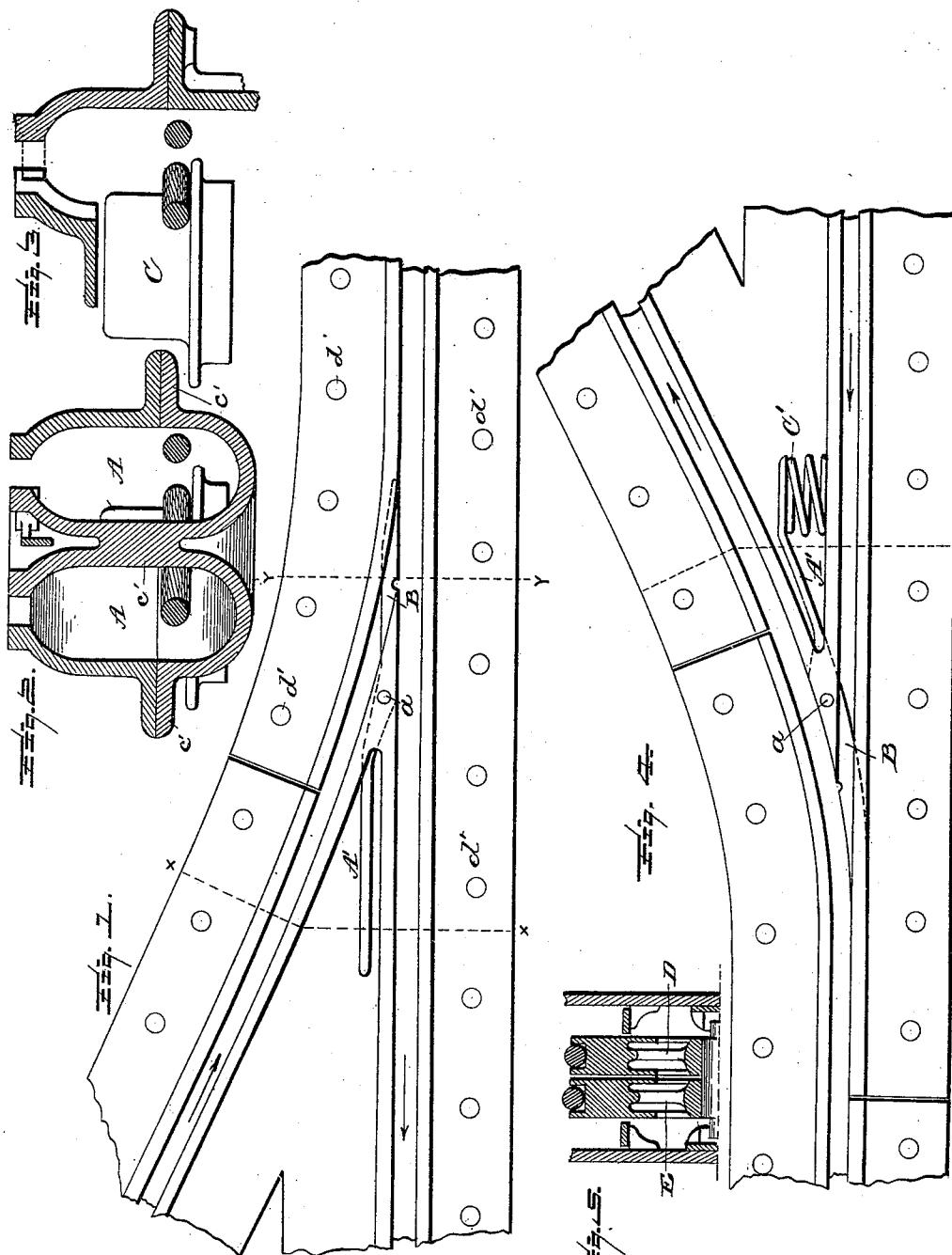


(No Model.)

W. E. & W. M. WINBY.
CABLE TRAMWAY.

No. 466,987.

Patented Jan. 12, 1892.



WITNESSES

L. C. Hills.
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UNITED STATES PATENT OFFICE.

WILLIAM EDWARD WINBY AND WILLIAM MARSTON WINBY, OF BIRMINGHAM, ASSIGNORS OF ONE-HALF TO FRANCIS HENRY LLOYD, OF WEDNESBURY, AND THOMAS FLEWITT CRADDOCK, OF LONDON, ENGLAND.

CABLE TRAMWAY.

SPECIFICATION forming part of Letters Patent No. 466,987, dated January 12, 1892.

Application filed December 16, 1889. Renewed June 20, 1891. Serial No. 396,900. (No model.) Patented in England August 18, 1887, No. 11,277.

To all whom it may concern:

Be it known that we, WILLIAM EDWARD WINBY and WILLIAM MARSTON WINBY, subjects of the Queen of Great Britain, and residents of Birmingham, in the county of Warwick, England, have invented certain new and useful Improvements in Cable Tramways, (for which we have obtained a patent in Great Britain, No. 11,277, dated August 18, 1887,) of which the following is a full, clear, and exact specification.

This invention relates to certain new and useful improvements in cable tramways.

The novelty resides in the peculiar combination and the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a plan illustrating our invention. Fig. 2 is a vertical transverse section on the line *xx* of Fig. 1. Fig. 3 is a transverse section on the line *yy* of Fig. 1. Fig. 4 is a plan showing the spring for holding the switch-lever in position. Fig. 5 is a sectional detail.

Referring now to the details of the drawings by letter, A designates the conduits or tubes, which may be of any approved construction, except as hereinafter specified, at the junction of the two tracks, however, being formed as shown in Fig. 2, and as more particularly hereinafter specified.

B is the switch-plate for closing up the entrance for the car-grip to the groove. It is placed some distance below the top of the tube. Secured to the point by a vertical pivot-pin *a*, the switch-lever *A'* is acted upon and held in

position by a spiral, volute, or laminated spring, as shown at *C'* in Fig. 4, and in all cases the switch-plate is set to close up the right-hand facing-groove. The arrows show the transit of the up and down cable.

The switch is to prevent the car-gripper taking the wrong groove and to secure it following the transit of the cable when passing on straight lines where there are turn-out tubes and in passing from straight lines to turn-outs.

As shown in Fig. 2, the point and lower part of the tube form one steel casting, as shown at *c' c' c'*, and is bolted to the under side of the longitudinal side pieces of the tube at *d' d' d' d'*, (see Fig. 1,) thus effectually securing the continuous line of tube.

C, Fig. 3, is a pulley at the junction, conveying the cable from turn-out to straight line.

When a single line is used for up and down traffic, the wheel or pulley box will be required with double pulleys—that is, the lower part will be of sufficient width to carry two pulleys, as shown in Fig. 5—the pulley D being keyed to the spindle and the pulley E running alongside and loose on the same spindle for the cable running in the contrary direction.

What we claim as new is—

The combination, with the point and lower part of the tube forming an integral casting, of the removable outside members, substantially as herein shown.

In testimony that we claim the foregoing we have hereunto set our hands this 11th day of April, 1889.

WILLIAM EDWARD WINBY.
WILLIAM MARSTON WINBY.

Witnesses:

M. A. EISTER,
T. E. FORSYTH.