

(No Model.)

C. J. VAN DEPOELE.

SPRING SWITCH FOR OVERHEAD ELECTRIC CONDUCTORS.

No. 414,609.

Patented Nov. 5, 1889.

Fig. 1.

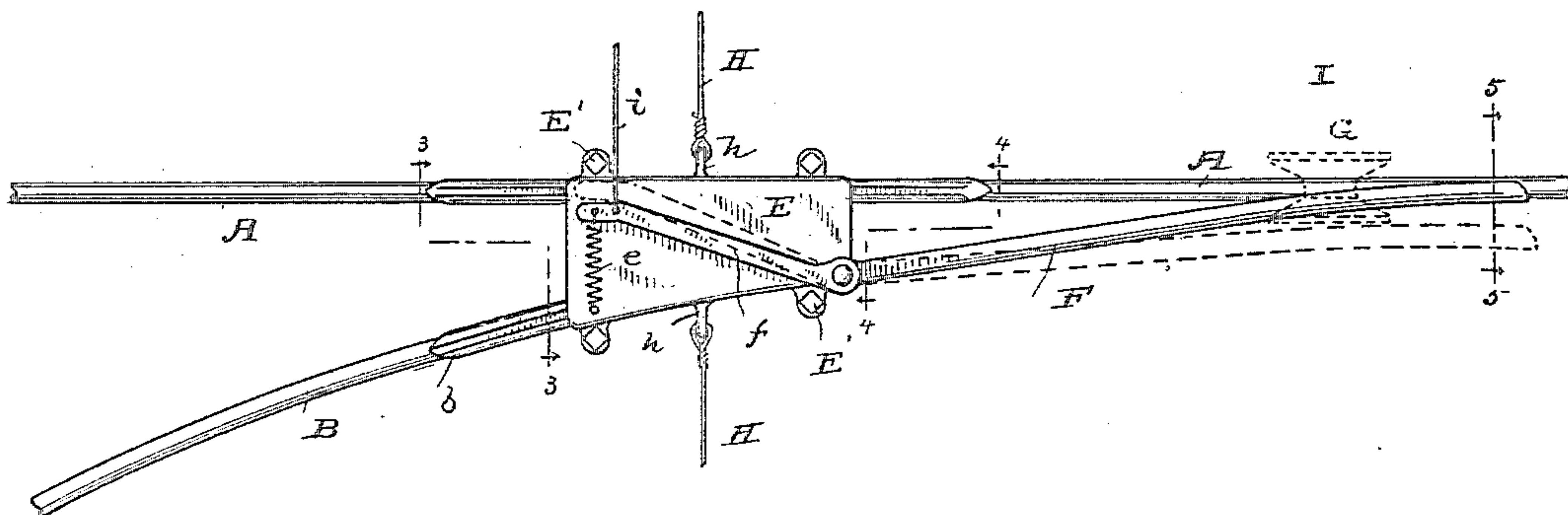


Fig. 2.

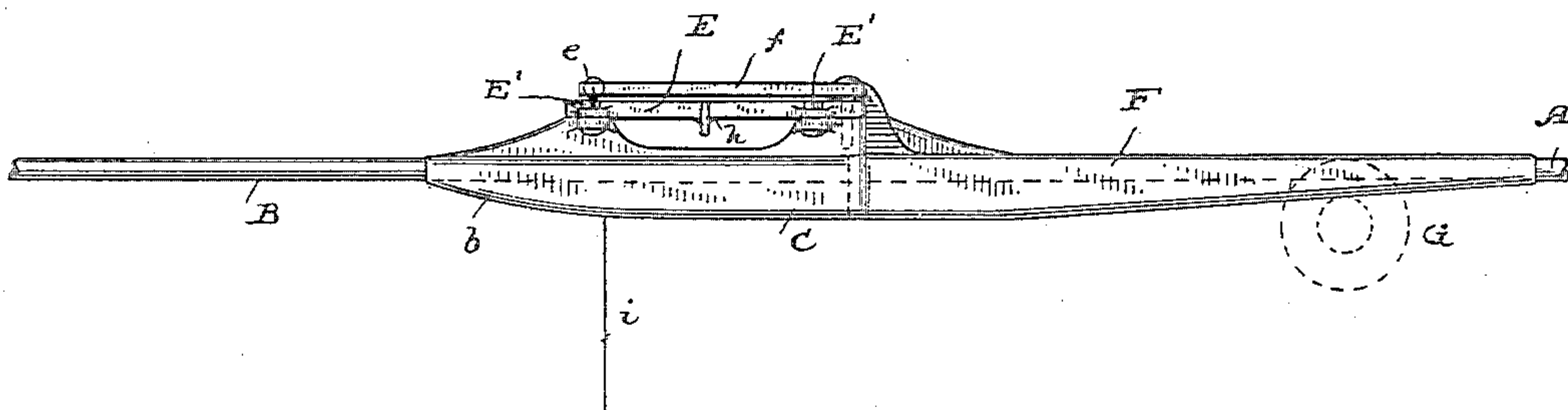


Fig. 3.

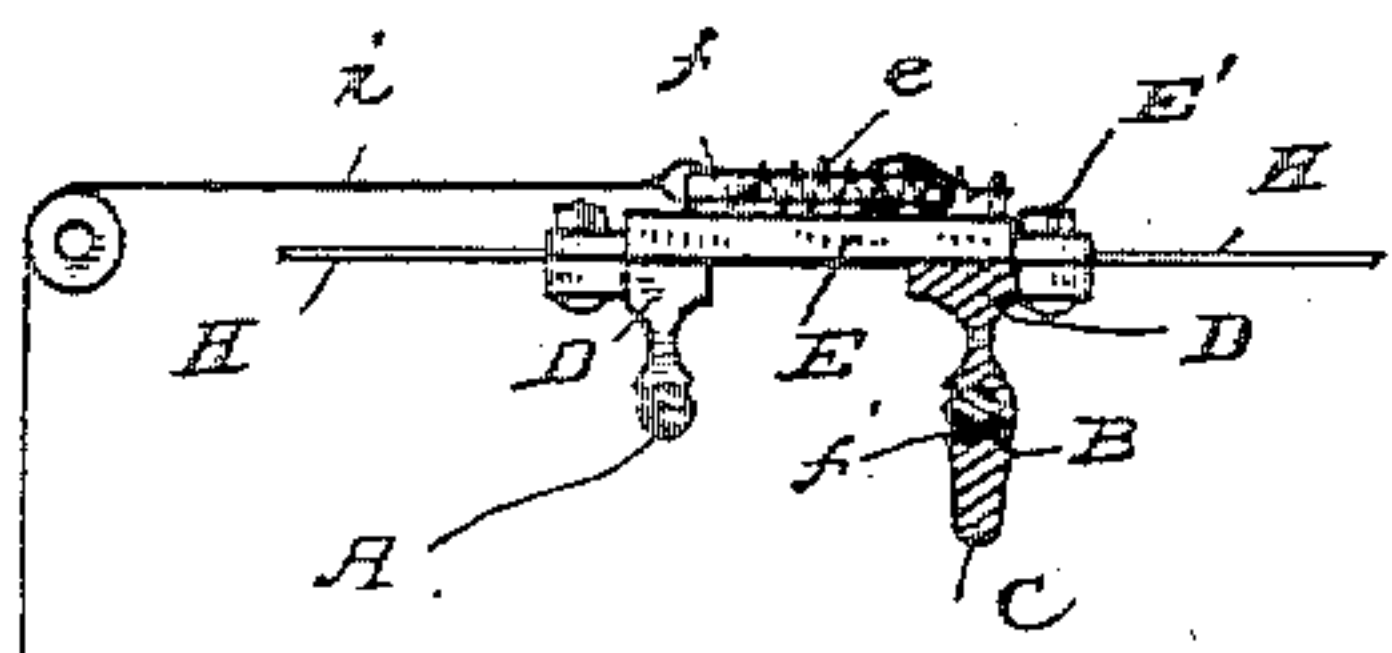
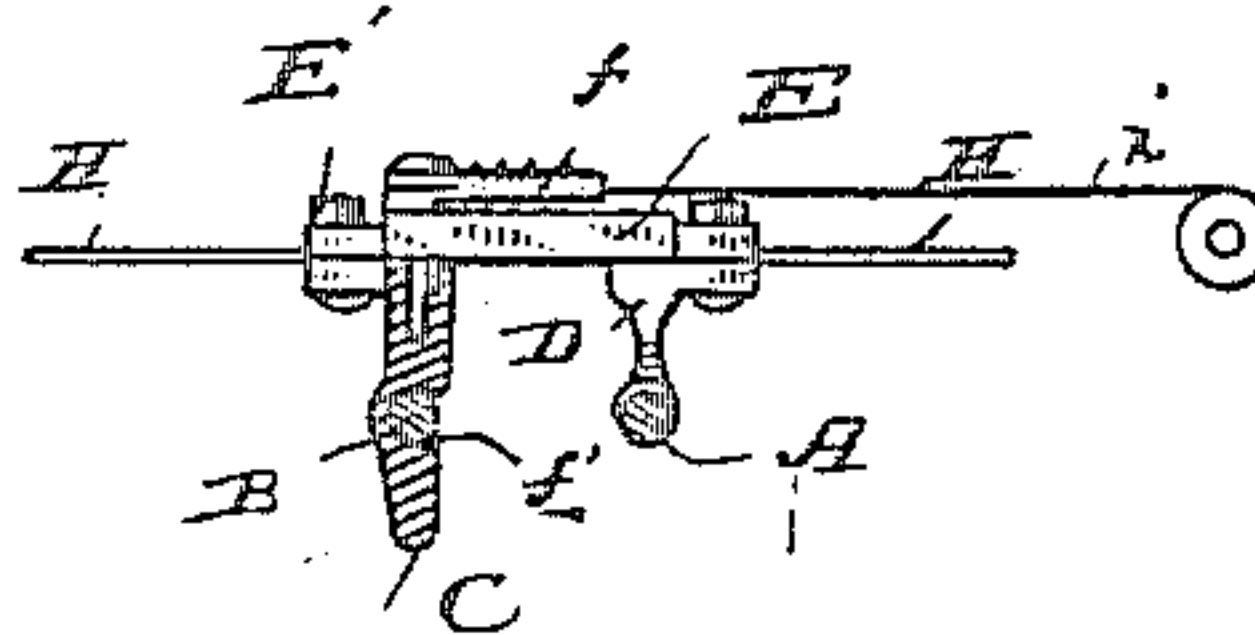


Fig. 5.



Fig. 4.



Witnesses

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SPRING-SWITCH FOR OVERHEAD ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 414,609, dated November 5, 1889.

Application filed January 24, 1889. Serial No. 297,350. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. VAN DEPOELE, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Spring-Switches for Overhead Electric Conductors, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to electric railways in which the supply-current is conveyed by a suspended electric conductor and carried to the motor upon the traveling vehicle by means of a traveling contact-wheel or its equivalent pressing upwardly against the supply-conductor; and it consists in a switch which will be entirely automatic in its action where the traveling contact-wheel is to be diverted onto a branch or turn-out, but which may be manually operated to permit the contact device to remain upon the main conductor and pass the turn-out without entering the same.

The various details of construction and arrangement of a device embodying my invention are shown in the accompanying drawings, in which—

Figure 1 is a plan view showing main and branch conductors and a switch embodying my invention. Fig. 2 is a side elevation thereof. Figs. 3 and 4 are detail sectional views on the line 3 3 and 4 4 of Fig. 1. Fig. 5 is a detail sectional view on the line 5 5 of Fig. 1.

As indicated in the drawings, A is the main conductor seen at a point where a branch conductor B diverges therefrom. The branch B may extend to a separate line or comprise the supply-conductor for a turn-out such as is used on single-track railways to admit of the cars passing each other. A metallic bail or ear C is securely attached to the upper side of the conductor A, and a similar though shorter bail D is similarly attached to the cross piece or plate E, which may be attached thereto in any convenient manner, as by bolts E', or formed integral with the said bails C D. With either construction the plate E unites the bails, and so acts to support the extremity of the branch conductor B. To the plate E is pivotally connected a hollow or grooved tongue F, which forms a continua-

tion of the branch conductor B, and is normally held laterally against the conductor A by a suitable spring *e*, acting against an arm or projection *f* extending from the tongue F. The tongue F is, as stated, made hollow or with a deep lateral groove *f'*, and so formed as to lap the under side of the main conductor A; but it is also curved outwardly and downwardly therefrom, so that a grooved contact-wheel *g*, coming toward the outer end of said tongue in the direction of the arrow I, will engage the same and be deflected outwardly toward the branch conductor B, and at the same time downward sufficiently for its flange to clear the main conductor. In following along said tongue the wheel G will diverge laterally from the main conductor and be directed to the extremity *b* of the branch conductor B, which it is then free to follow.

The switch as a whole is supported in any convenient manner, as by cross-wires H, connected to suitable ears *h*, formed on the plate E.

When it is desired that a contact-wheel moving in the direction indicated by the arrow I shall continue on the main conductor, instead of being automatically switched to the branch B, the tongue F is held away from the said main conductor by means of a suitable switch-rope *i*, attached to the tongue F or to the arm *f* thereof. A contact-wheel, as G, moving toward the switch upon the branch conductor B, will automatically pass to the main conductor by following the tongue F. A similar contact-wheel moving toward the switch upon the main conductor A will force the tongue F laterally away from the said main conductor sufficiently to allow its flanges to pass and remain in engagement therewith.

It will be understood, therefore, that with a switch constructed as just described a contact advancing toward it upon the main conductor in the direction of the arrow *i* will force the tongue F outward and remain upon said conductor; also, that a traveling contact advancing upon the main conductor toward the front end of the switch, as indicated by arrow I, will be switched to the branch conductor by following the tongue F. It will also be apparent that when it is desired that a traveling contact advancing toward the

front end of the switch should remain upon the main conductor by overcoming the power of the spring by which the tongue is normally held against said main conductor, as by pulling the switch-rope, the contact will be permitted to travel uninterruptedly along the main conductor.

Other forms of construction than that here shown may be employed to embody the invention, and I therefore do not restrict myself to the exact details shown.

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

1. A switch for suspended electric conductors, comprising a main conductor and a branch conductor having a laterally-movable switch-point, the extremity of which laps the under side of the main conductor, substantially as described.

2. A switch for suspended electric conductors, comprising a support secured to the main conductor and sustaining the terminal of the branch, a tongue forming a continuation of the branch conductor and extending into engagement with the main conductor, the extremity of said tongue lapping or embracing the under side of the main conductor at its point of junction therewith to disengage the

contact device from the said main conductor when passing onto the branch.

3. A switch for suspended electric conductors, comprising a central support secured to the main conductor and to the terminal of the branch, a movable switch-tongue suitably spring-held against the side of the main conductor, and means for holding the switch-tongue out of contact with the main conductor or to render the switch inoperative, substantially as described.

4. A switch for suspended conductors, comprising stationary supports, main and branch conductors secured thereto, a laterally-moving tongue forming a continuation of the branch conductor, a suitable spring connected with said tongue and normally holding the same laterally against the main conductor, and means for holding the tongue away from the main conductor when it is desired that the contact should pass the switch without leaving the main conductor, substantially as described.

In testimony whereof I hereto affix my signature in presence of two witnesses.

CHARLES J. VAN DEPOELE.

Witnesses:

FRANKLAND JANNUS,
J. W. GIBBONY.