H. IZARD.

FRAMING TOOL.

APPLICATION FILED MAR. 23, 1911.

1,012,858.

Patented Dec. 26, 1911.

2 SHEETS—SHEET 1.

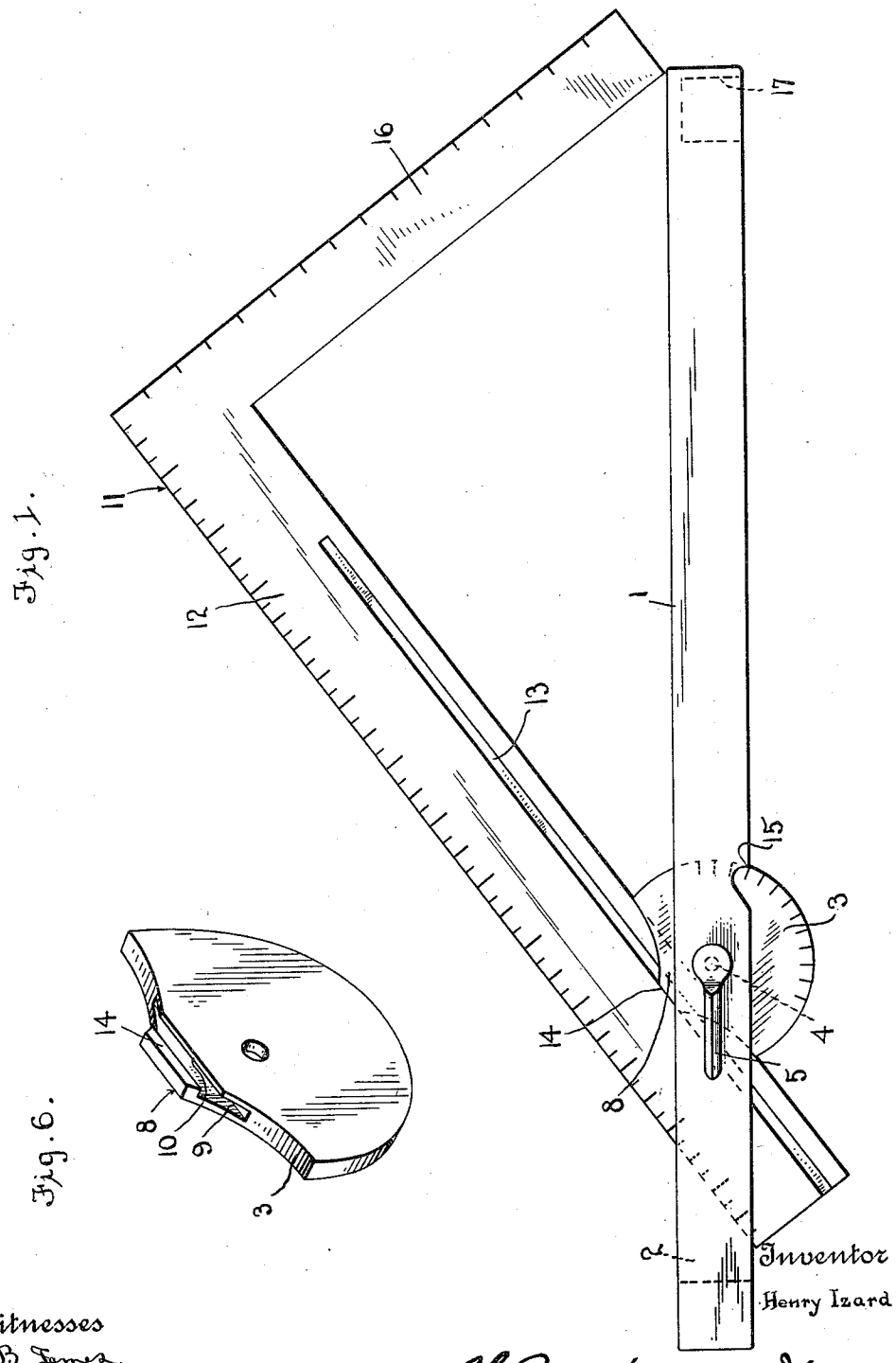

Fig. 1.

Fig. 6.

Witnesses

L. B. James

Wm Hopkins

Inventor

Henry Izard

by H. B. Williamson & Co

Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

H. IZARD.

FRAMING TOOL.

APPLICATION FILED MAR. 23, 1911.

1,012,858.

Patented Dec. 26, 1911.

2 SHEETS—SHEET 2.

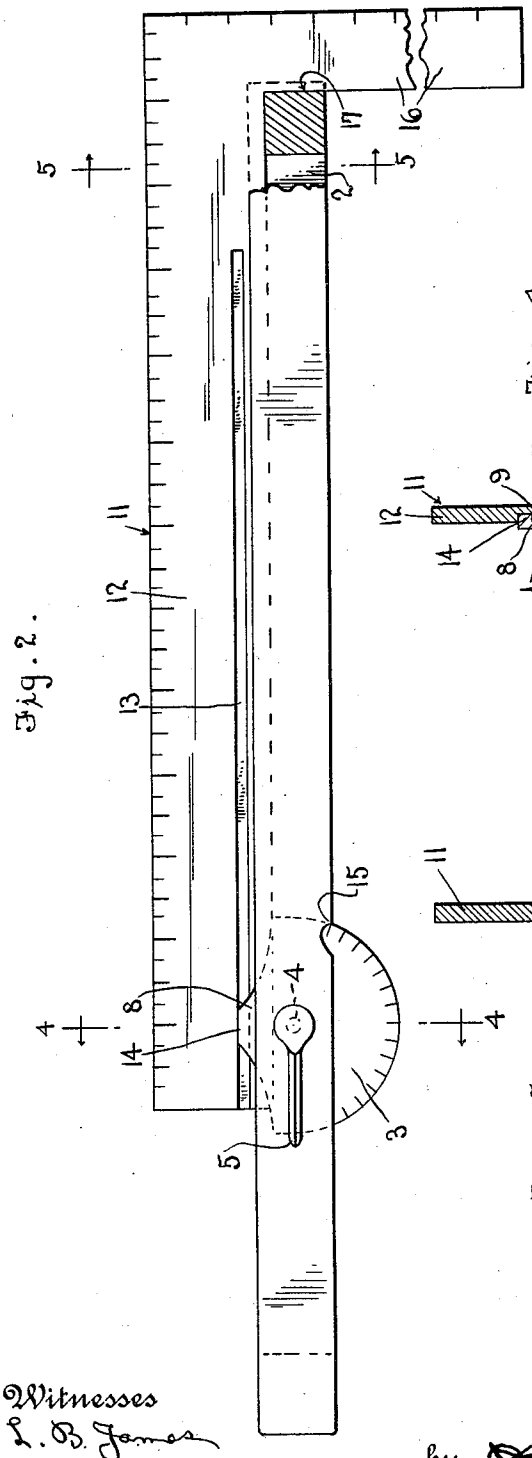

Fig. 2.

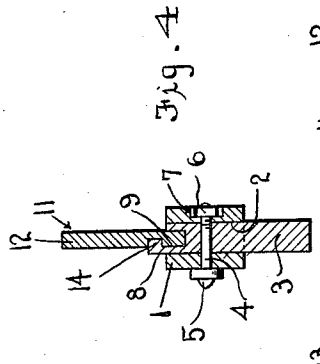

Fig. 4

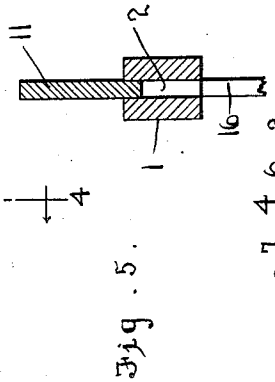

Fig. 5.

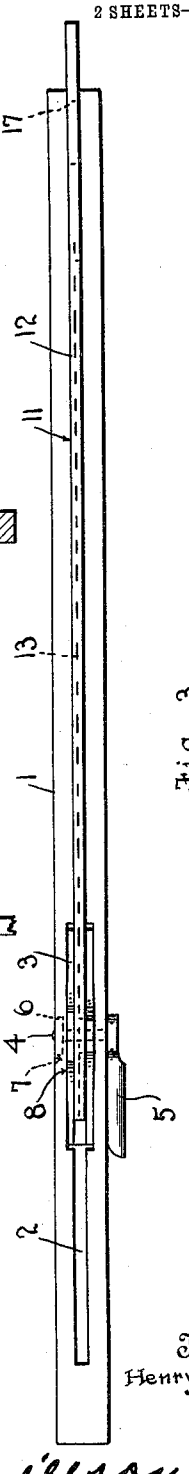

Fig. 3.

Witnesses

L. B. James

Op Hopkins

Inventor

Henry Izard

by H. B. Williamson & Co

Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY IZARD, OF PORTLAND, OREGON.

FRAMING-TOOL.

1,012,858. Specification of Letters Patent. Patented Dec. 26, 1911.

Application filed March 23, 1911. Serial No. 616,466.

To all whom it may concern:

Be it known that I, HENRY IZARD, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Framing-Tools; and I do 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 framing tools.

One object of the invention is to provide a framing tool having an improved construction and arrangement of parts by means of which the tool may be employed as a bevel, try square, miter square, protractor and stair gage, and by the use of which rafters may be readily framed at any desired pitch and the points for plumb cuts, heel cuts or back cuts may be readily indicated.

Another object is to provide a tool of this character which will be strong, durable and inexpensive in construction, efficient and reliable in operation and well adapted to the purpose for which it is designed.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a plan view of my improved tool showing the parts arranged in position for use; Fig. 2 is a similar view showing the parts folded; Fig. 3 is a rear edge view with the parts in the position shown in Fig. 2; Fig. 4 is a cross sectional view on the line 4—4 of Fig. 2; Fig. 5 is a similar view on the line 5—5 of Fig. 2; Fig. 6 is a detail perspective view of the protractor plate.

In the embodiment of the invention I provide a base member 1 which forms a straight edge and has arranged therein a longitudinal disposed slot 2. The slot 2 near one end of the base 1 is enlarged and has pivotally mounted therein a substantially semi-circular protractor plate 3. The plate 3 is revolubly mounted on a combined pivot bolt and clamping screw 4 which is arranged through the opposite yieldable sides of the base member 1. On one end of the bolt 4 is fixedly mounted a short operating lever 5, while on the opposite threaded end of the bolt is arranged a clamping nut 6, said nut being counter-sunk in a recess 7 formed in the lower side of the base member 1 as shown. By providing the clamping screw 4 the sides of the base member 1 may be compressed together into tight clamping engagement with the plate 3 thereby holding the latter in its adjusted positions.

On the square edge of the protractor plate 3 is arranged a centrally disposed extension 8 through which is formed a longitudinal passage 9 and in which on the under side thereof is formed a longitudinal slot 10, said slot communicating with the passage 9 as clearly shown in Fig. 6 of the drawing. Slidably engaged with the passage 9 in the extension 8 of the protractor plate is a try square 11 in the longer blade 12 of which, adjacent to the inner edge thereof is formed a longitudinal groove 13 adapted to receive a loop 14 formed on the outer end of the extension 8 whereby the square is securely held in sliding engagement with the protractor plate. The blade 12 of the try square when thus engaged with the passage 9 and slot 10 in the protractor plate is adapted to be slipped back and forth through the slot 2 in the base member 1 and thus adjusted to any desired position as clearly shown in Fig. 1 of the drawings. In thus arranging the square the position of the same will be indicated by the scale thereon and the angle at which the same is adjusted will be indicated by the scale on the protractor plate in conjunction with the pointer 15 formed by notching the outer edge of the base member as shown. The try square when thus adjusted is securely fastened by tightening up the clamping bolt 4 which will press the connecting portions of the protractor plate and the sides of the base member into tight engagement with the blade of the square. When not in use the square may be swung around to bring the blade 12 in parallel relation to the base 1 with the inner edge of the blade in engagement with the adjacent portion of the slot 2 in the base member while the right angular shorter blade 16 of the square is engaged with a groove or recess 17 formed in one end of the base member as shown in Fig. 2 of the drawings.

If desired the square 11 may be disengaged from the extension 8 of the pro-

tractor plate and removed from the base member 1 and employed in the usual manner.

On one or both sides of the longer blade 12 of the square is preferably arranged a computing scale or series of scales for indicating the lengths of rafters for various angles or pitches.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claims.

Having thus described my invention, what I claim is:

1. A framing tool comprising a base member having formed therein a longitudinally disposed slot and having at one end a transverse recess, a protractor plate pivotally mounted in said base member, an extension formed on one edge of said protractor plate, a try square having a slidable connection with said extension and adapted to be adjusted therein and continuously extending within the slot in said base member, means whereby the position of the square is indicated on the protractor plate, and means to simultaneously fasten the protractor plate and the try square in their adjusted positions.

2. A framing tool comprising a base member having formed therein a longitudinal slot and in one end a transverse recess, a protractor plate pivotally mounted in said base member, a clamping bolt arranged through said member and plate whereby the latter is fastened in its adjusted positions, an extension formed on one edge of said plate, said extension having therein a passage and having a slot communicating with said passage, a try square having in one of the blades near its inner edge a longitudinal groove, said grooved edge of the blade having a sliding engagement with the passage and slot in the extension of said protractor plate whereby the blade may be adjusted to various operative positions with respect to the base member and to a folded position in parallel relation with the base member in which position the inner edge of the shorter blade of the square will be engaged with the transverse recess in the end of said base member.

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

HENRY IZARD.

Witnesses:
B. S. PAGUE,
J. P. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."