

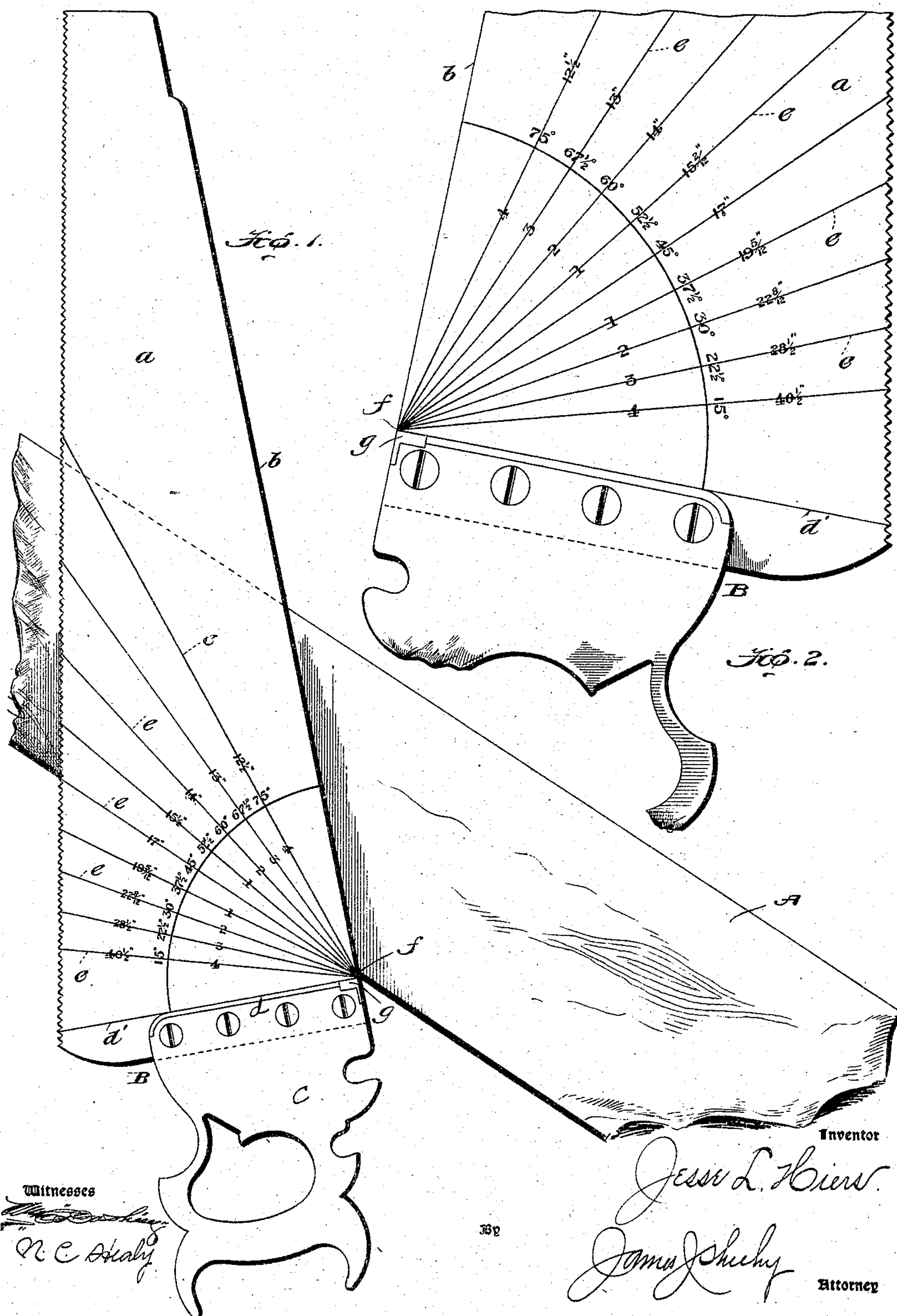
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J. L. HIERS.

SAW.

APPLICATION FILED AUG. 4, 1904.



UNITED STATES PATENT OFFICE.

JESSE L. HIERS, OF ATLANTA, GEORGIA.

SAW.

SPECIFICATION forming part of Letters Patent No. 782,396, dated February 14, 1905.

Application filed August 4, 1904. Serial No. 219,480.

To all whom it may concern:

Be it known that I, JESSE L. HIERS, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have
 5 invented new and useful Improvements in Saws, of which the following is a specification.

My invention pertains to compound tools of the saw type; and it has for its object to
 10 provide a saw which is as simple and efficient as the ordinary saw and almost, if not quite, as cheap, and yet is provided with means with the assistance of which various angular cuts resorted to in carpentry may be expeditiously
 15 and easily found and marked.

With the foregoing in mind the invention will be fully understood from the following description and claims, when taken in connection with the accompanying drawings, forming
 20 part of this specification, in which—

Figure 1 is a view illustrating the manner in which my novel saw is placed relative to a timber when it is desired to scribe or mark the timber for a cut of forty-five degrees.
 25 Fig. 2 is a broken side elevation of a portion of the saw on an enlarged scale.

Similar letters designate corresponding parts in both views of the drawings, referring to which—

30 A is a timber, and B is my novel saw as a whole. Like the ordinary handsaw extant, my novel saw comprises a blade *a* having a straight back edge *b* and a handle *c*, one side of which is flush with the said back edge *b*
 35 and which has portions *d* disposed at opposite sides of the blade at the rear end thereof. The said saw is peculiar, however, in that it is provided with a line *d'* disposed at right angles—*i. e.*, at an angle of ninety degrees to
 40 the straight back edge *b*—so that a handle of any style may be employed, and with a plurality of lines *e*, which, like the line *d'*, extend from the point *f*, where the inner edge of the handle meets the edge *b* of the blade, to the
 45 toothed edge of the blade and are disposed at angles of fifteen degrees, twenty-two and one-half degrees, thirty degrees, thirty-seven and one-half degrees, forty-five degrees, fifty-two and one-half degrees, sixty degrees, sixty-
 50 seven and one-half degrees, and seventy-five

degrees, respectively, as illustrated and marked on the drawings. Each of the lines *e* is also, preferably, marked to indicate what its respective pitch adds to the foot indicated by the mark "12 inches" adjacent to edge *b*,
 55 or, in other words, the ratio which its rise or altitude bears per foot to a run or horizontal measurement, the seventy-five-degree line being marked "12½ inches," the sixty-seven-and-one-half-degree line "13 inches," the
 60 sixty-degree line "14 inches," the fifty-two-and-one-half-degree line, "15½ inches," the forty-five-degree line "17 inches," the thirty-seven-and-one-half-degree line "19½ inches," the thirty-degree line, "22½ inches," the
 65 twenty-two-and-one-half-degree line "28½ inches," and the fifteen-degree line "40½ inches." This obviously renders it unnecessary for the user of the saw when he knows the span of a projected roof and the angles
 70 of the incline to calculate the ratio which the rise or altitude bears per foot to the span. The corresponding lines at opposite sides of the middle or forty-five-degree line *e* are numbered "1," "2," "3," and "4," correspond-
 75 ingly and in proper sequence as they recede from said forty-five-degree line, for a purpose presently set forth. The said lines and marks are arranged on both sides of the blade; but as the lines and marks on one side of the blade
 80 are identical with the lines and marks on the other side thereof I have deemed it unnecessary to illustrate more than one side of the blade. I also desire it understood that while I prefer to provide the blade with the lines
 85 illustrated in order that the cuts generally used in carpentry may be readily found and marked the blade may be provided with any other line or lines extending from the point *f* described without involving a departure from
 90 the scope of my invention.

In order to prolong the usefulness of the saw and secure accuracy in the lines marked, I prefer to shoe the point *f* with metal or other suitable material, as indicated by *g*.
 95 The said metallic shoe *g* is arranged on the corner of the handle *c* adjacent to the back edge *b* of the blade *a* and is disposed at opposite sides of the blade.

It will be appreciated from the foregoing 100

that while my improvements considerably increase the sphere of the tool and render it unnecessary to employ the usual square when an angular cut is to be found and marked they
5 do not in any measure render the tool cumbersome or interfere with the ordinary use of the same as a saw. Moreover, the improvements do not add appreciably to the cost of the saw, which is an important desideratum.
10 I have entered into a specific description of the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the said embodiment. I desire it understood, however, that such
15 changes or modifications may be made in practice as fairly fall within the scope of my invention as claimed without involving a departure from the scope of the invention.

Having described my invention, what I
20 claim, and desire to secure by Letters Patent, is—

1. A device for the purpose described comprising a blade having a straight back edge, a handle connected to the blade and having a
25 portion disposed at one side of the blade and provided with an edge arranged flush with the straight back edge of the blade and an edge disposed at right angles to said straight back

edge, whereby a point is formed coincident with the straight back edge, and lines, on the
30 blade, diverging from the said point and arranged to serve in connection with the straight back edge to assist in the finding and marking of an angular cut on a board or the like.

2. A device for the purpose described comprising a blade having a straight back edge, a handle connected to the blade and having a portion disposed at one side of the blade and provided with an edge arranged flush with the
35 straight back edge of the blade and an edge disposed at right angles to said straight back edge, whereby a point is formed coincident with the straight back edge, a shoe carried by the handle and arranged over the point, and
40 lines, on the blade, diverging from the said point and arranged to serve in connection with the straight back edge to assist in the finding and marking of an angular cut on a board or the like.

In testimony whereof I have hereunto set
50 my hand in presence of two subscribing witnesses.

JESSE L. HIERS.

Witnesses:

S. L. BLANTON,
L. L. WATERS.