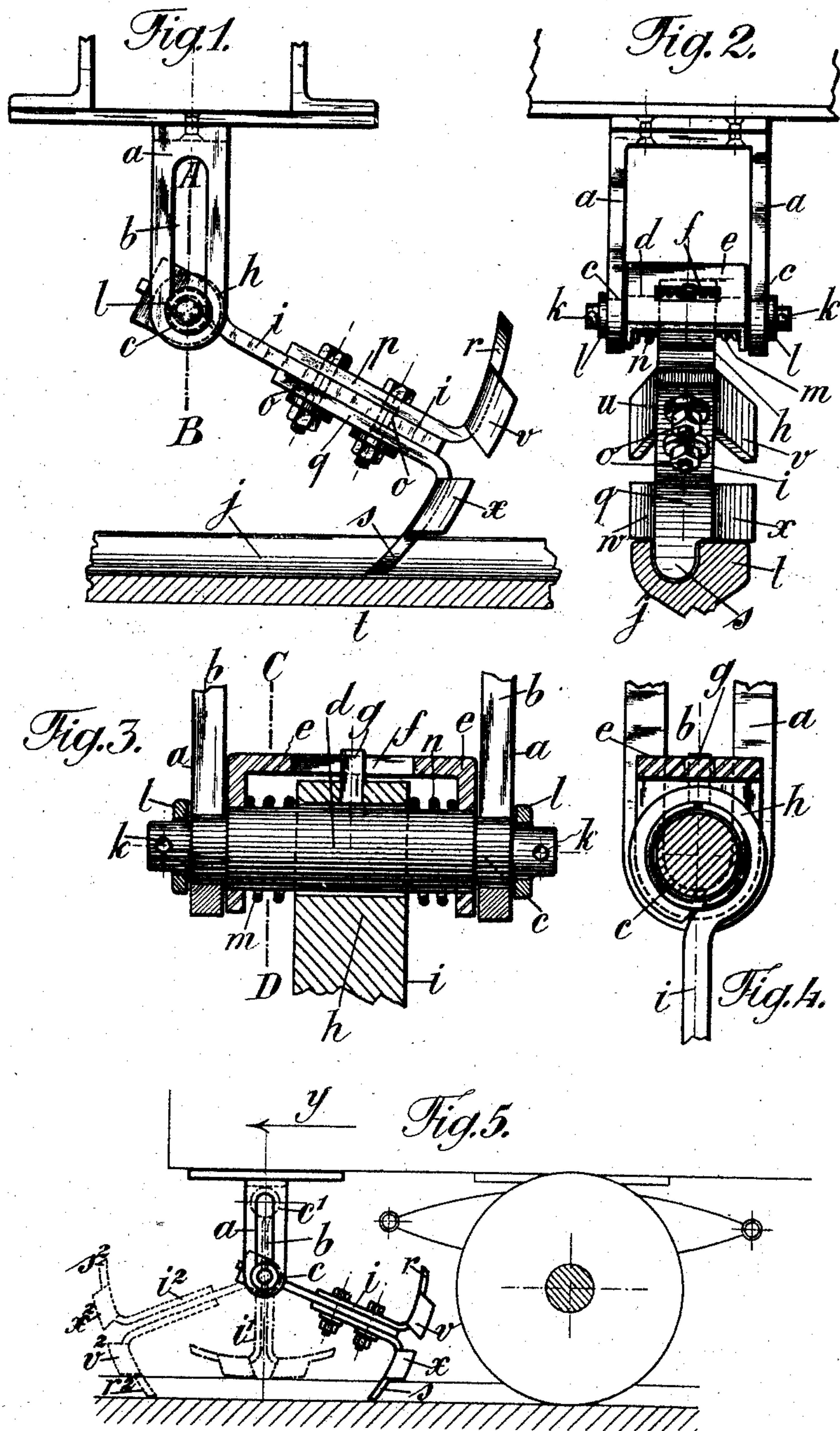


J. SANDOZ-SUTTER.
 AUTOMATIC CLEANING DEVICE FOR TRAMWAY RAILS.
 APPLICATION FILED DEC. 29, 1908.

928,543.

Patented July 20, 1909.



WITNESSES;
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UNITED STATES PATENT OFFICE.

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AUTOMATIC CLEANING DEVICE FOR TRAMWAY-RAILS.

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Specification of Letters Patent.

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Application filed December 29, 1908. Serial No. 469,903.

To all whom it may concern:

Be it known that I, JÄMES SANDOZ-SUTTER, a citizen of Switzerland, and resident of Neuchatel, in the Canton of Neuchatel, Switzerland, have invented a certain new and useful Automatic Cleaning Device for Tramway-Rails, of which the following is a specification.

This invention relates to a device to be applied to tramway cars, and has for its object to automatically clean the grooves of the rails in which the wheel flanges of these cars travel.

In the annexed drawing which illustrates the invention, Figure 1 shows the arrangement in side elevation and the rail in longitudinal section; Fig. 2 is a front elevation of Fig. 1, with the rail in cross-section. Fig. 3 is an enlarged section on the line A—B of Fig. 1, Fig. 4 is a section on the line C—D of Fig. 3. Fig. 5 shows the arrangement adapted to the fore part of a tramway car, represented diagrammatically.

The reference letters provided with an index numeral represent another position of the various parts shown in Fig. 5.

As shown, the arrangement comprises a support *a* fixed to the car and having two vertical slots *b* in which the pivots *c* of a shaft *d* are engaged. On the shaft *d* is freely adjusted a part *e* of T-square form in a longitudinal opening *f* of which is engaged a hook *g* fixed to the lug *h* of a pivoted part *i* turning freely on the shaft *d*. The shaft *d* is held in place in the slots *a* by the pins *k* and the washers *l*. On the shaft *d*, and on each side of the lug *h* are placed two spiral springs *m*, *n*, bearing, from the outer side, against the part *e*. Against the part *i* are fixed, by bolts *o*, two arms *p*, *q* bent at their lower part and terminating in rounded points *r*, *s* turned away from each other, the latter of which is engaged in the groove *j* of the rail *t*. At equal distance respectively from the points *r*, *s*, the arms *p* and *q* have each an enlarged part forming wings *u*, *v*, and *w*, *x* respectively.

The drawing shows only one support with its pivotally turning part *i*, but each car may

have, if required, two supports each carrying a pivotally turning part corresponding each to one of the tramway lines.

When the car moves in the direction of the arrow *y* (Fig. 5) the part *i* occupies the position shown in full lines; in this position the point *s* placed in front scrapes along the bottom of the groove *j* of the rail, driving out of this groove mud, stones etc. which may be in it; the material thrown out cannot fall back on the rail owing to the wings *w*, *x*, which push them aside. By means of the springs *m* and *n*, between which the part *i* is pivoted, the latter, should it be laterally displaced by shocks, etc., will always be brought back to the middle of the shaft. When the car, ceasing to proceed in the direction of the arrow *y*, commences to move in the opposite direction, the part *i* falls first into the position *i*¹ (Fig. 5), the pivots *c* of the shaft *d* sliding up to the position *c*¹ in their slot *b*, and then the part assumes the position *i*², thus causing the point *r*, now placed at the rear of the vehicle, with its wings *u*, *v*, to clean the rail in the groove of which it is engaged. The points of the pivoted parts *i* only work in the groove of the rails under the action of the weight of the movable parts of the arrangement; there is therefore no fear of premature wear to the rails or points.

The cleaning of rails effected by this arrangement is done quite automatically, as there is no occasion to trouble about the position of the respective points *r* and *s*, which fall of themselves into the required position, in whichever direction the vehicle is traveling.

The form and dimensions of the parts of this arrangement, as well as the material of which they are made, may vary without departing from the spirit of the invention.

Having now described my invention, I claim as new and wish to secure by Letters Patent:—

1. In a device for cleaning tramway rails, a body having vertical slots, a scraper mechanism having a cleaning piece and wings at its lower end and adapted by its weight alone to clean the surface of a rail, said scraper

mechanism having its upper end pivotally carried by the body aforesaid and slidable in the vertical slots of the latter.

2. In a device for cleaning tramway rails,
5 a body, a scraper mechanism having a cleaning piece and wings at its lower end and adapted by its weight alone to hold the cleaning piece against the surface of a rail, said scraper mechanism having its upper end

pivoted upon and slidable lengthwise of a 10 horizontal rod which, in turn, is slidable vertically of the body.

Signed at Berne, Switzerland, this ninth day of December A. D. 1908.

JAMES SANDOZ-SUTTER.

Witnesses:

O. URZ,

OTTO TETENS.