

E. J. McRAVEY, F. W. McRAVEY, & J. SCHWARTZ.

COUPLING FOR RAILROAD TRAIN TELEGRAPH.

No. 188,163.

Patented March 6, 1877.

Fig. 1.

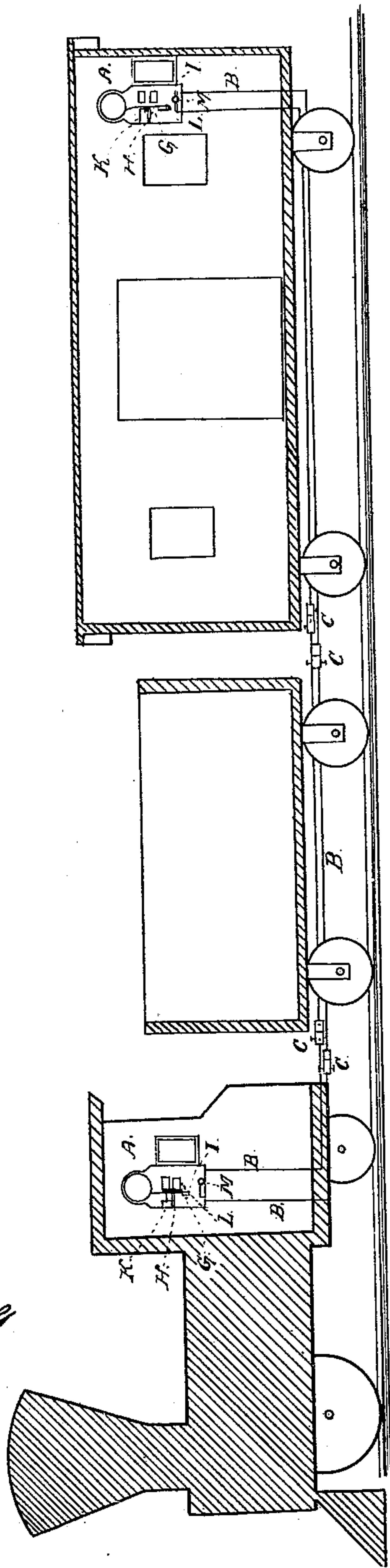
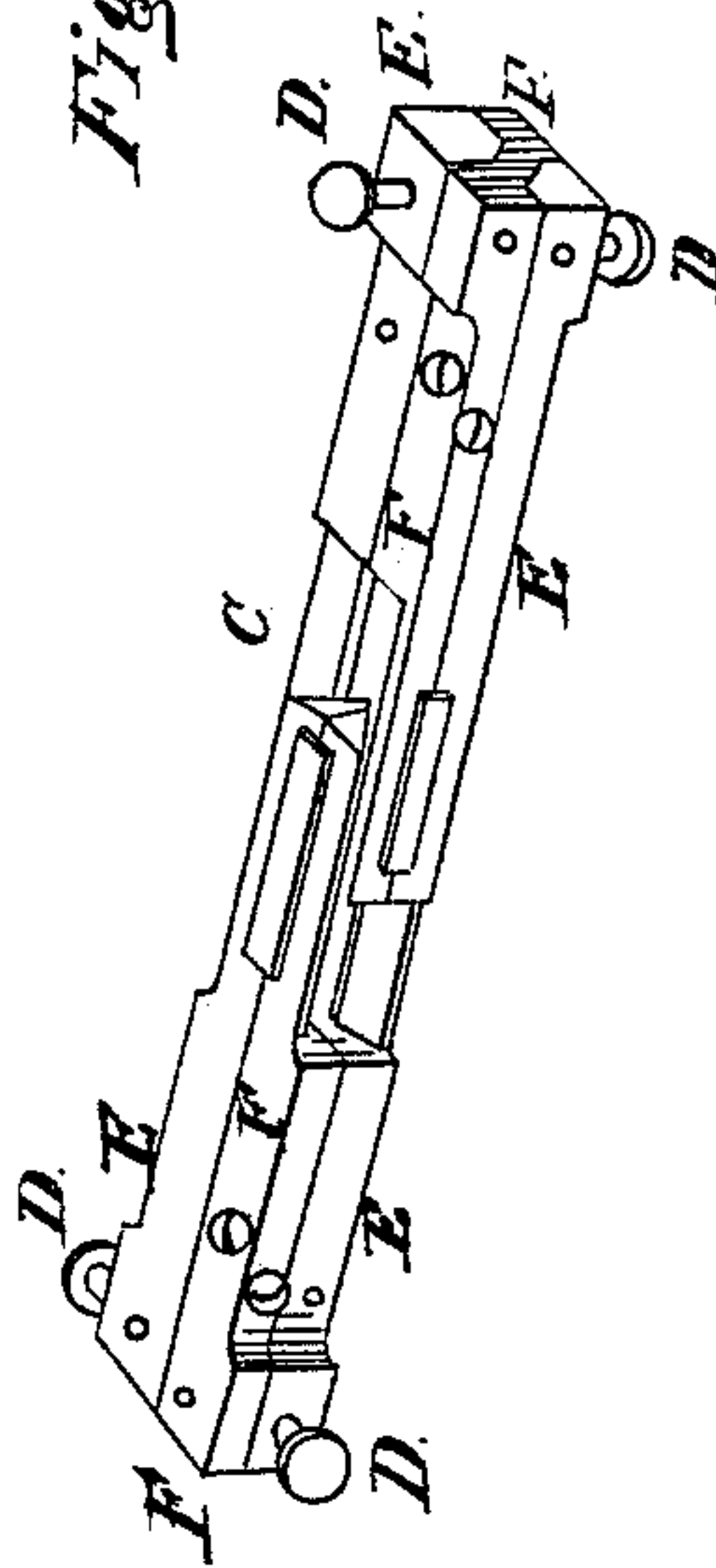


Fig. 2.



WITNESSES:

A. Schattenberg  
Chas. Frick

INVENTORS:

Edwards J McRavey  
F. W. McRavey  
John Schwartz

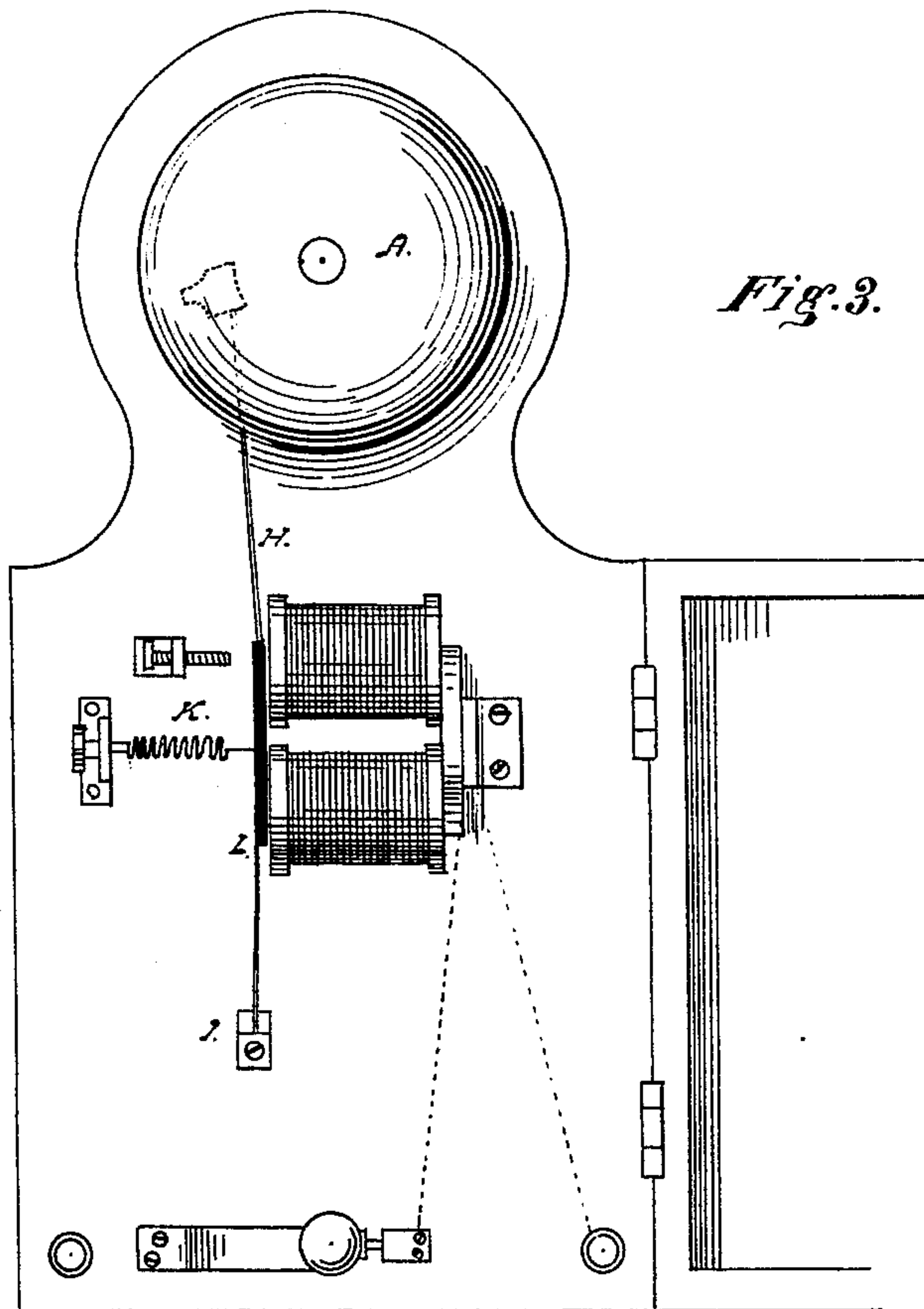
2 Sheets—Sheet 2.

E. J. McRAVEY, F. W. McRAVEY, & J. SCHWARTZ.

COUPLING FOR RAILROAD TRAIN TELEGRAPH.

No. 188,163.

Patented March 6, 1877.



*Fig. 3.*

WITNESSES:

Geo. P. Sherman  
Jno. D. Patton

INVENTORS:

Edward J. McRavey  
Frank W. McRavey  
John Schwartz  
By *Wm. H. Smith*  
J. H. Smith



# UNITED STATES PATENT OFFICE.

EDWARD J. McRAVEY, FRANK W. McRAVEY, AND JOHN SCHWARTZ, OF  
MILWAUKEE, WISCONSIN.

## IMPROVEMENT IN COUPLING FOR RAILROAD-TRAIN TELEGRAPHS.

Specification forming part of Letters Patent No. **188,163**, dated March 6, 1877; application filed  
April 13, 1876.

*To all whom it may concern :*

Be it known that we, EDWARD J. McRAVEY, FRANK W. McRAVEY, and JOHN SCHWARTZ, of the city and county of Milwaukee, in the State of Wisconsin, have invented certain Improvements in Electric Train-Signals for Railways, of which the following is a specification:

The object of our invention is to signalize the engineer on a railroad-train whenever the train is broken.

Our invention consists in the peculiar form of coupling to be used in the following apparatus, embodying a bell placed in the engine-cab and another in the rear car of a train, with electro-magnets connected with same, and wires running from one bell to the other, and a battery on the train in connection with same.

The hammers of the bells are held back from them by the electro-magnets, and when the connection with the battery is broken the spring attached to same will draw them back against the bells and ring them.

Figure 1 is a view of a train of cars with our apparatus attached, and Fig. 2 a view of the coupling which couples the wire between the cars; Fig. 3, a view of the bell and the magnet.

A is the bell; B, the wires running from one end of the train to the other, and connected with the electric apparatus in the engine-cab and the rear car of the train. C is a coupling, which holds the wires together between the cars, which is made of brass and wood, or other suitable material. It is made in two pieces, and with two prongs to each piece, which slide together, so that the brasses in each piece touch each other and make a continuous conductor through it from wire to wire.

Between the brasses there are strips of rubber or other suitable material, running from end to end of the coupling, keeping the brass for each conductor separate from that of the

other. D are screws on the ends of the coupling connected with the brasses of same, to which the wires are connected. E are the brasses, which connect the wires together. F is the rubber or other non-conducting material, which keeps the brasses apart in the coupling. G is the electro-magnet. H is the handle of the tongue of the bell, hung at I. K is a spring, which pulls the tongue or hammer of the bell back and strikes it against the bell when the connection of electricity is broken; L, a piece of metal on the handle of the hammer.

When the connection is unbroken, the magnets draw it up against them, and hold the hammer away from the bell; but when the connection is broken, the spring K brings the hammer against the bell and sounds the alarm.

M is a key, with which the apparatus may be operated and communication be had from the engine to the rear car, and vice versa, when there are two machines, one in the cab and the other in the rear car.

The operation of this apparatus is as follows: The battery being put in communication with the magnets, the iron L is drawn up to them, and with it the hammer is drawn away from the bell. When the train is broken the coupling is drawn apart, the connection is broken, and the spring will draw the hammer against the bell and sound the alarm.

We claim as new and as our invention—

The herein-described coupling for train-telegraphs, consisting of two parts, each constructed of two springs, E E, separated by an insulating portion, F, running diagonally between them.

EDWARD J. McRAVEY.  
F. W. McRAVEY.  
JOHN SCHWARTZ.

Witnesses:

J. B. SMITH,  
A. H. SCHATTENBERG.