

(No Model.)

F. S. FRISCHEIS.  
AUTOMATIC CAR LINK.

No. 383,453.

Patented May 29, 1888.

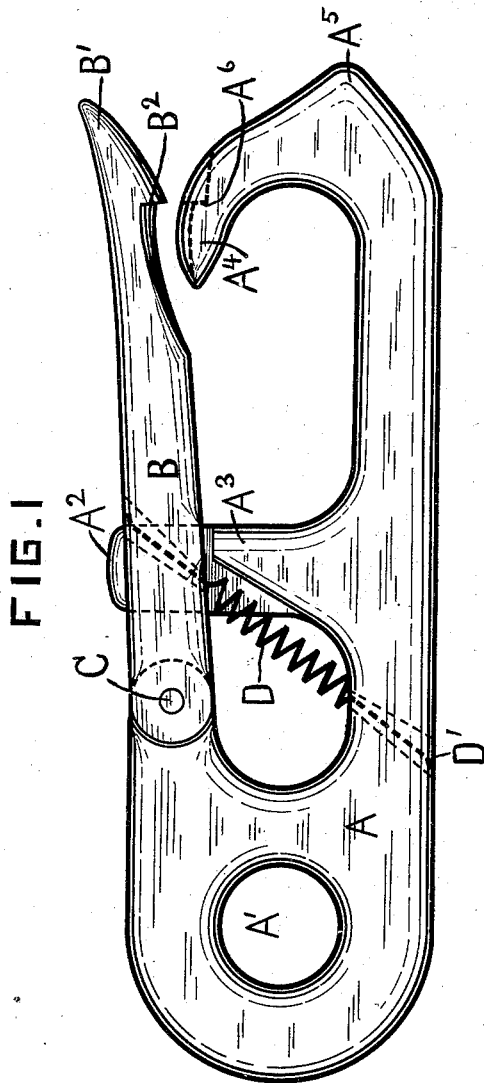
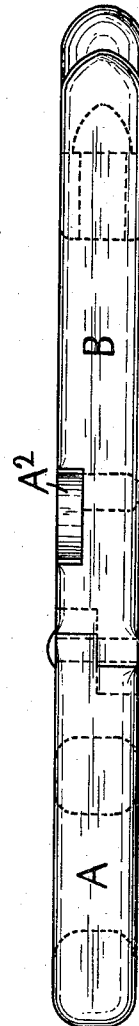


FIG. 2



WITNESSES:

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## AUTOMATIC CAR-LINK.

SPECIFICATION forming part of Letters Patent No. 383,453, dated May 29, 1888.

Application filed September 28, 1887. Serial No. 250,912. (No model.)

*To all whom it may concern:*

Be it known that I, FABIAN S. FRISCHEIS, a citizen of the United States, residing at Lititz, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Car-Links; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

15 This invention relates to that class of car-links in which one side is pivoted, so as to be automatically opened when brought in contact with the coupling-pin of another car, and again automatically closed when the coupling has been accomplished.

25 The object of my improvement is to produce a cheap and simple yet strong and effective means of coupling all cars which can use an ordinary link, and at the same time avoid, to a large extent, the numerous accidents incident to the coupling of cars.

30 Figure 1 is a plan of my improved link, the pivoted arm being slightly opened so as to better show the construction. Fig. 2 is an edge view.

A represents the body of the link, and B the pivoted arm.

A' is a coupling-pin hole formed in the body.

35 A<sup>2</sup> A<sup>3</sup> is a guide-arm, and A<sup>4</sup> a hook integral with the body.

40 C is a pin on which the pivoted arm turns. The latter is formed with a projecting end, B', and with an offset, B<sup>2</sup>, adapted, when held in contact with the hook A<sup>4</sup>, to engage with the recessed shoulder A<sup>5</sup>, formed in said hook. A spring, D, connects the pivoted arm with the body of the link and is adapted to ordinarily hold it in close contact with the hook. The hook end of the body is formed with a projecting snout, A<sup>5</sup>, which is thrown to one side of the center, so as to increase the space between it and the end B' of the pivoted arm.

The drawings represent the spring D as a

coiled steel wire with the straightened-out ends securely held in holes D', formed in the body and pivoted arm. This is a simple method, and places the spring in such a position that it is protected from injury, even though the link be very roughly handled. A flat spring, however, may be used instead, if desired.

The guide-arm A<sup>2</sup> A<sup>3</sup> is intended mainly to guide the pivoted arm, so that it may always engage properly with the hook A<sup>4</sup>. It also serves, however, to protect the spring D, and at the same time to strengthen the link.

65 The object of forming the hook and pivoted arm with the offsets A<sup>6</sup> and B<sup>2</sup>, respectively, is to strengthen the hook end of the body when in service by conveying a portion of the strain of pulling through the pivoted arm. This device makes the hook end of the link practically as strong as the closed end. The hook end of the body is so formed between the snout A<sup>5</sup> and the projecting end B' that when brought into contact with a coupling-pin the latter will slide along until it strikes the pivoted arm, which will be forced open, thus admitting the pin, and will then be closed again by the spring when the coupling is complete.

70 My links may either be of cast-steel or malleable iron, or they may be made of wrought-iron formed in suitable dies.

Having fully described my improvement, I desire to secure by Letters Patent the following claims thereon:

1. A car-link consisting of a body, A, formed with a hole, A', guide-arm A<sup>2</sup>, hook A<sup>4</sup>, and snout A<sup>5</sup>, in combination with a pivoted arm, B, adapted to be guided by said arm A<sup>2</sup>, and having a projecting end, B', and with a spring, D, substantially as set forth.

2. A car-link consisting of a body, A, formed with a hole, A', snout A<sup>5</sup>, and hook A<sup>4</sup>, said hook formed with a shoulder, A<sup>6</sup>, in combination with a pivoted arm, B, having a projecting end, B', and an offset, B<sup>2</sup>, adapted to engage with said shoulder and with a spring, D, substantially as set forth.

3. A car-link consisting of a body, A,

formed with a hole, A', guide-arm A<sup>2</sup> A<sup>3</sup>, hook  
A<sup>4</sup>, with shoulder A<sup>6</sup>, and snout A<sup>5</sup>, in combi-  
nation with an arm, B, pivoted at C to said  
body and formed with a projecting end, B',  
5 and offset B<sup>2</sup>, and with a coiled spring, D,  
connecting said body and pivoted arm, all  
arranged and operated substantially as set  
forth.

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

FABIAN S. FRISCHEIS.

Witnesses:

HAYDN H. TSHUDY,  
SAMUEL E. KELLER.