B. TWEEDLE.

Car-Couplings.

No. 148,782. Patented March 17, 1874.

FIG. 2

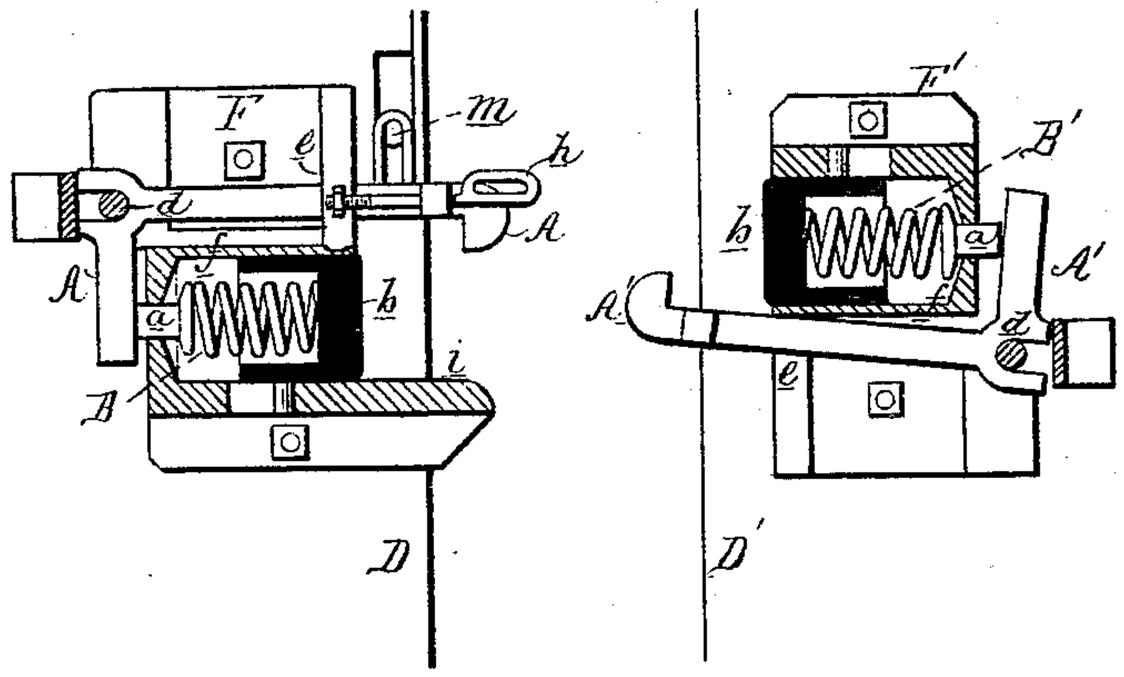


FIG. 1

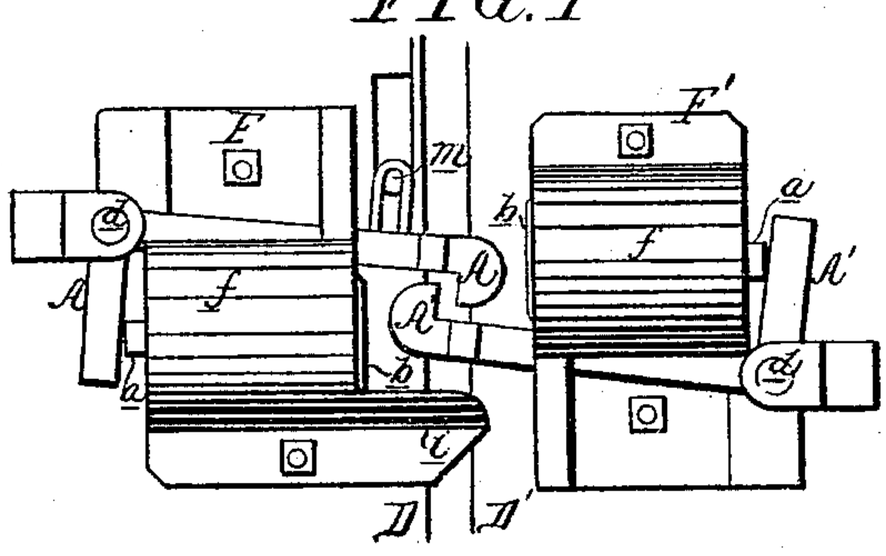


FIG. 3.

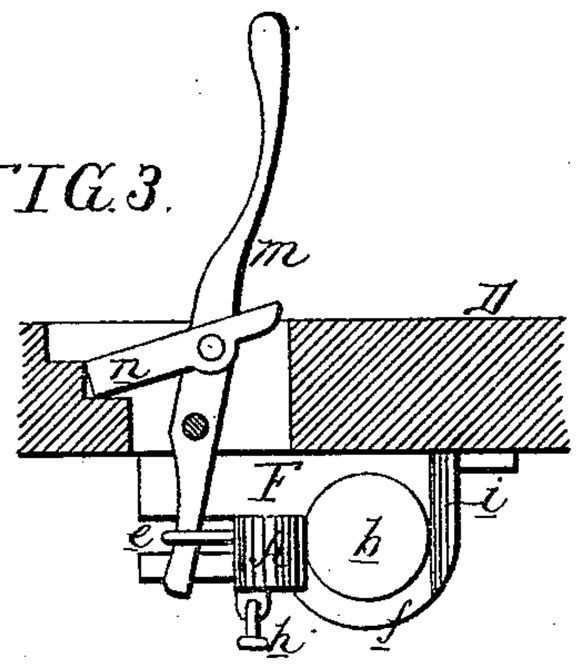
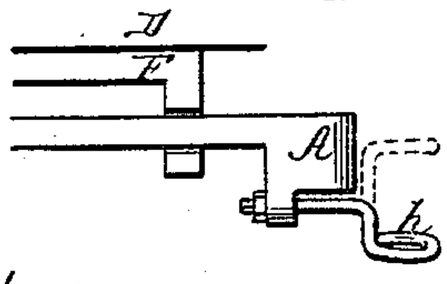


FIG. 4



Witnesses. J. S. Singer
Harry Smith

Benjamin Tweedle
by his Attys.
Munson and Son

UNITED STATES PATENT OFFICE.

BENJAMIN TWEEDLE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **148,782**, dated March 17, 1874; application filed September 8, 1873.

To all whom it may concern:

Be it known that I, BENJAMIN TWEEDLE, of the city and county of Philadelphia, State of Pennsylvania, have invented certain Improvements in Car-Couplings, of which the following is a specification:

The objects of my invention are to facilitate the coupling and uncoupling of railroad-cars, and to dispense with the usual draw-heads and bumper-bars.

I attain these objects by the use of bell-crank levers A and A′, hooked at their outer ends, slotted at their fulcrum-points, and so combined with and acted on by incased springs B and B′ as to serve the threefold purpose of automatic couplers, draw-heads, and bumper-bars, all as best observed in the inverted plan, Figure 1, and inverted sectional plan, Fig. 2, of the accompanying drawings. D and D′ represent portions of the ends of two cars, to the under sides of which are secured, in any suitable manner, two castings, F and F′, which, with their appliances, are precisely alike, so that a description of one will suffice for both. The casting F serves as a frame for the lever A and spring B, the said lever having its fulcrum-pin *d* extending through a guiding-slot, *e*, as best observed in the transverse section, Fig. 3, and the spring B being contained within a cylindrical enlargement or barrel, *f*, of the said frame. One end of the spring bears against a cap, *b*, and the opposite end against a stud, *a*, both of which have a limited sliding movement in the said barrel *f*. (See Fig. 2.) The stud *a* bears against the short arm of the bell-crank lever A, and tends to maintain the same in the position shown in Fig. 1, and in the view to the right in Fig. 2, and, when the lever which is slotted at its fulcrum-point, as shown, is drawn bodily outward, such movement will be resisted by the stud *a* and spring, as a direct pressure will then be exerted against the same through the short arm of the lever. Both levers A and A′ are hooked at their outer ends, as shown, and they serve the threefold purpose of automatic couplers, draw-heads, and bumper-bars, the several operations being as follows: The hooked ends of the two levers are rounded, so that when the two cars are brought together both levers will yield laterally until their hooked portions have passed each other, when they will become interlocked, as shown in Fig. 1.

If the cars should still continue to approach each other, after completing the coupling, the end of the lever A would strike the cap *b* of the spring B′, and the lever A′ that of the spring B, the said levers, in conjunction with the springs, thus acting as bumpers to absorb the shock.

In starting, and as long as the cars are in motion, the levers will yield at their fulcrum-points, and exert a constant pressure against their springs, thus acting as efficient substitutes for the usual yielding draw-bars.

By operating a lever, *m*, hung to the end of the car and connected to the side of the lever A, the latter can be drawn away from the lever A′ sufficiently to effect an uncoupling of the cars, as shown in Figs. 2 and 3. When the cars are thus uncoupled a dog, *n*, hung to the said lever *m*, drops into a recess in the platform, and thus retains the two levers in the position to which they have been adjusted. The simple pressure of the foot upon the projecting portion of the dog will release the same, and permit the levers to spring back to their original positions. I have illustrated but one lever, *m*, but it will be understood that another is to be provided for the coupling-lever A′. It will be also advisable, in most instances, to provide the frame F′ with a guard, *i*, similar to that of the frame F.

As it may often be necessary to connect a car, provided with my improved coupling, to an ordinary car, I propose to combine a bent link, *h*, best observed in Fig. 4, with each of the coupling-levers A and A′, the said link being made reversible, as shown, so that it can be connected to either high or low cars, and being secured to a sliding rod so that it can be pushed back out of the way when not required for use.

I claim as my invention—

1. The combination, in a car-coupling, of springs B B′ and levers A A′, so that the device will serve the threefold purpose of an automatic coupler, draw-head, and bumper, as set forth.

2. The bell-crank levers A A′, hooked at the extremities of their long arms, in combination with incased springs B B′ and sliding studs

a a intervening between the springs and the short arms of the levers, as set forth.

3. The combination of the hooked levers A and A′, slotted at their fulcrum-points, the springs B and B′, and the studs *a a*, as and for the purpose specified.

4. The combination of the hooked levers A A′, the yielding caps *b b*, and the springs B B′, substantially as and for the purpose specified.

5. The combination of lever *m* and dog *n* with the hooked levers A A′, as set forth.

6. The combination of a reversible bent link, *h*, with the hooked lever A A′, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BENJ. TWEEDLE.

Witnesses:
WM. A. STEEL,
HARRY SMITH.