

No. 754,176.

PATENTED MAR. 8, 1904.

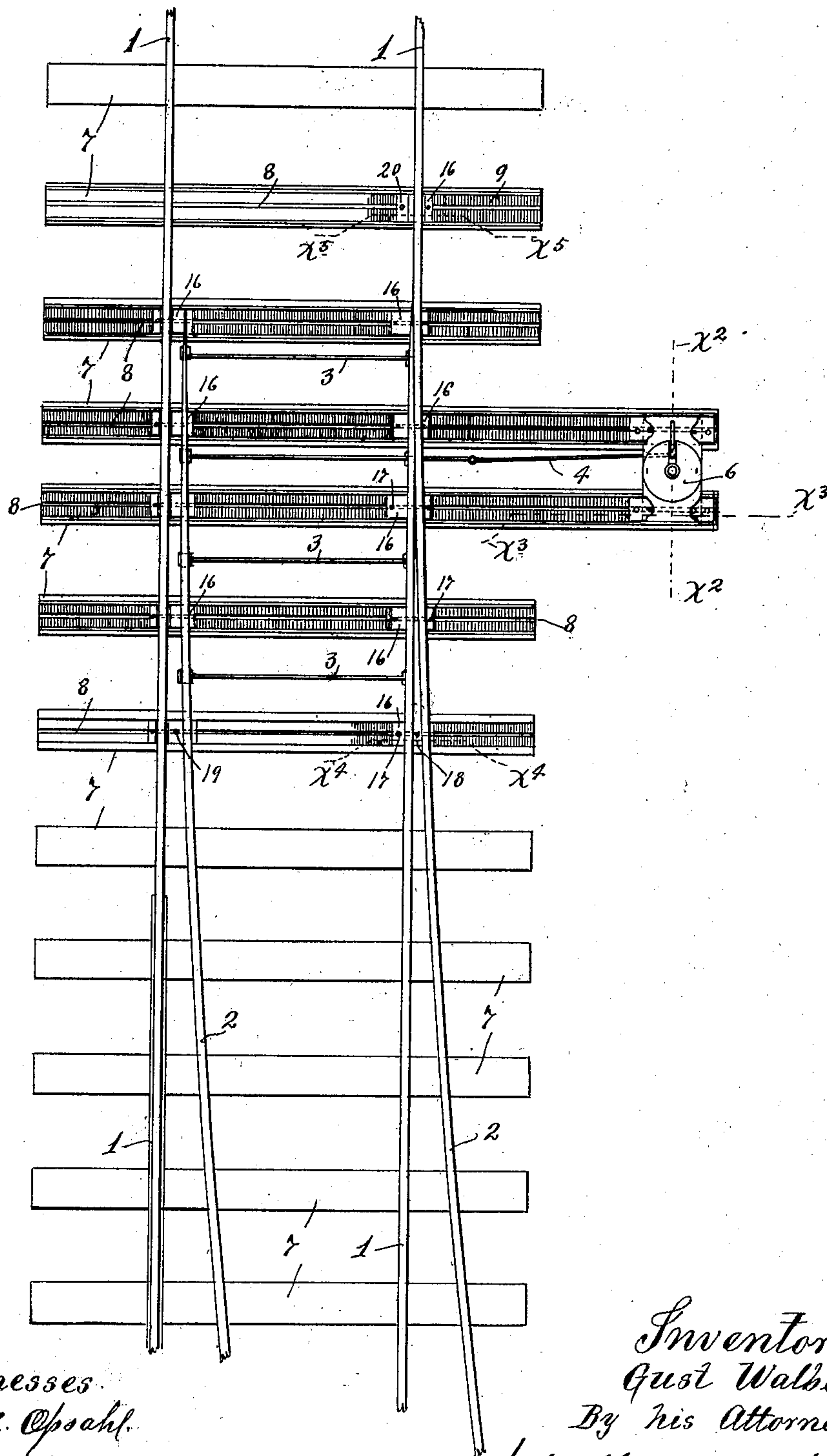
G. WALBERG.  
RAILWAY TIE.

APPLICATION FILED OCT. 15, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

*Fig. 1.*



Witnesses  
A. H. Opsahl.  
H. D. Kilgore.

Inventor.  
Gust Walberg.  
By his Attorneys'  
Williamson Merchant

No. 754,176.

PATENTED MAR. 8, 1904.

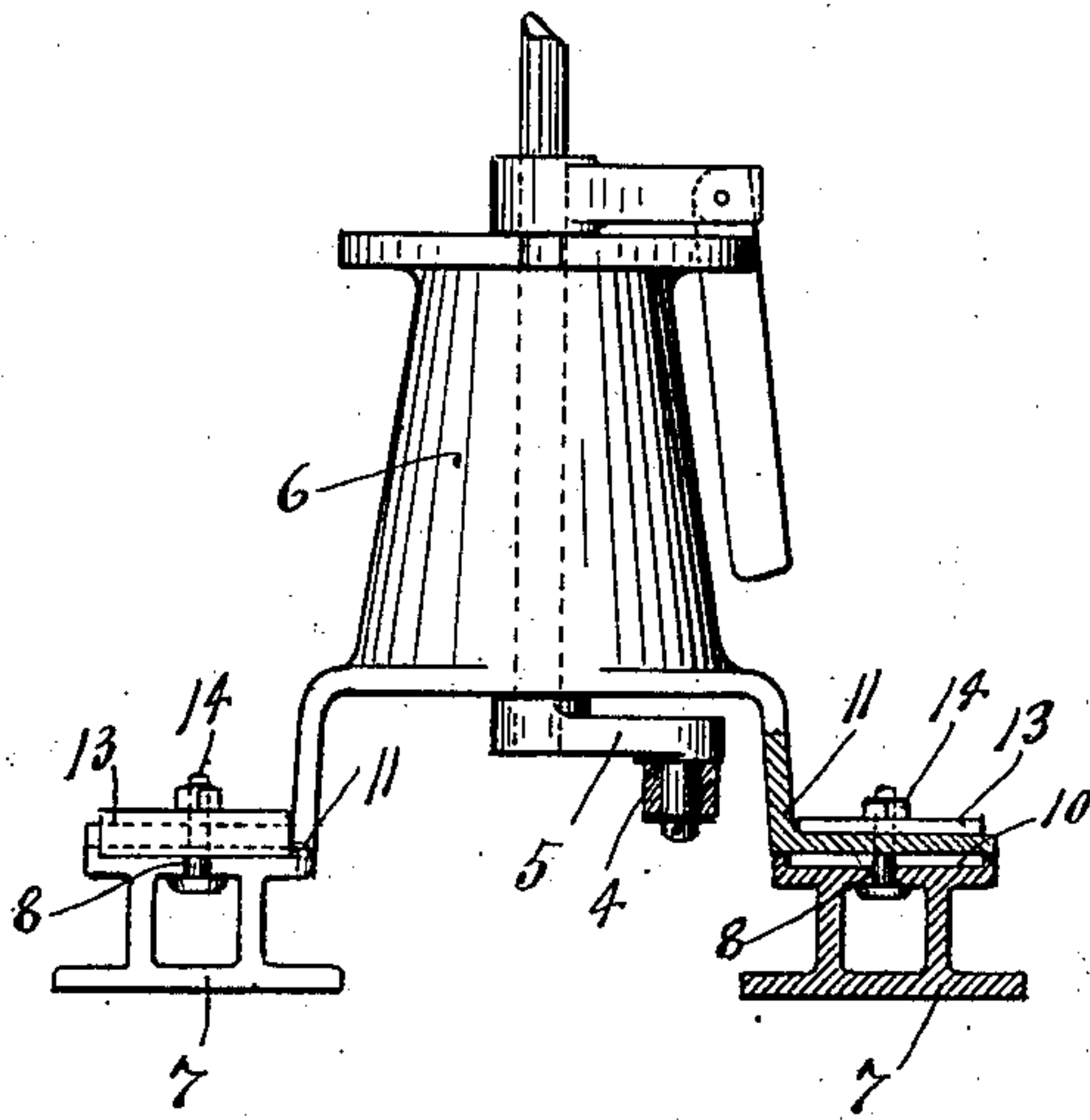
G. WALBERG.  
RAILWAY TIE.

APPLICATION FILED OCT. 15, 1903.

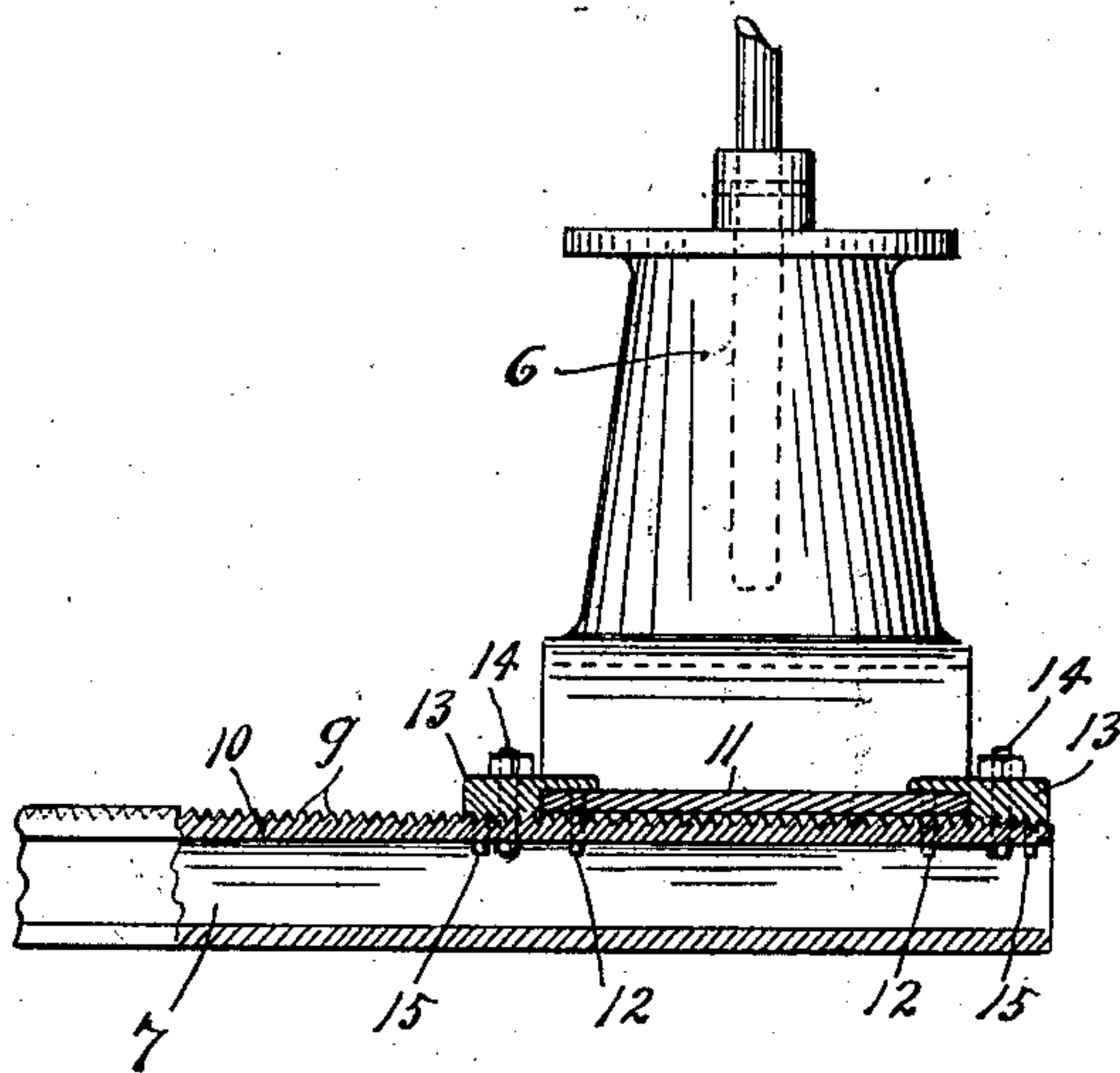
NO MODEL.

2 SHEETS—SHEET 2.

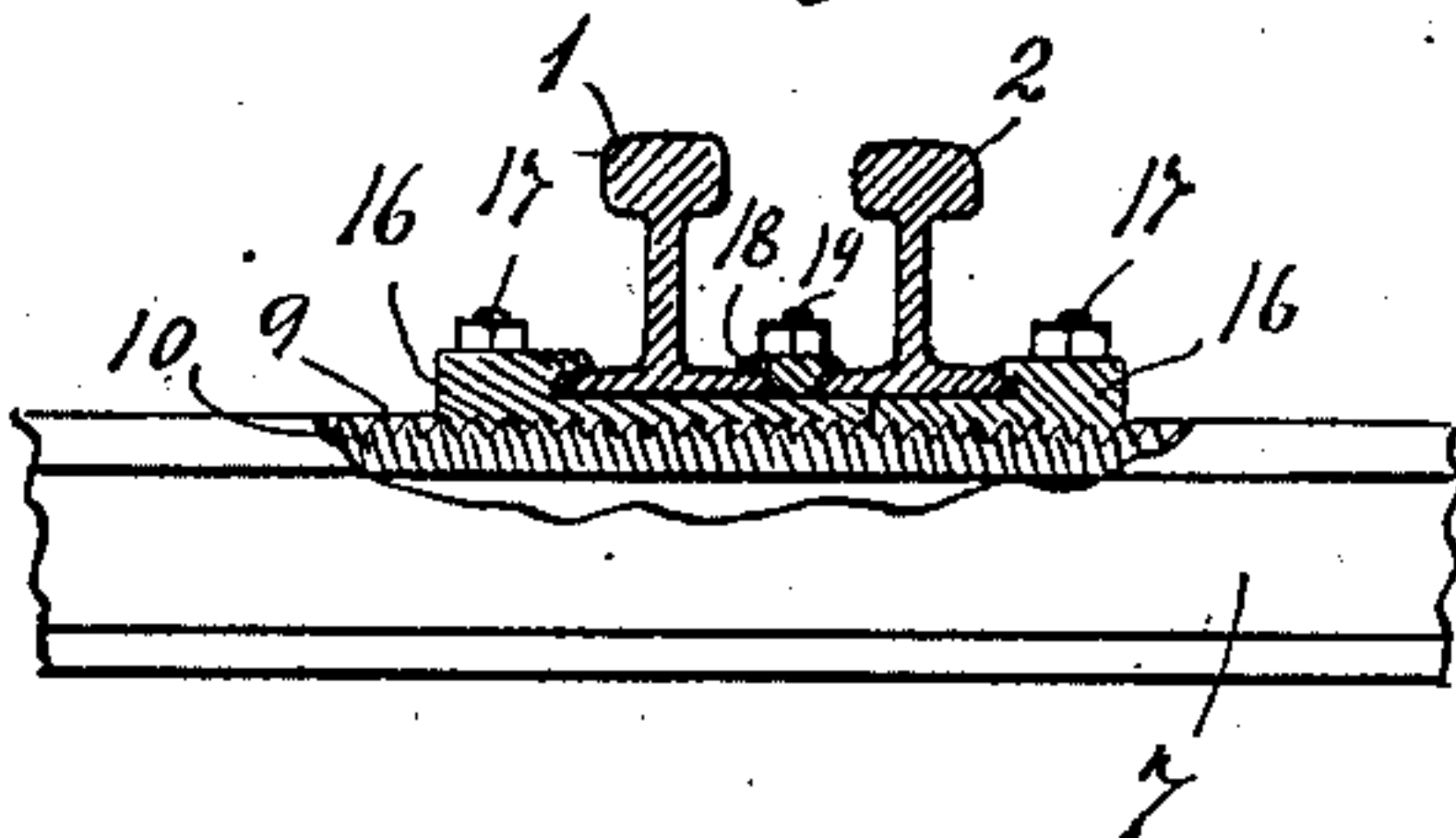
*Fig. 2.*



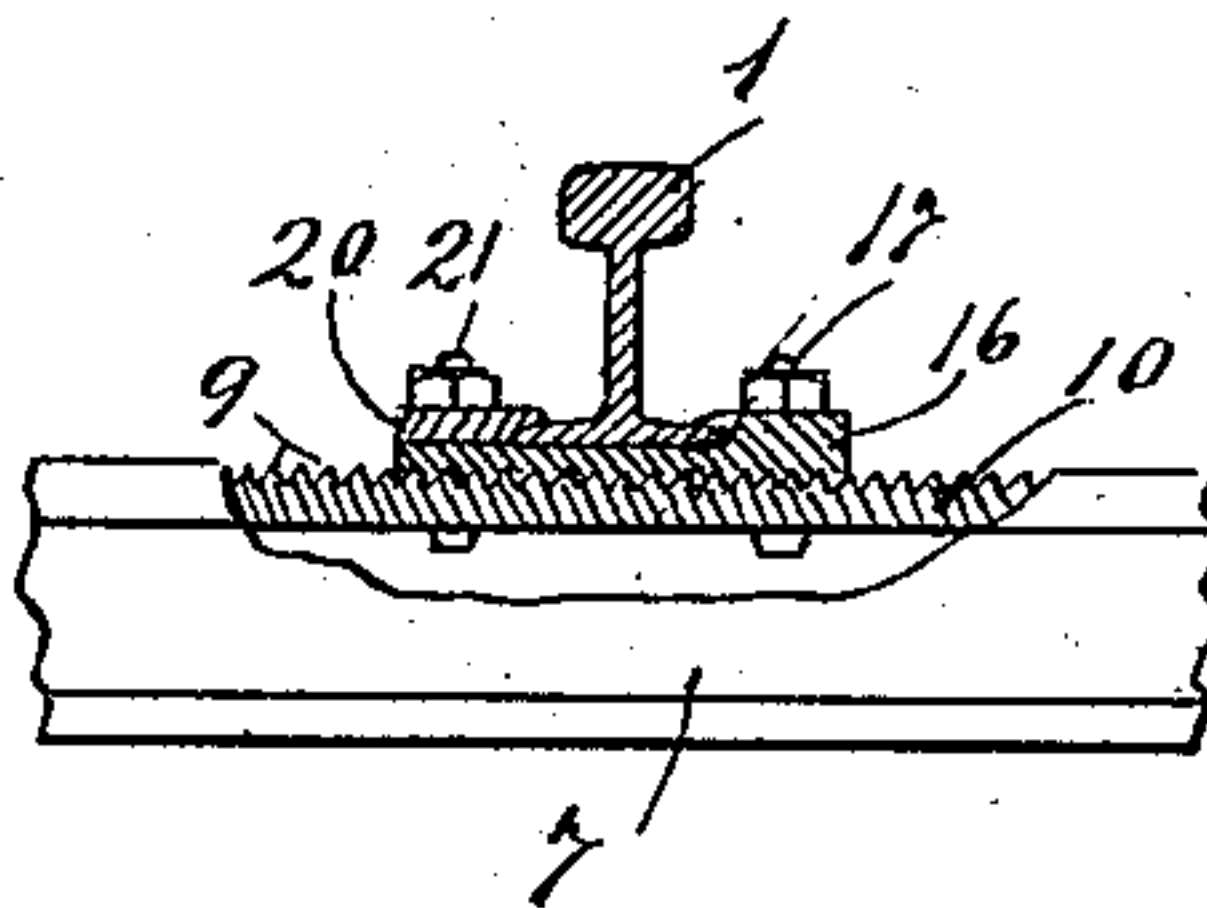
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Witnesses.*

*A. H. Opsahl.*

*H. S. Kilgore.*

*Inventor.*

*Gust Walberg.*

*By his Attorneys'*

*Williamson Merchant*



## UNITED STATES PATENT OFFICE.

GUST WALBERG, OF MINNEAPOLIS, MINNESOTA.

## RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 754,176, dated March 8, 1904.

Application filed October 15, 1903. Serial No. 177,097. (No model.)

*To all whom it may concern:*

Be it known that I, GUST WALBERG, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Railway-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to metallic railway-ties, and especially to those ties that are usually designated as "lead-ties" and to which the switch-stand of a railway-switch is applied.

The invention has for its object to provide simple and efficient means for securing the switch-stand to these lead-ties and also for securing the rails to other ties as well as to the lead-ties.

To the above ends the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a plan view showing a portion of a railway-track and illustrating my invention applied thereto. Fig. 2 is a side elevation of the switch-stand, some parts being sectioned on the line  $x^2 x^2$  of Fig. 1. Fig. 3 is a section on the line  $x^3 x^3$  of Fig. 1. Fig. 4 is a detail in section on the line  $x^4 x^4$  of Fig. 1, and Fig. 5 is a detail in section on the line  $x^5 x^5$  of Fig. 1.

The main-line rails are indicated by the numeral 1, and the side-track rails are indicated by the numeral 2. At the switch the tapered ends of the movable rail-sections are tied together in the usual way by tie-rods 3, one of which tie-rods projects and is connected by a rod 4 to the crank 5 of the switch-stand 6, these parts being of the usual construction and operated in the usual way.

In accordance with my invention I construct the ties of metal, being either of cast or malleable iron. The so-called "lead-ties" are like the other ties except that they are made considerably longer. In cross-section these ties are formed very much as if made of two I-

beams having integrally-formed bases, but with their upper flanges spaced apart, so as to leave the slot 8 running from end to end of the tie. The upper surfaces of the ties are formed with transversely-extended serrations or V-shaped ribs 9, and at their edges they are formed with longitudinally-extended ribs 10.

The switch-stand 6 is provided with depending feet 11, that rest upon the flanges 10 of the long projecting ends of the lead-ties, as best shown in Fig. 2, and these feet are provided with depending pins 12, that engage in the slots 8 of the lead-ties and hold the switch-stand against displacement by movements transverse of the said ties. The switch-stand is held against movements longitudinally of the ties by means of clamping-blocks 13, the bases of which are serrated for engagement with the serrated surface of the said lead-ties, as best shown in Fig. 1. The clamping-blocks 13 are held in place by nutted clamping-bolts 14, that are passed through the slots 8 of the ties and are provided at their lower ends with transversely-elongated heads, that are held from turning by means of pins 15, depending from the clamping-blocks 13. These bolts are passed through said slots 8 of the lead-ties. In this way it is evident that the switch-stand is very securely held in working position and at the same time may be very quickly set in different adjustments on the lead-ties.

Where the two rails come very closely together, as is the case at a switch, the two adjacent rails may be conveniently secured to the tie, as shown in Fig. 4, wherein a pair of tie-plates 16, having at their outer portions flanges that overlap the flanges of the rails, are interposed between the rails and the upper faces of the tie. These tie-plates 16 are serrated on their under surfaces to fit the serrations of the tie, and they are clamped to the tie by short nutted bolts 17, that are passed through the slots 8 of the tie, with their heads engaging the internal flanges thereof. A T-shaped clip 18 is clamped against the adjacent flanges of the rails and is held in position by a nutted bolt 19, working in the same manner as the bolts 17, but passed also through perforations in one of the tie-plates 16.



To clamp a single rail to a tie, as shown in Fig. 5, a single tie-plate 16 is employed, and a clip 20 is bolted to the projecting edge of said tie-plate by means of a bolt 21. This clip  
5 20 engages one flange of the rail and coöperates with the flanged portion of the tie-plate 16 to securely hold the rail.

Both of the rail-fastenings shown in Figs. 4 and 5 are capable of being secured at any  
10 point on the tie and, as is obvious, cannot possibly slip from any set position.

From what has been said it will of course be understood that the device described is capable of modification within the scope of my  
15 invention, as herein set forth and claimed.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A metallic tie which in cross-section has the form of a double I-beam with a common  
20 base but with the upper flanges spaced apart

to afford a longitudinal slot the upper surface of said tie being serrated, substantially as described.

2. The combination with a pair of metallic ties having their upper faces serrated and provided with longitudinal slots, of a switch-stand resting on said ties, and clamping-blocks pressing on the base portions of said switch-stand and having serrated surfaces engaging with the serrated surfaces of said ties, and  
25 bolts passed through said clamping-blocks and through the slots of said ties for rigidly but adjustably securing said switch-stand to  
30 said ties, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

GUST WALBERG.

Witnesses:

ELIZABETH H. KELIHER,  
F. D. MERCHANT.