

No. 713,680.

Patented Nov. 18, 1902.

J. M. PHILLIPS.

COMBINED COUPLING AND BUMPER FOR MINE CARS.

(Application filed Oct. 14, 1901.)

(No Model.)

Fig. 1

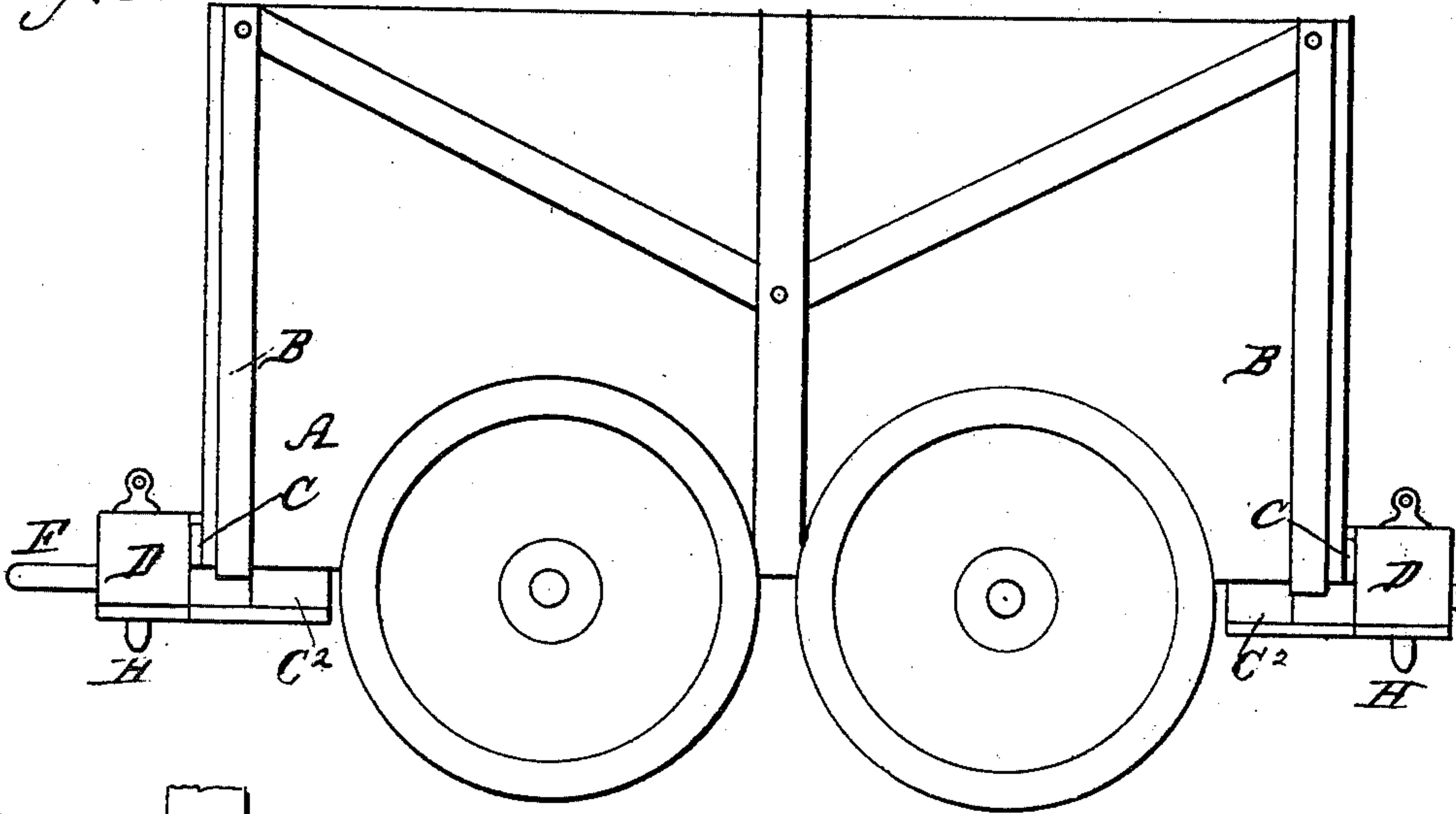


Fig. 2

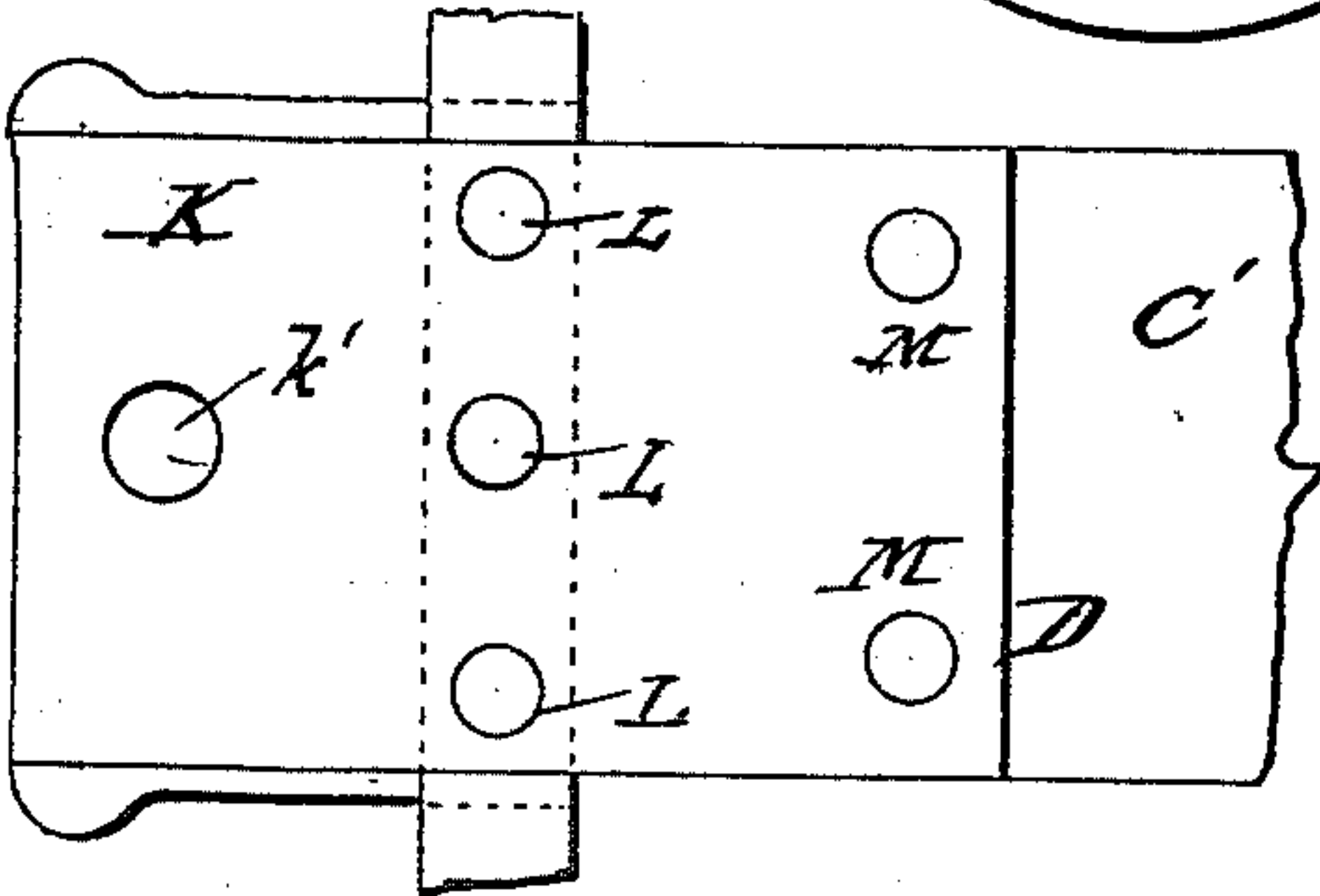


Fig. 3

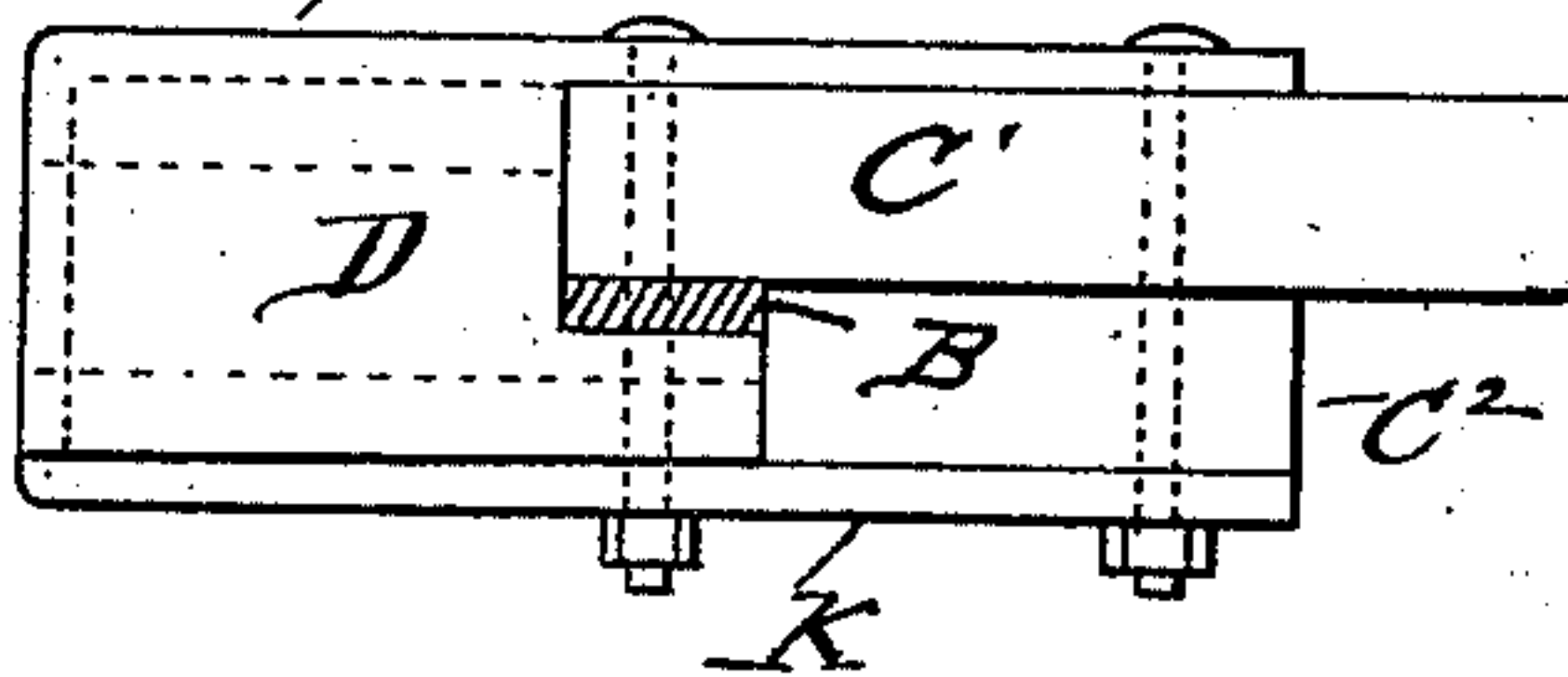


Fig. 4

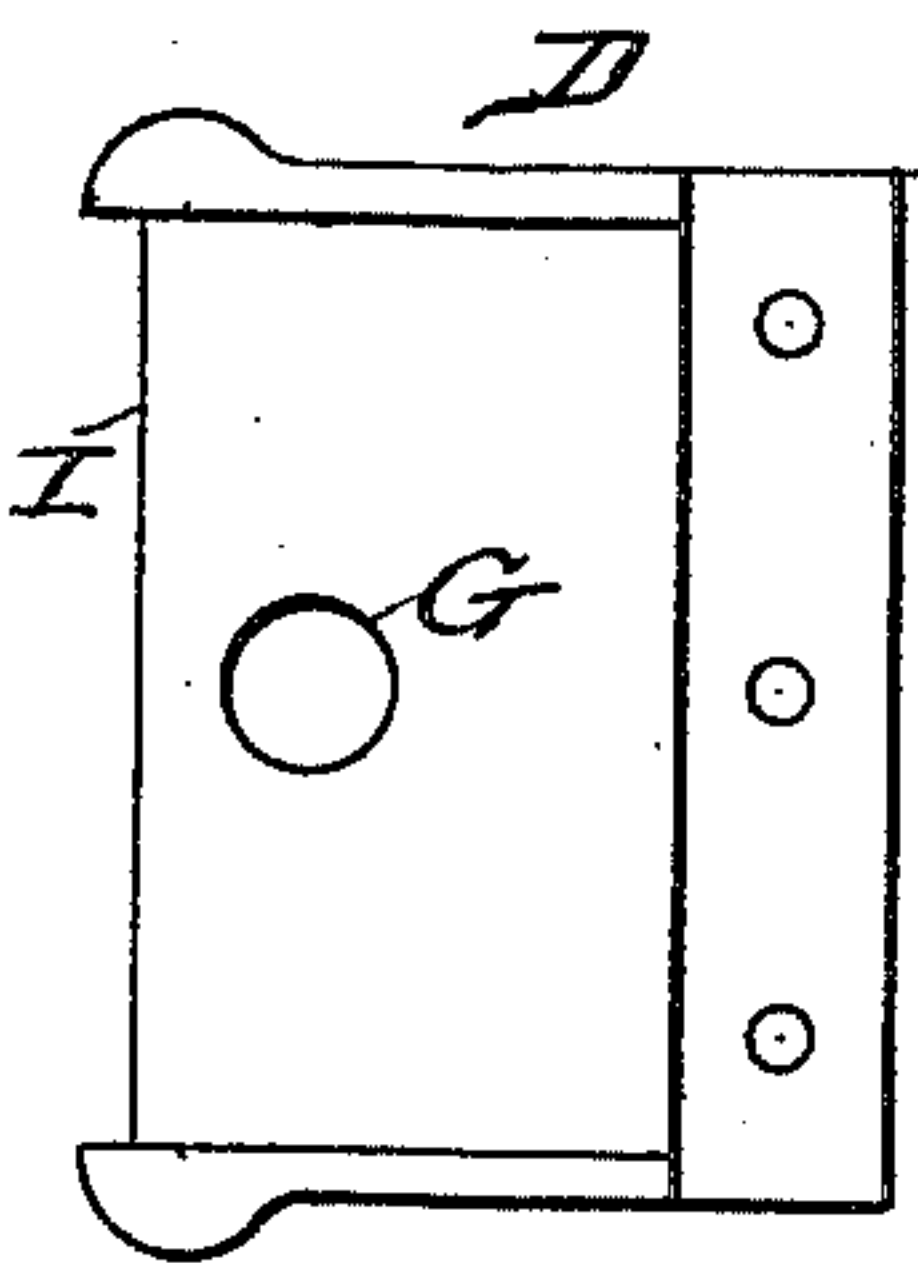
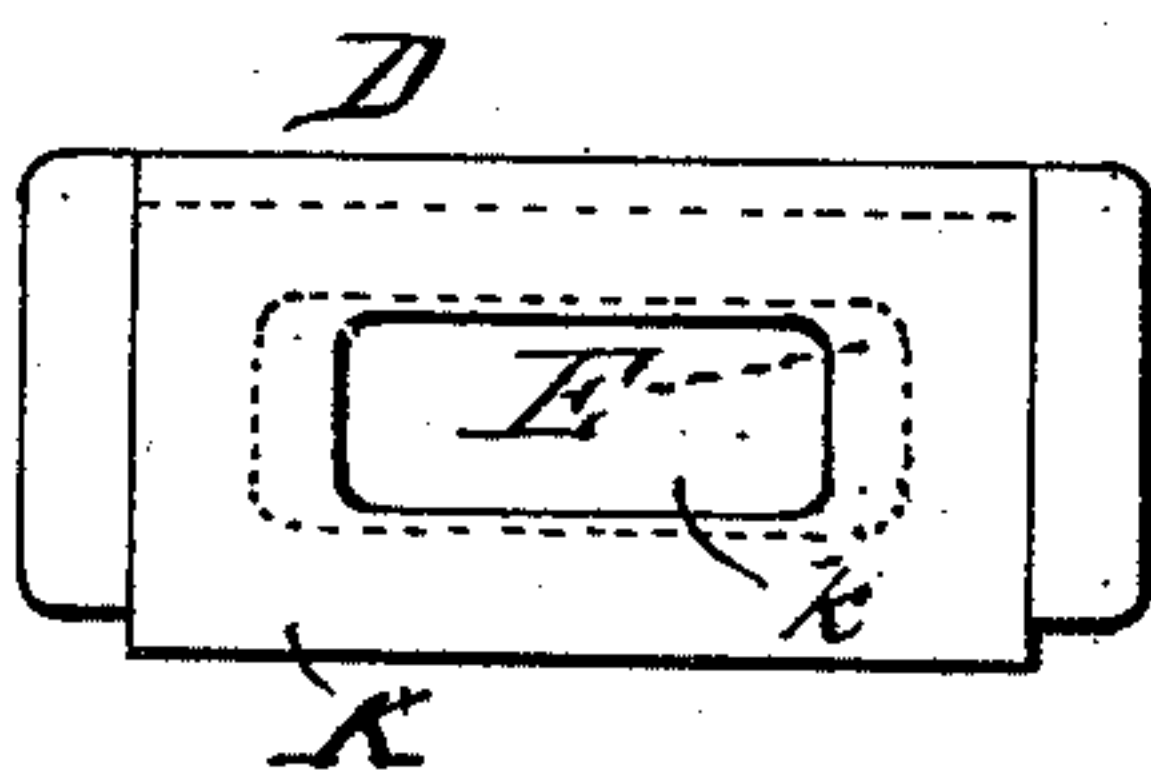


Fig. 5



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COMBINED COUPLING AND BUMPER FOR MINE-CARS.

SPECIFICATION forming part of Letters Patent No. 713,680, dated November 18, 1902.

Application filed October 14, 1901. Serial No. 78,645. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. PHILLIPS, a citizen of the United States, residing at Carrick, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Coupling and Bumper for Mine-Cars; 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.

My invention has relation to couplings for mine-cars, and has for its object the provision of a combined coupling and bumper of comparatively cheap and simple construction and which will be very strong and durable and adapted to meet all the requirements of and withstand the severe shocks and strain to which these devices are subjected.

Mine-cars as ordinarily constructed consist of a box-like structure having a bottom composed of heavy planks that protrude slightly beyond each end of the body, and the protruding ends of the bottom planks have been utilized both as a means for attaching coupling devices and as buffers, the coupling device being attached to the middle plank and the side planks being shod with iron and acting as buffers or bumpers. This construction is objectionable for the reason that in turning short curves the bumpers on one side of the coupling are brought into contact and the leverage given by the location of the bumpers imposes a heavy strain upon the coupling that often results in serious damage to the coupling.

I am aware that it has been proposed to form a combined coupling and bumper by arranging a casting having openings for a coupling link and pin between plates which were riveted to the casting and bolted to the top and bottom of the central plank of the car-bottom; but in this construction the entire strain of the pull and shock of the meeting cars is imposed on the bolts or rivets which hold the parts together.

In carrying my invention into effect I provided a cast-metal block having a cavity for the reception of a coupling-link and a vertical hole for the passage of the coupling-pin, and I attach this casting to the middle plank

of the car-bottom by means of a single bent plate of heavy wrought metal of substantially U shape, which extends around the front or face of the casting and in the rear of the same on both the top and bottom and embraces the bottom plank of the car-body, the end belt of the same, and a filling-block fixed below the car-bottom. The bent plate is formed with a hole in front corresponding to the cavity for the reception of the coupling-link in the casting and with holes for the passage of the coupling-pin and is secured to the casting and to the bottom plank of the car, as hereinafter described, the whole constituting a combined coupling and bumper of very simple construction, but of superior strength and durability.

Referring to the accompanying drawings, Figure 1 is a side elevation of a mine-car of ordinary construction having my improvements applied. Fig. 2 is a plan view of the combined coupling and bumper and part of a bottom plank; Fig. 3, a side elevation of the same with the end belt of the car in section; Fig. 4, a plan view of the casting detached from the bent plate, and Fig. 5 a front view of the coupling shown in Figs. 2 and 3.

A designates the body of the car, B the end belt of the same, and C the bottom, the latter being composed of a number of heavy planks, which project slightly beyond the car-body, as shown in Fig. 1.

D designates a heavy casting of substantially rectangular form, having a central cavity E for the reception of the coupling-link F and a vertical hole G for the reception of the coupling-pin H. This casting has a wide groove I, extending from near one edge to near the other and on the top and front or face of the casting, and in this groove rests the U-shaped wrought-metal plate K, which extends, as shown, to the rear of the casting and embraces the plank C', which is the middle plank of the car-bottom, and also embraces a filling-in block C², which is cut away, as shown in Fig. 3, for the reception of the end belt B. The plate K has a cavity *k* in front for the passage of the coupling-link F and a hole *k'* for the passage of the coupling-pin H.

The plate K is secured in position and attached to the car-bottom by means of bolts L L L and M M, the bolts L L L passing through the end belt B.

5 The casting D is held securely in position by the plate K, which rests in the groove in the top and front of the casting, and no bolts, rivets, or other means are required for holding it in place.

10 Having described my invention, I claim—

1. A combined coupling and bumper composed of a casting having a cavity for the reception of a coupling-link, a hole for the reception of a coupling-pin and a metal plate
15 extending around the front of said casting and projecting to the rear of the same and adapted to embrace and be secured to the

bottom plank of a car-body, substantially as described.

2. In a coupling, the combination of casting D having the groove I, the cavity E and the hole G with the U-shaped plate K having cavity *k* and hole *k'* and extending to the rear of said casting and pierced for the passage of bolts to secure it in position on the
25 bottom plank of a car, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN M. PHILLIPS.

Witnesses:

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A. A. CONNOLLY.