

(No Model.)

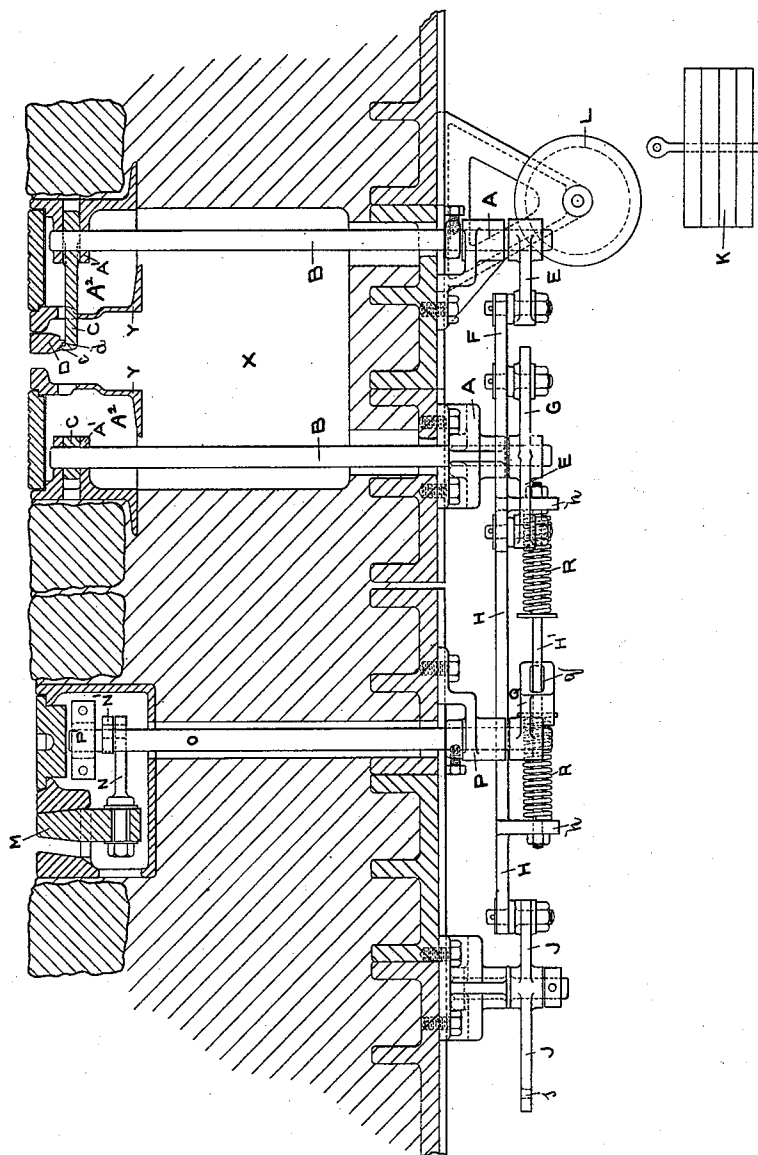
2 Sheets—Sheet 1.

W. N. COLAM.
CABLE TRAMWAY.

No. 510,469.

Patented Dec. 12, 1893.

FIG. 1.



WITNESSES:

W. H. James.
J. S. Colwell.

INVENTOR.

William Newby Colam

per T. H. Phillips

Attorney.

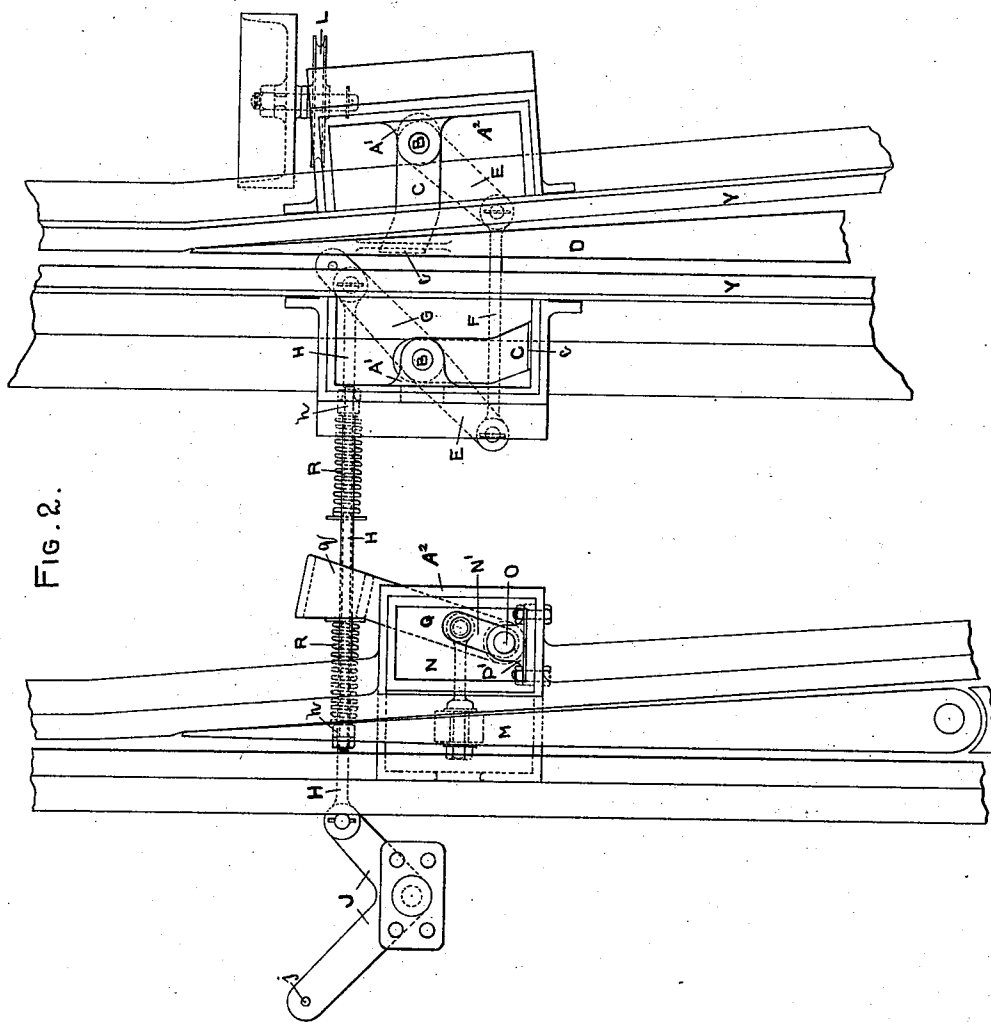
(No Model.)

2 Sheets—Sheet 2.

W. N. COLAM.
CABLE TRAMWAY.

No. 510,469.

Patented Dec. 12, 1893.



WITNESSES:

W. B. James
J. B. Clark

INVENTOR

William Newby Colam

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UNITED STATES PATENT OFFICE.

WILLIAM NEWBY COLAM, OF LONDON, ENGLAND.

CABLE TRAMWAY.

SPECIFICATION forming part of Letters Patent No. 510,469, dated December 12, 1893.

Application filed June 19, 1893. Serial No. 478,181. (No model.) Patented in England, August 10, 1892, No. 14,452.

To all whom it may concern:

Be it known that I, WILLIAM NEWBY COLAM, a subject of the Queen of Great Britain, residing in the city and county of London, England, have invented a new and useful Improvement in Cable Tramways, (for which I have obtained a patent in Great Britain, No. 14,452, bearing date the 10th of August, 1892,) of which the following is a specification.

My invention relates to a double locking point for use on cable tramways, and it consists of mechanism for operating the slot point at the same time as the rail point, and in so locking it that it cannot be displaced, the object being to insure the simultaneous action of the two points. I attain this end by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 Sheet No. 1 is a view in transverse section through part of a cable road, showing the mechanism constituting my invention in elevation, and Fig. 2 Sheet No. 2 is a view of the said mechanism, with the road removed for sake of distinctness.

Throughout the views similar parts are marked with like letters of reference.

In a suitable position on each side of the cableway X is mounted in suitable bearings A and A', a vertical shaft B. The bearings A' supporting the top ends of the shaft B are preferably formed in one with boxes A² formed on or fixed to the slot rails Y, Y. On to the top of each shaft B is fixed an arm C the free end of which carries a tongue or flange c adapted to engage either with a projection d on the under side of the slot point D or with the side of the box A². The two arms C, C, are so mounted on the shafts B, B, that the one stands at right angles to the other so that when the tongue or flange c on one arm is engaged with the projection d on the slot point the other engages with the side of the box A² carrying the top bearing of the shaft carrying it. On the lower ends of the shafts B and B are mounted levers E, E, coupled together by a rod or link F so that both of the arms C, C, carried by the said shafts move together, so that as the tongue or flange carried by one arm becomes disengaged with the projection on the slot point,

the tongue or flange on the other arm becomes disengaged with the side of the box carrying the top bearing of the shaft carrying the said arm and engages with the said projection on the slot point and so pulls it over to the other side of the slot the tongue or flange on the other arm engaging at the same time with side of the box carrying the top bearing of the shaft carrying the said arm, the frictional contact between the tongues or flanges c and the sides of the boxes A² being sufficient to efficiently prevent the arms moving unless the shafts carrying them are operated for the purpose.

To one of the shafts B is fixed an operating lever G (preferably formed in one with the lever E) which is coupled by a rod or link H with a bell-crank lever J, to the free end of which the operating cord or mechanism is attached. If this operating mechanism takes the form of a cord or wire, a balance weight K or spring is provided to operate the mechanism in the opposite direction, the said cord or wire being guided by one or more pulleys L.

The rail point M is operated through a pair of arms N and N' the former fixed to the rail point M, and the latter to a vertical shaft O mounted in suitable bearings P, P', and carrying at its lower end a lever Q the free end of which has a slot q through which a rod or bar H' carried by snugs h, h, on the rod or link H passes. In suitable positions on the rod or bar H' are placed elastic or spring stops R, R, which when the said rod or link is operated, bear against the slotted end of the lever Q operating the rail point M and so operate the said point at the same time that the slot point D is being operated, the difference in the movement of the operating levers being overcome by the elasticity of the stops R.

The length of the shafts B, B, and O are such as will bring the mechanism at their lower ends well below the bottom of the cableway, a suitable chamber being constructed to receive the said gear.

I wish it to be particularly understood that I do not limit myself to the precise details of construction hereinbefore described and illustrated by the accompanying drawings, but

that I hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

What I claim, and desire to secure by Letters Patent, is—

1. In a cable tramway, the combination with the switch or rail and slot points, of two arms mounted on vertical shafts one on each side of the cableway the said arms carrying
10 tongues or flanges adapted to engage with a projection on the under side of the slot point to pull the said point over to either side of the slot, levers mounted on the said shafts below the cableway and coupled together by
15 a link to insure their simultaneous action, an arm mounted on one of the said shafts and connected to a bell crank operating lever by a connecting rod, spring stops mounted on the said connecting rod, a vertical shaft carrying
20 at its top end an arm connected to the switch or rail point, and an arm mounted on the bottom of this vertical shaft and having

a slotted end through which the connecting rod carrying the spring stops passes and is operated by the said spring stops, as set forth. 25

2. In a cable tramway, the combination with the rail and slot points, of the vertical shafts B, of the levers E and coupling rod H connecting the shafts B, of the vertical shaft O, of the levers G and J and the coupling rod H connecting the shaft O with the shafts B, of the
30 slotted lever Q of the spring stops R on the coupling rod H, of the levers N and N' connecting the rail point M with the shaft O, and of the arms or levers C carried by the shafts
35 B and adapted to operate the slot point D, all combined, arranged and operating, as and for the purpose set forth.

WILLIAM NEWBY COLAM.

Witnesses:

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