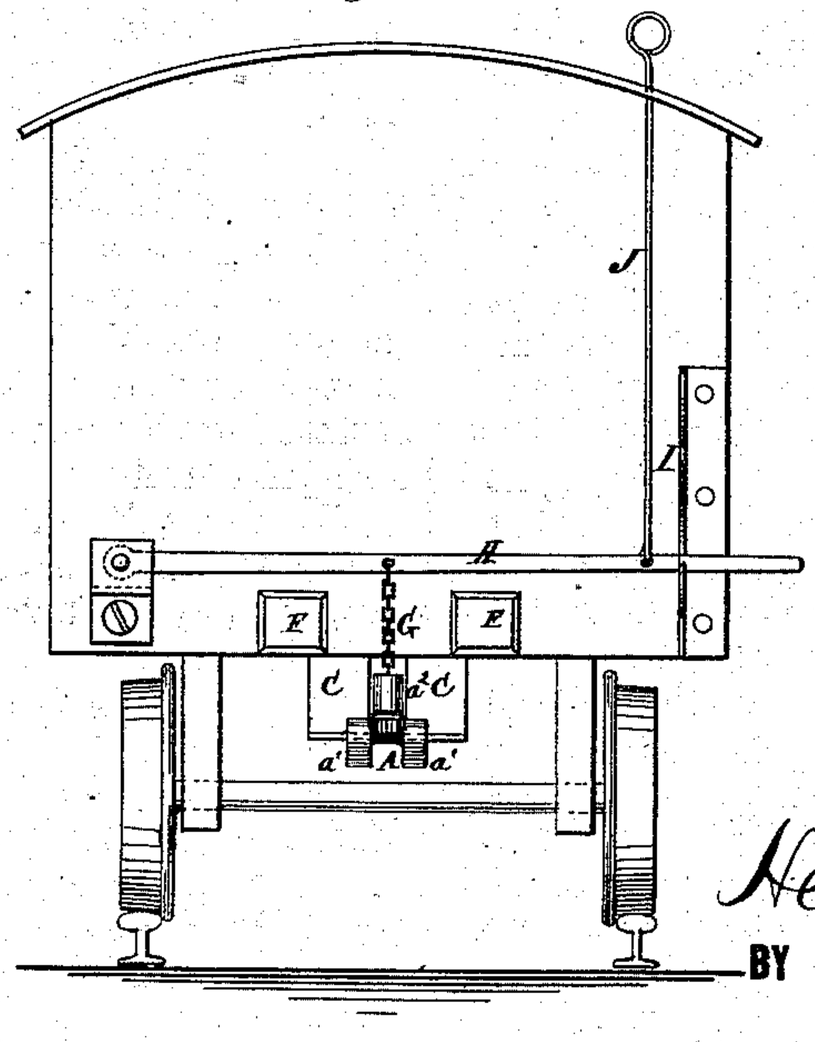


Fig. 3



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UNITED STATES PATENT OFFICE.

HENRY DUTCHER, OF PORT JERVIS, NEW YORK.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **158,409**, dated January 5, 1875; application filed December 5, 1874.

To all whom it may concern:

Be it known that I, HENRY DUTCHER, of Port Jervis, Orange county, New York, have invented a new and Improved Car-Coupling, of which the following is a specification:

Figure 1 is a side view of my improved coupling, shown as applied to a freight and a box car, and part being broken away to show the construction. Fig. 2 is a top view of the same, partly in horizontal section, through the line *x x*, Fig. 1. Fig. 3 is a front view of one of the cars to which my coupling has been applied.

The invention is an improvement in automatic couplers; and consists in the construction of parts, as hereinafter described and claimed.

A represents the coupling-bar, the rear end of which passes through two cross-bars, B. The ends of the two bars B are placed in slots in the longitudinal bars C, attached to the car-body. D is a coiled or other spring, placed upon the coupling-bar A between the cross-bars B.

By this construction, in starting and stopping the cars the first effect is to compress the spring D, so as to diminish the jar.

Upon the sides of the forward ends of the coupling-bars A are formed projections a^1, the lower side of the forward end of which is beveled off, as shown in Fig. 1. The rear ends or shoulders of the projections a^1 are concaved or slightly notched, as shown in Fig. 1, so that the lower part of the said shoulders may serve as hooks to catch upon the upper parts of the shoulders of the coupling-bar of the adjacent car. The projections or heads a^1 are level with the upper sides of the bars A, and project below the lower sides of said bars A.

By this construction, as the cars are run together and the heads a^1 catch upon each other the downwardly-projecting parts of the upper head a^1 straddle the body of the lower head, which prevents the coupling from being uncoupled by the lateral movement of the cars.

The coupling-bars A are held down by springs E placed above them, and attached to the body of the car, and which bear upon the upper sides of the bars A, so as to prevent the coupling from being uncoupled by a sudden jar. Upon the upper sides of the bars A, a little in the rear of the heads a^1, are formed projections a^2, against which the ends of the adjacent bars strike before the bumpers E come in contact, and which thus serve as buffers to receive the first blow and cause the springs D to be compressed, and thus diminish the jar when the bumpers F come in contact. To the forward part of the bars A, or to the projections or buffers a^2, are attached short chains G, the upper ends of which are attached to the levers H. The levers H are pivoted at one end to the front of the car-body, near one side, and their other ends project into such a position that they may be conveniently reached and operated by a person standing at the side of the car. The free end of the lever H passes across a notched bar, I, attached to the car-body, as shown in Figs. 1 and 3.

When cars of the same height are to be run together the lever H of one car is placed in the lowest notch of the bar I, and the lever H of the other car is placed in the second notch, so that, when the cars are run together, one of the heads a^1 may be raised a little above the other, so that it will slide over it.

When the cars are to be uncoupled the lever H of the upper bar A is placed in the third notch of the bar I, which raises the head a^1 of the said upper bar out of contact with the head of the lower bar.

In the case of box-cars a rod, J, may be attached to the lever H near its free end, so that the upper bar may be raised to uncouple the cars from the top of the said car, if desired or more convenient.

To the forward part of the bars A are attached links K, so that a car to which my improved coupling has been applied may be coupled with a car having the ordinary link-and-pin coupling.

The links K, when not in use, may be allowed to hang down, as shown in Fig. 1; or they may be detached, if desired.

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

The peculiar heads a^1 and the projections or buffers a^2, formed upon the forward ends of the coupling-bars A, connected with the car-bodies by cross-bars B and springs D, all combined substantially as shown and described.

HENRY DUTCHER.

Witnesses:
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