J. I. MATTHEWS.

SAW ATTACHMENT.

APPLICATION FILED MAR. 8, 1909.

939,051.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

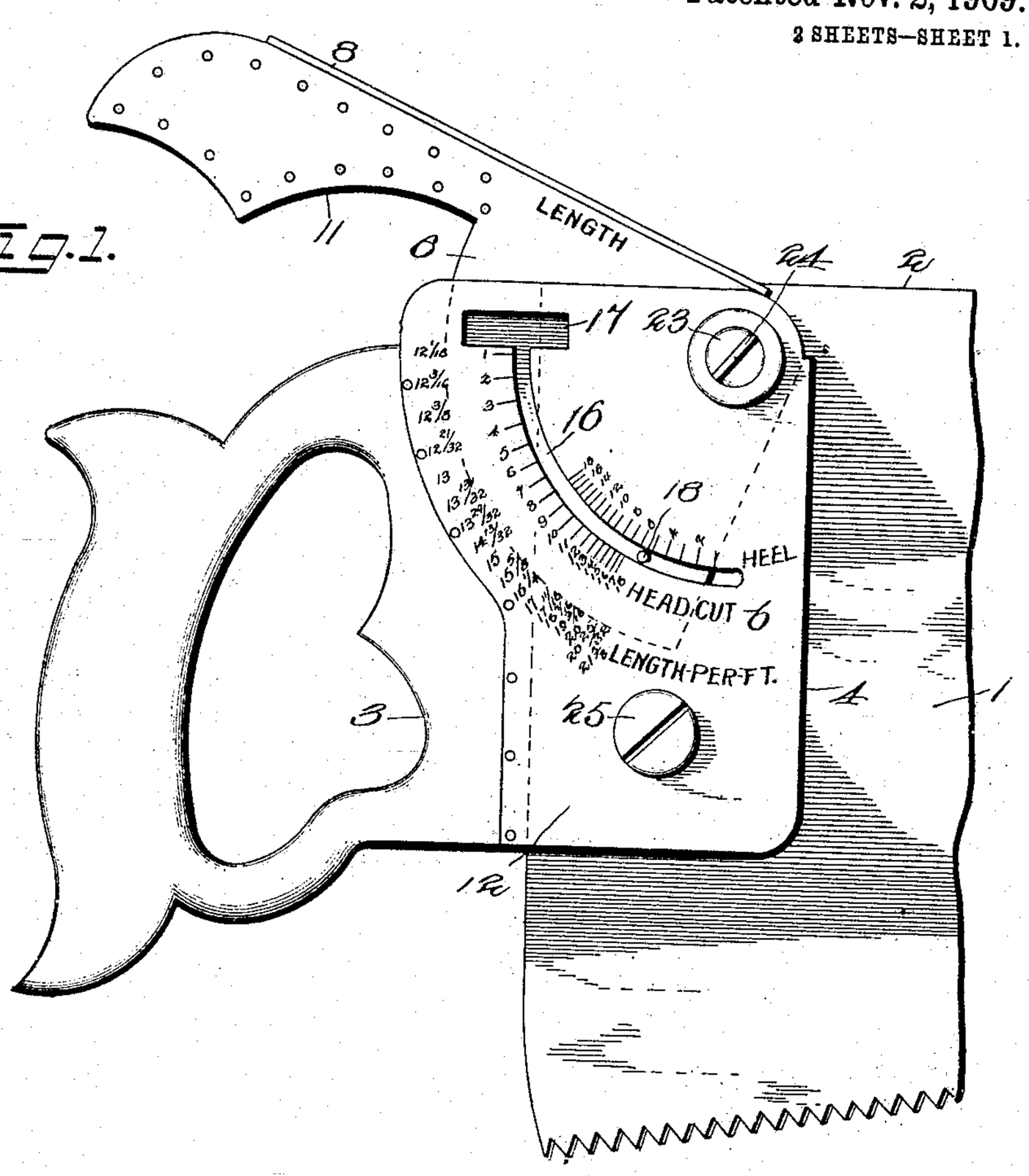
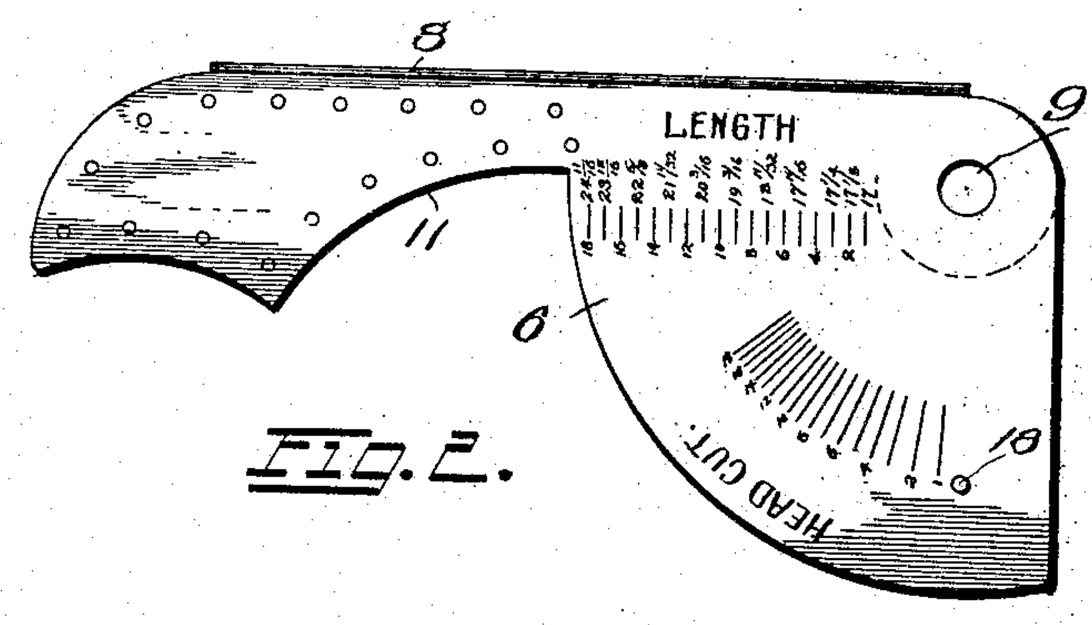


Fig. 2.



Witnesses

W. Max. Durell.

J. F. Einsla.

Inventor

J. I. Matthews

by Williamson, Fitze & Witherspoon

his Attorneys.

J. I. MATTHEWS.

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2 SHEETS—SHEET 2.

Fig. 3.

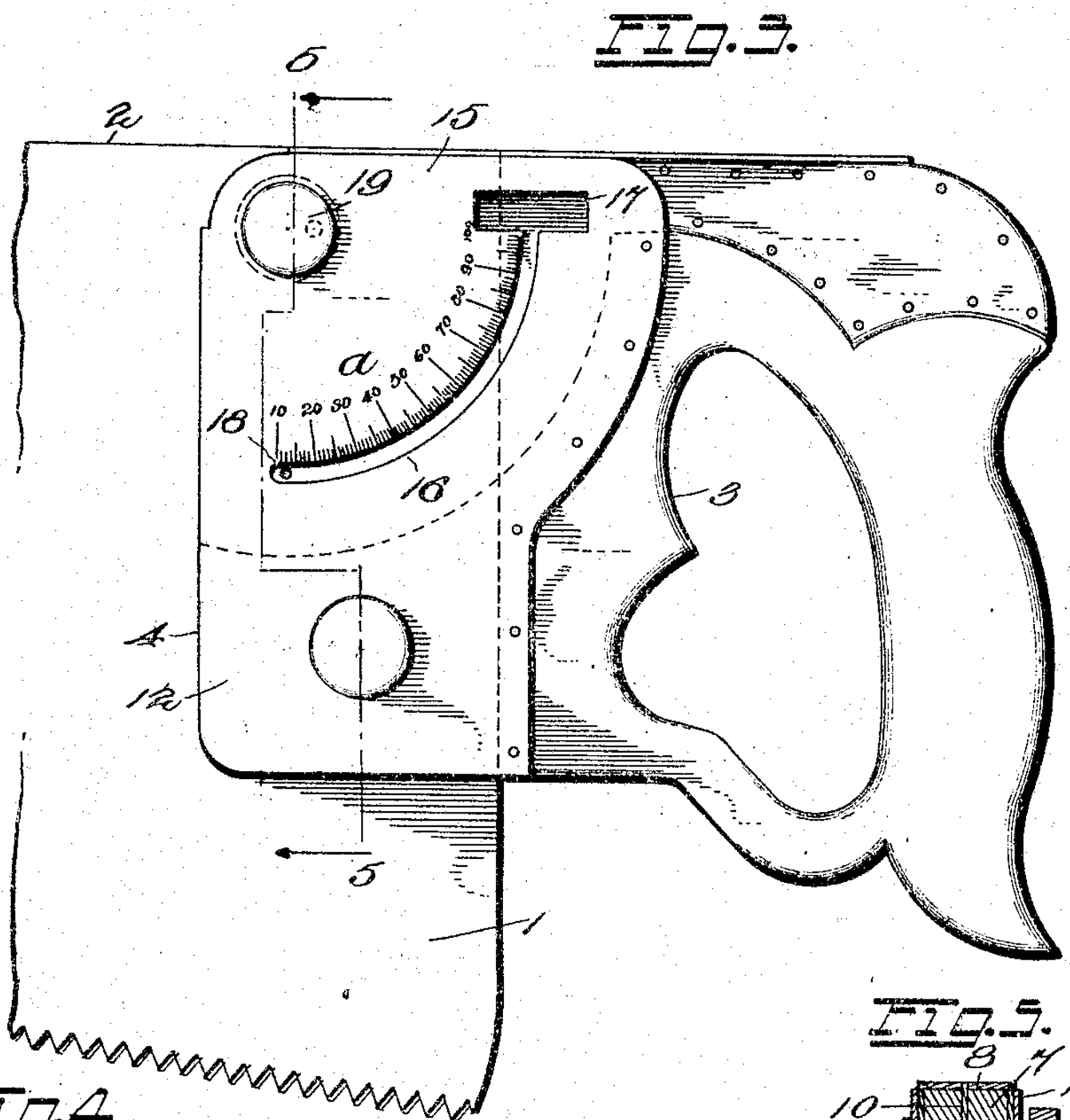


Fig. 4.

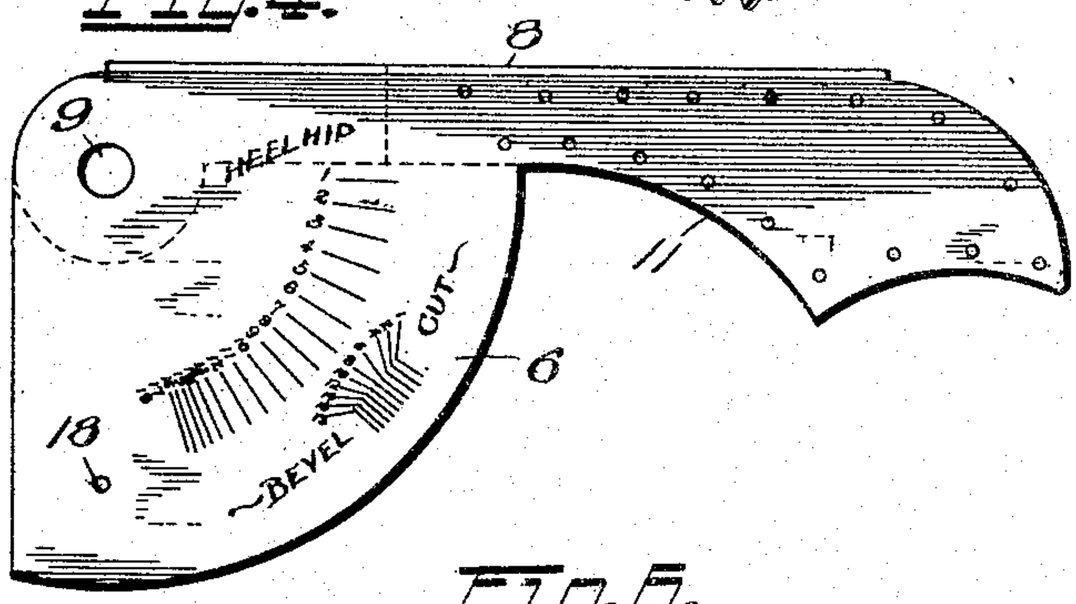


Fig. 5.

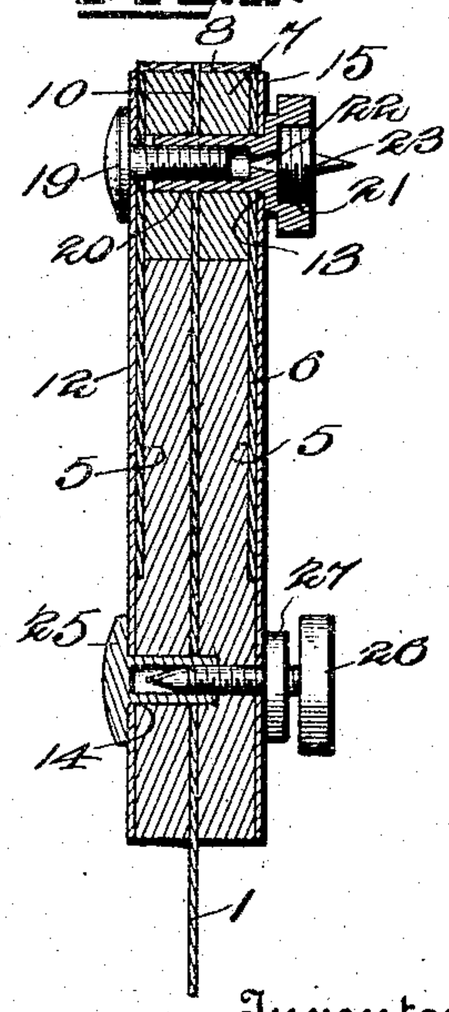
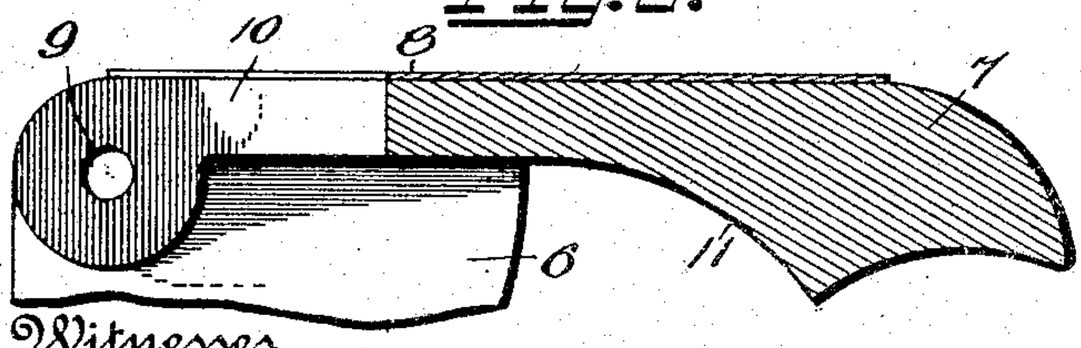


Fig. 6.



Witnesses

W. Mayo Durall.

J. Einsta

Inventor

J. I. Matthews

By Fairbanken Fisher & Whittemore

his Attorneys

UNITED STATES PATENT OFFICE.

JAY I. MATTHEWS, OF BOISE, IDAHO.

SAW ATTACHMENT.

939,051. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed March 8, 1909. Serial No. 482,129.

To all whom it may concern:

Be it known that I, JAY I. MATTHEWS, a citizen of the United States, residing at Boise, in the county of Ada and State of Idaho, have invented certain new and useful Improvements in Saw Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in combination tools, and is especially designed to provide a saw blade with a handle having certain attachments and computed scales associated therewith, whereby when properly manipulated the said tool may accomplish the purpose of several separate tools, such as saw, try square, bevel gage, steel square, steel square "fence," protractor, dividers and framing tool.

It is well known that in the operation of framing roofs, stairs, bay windows, etc., several tools must be employed and prepared patterns are commonly used to lay off the various angles and bevels varying in accordance with length and slant, etc., of the joists, risers or similar framework, and it is the primary object of this invention to combine in a single tool the several requisite means, for measuring, laying off, marking, cutting and fitting the sawed timber.

While the invention is not limited to the exact details shown and described, still for the purpose of disclosure reference is had to the accompanying drawings illustrating a practical embodiment of the invention, and the particular features of novelty will be more succinctly pointed out in the claims.

Referring to the drawings in which like characters designate the same parts in the several views, Figure 1 is a fragmentary elevational view of a saw blade with my improvements attached and looking toward the right hand side of the saw, the bevel gage being shown partly open. Fig. 2 is a detail view in right hand side elevation of the bevel gage detached. Fig. 3 is a similar view to Fig. 1 looking from the left hand side and with the bevel gage in its closed position. Fig. 4 is a view similar to Fig. 2 but looking from the reverse or left hand side. Fig. 5 is a cross section on the line 5—5 of Fig. 3 and looking in the direction of the arrows, and Fig. 6 is a longitudinal section through the bevel gage, the segmental tail of the gage being shown broken away.

1 designates the saw blade which has a straight back edge 2 for scribing purposes, and 3 designates the handle proper slotted centrally to receive the saw blade, the saw blade being secured to the handle in any suitable way, and the forward face 4 of the handle forming a shoulder on each side of the blade at a true right angle to the back edge of the blade. The upper side faces of the handle are recessed in the form of a quadrant as at 5 (Fig. 5) to receive snugly the spaced side plates 6 of the segmental tail member of the bevel gage attachment, consisting of the central solid portion 7 provided with the side plates 6 and the top plate 8 formed integral with or separately from the side plates. The bevel gage member is pivoted to the handle, through the saw blade, by means hereinafter referred to, the pivotal means passing through the aperture 9 in the gage member, the latter at its pivoted end being provided with a slot 10 to receive the inner back edge of the saw blade, and the gage member being also formed on its inner face of a contour to snugly register with the top face of the handle as at 11. The longitudinal disposition of this bevel gage member with reference to the saw blade is such that it lies in the same longitudinal plane as the saw blade, but it is of a thickness substantially the same as that of the saw handle, with its center, or slot 10, in alinement with the saw blade so that there are formed on both sides of the saw blade shoulders or abutments. A channeled casing is also provided for the handle, consisting of the side plates 12 secured to the handle and bent inwardly at one of their ends to form a metallic surface for the shoulders 4, a slot being formed at their inturned edges disposed in alinement with the slots in the handle and the bevel gage member. The side plates 12, which are apertured at 13 and 14, extend above the top edge of the handle as at 15 forming side supports or guiding means for the segmental plates of the bevel gage member to hold the latter rigidly, against lateral play when set in the open position, and the side plates 12 are provided with slots 16 curving in the arc of a circle and terminating in the rectangular

head slots [illegible]sed parallel to the straight back edge of the saw blade, the slots 16 forming runways for the indicator pins or pointers 18 carried by the tail plates 6 of the bevel gage member. The indicator pins 18 coöperate with the protractor scale *a* and the scales *b* on the side plates 12 of the casing, to indicate the angle of the bevel gage member and the head and heel cuts for different length timber upon well established rules of computation, and the various scales on the bevel gage member similarly provide ready computations for this class of carpentry and stair building work.

Referring to Fig. 5, apertures of suitable diameter extend through the saw, saw handle and side plates, in alinement with the respective apertures 9, 13 and 14, and 19 designates a screw, threading in a sleeve 20 forming the pivotal axis for the gage member, and said sleeve being provided with a hollow headed portion, recessed as at 21 and 22 to respectively form a screw-threaded cylindrical recess and conical recess to form a housing for the divider leg 23 when seated in its unused position, the sharpened screw or divider leg 23 being provided with either a slot or a rib 24 (Fig. 1) on its head for manipulation. Similarly 25 is a headed hollow spindle, in which threads the pointed end of a screw 26 provided with a threaded washer or flat nut 27.

When the tool is to be used as a pair of dividers for laying off an arc, it is obvious that the screw 26 can be affixed to the straight back edge of the saw by a clamping action between the head of the screw and the nut 27 and with the leg 23 in the position shown in Fig. 5 the leg 23 can be used as the pivot and the pointed screw 26 as the marker, or vice versa.

The utility and further operation of the tool are well understood in the art and to those following the trade and further details of operation are deemed unnecessary, suffice it to say the head spindle 20 coöperating with the screw 19 will clamp the bevel gage securely in its set positions from a straight angle when closed to a right angle when in its full open position.

Having thus described the invention, what I claim is:—

1. A saw blade having a straight back edge, a handle therefor, and a bevel gage member pivoted to said handle and comprising an elongated member provided with a squaring face and having segmental tail plates operating in recesses of quadrant form cut in said saw handle, and the under face of said elongated member being of a contour to snugly fit said saw handle, substantially as described.

2. The combination of a saw blade, having a straight back edge, a handle therefor having a shoulder disposed at right angles to said edge, and a bevel gage member pivotally mounted at one end to the forward portion of said saw handle adjacent said shoulder and adapted to swing rearwardly therefrom, said bevel gage member having an upper squaring face adapted to aline with the straight back edge of the saw when in its closed position and disposed in the same straight line as said squaring shoulder when in its open position, the bevel gage member being provided with an under face of a contour to snugly fit the top face of the saw handle and forming a part thereof when in its closed position, and said bevel gage member being longitudinally disposed in the plane of the saw blade and being of a thickness substantially the same as the saw handle whereby its sides will project beyond the side faces of the saw blade, substantially as described.

3. The combination with a saw blade having a straight back edge and a handle therefor, of a bevel gage member pivotally connected with said saw handle and provided with tail plates at its pivoted end disposed on opposite sides of said handle, a casing consisting of side plates provided with curving slots, indicator means on said tail plates, and scales indicated on said casing side plates adjacent said curving slots, substantially as described.

4. The combination with a saw blade having a straight back edge and a handle therefor, of a bevel gage member provided with a squaring surface adjacent said straight back edge, said bevel gage member being pivoted at one end to said saw blade handle and extending toward the end of the handle and being provided with segmental tail plates disposed on opposite sides of said saw handle and operating in recesses cut therein, a casing comprising side plates disposed outside of said tail plates and extending vertically above same, said casing side plates being provided with curved slots terminating in elongated slots extending parallel to the straight back edge of the saw blade, and indicator pins carried by said tail plates, said bevel gage member and casing side plates being provided with suitable computing scales conveniently arranged, substantially as described.

5. The combination with a saw blade having a straight back edge and a handle therefor, of a bevel gage member pivotally connected to the saw, and scribing means associated therewith for marking curved lines comprising a pair of pointed members, one of said members consisting of a pointed screw threading in a headed spindle and having a nut thereon, coöperating to be clamped on the saw blade, and the other of said members consisting of a spindle thread-

ing with a headed screw and having an enlargement or head recessed to form a cylindrical and a conical housing, a pointed screw adapted to be reversibly disposed in said housing, and one of said scribing means forming the pivotal axis for said bevel gage member, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

JAY I. MATTHEWS.

Witnesses:
JOHN C. WILDER,
WILLIAM E. VAN ORSDAL.