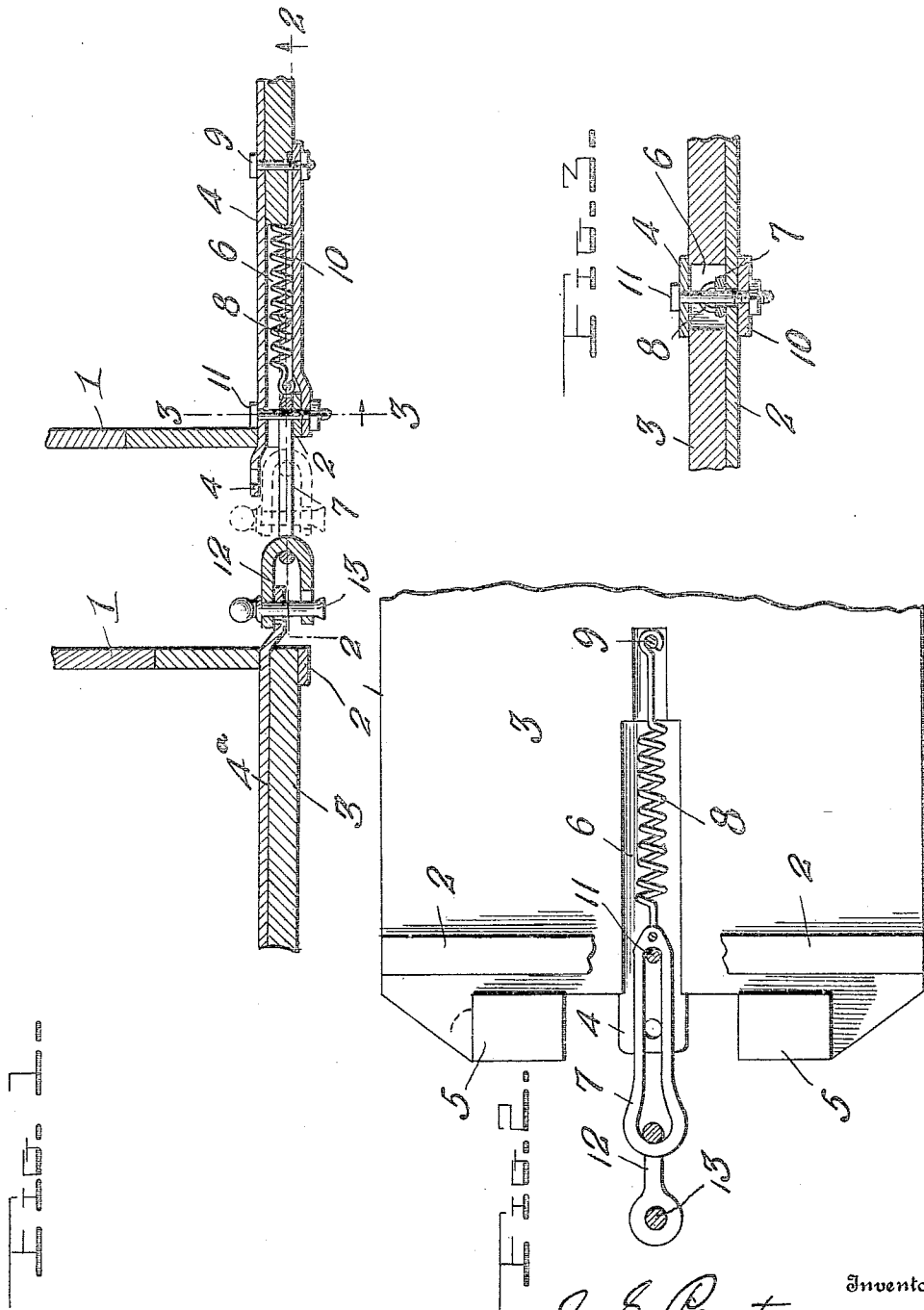


J. S. PAXTON.
MINE CAR COUPLING.
APPLICATION FILED APR. 22, 1909.

953,706.

Patented Apr. 5, 1910.



Witnesses

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JAMES S. PAXTON, OF LUZERNE, KENTUCKY.

MINE-CAR COUPLING.

953,706.

Specification of Letters Patent.

Patented Apr. 5, 1910.

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To all whom it may concern:

Be it known that I, JAMES S. PAXTON, a citizen of the United States, residing at Luzerne, in the county of Muhlenberg and State of Kentucky, have invented certain new and useful Improvements in Mine-Car Couplings, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in coupling devices for mine cars.

The object of the invention is to provide a simple and practical link and pin coupling device which will be carried by the car so that it cannot become lost and which will be spring retracted to not only retract the coupling link or draw bar when not in use but also to take up all slack in the coupling connection between two cars, whereby the coupling devices will be prevented from getting between the ends of the longitudinal bars of the cars and bending such bars when the cars bump against each other.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section through the adjacent ends of two cars showing the improved coupling device; Fig. 2 is a horizontal section taken on the plane indicated by the line 2—2 in Fig. 1; and Fig. 3 is a detail vertical transverse section taken on the plane indicated by the line 3—3 in Fig. 1.

In the drawings 1 denotes the body portions of two mine cars of well known form and construction having their ends reinforced by transversely extending binding straps 2 which extend across the under face of the bottom portions 3 of the car bodies. Secured centrally upon the top of the car bottoms 3 are longitudinal bars 4 4^a, the ends of which project beyond the vertical end walls of the car bodies and between the usual bumpers 5 at the ends of the bottoms of the cars. Cars of the character just described are usually coupled by coupling devices consisting of several chain links and two clevises having pins to enter the apertured ends of the longitudinal bars. In practice, it frequently happens that when mine cars are thus connected the link or chain coupling devices get between the ends

of the longitudinal bars when the cars bump together and either bend the longitudinal bars or break the couplings.

To overcome the above noted objection, I employ the coupling devices shown in the drawings.

In the practice of the invention, I remove a portion of the bottom 3 beneath the longitudinal bar 4 at one end of the car to provide a recess 6 for the reception of a draw bar in the form of a longitudinally slidable link 7 and a retracting spring 8 for said link. Said spring is in the form of a coil having one end attached to the link and its other end fastened by a vertical bolt 9 which extends through the longitudinal bar, the bottom of the car and a longitudinally extending bottom bar 10 which closes the bottom of the recess 6. The forward end of the bottom bar 10 is united to the transverse reinforcing bar or strap 2 by a vertical bolt or the like 11, which latter passes through the link or draw bar 7 and also through the longitudinal bar, as clearly shown in Fig. 1 of the drawings. The outer end of the link or draw bar has hung from it a U-shaped clevis 12 in the apertured arms of which is a slidable coupling pin 13 adapted to enter the opening in the end of the longitudinal bar on the abutting end of the adjacent car. The pin 13 has a shouldered or headed upper end and its lower end is so shaped that it may pass freely through the opening in the lower arm of the U-shaped clevis 12 but will be prevented from passing through the opening in the other arm of said clevis, thereby preventing the complete removal of the coupling pin from the clevis and, consequently, the loss of such pin but at the same time permitting the ready connection of the clevis with the longitudinal bar and its removal therefrom.

By constructing the coupling devices as above set forth, it will be seen that when one car is pulling the other the inner end of the link 7 will be engaged with the bolt or fastening 11 so that the strain will be on the latter, and consequently, on the longitudinal bars. The instant one car moves toward the other, the spring 8 of the coupling device will retract the link 7 as shown in dotted lines in Fig. 1, and thereby take up all slack in the coupling connection and effectively prevent the longitudinal bars or other parts of the ends of the car from becoming broken or bent. When the cars are uncoupled said spring 8 will also retract the link 7 so that

they will not be in the way but will hold the clevis 12 in retracted position.

The invention may be applied to cars in their course of manufacture and also to old cars now in general use and cars equipped with the invention may be used in connection with the old style cars not equipped with the invention.

I have found in practice that this coupling device is exceedingly effective for the purpose intended and that its use results in a great saving in time and labor which is otherwise expended in repairing bent, twisted and broken bars and also a saving in the cost of coupling devices.

While I have shown and described in detail the preferred embodiment of the invention, it will be understood that I do not wish to be limited to the precise construction set forth and that various changes in the form, proportion, arrangement and details of construction may be resorted to within the spirit and scope of the invention.

Having thus described the invention what is claimed is:

1. The combination of a car, a longitudinal bar thereon, a second longitudinal bar spaced from the first mentioned one, fastenings uniting said bars, a coupling link arranged between said bars upon one of said fastenings, a coil spring arranged between

said bars and having one end connected to the link and its other end to the other fastening, and a clevis upon the outer end of the link.

2. The combination of a car having a recessed bottom, a longitudinal bar connected to the bottom of the car and extending over said recess, a longitudinally extending bottom bar extending over said recess, a transverse reinforcing bar extending across the bottom of the car and the outer end of said bottom bar, inner and outer vertical fastenings, the inner one being passed through the first mentioned longitudinal bar, the bottom of the car and said bottom bar and the outer one being passed through the first mentioned longitudinal bar, the bottom bar and said transverse reinforcing bar, a coupling link arranged between the first mentioned longitudinal bar and reinforcing bar and upon said outer fastening, a coil spring arranged in the recess in the bottom of the car and having one end connected to said link and its other end to said inner fastening and a clevis upon the outer end of said link.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JAMES S. PAXTON.

Witnesses:

C. W. TAYLOR,
D. S. DUNCAN.