W. Van Anden,

Making Rail Chairs.

No. 92,494. Patented Jul. 13. 1869.

Fig. 1.

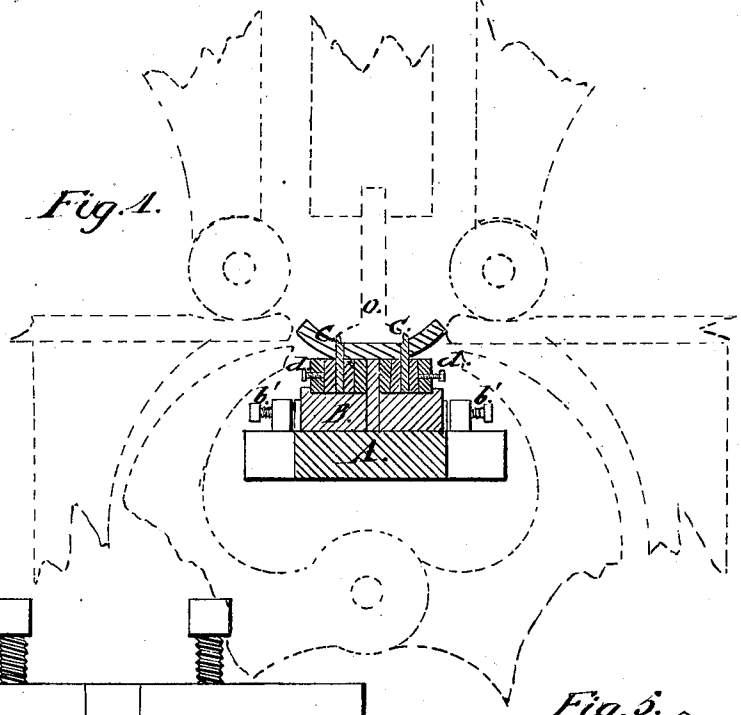


Fig. 2.

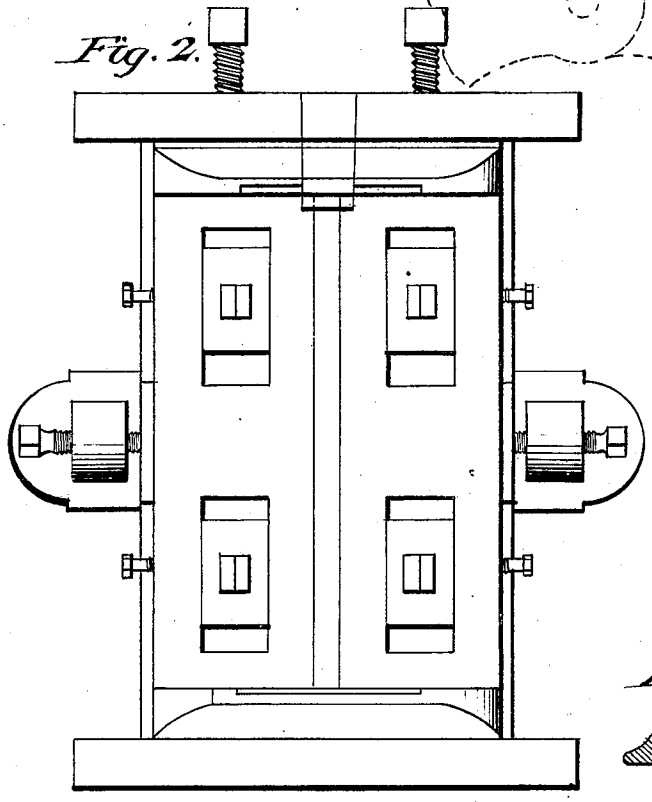


Fig. 5.

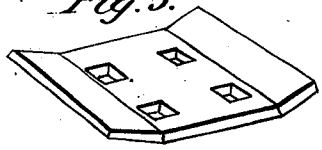


Fig. 3.

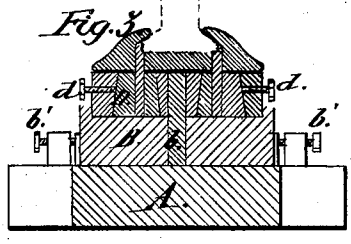
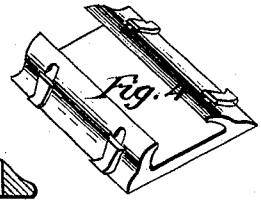


Fig. 6.



Fig. 4.



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United States Patent Office.

WILLIAM VAN ANDEN, OF POUGHKEEPSIE, NEW YORK.

Letters Patent No. 92,494, *dated July* 13, 1869.

IMPROVED MACHINE FOR MAKING RAILROAD-CHAIRS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILLIAM VAN ANDEN, of Poughkeepsie, in the county of Dutchess, and State of New York, have invented new and useful Improvements in Machines for Making Rail-Chairs; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to certain improvements in my machine for making rail-chairs, patented September 18, 1866; and consists mainly in the employment of pins in the bed-piece, for the reception of a previously-punched chair-blank, by means of which the spike-holes are kept open when the metal is swaged to form the chair; the arrangement being such, also, that the pins may be extended above the blank, and the metal be formed around them in such manner as to leave a recess in the solid part of the chair, for purposes hereinafter described.

Figure 1 represents a vertical section through the anvil-block, bed-piece, and chair-plate, the parts relating to my invention being shown in full section, with the connecting parts in red outline;

Figure 2 represents a plan view of the bed-piece;

Figure 3, a vertical section, showing the chair as formed about the pins;

Figure 4, a view of the chair complete;

Figure 5, a view of the chair-plate ready for the machine; and

Figure 6, a section of the chair through the spike-holes.

To enable others skilled in the art to which my invention appertains, to make and use the same, I will now describe fully the nature of my improvements, and their operation in connection with the machine.

A represents the anvil-block, upon which is located the bed-piece B. This bed-piece is rendered adjustable, so as to receive a wider or narrower chair-plate, as may be desired, by means of the packing *b*, more or less of which may be inserted between the two parts of the bed-piece, the whole being firmly held, when suitably arranged, by means of the screws *b' b'*, as clearly shown in the drawings.

c c represent the pins, which serve to keep open the spike-holes in the base, and about which the metal is formed. These pins are held in the sliding blocks D, in the bed-piece. It will be observed that they are constructed with one of their sides higher than the other, or, if desired, they may be constructed in two parts of unequal length.

The object of this arrangement is as follows:

In using the chairs for holding rails, it is usually desired that the spike should pass partly through the rail, in order to key it to its seat, and it is essential that the chair should closely clamp the rail. It therefore, in such cases, becomes necessary that the spike-hole should be formed partly in the solid metal of the chair, as well as in the flange. By observing the dotted lines in fig. 6 of the drawing, which shows the position of th spike when in place, this necessity will be fully understood. But, in practice, it is found impossible to punch a hole through the solid metal and the flange at the same time, and the pins *c c* are therefore provided, to form a recess in the solid part.

The sliding blocks D, in which the pins are placed, are tapering in form, as is clearly shown in fig. 3. These may be adjusted longitudinally in either direction, to suit different lengths of chairs, and are held in place, when properly located, by means of the screws *d*.

The operation is as follows:

The chair-plate of the proper shape and size having been provided, has first the spike-holes punched in the base, and is slightly bent, as shown in fig. 5. It is then placed upon the bed-piece, the higher part of the pins extending up on each side of the former or plunger O, as shown in figs. 1 and 3. In this position it is then swaged, a description of which process is fully given in my former patent.

By observing fig. 3, in which the chair is shown as swaged, it will be observed that the pins keep the spike-holes clear in the base of the chair, and also form a recess in the solid part. The chair being now removed from the machine, is easily punched through the flange for the continuation of the spike-holes, and thus completed, is ready for use.

Having thus fully described my invention,

What I claim, and desire to secure by Letters Patent, is—

The pins *c c*, when formed of unequal length, and arranged as described, for the double purpose of keeping the spike-holes open during the process of swaging, and for forming a recess in the solid metal, as and for the purpose set forth.

This specification signed and witnessed, this 19th day of November, 1868.

WM. VAN ANDEN.

Witnesses:

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