

(No Model.)

T. FAHEY.
COMBINED BEVEL AND SQUARE.

No. 524,417.

Patented Aug. 14, 1894.

Fig. 1.

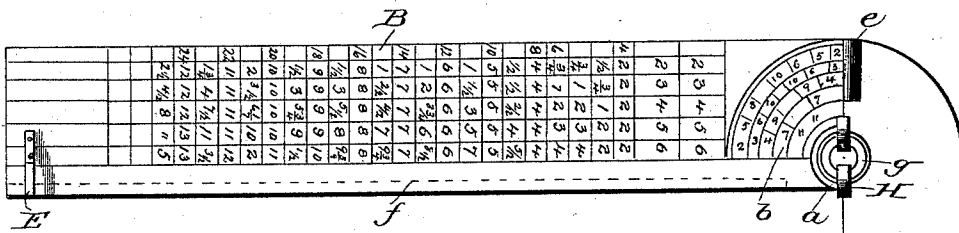


Fig. 2.

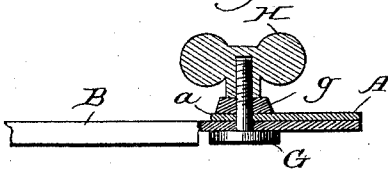
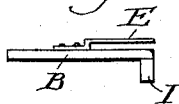


Fig. 3.



| | | | | | |
|--------|--------|--------|--------|--------|--------|
| 7 | 8 | 9 | 10 | 11 | 12 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 2 | 2 | 2 | 2 | 2 | 2 |
| 3 1/2 | 4 1/2 | 5 1/2 | 6 1/2 | 7 1/2 | 8 1/2 |
| 3 | 3 | 3 | 3 | 3 | 3 |
| 5 1/2 | 7 1/2 | 9 1/2 | 11 1/2 | 13 1/2 | 15 1/2 |
| 4 | 4 | 4 | 4 | 4 | 4 |
| 7 1/2 | 8 1/2 | 9 1/2 | 10 1/2 | 11 1/2 | 12 1/2 |
| 5 | 6 | 6 | 6 | 6 | 6 |
| 6 | 7 | 7 | 7 | 8 | 8 |
| 11 | 12 | 12 | 12 | 12 | 12 |
| 8 | 8 | 8 | 9 | 9 | 9 |
| 1 | 5 | 5 1/2 | 6 | 6 1/2 | 7 |
| 9 | 9 | 10 | 10 | 10 | 11 |
| 3 1/2 | 5 1/2 | 7 1/2 | 9 1/2 | 11 1/2 | 13 1/2 |
| 10 | 10 | 11 | 11 | 12 | 12 |
| 4 1/2 | 6 1/2 | 8 1/2 | 10 1/2 | 12 1/2 | 14 1/2 |
| 11 | 12 | 12 | 13 | 13 | 14 |
| 6 1/2 | 8 1/2 | 10 1/2 | 12 1/2 | 14 1/2 | 16 1/2 |
| 12 | 13 | 13 | 14 | 14 | 15 |
| 9 1/2 | 11 1/2 | 13 1/2 | 15 1/2 | 17 1/2 | 19 1/2 |
| 13 | 14 | 15 | 16 | 17 | 18 |
| 10 1/2 | 12 1/2 | 14 1/2 | 16 1/2 | 18 1/2 | 20 1/2 |

Witnesses
J. W. Reynolds
Chas. S. Myers

Inventor
Timothy Fahey
By
John Wedderburn
Attorney

UNITED STATES PATENT OFFICE.

TIMOTHY FAHEY, OF SPOKANE, WASHINGTON.

COMBINED BEVEL AND SQUARE.

SPECIFICATION forming part of Letters Patent No. 524,417, dated August 14, 1894.

Application filed March 23, 1894. Serial No. 504,789. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY FAHEY, a citizen of the United States, and a resident of Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in a Combined Bevel and Square; 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 a bevel and square especially designed for carpenters and builders to facilitate the laying out of work in construction of roofs and other coverings in which the beams are supported at their ends and incline to the horizontal throughout their length.

The primary object is to facilitate the reckoning of the lengths of beams for a given span and pitch and determine the top and the bottom cuts. Also to accurately indicate the cuts of the ends of the braces, posts and rafters.

With these ends in view and such others as appertain to the invention, the improvement consists of the novel construction of instrument hereinafter more fully described and claimed, and which is shown in the annexed drawings, in which—

Figure 1 is a plan view of an instrument embodying the invention. Fig. 2 is a detail view in section showing the means for securing the blades together in the required position. Fig. 3 is an end view showing the clip for holding the free ends of the blades together when closed, and the flange to support the instrument on the beam, rafter or other part of the structure to which it is designed to apply the instrument.

The instrument consists of two blades A and B which are pivoted together near one end by suitable means. The blade B has a concentric series of graduations *b* at one end arranged in concentric arcs. Each arc is differently graduated to correspond with the different pitches, the number of arcs depending upon the range and scope of the instrument.

The blade A has a semi-circular projection *a* which overlaps the blade B at the center of the graduations *b* and receives the pivot by means of which the two blades are connected.

The end projecting in the rear of the projection *a* is in line with the inner edge of the blade and is beveled, as shown at *e*, to travel on the graduations *b* and indicate the cuts at the ends of the beams corresponding to the length of span and the pitch of the rafter. The blade A when closed has its inner edge portion resting on a marginal portion *f* at the inner edge of the blade B and the free end extending beneath a keeper E attached to the blade B near the free end.

Each of the blades has a corresponding series of horizontal and longitudinal graduations which bear a certain relation to the semi-circular graduations *b*, and which indicate the top and the bottom cuts of the rafters, beams, braces, &c.

The pivot consists of a flat headed screw G passing through the blades and provided on its projecting threaded end with a washer *g* corresponding to the head of the screw, and with a thumb screw H. To set the blades the thumb screw is loosened sufficiently to permit the blades to be turned relatively on the pivotal connection. After the blades have been properly positioned they are secured by tightening up the thumb screw H.

To support the instrument on the rafter or beam it is provided with a laterally projecting flange I which forms a base. This flange is a piece of sheet metal having its upturned edge soldered, riveted or otherwise secured to the marginal edge of the blade B and adapted to project from the side opposite to that having the graduations.

Having thus described the invention, what is claimed as new is—

1. A combined square and bevel composed of two blades, one blade having a marginal edge and a concentric series of semi-circles differently graduated, the other blade having a semi-circular projection, and a beveled edge in the rear of the said projection to cooperate with the aforesaid semi-circular graduations, and a pivot connecting the blades, substantially as described.

2. A combined square and bevel composed of two blades, one blade having a marginal edge and a concentric series of semi-circular graduations, the other blade having a semi-circular projection and a beveled edge in the rear of the said projection, a pivot connect-

ing the blades, a keeper at the free end of one of the blades, and a flange or base projected laterally from the marginal edge of the said blade, substantially as described.

5 3. The herein described combined square, bevel and reckoner composed of two blades having a corresponding series of longitudinal and transverse graduations, one blade having at the pivoted end a concentric series of
10 semi-circular graduations, and having a marginal edge portion, the other blade having a semi-circular projection and a rear beveled edge portion, a clamp pivotal connection for

securing the blades together, a keeper at the free ends of the blades, and a flange or base 15 projected laterally from one of the blades, substantially as described for the purposes specified.

In testimony whereof I have signed this specification in the presence of two subscrib- 20 ing witnesses.

TIMOTHY FAHEY.

Witnesses:

P. F. QUINN,
THOMAS FAHEY.