

(No Model.)

S. A. McLEAN.

SPIKE POINT.

No. 364,767.

Patented June 14, 1887.

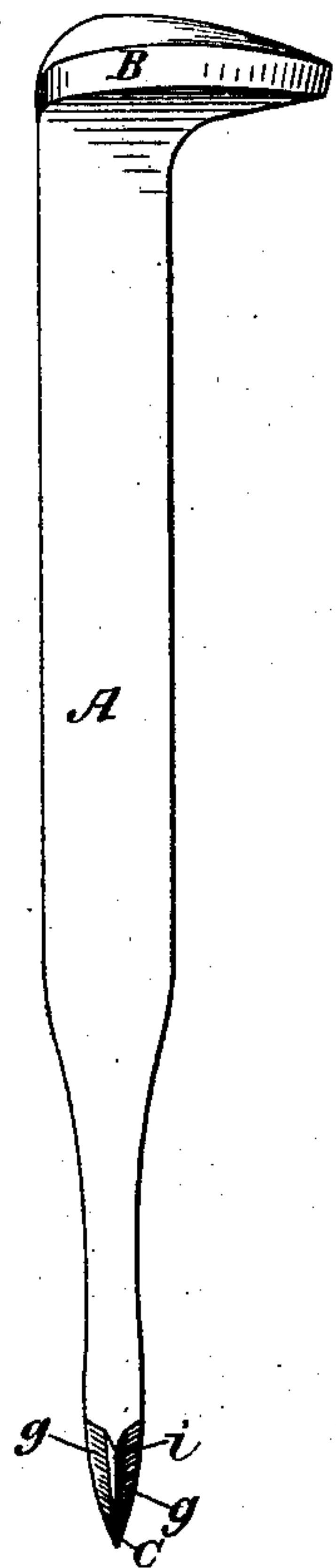


Fig. 1.

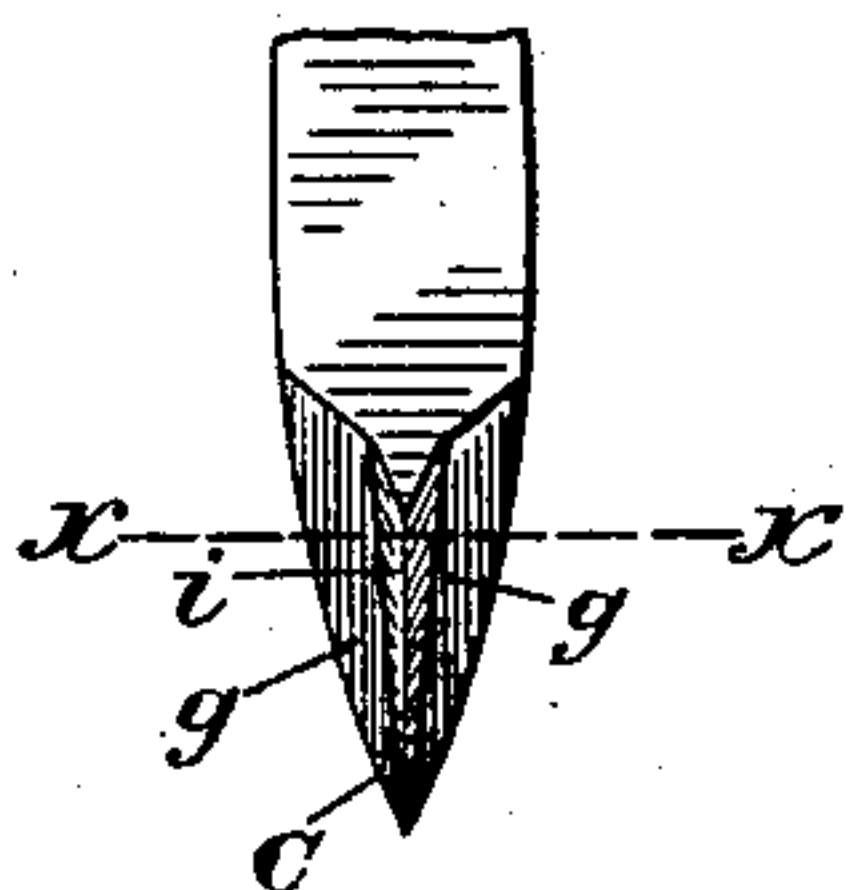


Fig. 3.

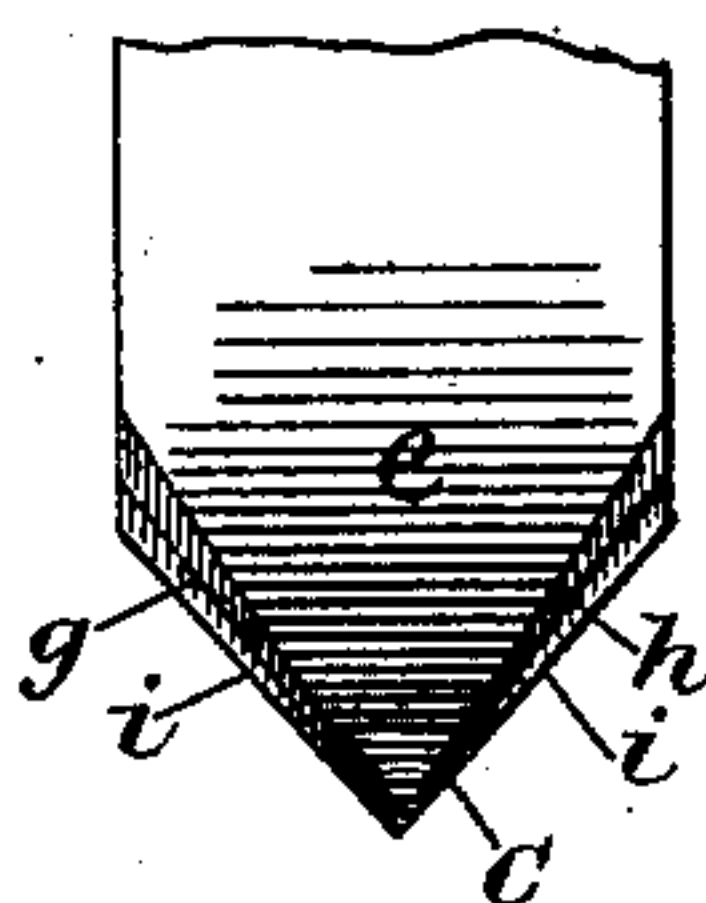


Fig. 4.

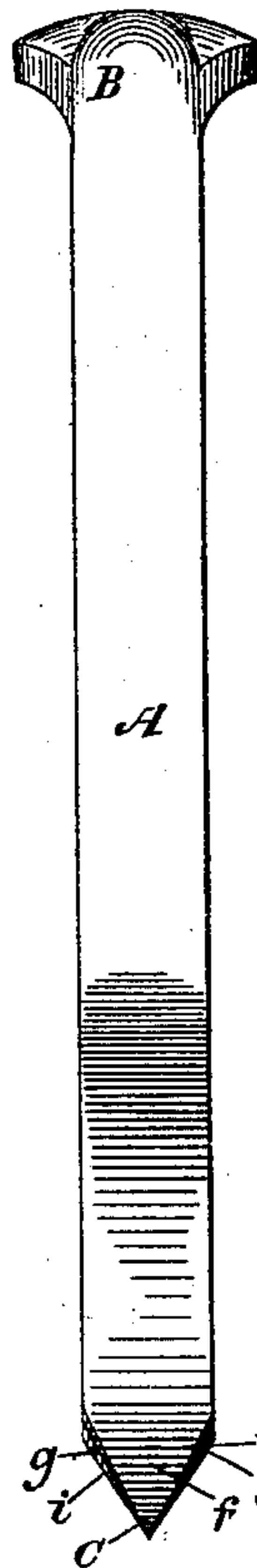


Fig. 2.

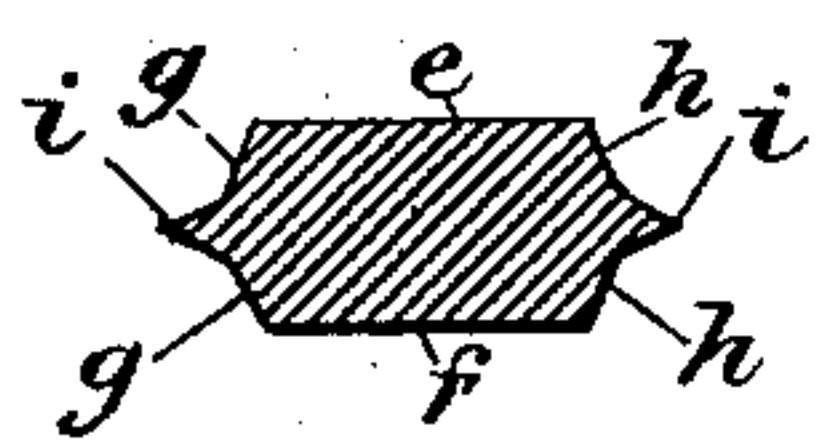


Fig. 5.

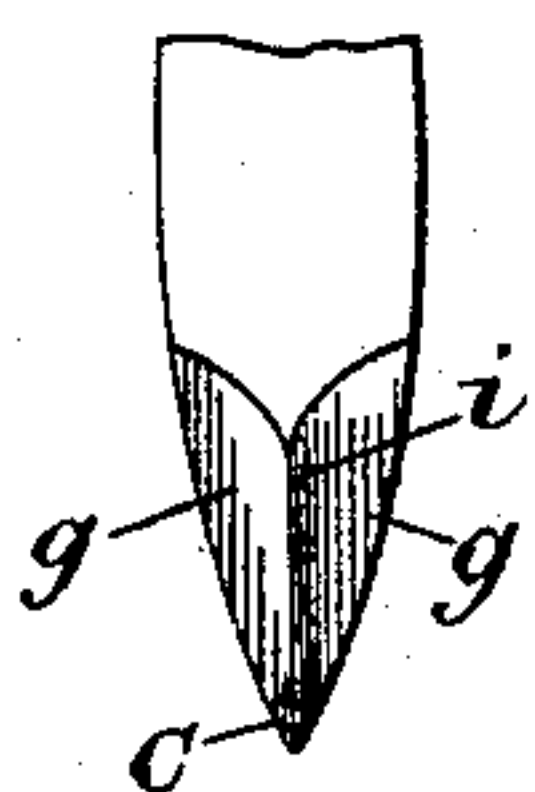


Fig. 6.

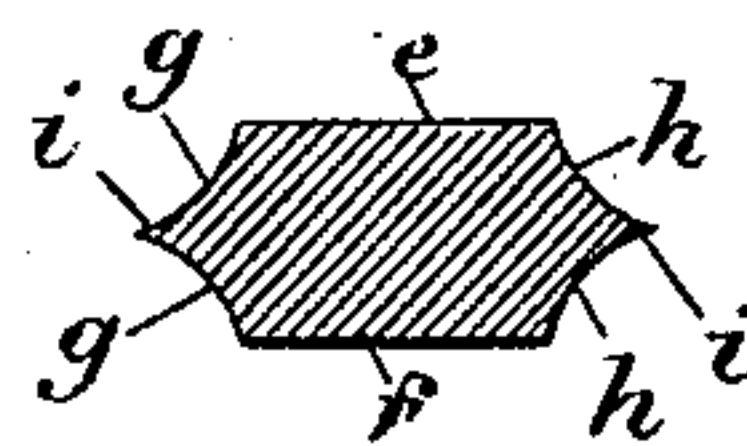


Fig. 7.

Witnesses:

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UNITED STATES PATENT OFFICE.

SETH A. McLEAN, OF BAY CITY, MICHIGAN.

SPIKE-POINT.

SPECIFICATION forming part of Letters Patent No. 364,767, dated June 14, 1887.

Application filed March 11, 1887. Serial No. 239,504. (No model.)

To all whom it may concern:

Be it known that I, SETH A. McLEAN, of Bay City, in the county of Bay and State of Michigan, have invented a new and useful Improvement in Spikes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this application.

My present invention relates to the "points" or puncturing (or entering) end portions of railroad and other spikes; and it consists, essentially, in a spike-point composed of convergent back and front surfaces (such as found in either the ordinary wedge-shaped or chisel-like points heretofore used, or in the usual "pyramidal" points commonly known) and convergent side portions that are formed with centrally-located knife-edges, the said knife-edges extending from their meeting-point (at the extreme point of the spike) divergently upward to the opposite side surfaces of the spike's body in such manner as to be capable of making clean shearing cuts in the timber cross-wise of the grain, all as will be hereinafter more fully explained, and as will be more explicitly defined in the claim of this specification.

To enable those skilled in the art to make and use spikes having my improved construction of point, I will now proceed to more fully describe my improvement, referring by letters to the accompanying drawings, which form part of this specification, and in which I have shown a spike made with my novel point or puncturing end.

Figure 1 is a side view of a spike embracing my improved point. Fig. 2 is a face view of the same. Fig. 3 is a side view of the lower portion or point only of the spike, drawn on an exaggerated scale for the purpose of more clearly delineating the peculiarities of construction of the point proper. Fig. 4 is a front or face view of the device represented at Fig. 3, and on the same scale. Fig. 5 is a detail sectional view on the same scale at the line x of Fig. 3, and designed to show more clearly the cross-sectional shape or profile of the knife-edge portions of the point. Figs. 6 and 7 show views, respectively, similar to Figs. 3 and 5, but illustrate a modified form of the

spike-point, which will be hereinafter particularly alluded to.

In the several figures the same part will be found designated by the same letter of reference.

A is the body portion of the spike, which, in the case shown, is composed of a main upper portion, which is larger than the lower part of reduced thickness, and which is provided with any suitable form of head—such, for instance, as shown at B. The point or puncturing device C of the spike is made by the convergent front and rear surfaces, e and f , and the oblique side faces or facets, g and h , which run from the opposite sides of the spike-body, as clearly shown, and meet at the extreme point of the instrument. These oblique side portions, g and h , start, preferably, at about the same point or plane of the spike-body at which the flattened surfaces e and f begin, so that the relationship of the facets, so to speak, e , f , g , and h , is somewhat similar to that of the four tapering faces of an ordinary pyramidal point. Unlike such points, however, my improved point is made with the facets e and f preferably slightly convex, and with the oblique facets or portions g and h provided with knife-edges i , which extend the entire length of said facets, or, in other words, run from points at their upper ends coincident with the sides of the spike-body to where they meet at the extreme point of the spike.

A reference to Figs. 3 and 4 will give a correct understanding of the peculiar shape and arrangement of the knife-edges i and of the relative arrangement and conformations of the other surfaces or devices composing the point proper of the spike, and the cross-sectional view at Fig. 5 shows more clearly, on an exaggerated scale, the preferable form and location of the knife-edges proper; and from the drawings, in connection with the description given, it will be understood that practically my novel structure of spike-point involves one form of the known pyramidal point supplemented with or having combined with it at the locality of the facets, which are located at either side of the spike-body, knife-edges i , which perform the function of cutting the timber into which the spike may be forced crosswise of the grain with a clean or shearing cut.

Of course, in lieu of the precise conformation of parts shown, my invention may be carried into effect by the formation of the spike-point with the facets *e* and *f* flat instead of convex, 5 or even with these facets slightly concave, and with the side facets that are supplied with the knife-edges made either longer or shorter than the facets *e* and *f* and of a precise conformation somewhat different from that shown in the 10 drawings and so far described. For instance, in lieu of the precise formation of the tapering or convergent portions *g* and *h*, with their knife-edges *i*, (shown at Figs. 1 to 5, inclusive,) these portions of the spike-point may be 15 formed as shown in the modification of my invention and illustrated at Figs. 6 and 7, in which the cutting-edges *i* of the point are somewhat differently formed from those seen in the preceding figures; and although I have 20 shown my improved point in connection with a spike-body composed of portions of different thicknesses (which is the preferable form of spike and the kind to which I practically apply my present invention) said improved point 25 may of course be applied to spike-bodies of other forms, the gist of my invention resting in the employment, in connection with the convergent surfaces or facets of the spike-point, of cutters or knife-edges extending 30 obliquely upward from the extreme point of

the spike at either side of the latter, or, in other words, at such localities as will render the said knife-edges capable of performing the function of cutting the grain of the timber crosswise in the operation of driving the spike. 35

I therefore wish it to be distinctly understood that I do not desire to limit my claim of invention to either any precise form of spike-body or to the particular shapes and arrangements of the tapering portions constituting 40 the spike-point, so long as the latter shall be provided with the knife-edges or cutters, arranged substantially as explained, for the purpose of performing the function ascribed to them. 45

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

In a spike, a point formed or provided, as specified, with knife-edges or cutters *i*, which extend obliquely upward at both sides of the 50 point, and operate to cut the timber grain shearingly, all substantially as hereinbefore set forth.

In witness whereof I have hereunto set my hand this 5th day of March, 1887.

SETH A. McLEAN.

In presence of—

S. T. HOLMES,
C. L. COLLINS.