(No Model.) 2 Sheets—Sheet 1.

S. B. STEWART.

ELECTRIC ROPE COUPLER

No. 361,731. Patented Apr. 26, 1887.

Fig. 1.

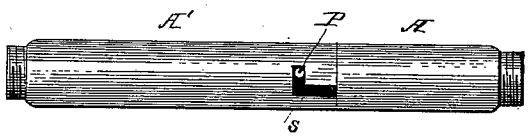


Fig. 2.

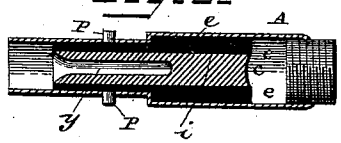


Fig. 3.



Fig. 5.



Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

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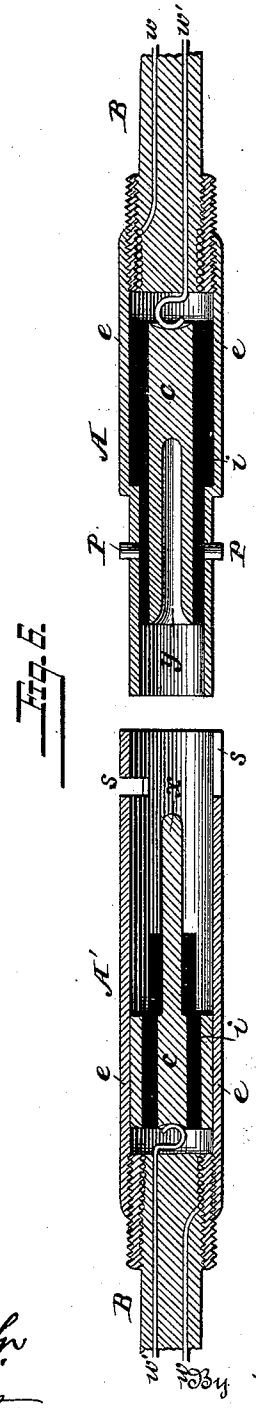


Fig. 5.

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UNITED STATES PATENT OFFICE.

SHELLMAN B. STEWART, OF MONTCLAIR, NEW JERSEY.

ELECTRIC ROPE-COUPLER.

SPECIFICATION forming part of Letters Patent No. 361,731, dated April 26, 1887.

Application filed November 5, 1886. Serial No. 218,118. (No model.)

To all whom it may concern:

Be it known that I, SHELLMAN B. STEWART, a citizen of the United States, and a resident of Montclair, in the county of Essex and State of New Jersey, have invented a certain new and useful Machine and Improvement in Electric Rope-Couplers, of which the following is a specification.

My invention consists of a coupling device for sectional signal-cords—such as are used upon railway-trains—the said coupling device being constructed not only to connect the ends of the cords, but also to put into electrical connection certain electrical conductors carried by the cords, as fully set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is an external view of my improved coupling device. Fig. 2 is a longitudinal section of one of the coupling-sections. Fig. 3 is an end view of Fig. 2. Fig. 4 is a longitudinal section of another of the coupling-sections; Fig. 5, an end view of Fig. 4; and Fig. 6 is an enlarged longitudinal section showing the coupling devices applied to the sections of a signal-cord.

In a separate application, Serial No. 218,116, I have described a signal-cord for railways, to be used for connection with a mechanical alarm, carrying two electrical conductors in a circuit for operating an electrical alarm. Such signal-cords may be made in a single continuous strip; but this is practically very objectionable, as it necessitates the removal of the cord whenever a train is broken up, and I therefore have devised a coupling whereby the cord may be made in sections readily detachable, and whereby the separate isolated electrical conductors may be brought into proper electrical connection without short-circuiting whenever the sections are coupled together.

Each coupling consists of two sections, A A′, connected to the opposite ends of each section B of the signal-cord, so that when two sections are united the two parts A A′ of the coupling will be brought together. Each section A A′ of the coupling consists of two parts—that is, a shell, *e*, and a core, *c*—which are insulated by means of an intervening insulating material, *i*, and the part *e* is in electrical connection with one of the conductors, *w*, and the part *c* is in electrical connection with the other conductor, *w′*, and these parts are so arranged that when the two sections of the coupling are brought together the outer parts will be in contact and electrically connected and the inner parts or cores will also be in contact and electrically connected, thereby forming continuous electrical conductors throughout the entire length of the signal-cord.

Different means of separably connecting the two sections A A′ will be obvious to any one skilled in the art. I have shown the outer sleeve, *e*, of the section A provided with pins P, adapted to enter L-shaped grooves *s* of the sleeve *e* of the section A′, so as to form a bayonet-joint, and the core *c* of the section A is provided with a socket, *y*, to receive a finger, *x*, projecting from the core *c* of the section A′, so that when the two sections are put together the shells or sleeves *e e* will be in direct contact, and the cores *c c* will also be in direct contact.

The electrical connection between the conductors and the shells *e* is effected by drawing out the end of one of the conductors and wrapping it tightly around the end of the cord B, which end is then screwed into the threaded open end of the sleeve *e*, so as to secure the latter upon the end of the cord, and at the same time make an electrical contact between the conductor and the sleeve. The other conductor is drawn out at the end of the cord, and bent into a coil or loop in such a position as to make contact with the end of the adjacent core *c*.

It will be seen that the sleeves are plain cylinders, but little, if any, larger in diameter than the cords, so that they can slip readily through the openings in the cord-supports, which is essential in making and breaking up trains.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A coupling for sectional signal-cords carrying insulated electrical conductors consisting of two sections, A A′, each consisting of an outer sleeve or portion in electrical connection with one of the conductors and an inner core

in electrical connection with the other conductor, the two parts being insulated from each other, and the sleeves being plain cylinders approximating the diameter of the cord, to pass readily through the supports thereof, substantially as set forth.

2. The combination, in a sectional signal-cord carrying electrical conductors, of a coupling-section, A, upon one section of the cord, consisting of a case and a stationary core insulated from the case, each in electrical connection with one of the conductors, and a like coupling-section, A′, upon another section of the cord, and coupling devices consisting of pins on one section and L-shaped slots in the other, whereby the two sections A A′ may be detachably connected, substantially as set forth.

3. The combination of a cord section, B, carrying two insulated conductors, *w w′*, one wound around the end of the cord and the other extending beyond the end of a coupling-section consisting of two insulated parts, *c e*, each in contact with one of the conductor ends, substantially as set forth.

4. The combination, in a coupling for signal-cords, of two hollow sleeves adapted to receive the ends of the cords and each supporting an insulated core, one of the cores having a socket to receive a finger upon the other, substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 25th day of October, A. D. 1886.

SHELLMAN B. STEWART.

Witnesses:

ANDREW W. SMITH,

JOHN F. BAHR.