(No Model.)

J. C. TOBERER.

CAR COUPLING.

No. 422,264. Patented Feb. 25, 1890.

Fig. 1.

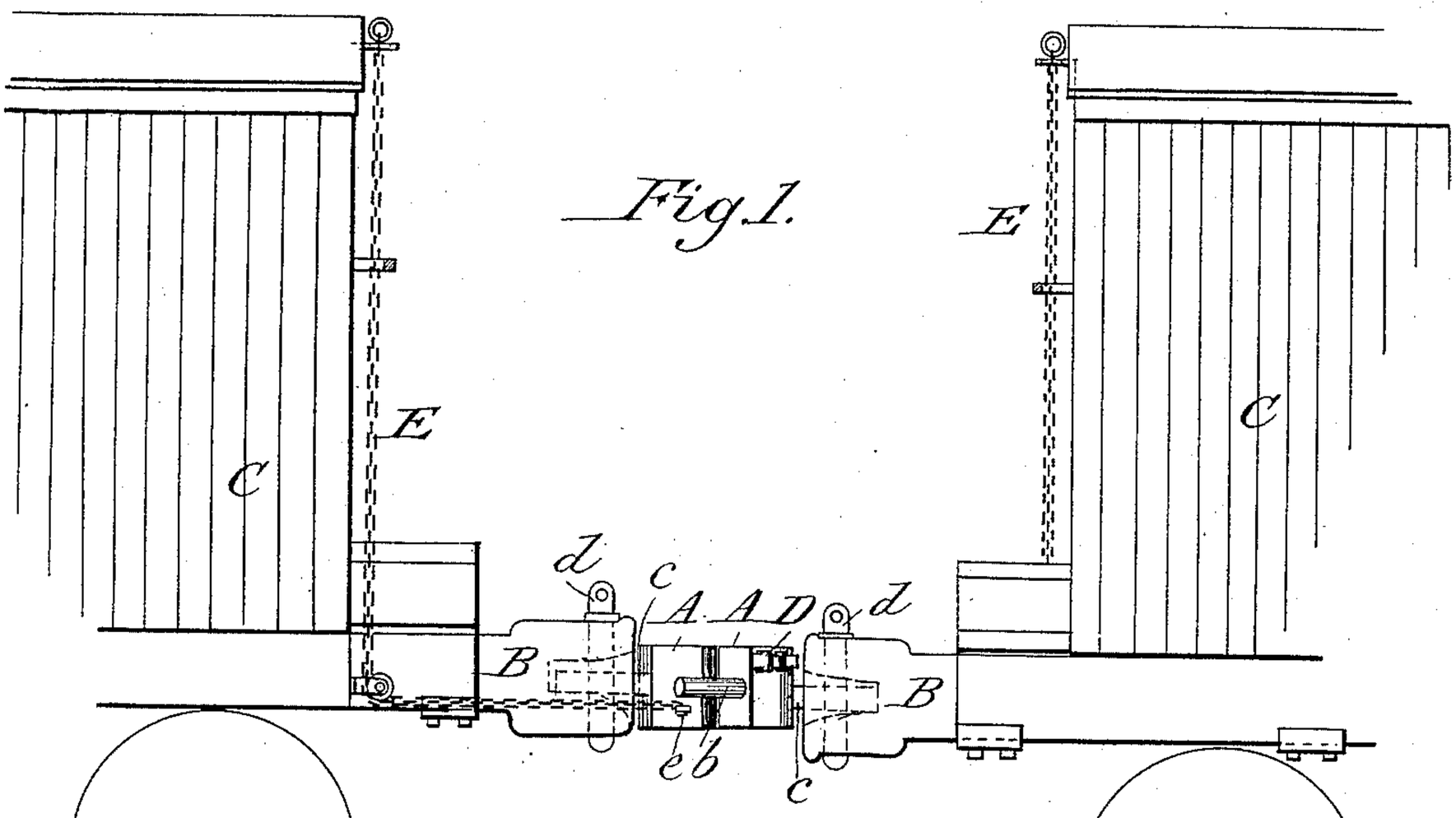


Fig. 2.

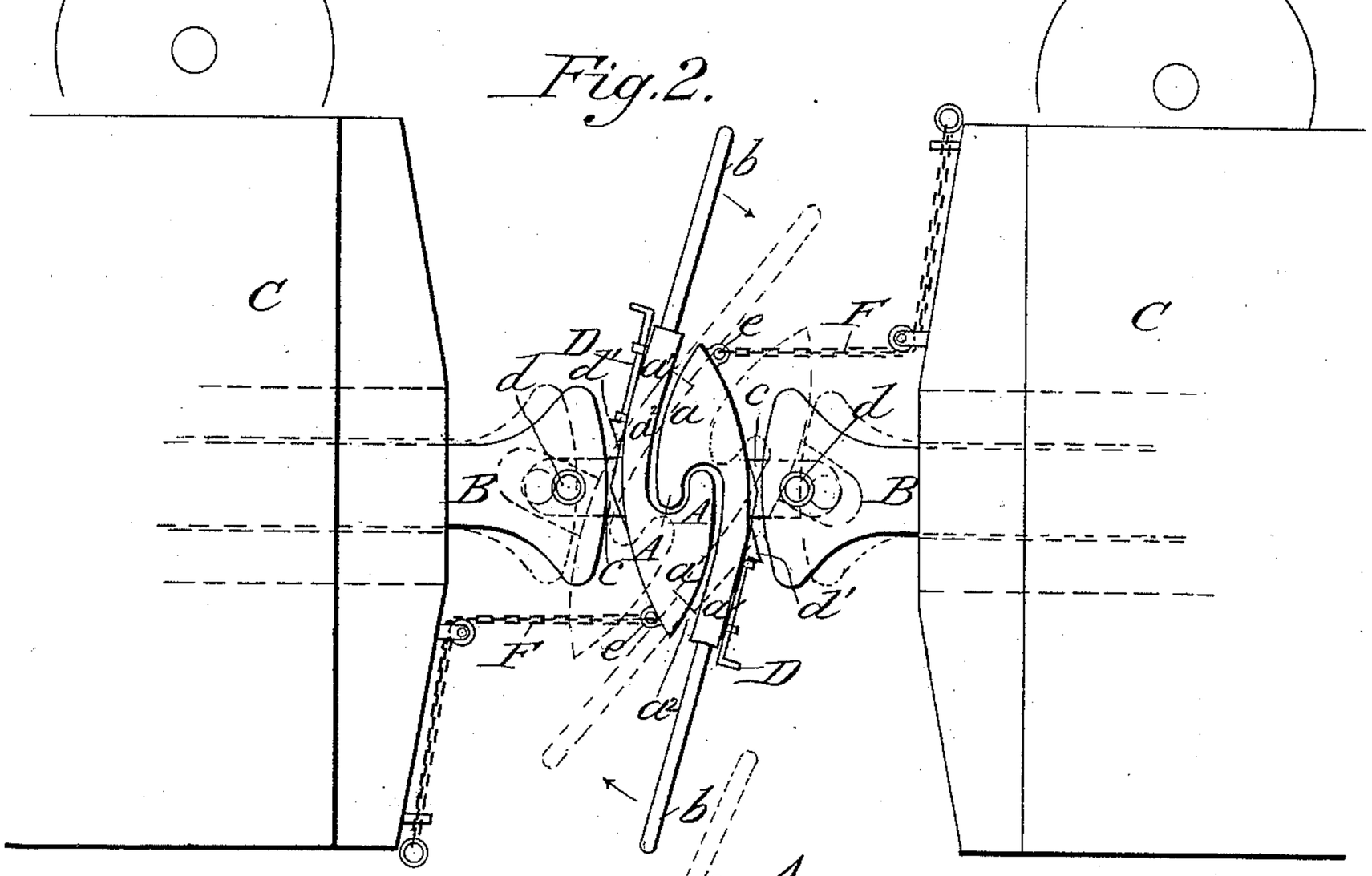
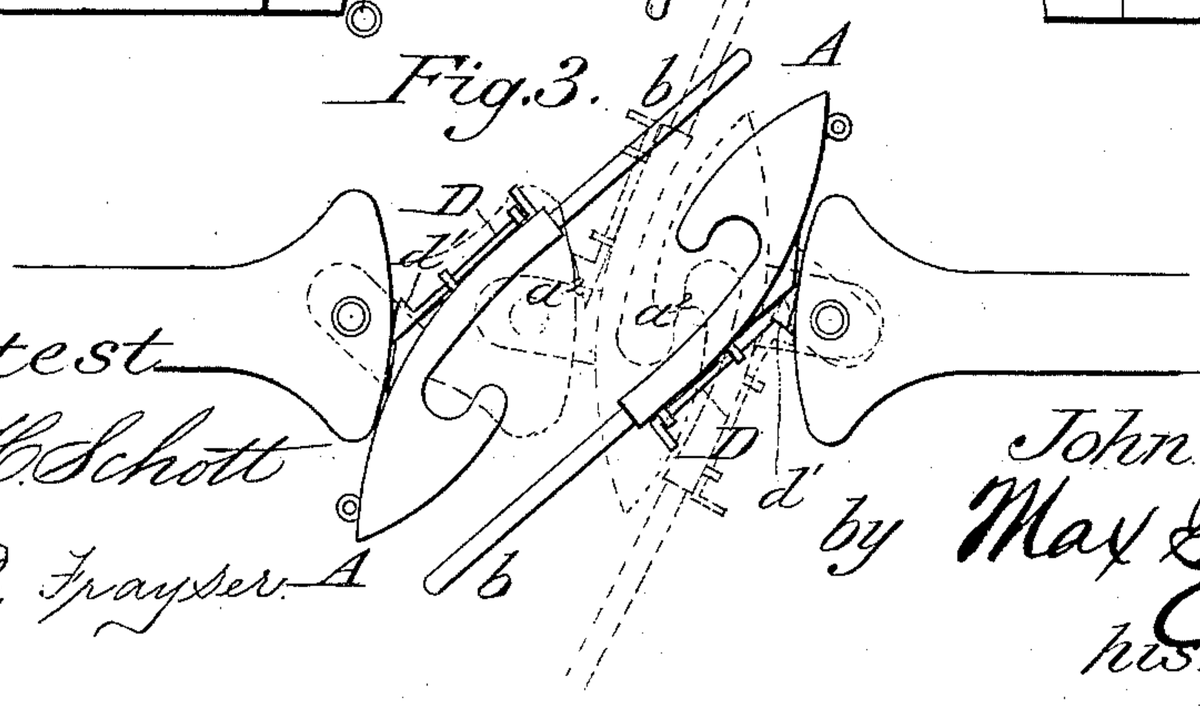


Fig. 3.



Attest

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UNITED STATES PATENT OFFICE.

JOHN C. TOBERER, OF NEW ULM, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 422,264, dated February 25, 1890.

Application filed December 23, 1889. Serial No. 334,603. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. TOBERER, a citizen of the United States, residing at New Ulm, in the county of Brown and State of Minnesota, have invented certain new and useful Improvements in Automatic Car-Couplings; 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 is directed to a car-coupling whose coupling operation is automatic and which may be uncoupled without going between the cars; also, to means whereby the coupling-jaws may be so set as to form a loose connection between the engine and car, or between two cars, so that they will readily separate when what is known as a "flying switch" is made.

To this end my invention consists in the arrangement of two twin jaws having a long exterior bearing-surface and an extended shank having an inner cam or wiper surface, whereby the jaws are effectively and automatically locked without the intervention of springs and by the simple backing of the engine and are positively prevented from separation without the intervention of springs or other auxiliary means on the occurrence of any jars or sudden stops of the train, and whereby the cars may be readily uncoupled with ease upon pressure upon either handle forming part of the jaws and extending out to the side of the train. This construction, it will be seen, enables me to make a far cheaper and more simple construction than those hitherto devised to my knowledge.

My invention also consists in latches attached to the back of the coupling-jaws and so arranged as to admit of being pushed between the jaws and the buffers of the cars, or the buffers of the car and the engine, as the case may be, for the purpose of forming a loose connection between the cars or the car and the engine, permitting their ready separation when what is known technically as a "flying switch" is made, or by pushing the latches in the entire extent the coupling may be wholly prevented for the same purpose.

My invention also consists in other details of construction, hereinafter to be described.

In order to enable those skilled in the art to practice my invention, I will now give a detailed description of the same, reference being had to the accompanying drawings, showing the preferred form in which I carry my invention into effect, and in which—

Figure 1 represents a side elevation of my coupling locked with so much of two adjacent cars as necessary to illustrate the action of said coupling; Fig. 2, a plan of the same, showing also the cars uncoupled by dotted lines; Fig. 3, a plan of the couplings detached, with the latches in operative position, showing also in dotted lines the position they occupy when the loose connection for the flying switch is made.

Similar letters of reference refer to the same parts throughout the drawings.

As will be seen, my coupling consists of two jaws A A, having the hooks *a a*, whose nibs interlock when the cars are coupled. These jaws are provided with the elongated shanks *a' a'*, having the extended cam-shaped bearing-surface a^2, and terminating in the handles *b*, and extending substantially transversely or at right angles to the ears *c*, and hence to the direction of the train. These ears *c* serve to connect the coupling-jaws to the buffers B of the cars C by means of the pins *d*. It is also to be noted that, as shown, the elongated shanks and the hooks, which also have elongated bearing-surfaces adapted to bear against the shanks in coupling, are on opposite sides of the pivot *d*. At the back of the shanks are provided the latches D, having the heads *d'*, preferably wedge-shaped, although I do not confine myself to this shape. The ends of the hooks may be provided with ears *e*, to which may be attached the chains E, running to the top of the cars, as in Fig. 1, or F, running to the sides of the platforms, as in Fig. 2, whereby the couplings may be unlocked either from the tops or the platforms while the train is in motion.

Operation: Assuming the parts to be in the position indicated by dotted lines in Fig. 2, it will be seen that when the engine is backed the shanks *a'* of each jaw A will be caused to bear against the hooks *a a*, which are also elongated, as shown, to cause them to readily turn on the pins *d d*. It will be seen that in this operation the hooks *a a* and

the shanks a' a' mutually assist in turning each other with the coupling position, and that the extended bearing-surface of the hooks and the shanks, as well as their transverse arrangement with respect to the car, will enable them to couple the cars automatically whenever the engine is backed in every position they may occupy. Thus the use of springs and other auxiliary means for effecting the automatic coupling is done away with, and a simple and cheap coupling-jaw in one piece is all that is necessary to attach to each car. All liability of the parts to get out of order is also avoided by this construction. It will also be seen that when the jaws are once locked no jolting or jarring of the train can separate them, as would be the case in all the automatic couplings of which I know if other extraneous means—such as springs—were not provided. This beneficial effect is due to the broad and extended bearing or wiper surfaces on the hooks and shanks of my coupling-jaws.

When it is desired to uncouple the cars when at rest, either handle is pushed or urged in the direction indicated by the arrows in Fig. 2. This will cause the twin jaws to turn in the opposite direction from that attending the coupling operation, as will be readily understood. The yielding of the cars and buffer of course assists in this operation. The parts will then occupy the position shown in dotted lines in Fig. 2.

To uncouple the cars when the train is moving, all that is necessary is to pull the chains E or F, as will be readily understood.

When it is desired to make a loose connection between an engine and a car or two cars, when a flying switch is to be made, the latches D are pushed in, as shown in Fig. 3. The nibs of the hooks impinge against each other only at their ends, and when, after the engine has passed the switch, the switch is swung around the car will be readily uncoupled and "switched off;" or by pushing the latches in to their full extent, as shown in full lines in Fig. 3, the coupling may be entirely prevented for the same purpose—*i. e.*, of making a flying switch.

What I claim, and desire to secure by Letters Patent, is—

1. In a car-coupling, two coupling-jaws extending transversely to the train and pivoted to the car and having a hook and a shank on opposite sides of the pivot, all substantially as described.

2. In a car-coupling, two coupling-jaws extending transversely to the train and pivoted to the car, each having a hook and a shank on opposite sides of the pivot, the shanks being provided with extended bearing-surfaces, substantially as set forth.

3. In a car-coupling, a coupling-jaw extending transversely of the car or train and pivoted to the car and having a hook and a shank provided with extended bearing or wiper surface, all substantially as described.

4. In a car-coupling, two coupling-jaws arranged transversely to the train and pivoted to the car and having extended bearing or wiper surfaces for causing them to interlock, all substantially as described.

5. In a car-coupling, twin coupling-jaws attached to and in combination with the buffers of two adjacent cars and two sliding latches attached to the coupling-jaws and located between the coupling-jaws and the buffers, all substantially as described.

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

JOHN C. TOBERER.

Witnesses:

FRED PFAENDER,

CHARLES TOBERER.