

(No Model.)

H. GREER.
Railroad Spike.

No. 236,020.

Patented Dec. 28, 1880.

FIG. I.

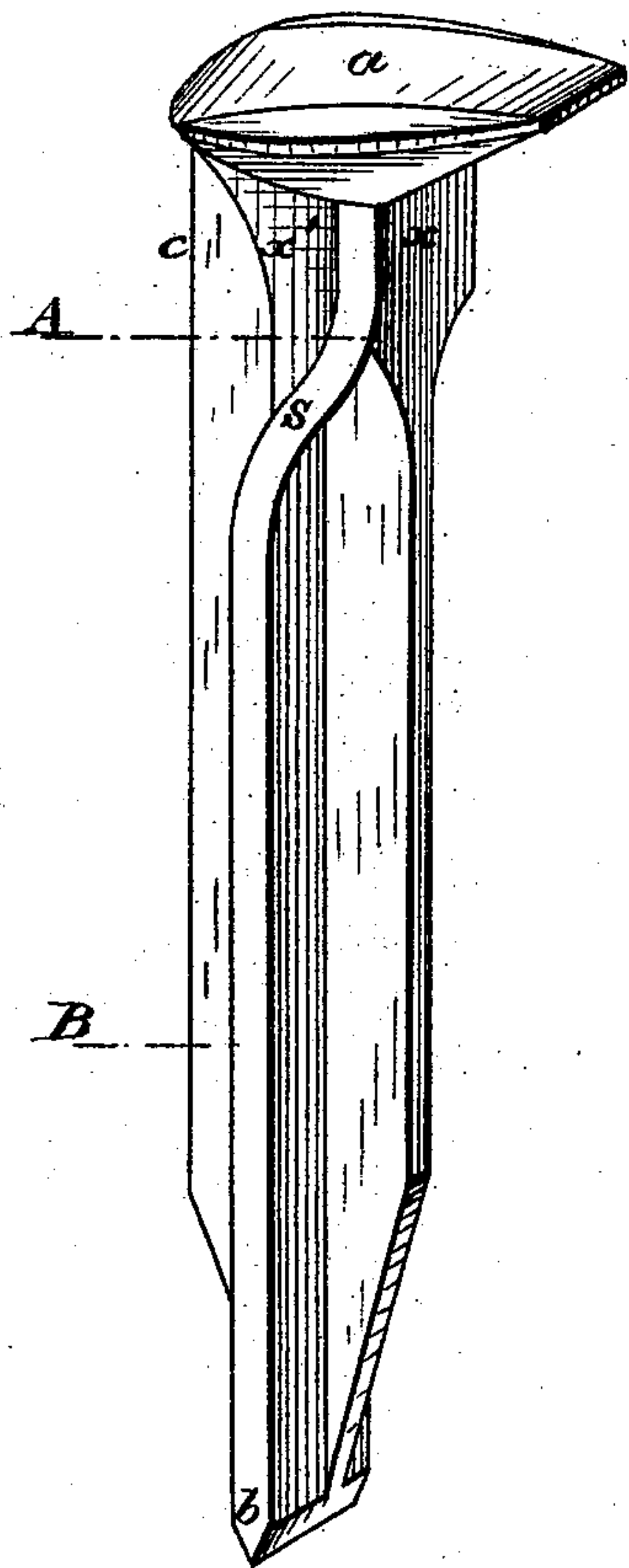


FIG. IV.

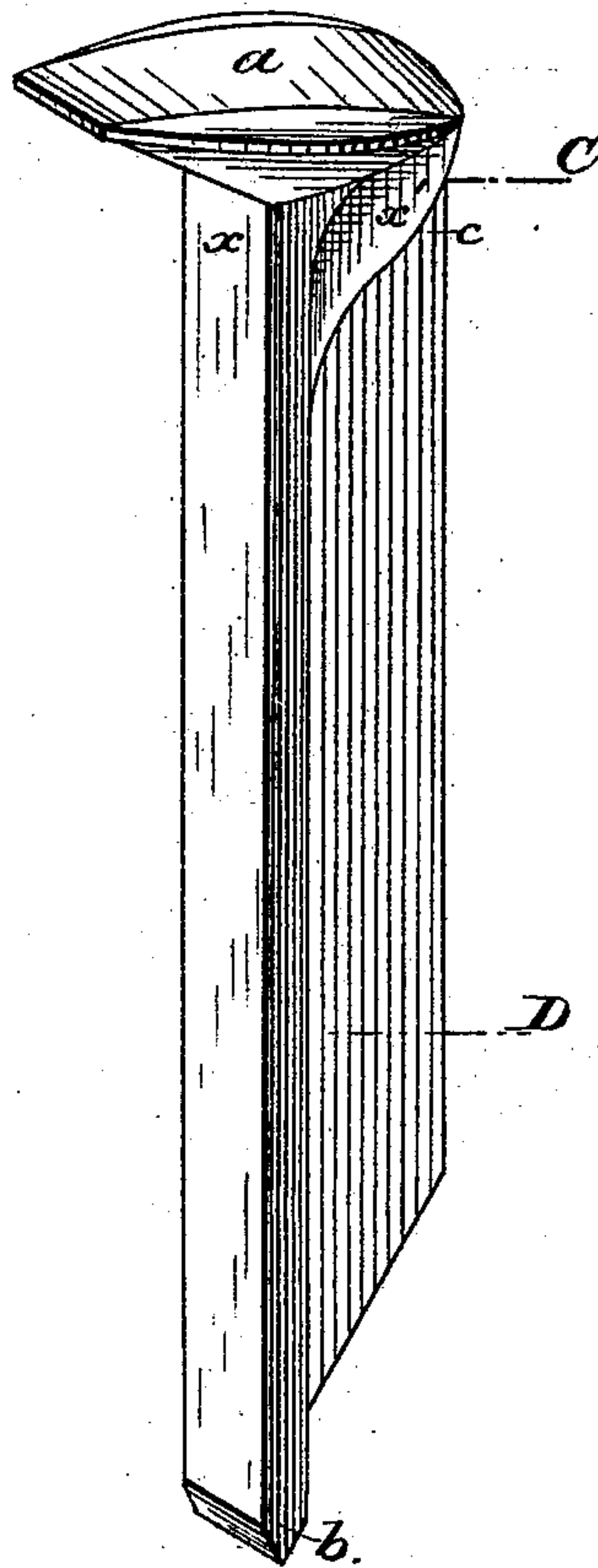


FIG. II.

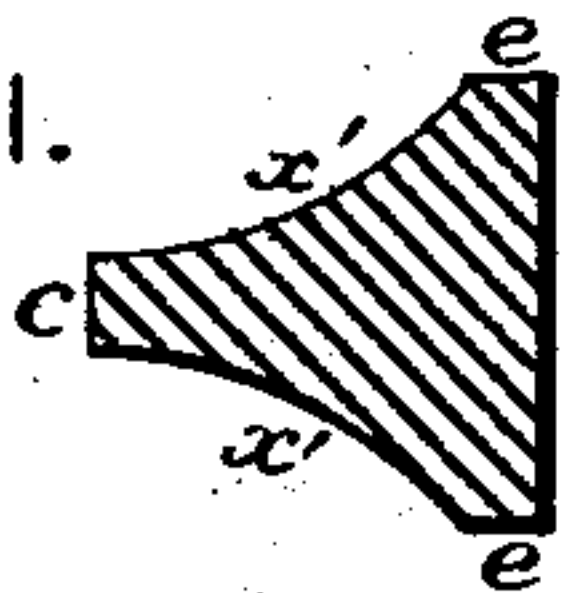


FIG. III.

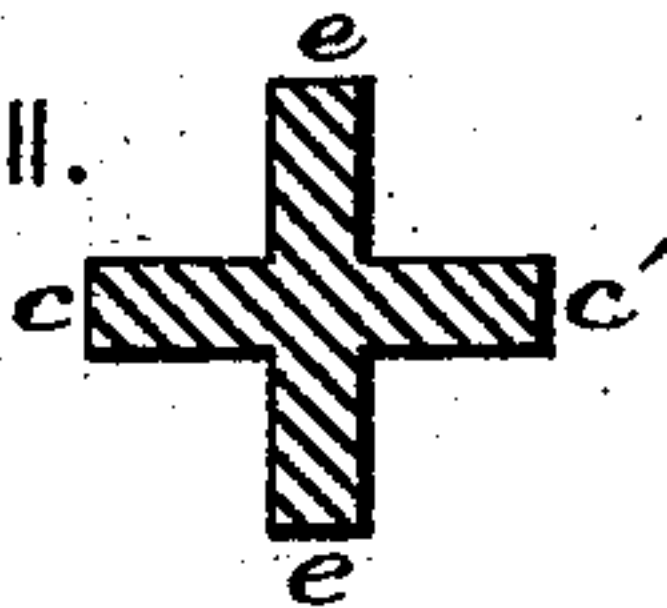


FIG. V.

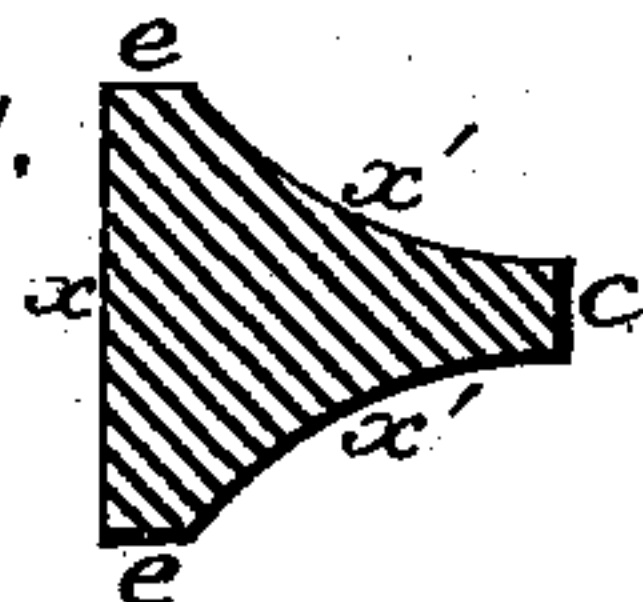
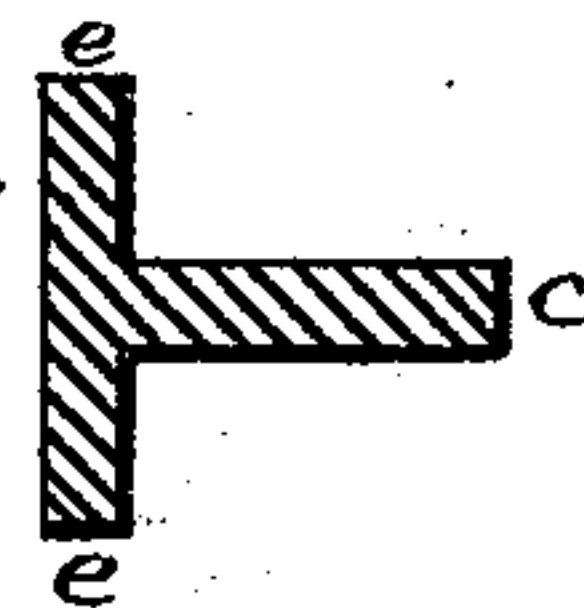


FIG. VI.



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UNITED STATES PATENT OFFICE.

HOWARD GREER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
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RAILROAD-SPIKE.

SPECIFICATION forming part of Letters Patent No. 236,020, dated December 28, 1880.

Application filed October 18, 1880. (No model.)

To all whom it may concern :

Be it known that I, HOWARD GREER, of Chicago, county of Cook, State of Illinois, have invented or discovered a new and useful Improvement in Railroad-Spikes; and I do hereby declare the following to be a full, clear, concise, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which, like letters indicating like parts—

Figure 1 is a view, in perspective, of one form of my improved spike, showing the same in full size, or approximately so. Fig. 2 is a cross-section thereof in the plane of the dotted line A. Fig. 3 is a like view in the plane of the dotted line B. Fig. 4 is a perspective view of a modified form of spike further illustrative of my present invention, and Figs. 5 and 6 are sectional views in the planes of the dotted lines C and D, respectively.

My present invention relates to a railroad-spike pointed at one end and having a side or lap head at the other end, a broad flat surface immediately beneath the head as a bearing for or side support to the edge of the base-flange of the rail, and having, also, a body portion, stem, or shank consisting of two comparatively thin and broad ribs in a plane with or parallel to the bearing-surface above, and with a rib or flange projecting therefrom on one or both the vertical faces thereof.

My particular object is to get such a disposition of the metal as, with a decrease in the weight or amount of material in the spike, to get a spike of equal or greater strength, equal or greater holding-power in the tie, and greater durability as against wear at the point of edge-bearing of the rail-flange against the neck of the spike.

My improved spike is made by rolling or forging, or both, in any of the ways known to the art. The head *a* is of the usual form of lap or side head, and the point *b* has the usual or any known form. As railroad-spikes have heretofore been made they usually have a body, stem, or shank of rectangular form in cross-section, made from nine-sixteenths iron, so that the bearing-face of the neck which comes against the edge of the rail-flange is of that length. As this part is subject to great wear I broaden it and lessen the breadth or thickness of the material at the back of the

neck, where the strain is much less, and where the wear is nothing. Hence I am enabled by such disposition of the material to make the bearing-face *x* of the neck somewhat wider than usual, say, about seven-eighths to one inch, so as to secure at that point a maximum of strength as against a breaking strain, and of greater durability as against ordinary wear, and this I do, with a decrease of the amount of material required, by making the back of the neck of a rib form, as at *c*, Figs. 1 and 2. This gives me, in effect, three ribs, *c c c*, strengthened immediately beneath the head by fillets *x'*, and these three ribs extend down to the point, or run out in the taper of the point, and constitute, substantially, the stem, shank, or body of the spike.

As shown in Figs. 4 to 6, these ribs extend directly down, the front plane of the ribs *e e* being in the plane of the bearing-face *x* of the neck. For some purposes, however, it may be better, as illustrated in Figs. 1 to 3, to slope the main ribs *e e* backward a little just below the neck, as indicated at *s*, and then, continuing them down in a plane parallel to the plane *x*, to add a front rib, *c'*; or, to state the same thing in another way, the main ribs *e e* may extend down the front edges of the strengthening-rib *c*, as in Figs. 4 to 6, or they may extend down along the vertical middle lines of the sides of the strengthening-rib, as in Figs. 1 to 3, and in such case I have, for convenience of description, divided such strengthening-rib into two parts—a front rib, *c'*, and a back rib, *c*. By this disposition of the metal I am enabled to secure the advantageous results above indicated.

I claim herein as my invention—

A railway-spike having a lap or side head, *a*, ribs *e e*, forming a broad bearing at the neck and extending down the spike-body to the point in the same or in a parallel plane, and a strengthening-rib, *c*, extending from the under side of the head to the taper of the point, and either with or without a front rib, *c'*, substantially as set forth.

In testimony whereof I have hereunto set my hand.

HOWARD GREER.

Witnesses:

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