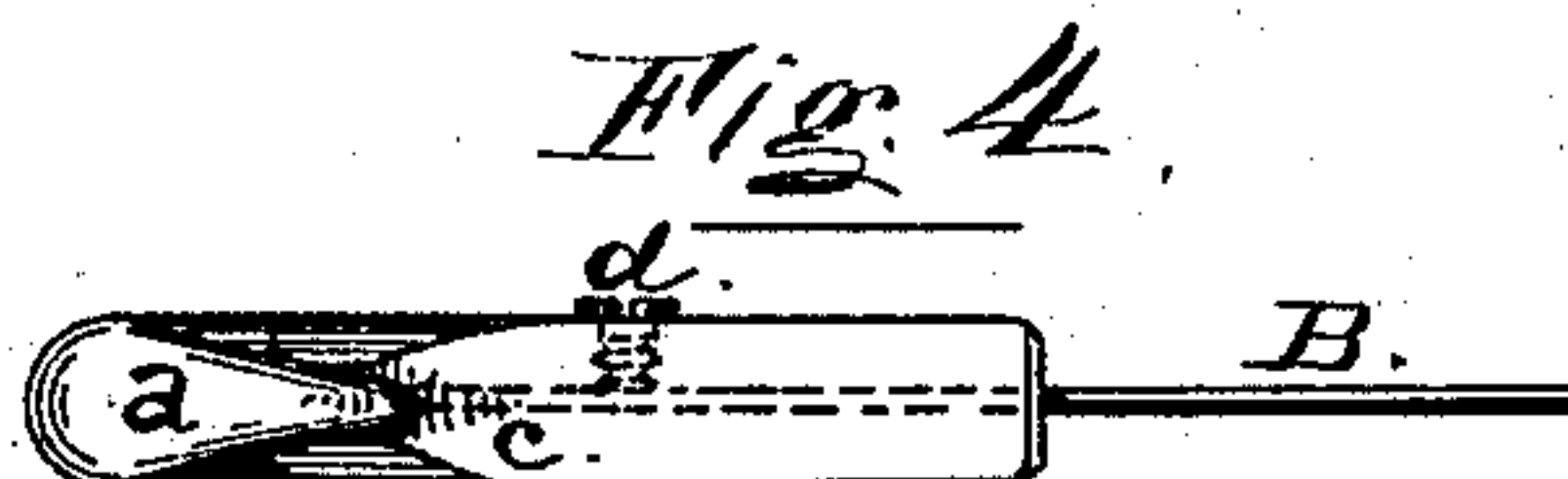
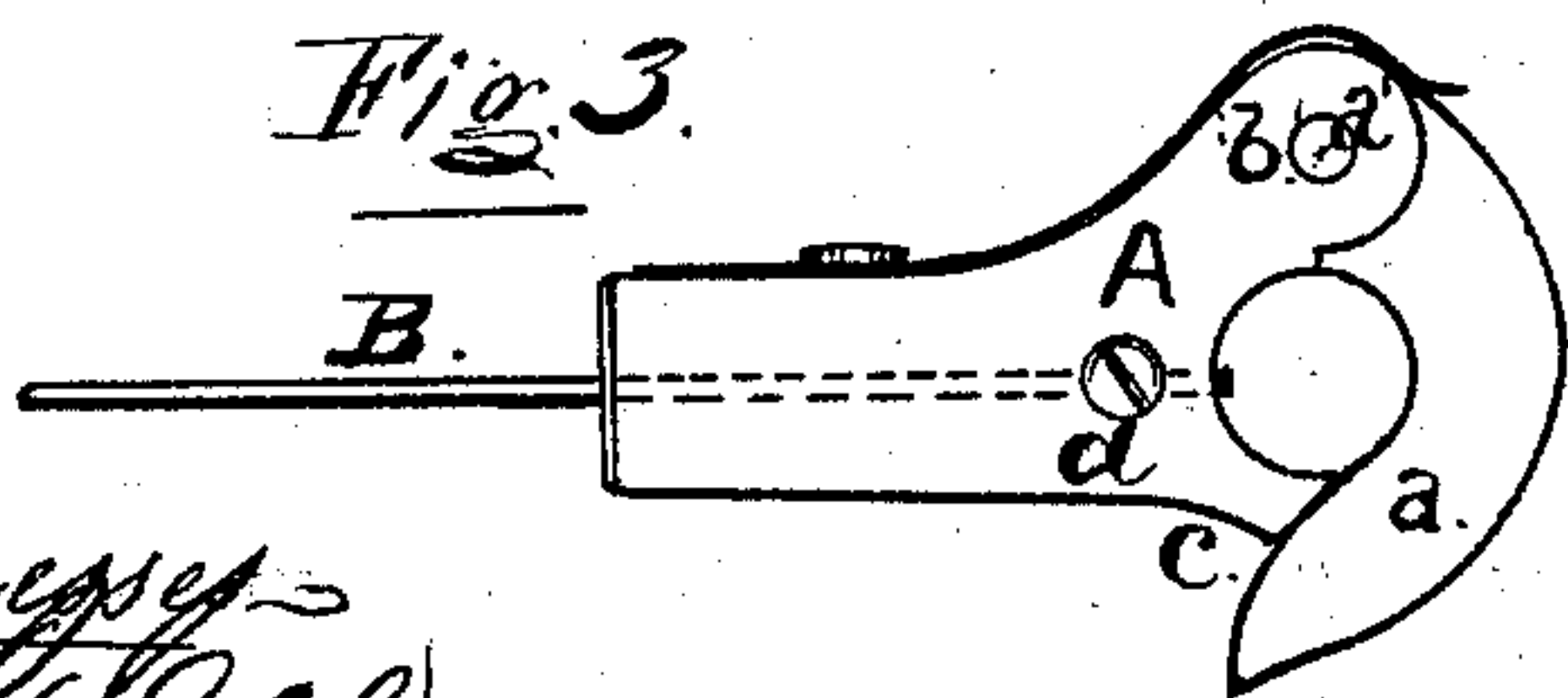
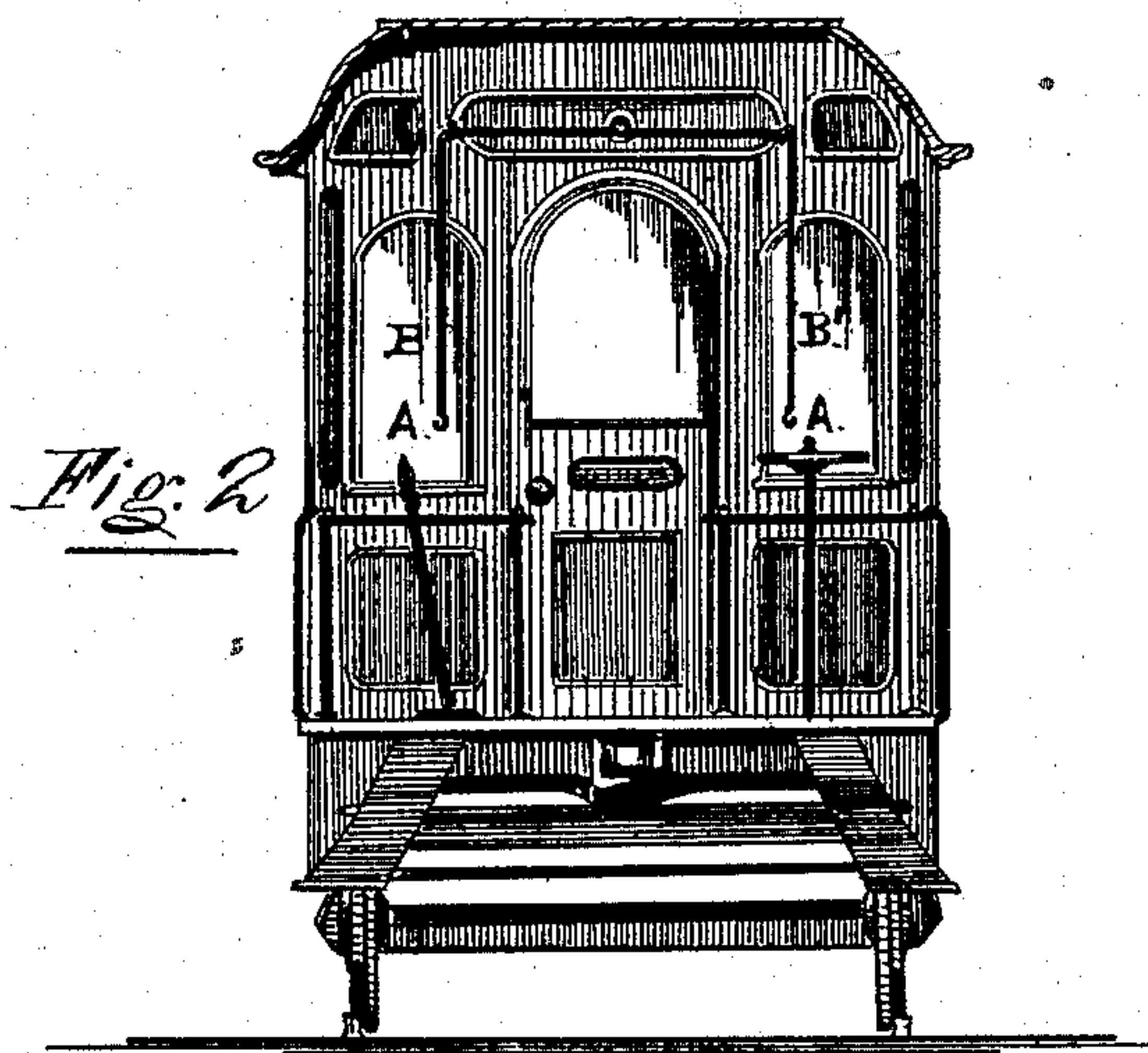
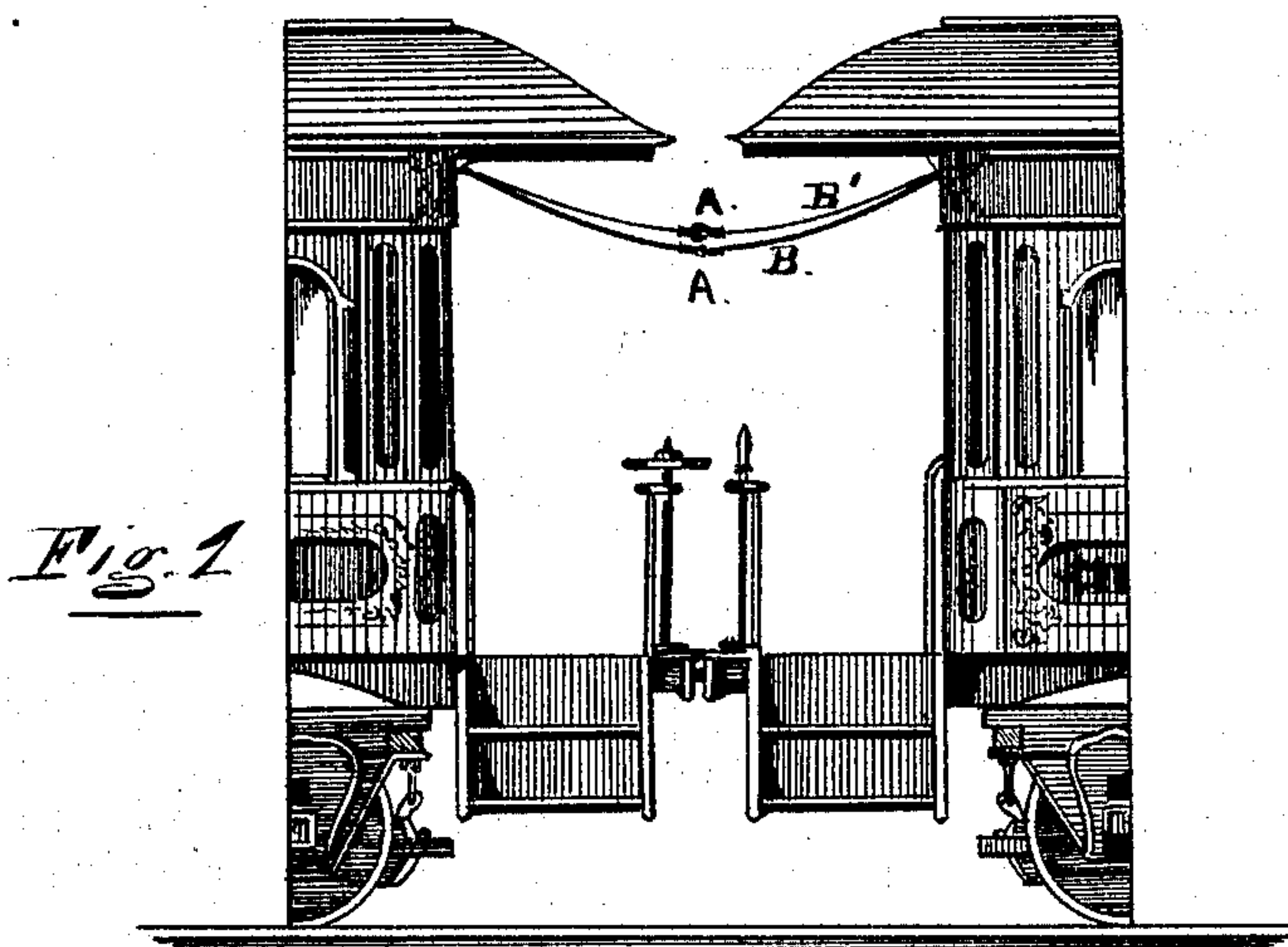


A. RYDER.

ELECTRIC COUPLINGS FOR TRAIN TELEGRAPH.

No. 182,776.

Patented Oct. 3, 1876.



Witnesses
Chas. E. Coe

J. E. Schenck

Inventor, *Andrew Ryder*

By C. W. Smith Attorney

UNITED STATES PATENT OFFICE.

ANDREW RYDER, OF OAKLAND, CALIFORNIA.

IMPROVEMENT IN ELECTRIC COUPLINGS FOR TRAIN-TELEGRAPHS.

Specification forming part of Letters Patent No. 182,776, dated October 3, 1876; application filed January 6, 1876.

To all whom it may concern:

Be it known that I, ANDREW RYDER, of Oakland, California, have invented an Improvement in Electric Couplings for Train-Telegraphs, of which the following is a specification:

My invention relates to an improved coupling for connecting the ends of the electric cords or cables between each car or carriage of a railway train to form a continuous electric communication through the train to the engine-cab. It consists in the use of a hook-coupling, constructed and arranged as hereinafter fully described, that connects the ends of each wire when the train is made up, and forms a complete conductor.

The accompanying drawings show, in Figure 1, the ends and platforms of two cars of a train with the wires of each car connected together. Fig. 2 is an end view of a car, showing the manner of arranging the wires on the outside. Figs. 3 and 4 are full-size views of the hook-coupling, one being a side view and the other a front view.

This coupling consists of a hook with a spring-beak, *a*, hinged at *a'*, and kept closed by a spring, *b*, on the back face of the coupling. This beak is pressed against the lip *c* of the hook, so that when the two couplings are brought together there is no space between the bill *a* and the body of the hook that will allow the hooks to separate or fall apart through any oscillation of the train when in motion. These hooks, when joined together, are always in contact, no matter what their position may be, and the electric connection can only be broken by pulling apart the hooks.

Each coupling, *A*, has a hole through it from the end to the head for the conducting-wire *B*, that is passed into this hole and held by the screw *d*. These wires pass through

the car along the sides within it and out at each end through the hole over the door, where they are secured on the outside in the manner shown in Fig. 2, the wire for one current being carried to the right about eighteen inches, and the other wire to the left the same distance, so that there shall be a space of three feet between the ends of the wires in order that they may not touch each other when they are connected with the coupling of the next car, and as they swing laterally from the motions given to them when the train is moving.

The wires *B* outside of the car are covered with gutta-percha to protect them from the effects of the weather, and they are left long enough to allow for the movements between the cars.

In operating this invention to give a signal the conductor pulls apart the couplings of one wire and connects them together, having thus broken the circuit and sounded the bell in the engine-cab; and as many times as the couplings are separated a signal is given to the engineer. A signal is automatically given when the train separates from accident.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The coupling for train-telegraph described, consisting of the body *A*, through which the wire is passed, and held by a set-screw, *d*, the spring-beak *a*, and spring *b*, substantially as described and shown.

Witness my hand this 4th day of December, 1875.

ANDREW RYDER. [L. S.]

In presence of—

WILLIAM W. OSBORN,
EDWARD E. OSBORN.