

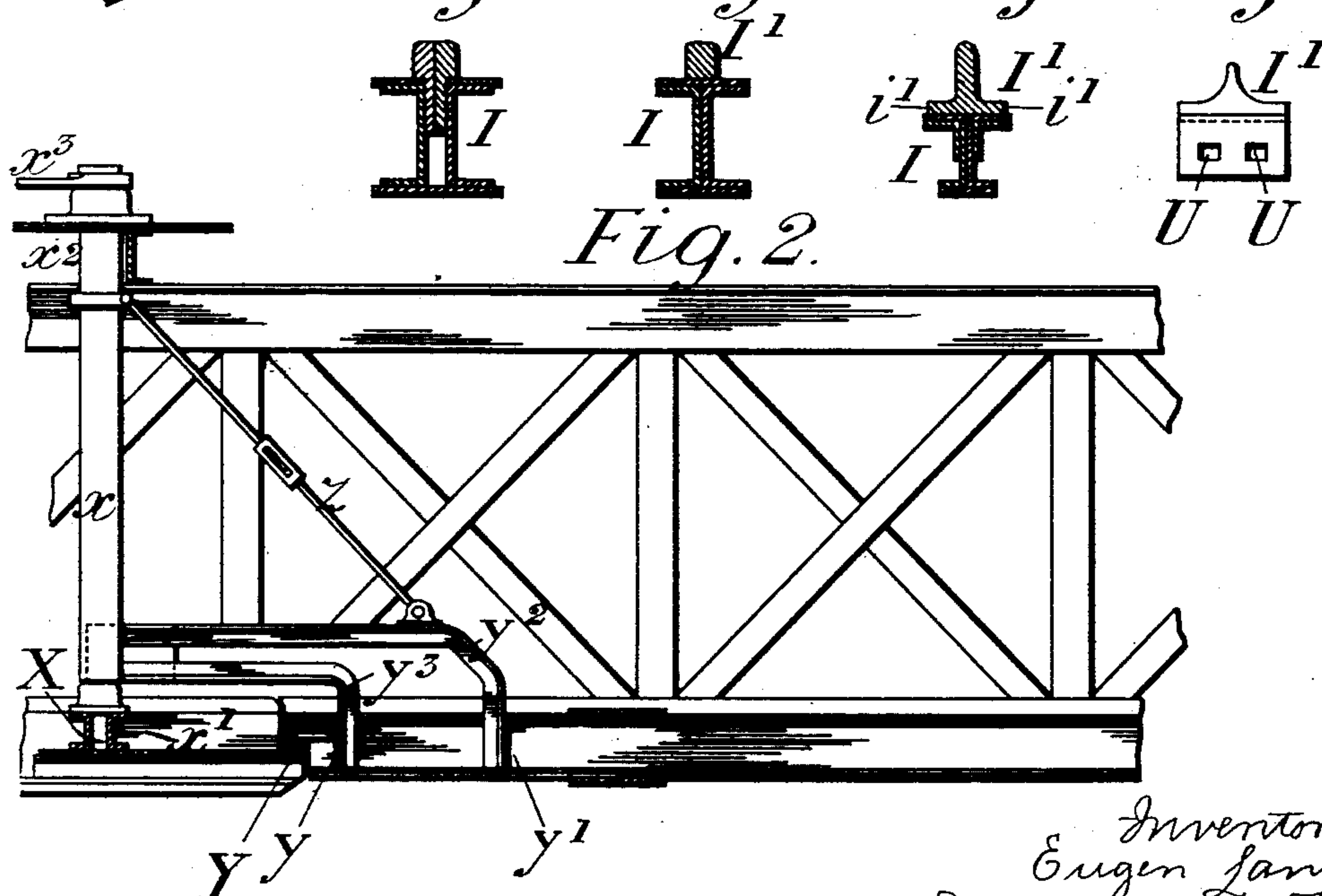
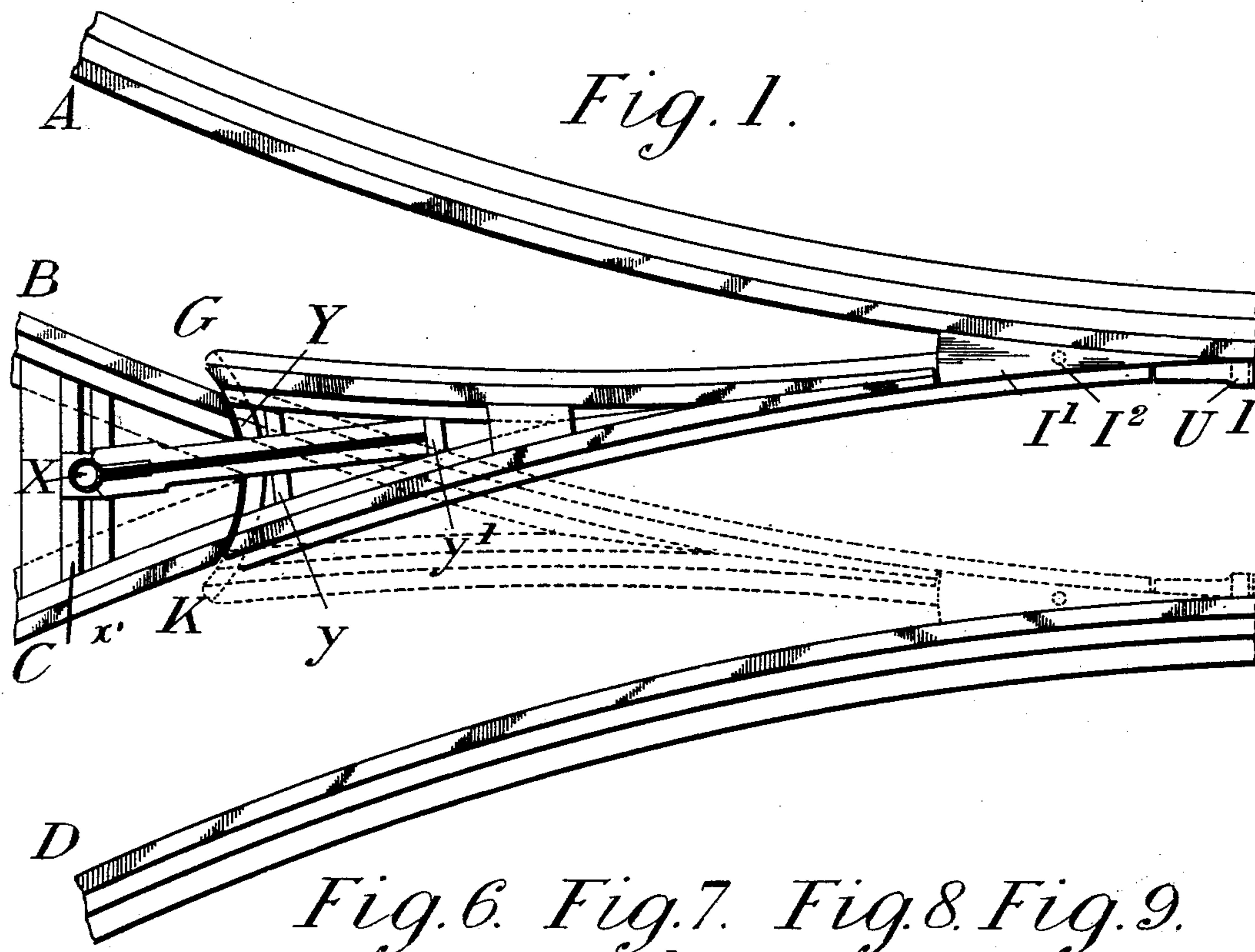
(No Model.)

2 Sheets—Sheet 1.

E. LANGEN.
SWITCH FOR OVERHEAD RAILWAYS.

No. 541,366.

Patented June 18, 1895.



Witnesses:
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Thos. A. Green

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Fig. 3.

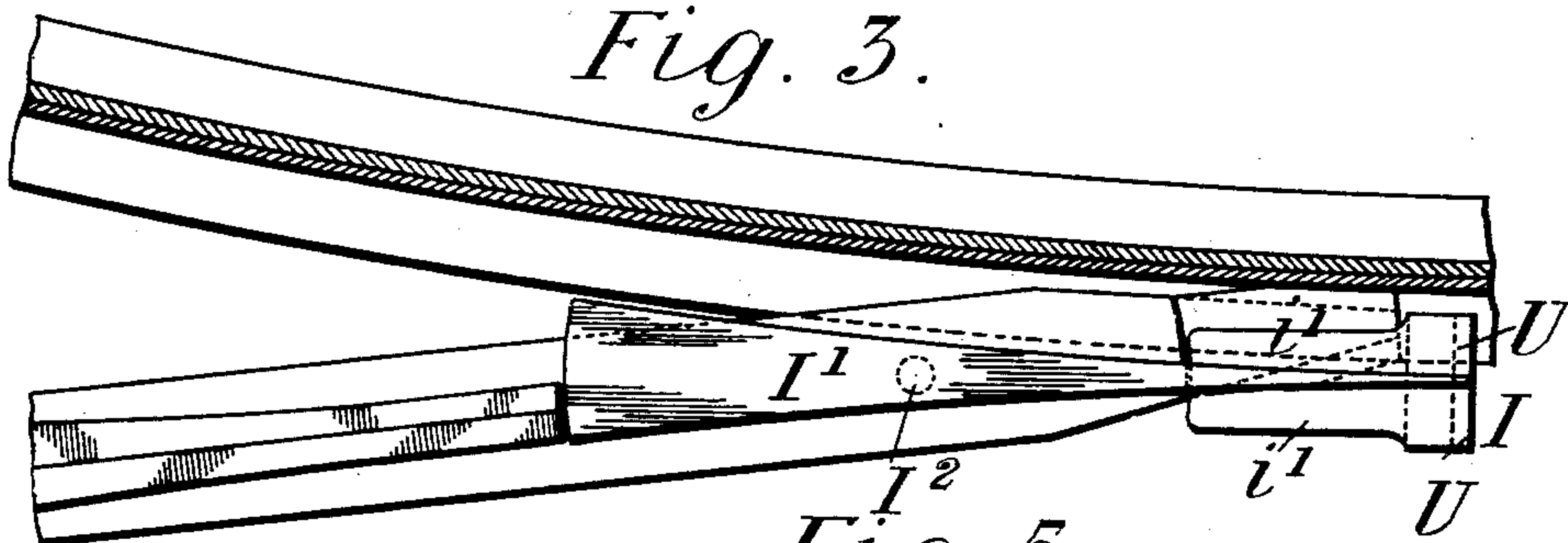


Fig. 5.

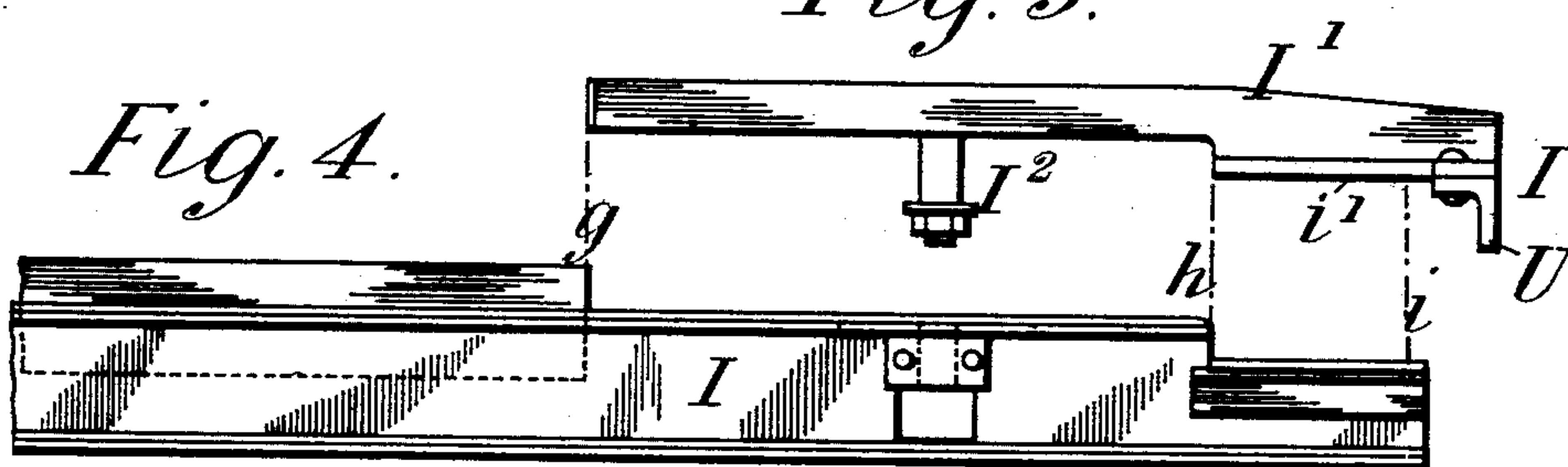


Fig. 4.

Fig. 10.

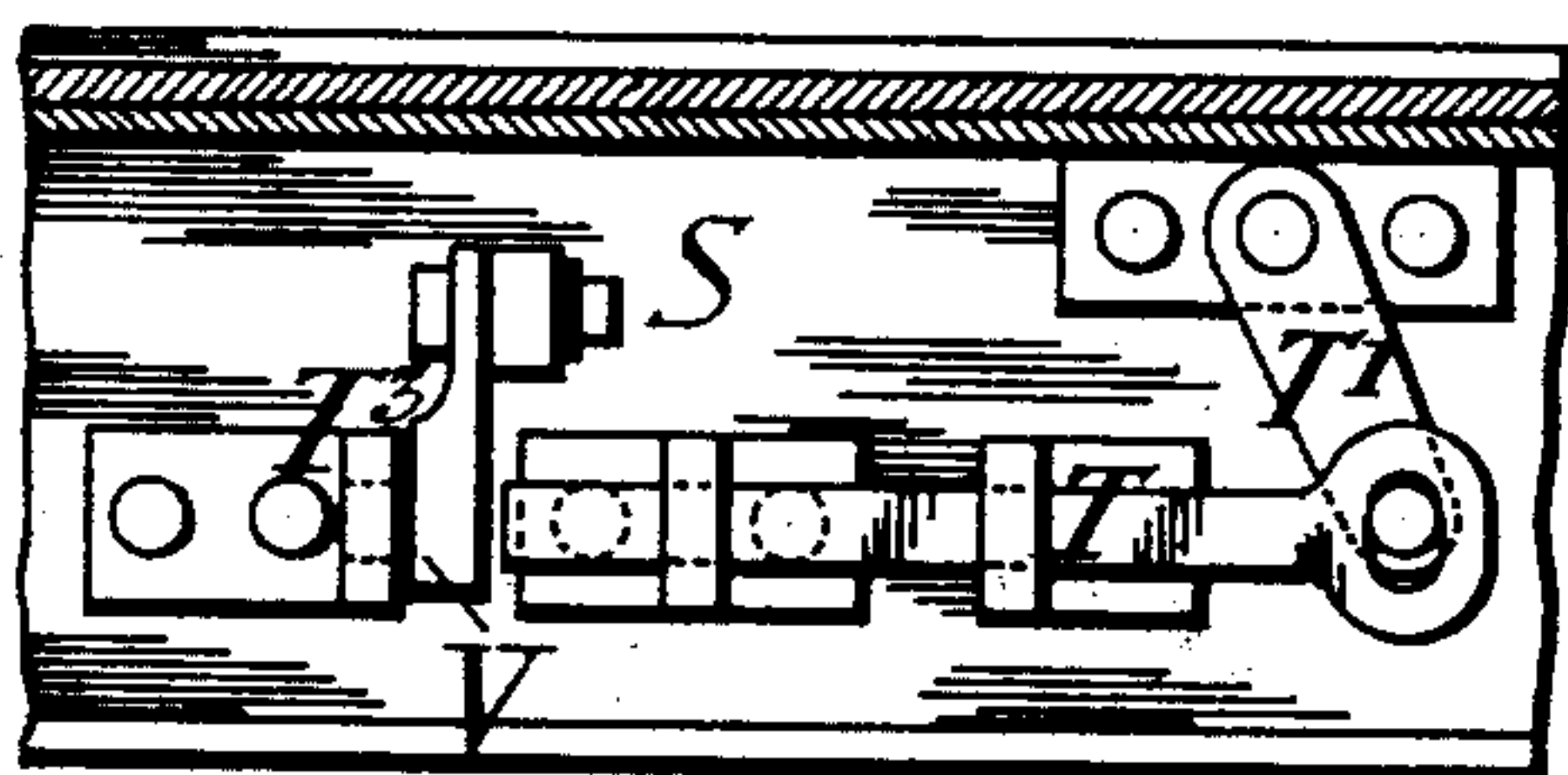


Fig. 11.

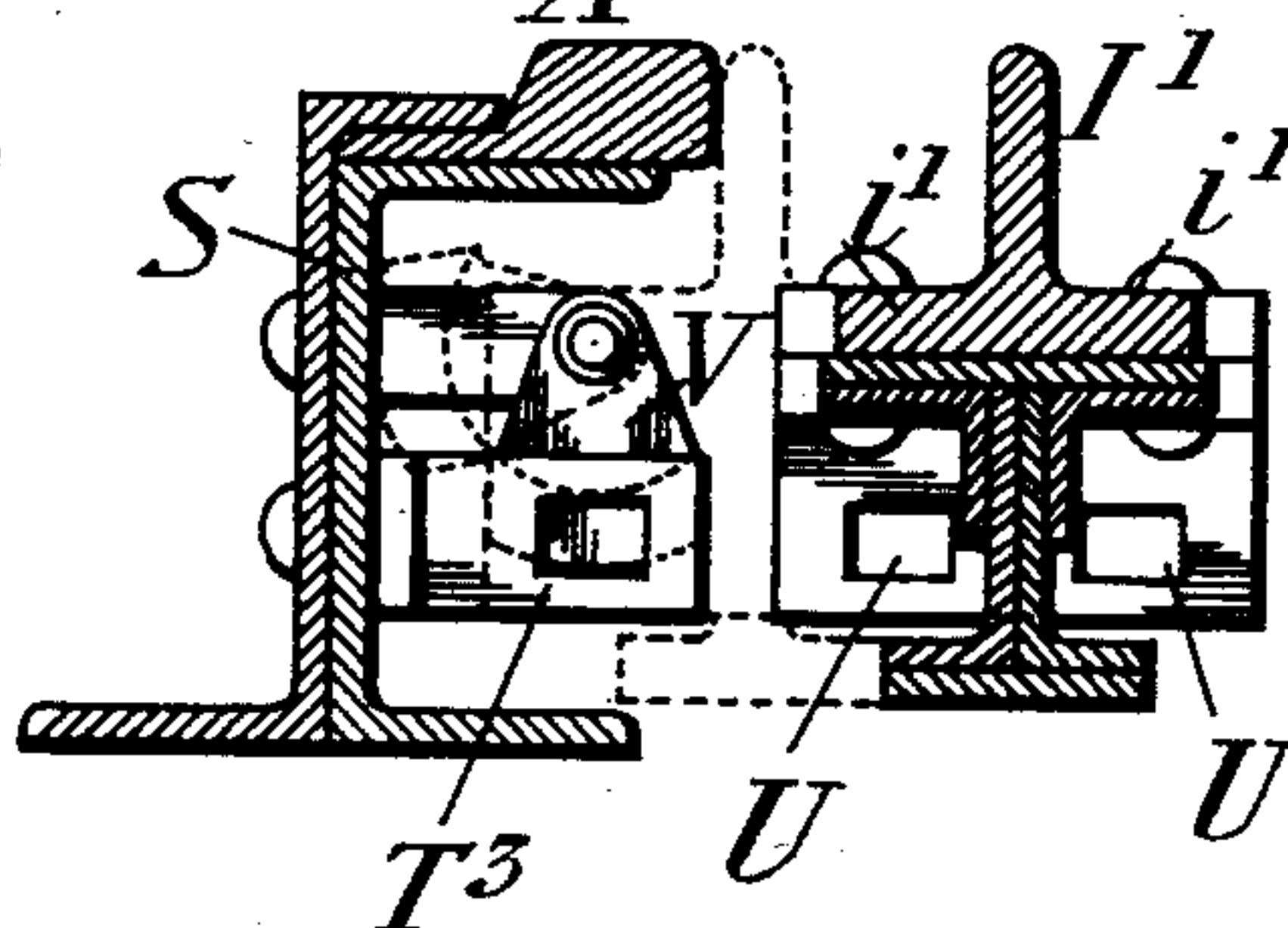
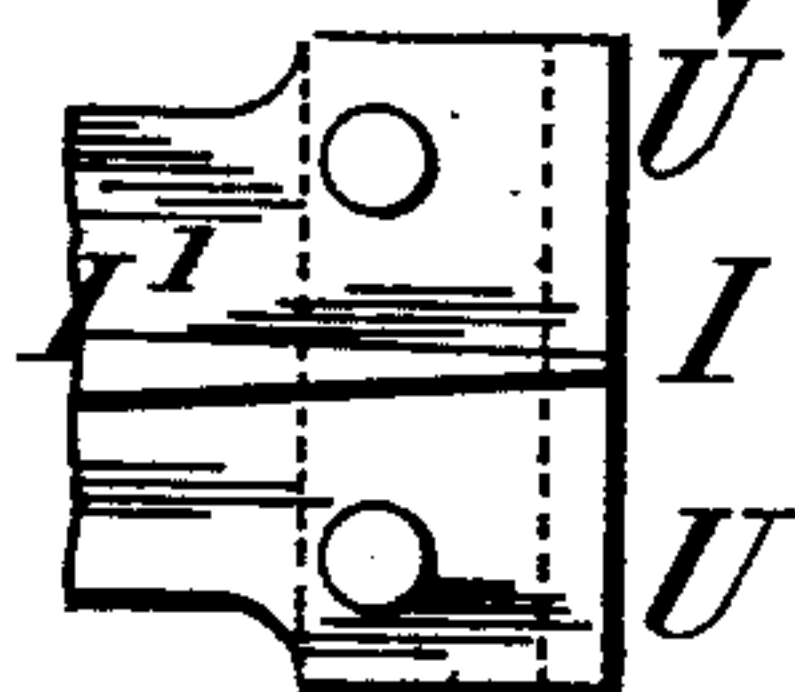
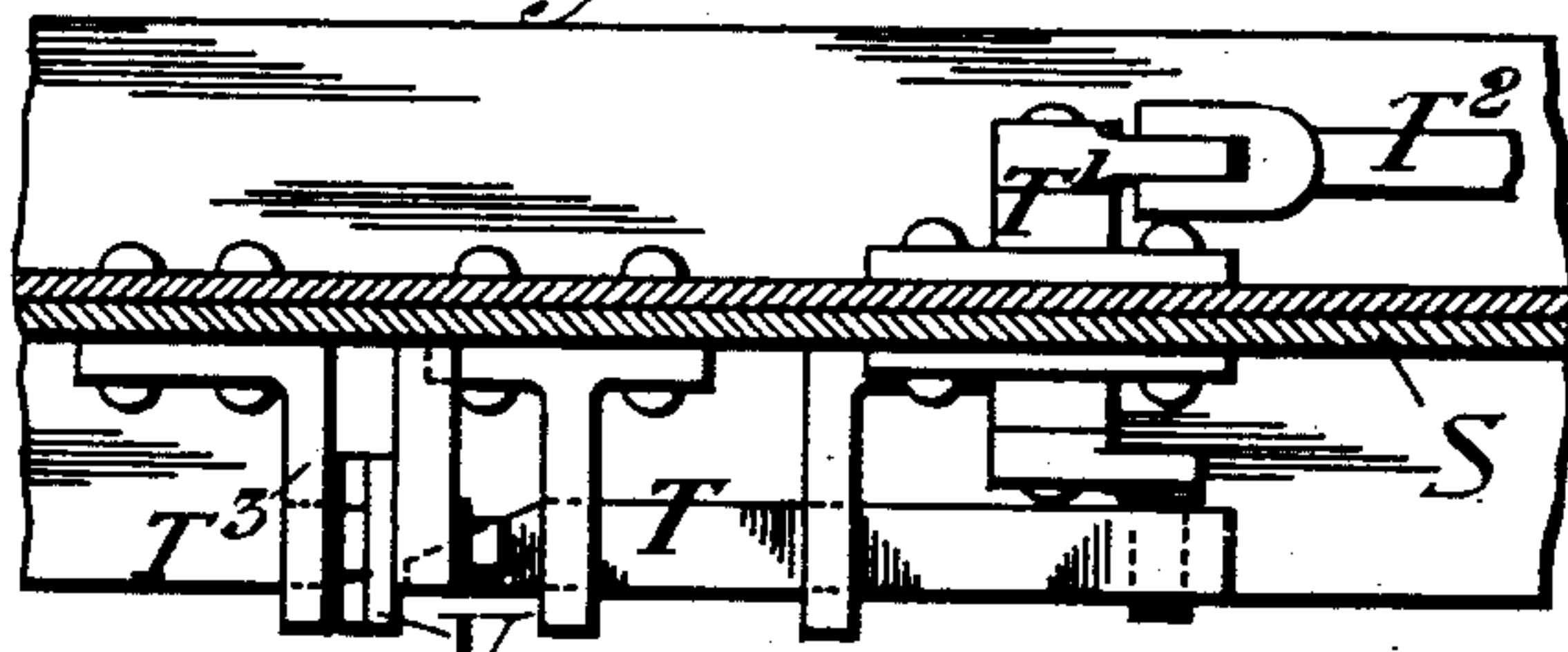


Fig. 12.



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UNITED STATES PATENT OFFICE.

EUGEN LANGEN, OF COLOGNE, GERMANY.

SWITCH FOR OVERHEAD RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 541,366, dated June 18, 1895.

Application filed April 6, 1895. Serial No. 544,780. (No model.)

To all whom it may concern:

Be it known that I, EUGEN LANGEN, a citizen of Prussia, residing at 14 Werthstrasse, Cologne, in the Empire of Germany, have invented certain new and useful Improvements in Switches for Overhead Railways with Suspended Vehicles, of which the following is a specification.

My invention relates to an improved construction of switches for overhead railways with suspended vehicles wherein there is required only a single movable switch in connection with two meeting lines of rails.

I will describe my improvements with reference to the accompanying drawings, in which—

Figure 1 shows a sectional plan of the junction of two lines of railway with the single-tongue switch. Fig. 2 is a vertical section; Fig. 3, an enlarged part plan of the front end of the switch; Figs. 4 and 5, side views of the front end I of the switch and its pivoted piece I' detached. Figs. 6, 7, and 8 are sections taken, respectively, at *g*, *h*, and *i*, Fig. 4. Fig. 9 is a front view of the end I of the switch. Figs. 10, 11, and 12 show the device for locking the switch.

The single tongue switch G I K is pivoted at its base at X and is moved over to the one side or other like an ordinary switch so as to form a through connection either for the line C D as shown in the position in full lines, or for the line A B as shown in the dotted position. This construction is not generally new, but only as regards the arrangement whereby the extreme point of the switch is pivoted to the other part, so that when moved against the one rail or the other the point will adjust itself so as to lie close against the rail, instead of forming a certain angle therewith, as would otherwise be the case, unless the switch were made of considerable length.

The switch G I K, is, as before stated pivoted at X to a tubular post x having its lower end supported by a bearing on a transverse bearer x' while its upper end is supported by a collar at x^2 at the top of the box girder, above which it is provided with an arm x^3 actuated in any convenient manner for moving the switch over from one position into the other.

The two sides of the switch are connected together at their rear part by transverse pieces $y y'$ from which bent bars $y^2 y^3$ extend to the lower part of the post x to which they are rigidly fixed.

From the bar y^2 an adjustable tie rod z extends to the upper part of the post x , so that by this construction the switch is effectually supported by the post when being turned from the one position into the other.

When in either extreme position, the end I of the switch is supported by the bottom flange of the box girder, while the base rests with a curved bar Y upon the bearer x' that supports the post x .

The upper part I' of the point is made of a separate piece as shown at Figs. 3, 4 and 5, this being connected to the part I by a pivot I² passing through an eye in the latter, so that when the point is brought up against the rail, it turns slightly on the pivot I², as shown at Fig. 3, so as to lie close against the rail, in which position it is locked by a locking bolt passing through one or other of the eyes U U fixed to the extreme end of the piece I'. It will be seen that when in that position the piece I' is still sufficiently supported by its lateral flanges i' resting upon the upper face of the part I.

The device for locking the switch is shown at Figs. 10, 11 and 12. This device is not herein claimed, as it constitutes the subject matter of a separate application for Letters Patent filed by me concurrently herewith, Serial No. 544,779.

On the bottom member of the girder is provided a sliding bolt T worked by a lever T' and rod T² from any convenient point at a distance, and on the side of the switch is fixed a part or flange having an eye U through which, when the switch is brought completely home against the rail A', as shown by the dotted lines Fig. 11, the bolt T can be shot into eye T³ of another part or flange fixed to S. In order to prevent the bolt from being shot home without passing through the eye U, should the switch not have been moved completely over as for example in the position shown in full lines Fig. 11, a pivoted guard V is provided in front of the eye T³, so that the bolt is prevented from being shot.

When the switch is moved completely over as in the position shown in dotted lines Fig. 11, then the part or flange having the eye U pushes the guard to one side, into the position shown in dotted lines Fig. 11, so that the bolt T can then be shot.

The end of the bolt is made wedge shape as shown, so that if the eye U should not be exactly in line with the eye T³, the wedging action of the bolt in passing through will cause the eye U, and consequently the switch to be brought completely home.

Having thus described the nature of this invention and the best means I know of carrying the same into practical effect, I claim—

1. A single tongue switch G I K for two meeting lines of rails, such switch being pivoted to the line at its base and having its point I formed with a separate piece I' pivoted thereto so as to lie close against the rail when

moved over into either extreme position, substantially as described.

2. In a single tongue switch for two meeting lines of rails, the combination of the switch G I K, movable piece I' connected thereto by a pivot I², a pivoted support α for the rear end of the switch to which it is connected by bars $y y' y^2 y^3$ and tie rod z , and a curved transverse bar Y, resting upon the transverse bearer α' of the pivotal support α , substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 16th day of March, A. D. 1895.

EUGEN LANGEN.

Witnesses:

FRITZ SCHRÖDER,
MARIA NAGEL.