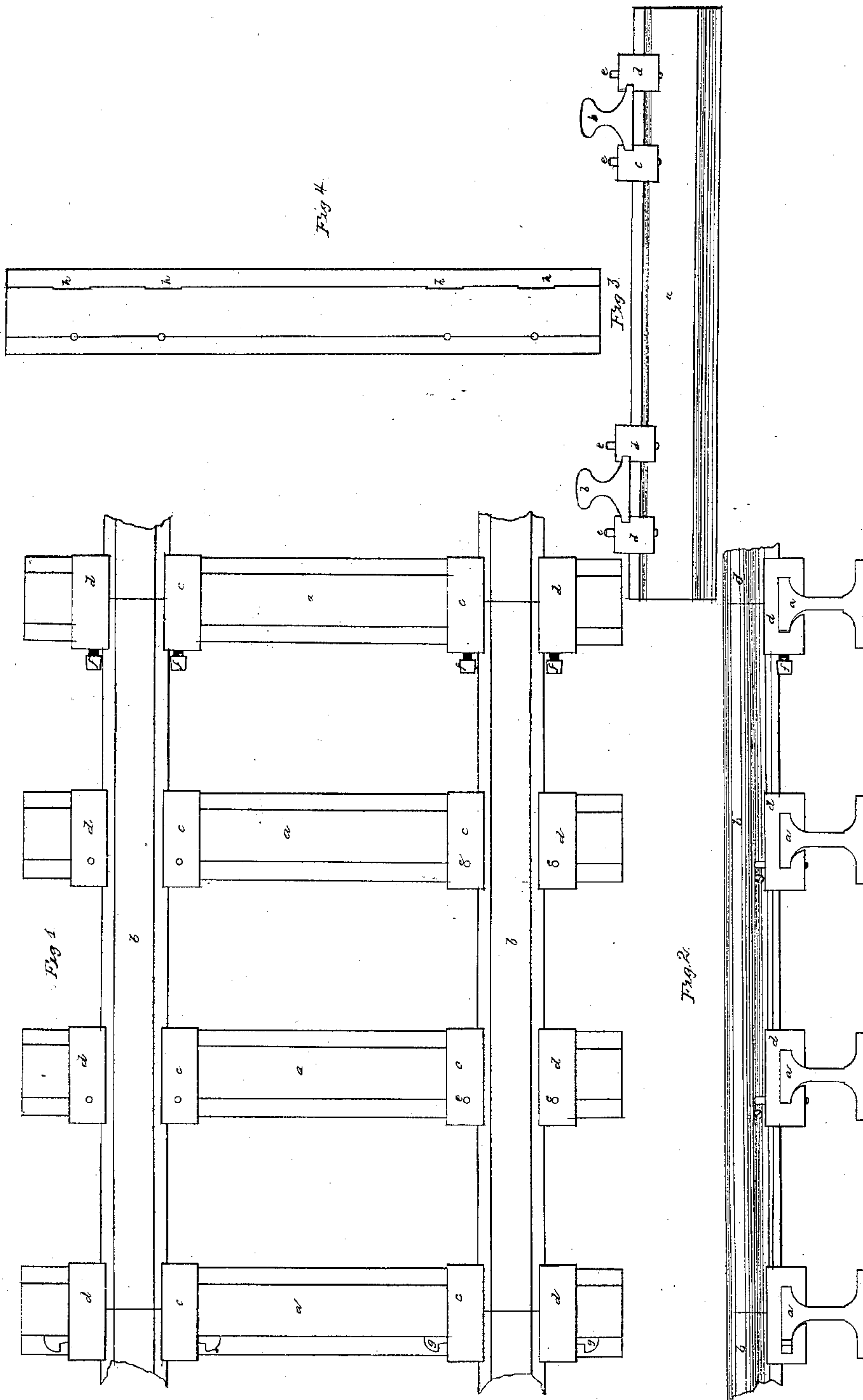


A. TEAL.
METHOD OF SECURING THE RAILS OF RAILWAYS IN THEIR PROPER
POSITIONS.

No. 16,343.

Patented Jan. 6, 1857.



UNITED STATES PATENT OFFICE.

ANDREW TEAL, OF AURORA, ILLINOIS.

METALLIC CROSS-TIE AND CHAIR FOR RAILROADS AS A NEW MANUFACTURE.

Specification of Letters Patent No. 16,343, dated January 6, 1857.

To all whom it may concern:

Be it known that I, ANDREW TEAL, of Aurora, in the county of Kane and State of Illinois, have invented a new and Improved
5 Commodity or Article of Manufacture, Consisting of Cross-Ties and Clamping-Blocks of Metal for Railways; and I do hereby declare that the following is a full and exact description thereof, reference being had to
10 the accompanying drawings, making a part of this specification.

In the accompanying drawings, Figures 1, 2, and 3 represent top, side and end views of some rails and their supporting double
15 chairs; and Fig. 4, is a top view of the main portion of each double chair detached from its auxiliary parts.

Similar letters indicate like parts in all the drawings.

20 Instead of supporting the rails of a railway upon wooden cross-ties, and securing the rails thereto by means of metallic chairs, I support both of the rails of a track upon metallic double-chairs, in substantially the
25 manner represented in the drawings. The aforesaid double-chairs are each composed of a reversed I shaped cross-rail *a*, and two pairs of fastening chair-blocks *c*, *d*, which are combined with each other in such a
30 manner that each pair of said fastening blocks can be firmly secured at any desired position upon the said cross-rail *a*, of the chair.

The pairs of blocks of each metallic double-
35 chair, are secured to its cross-rail *a*, in such a manner that they can be moved laterally thereupon, viz, by means of a recess in each block that embraces the head of said rail, as represented in Fig. 2.

40 The projecting edges of the base of each track-rail *b*, when resting upon the said double-chair, are received into grooves in the inner sides of each pair of chair-blocks *c*, *d*; and the said blocks may be secured in their
45 proper positions upon the chair-rail *a*, by means of lateral notches *h*, *h*, formed in the head of said chair-rail, into which one end of each chair-block may be drawn and retained by any suitable device.

50 The accompanying drawings represent three different ways of drawing the ends of the chair-blocks into the notches *h*, *h*, in the

heads of the chair rails and retaining them therein; viz: First, the tapering pins *e*, *e*, passing through vertical apertures in said
55 blocks and having a drawing action upon the edge of the head of said chair-rail, opposite the notches *h*, *h*, therein; second, the screws *f*, *f*, passing into screw apertures in the ends of said blocks and acting upon the
60 edge of the head of said chair-rail, opposite the notches therein; and, third, the wedges *i*, *i*, driven into the spaces between the smooth edge of the head of the chair-rail and the ends of the recesses in the chair-
65 blocks that receive said rail.

A great number of other devices may be employed to retain the chair-blocks in their proper position upon the chair-rails, which will suggest themselves to persons familiar
70 with such subjects.

The use of my metallic double-chairs for railway purposes, as a substitute for the wooden cross-ties and metallic single chairs
75 now in use, will be attended with many advantages and would prove the means of saving much property and many valuable lives.

It will readily be perceived that the rails would be held so securely by the said double chair, that it would be impossible to spread
80 them, or for the rails to be thrown out of their proper positions. The ends of the rails where they abut against each other, would also be much more securely held between the pairs of chair-blocks of the double-chair,
85 than they possibly can be held by a single chair secured to a wooden cross-tie.

In case a rail supported by the said metallic double-chairs, should be broken, it could be easily and quickly removed by detaching from said chairs the outer blocks
90 *d*, *d*, which act upon said rail; whereas, if said rail had been confined to wooden cross-ties by the ordinary chairs, every chair and spike acting upon said rail would have to be
95 wrenched from the cross-tie, before the said broken rail could be removed preparatory to supplying its place with a perfect rail.

What I claim as my invention and desire to secure by Letters Patent as a new manu-
100 facture, is—

My improved adjustable double-chair for supporting the rails of railways and at the same time securing said rails in any desired

position, the said double-chair being composed of I shaped metallic rails of suitable length, combined with duplicate pairs of transversely grooved clamping blocks substantially as herein set forth.

The above specification of my improved method of securing the rails of railways in

their proper positions, signed this 21st day of May, 1856.

ANDREW TEAL.

Witnesses:

Z. C. ROBBINS,
FRED. MATHYS.