(No Model.)

W. H. GRIM.

COMBINATION TOOL FOR BRICKLAYERS.

No. 558,383. Patented Apr. 14, 1896.

Fig. 1.

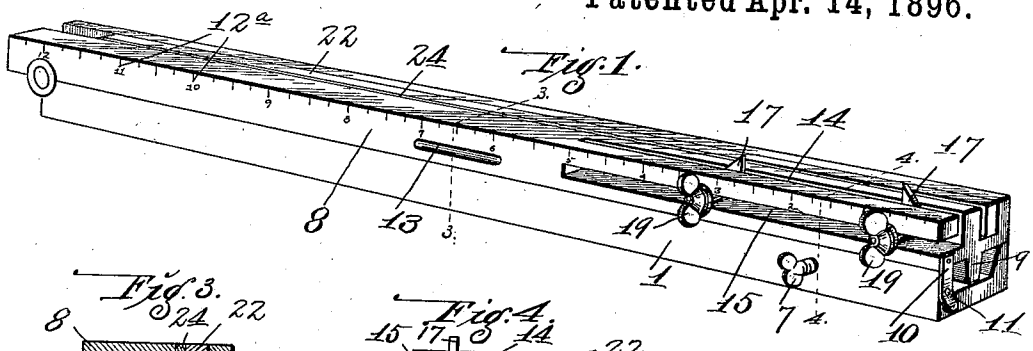


Fig. 3.

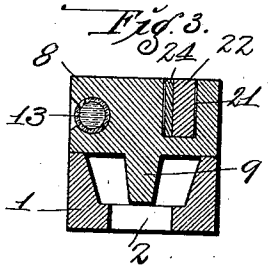


Fig. 4.

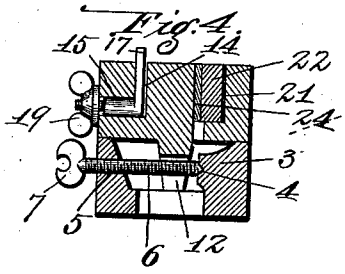
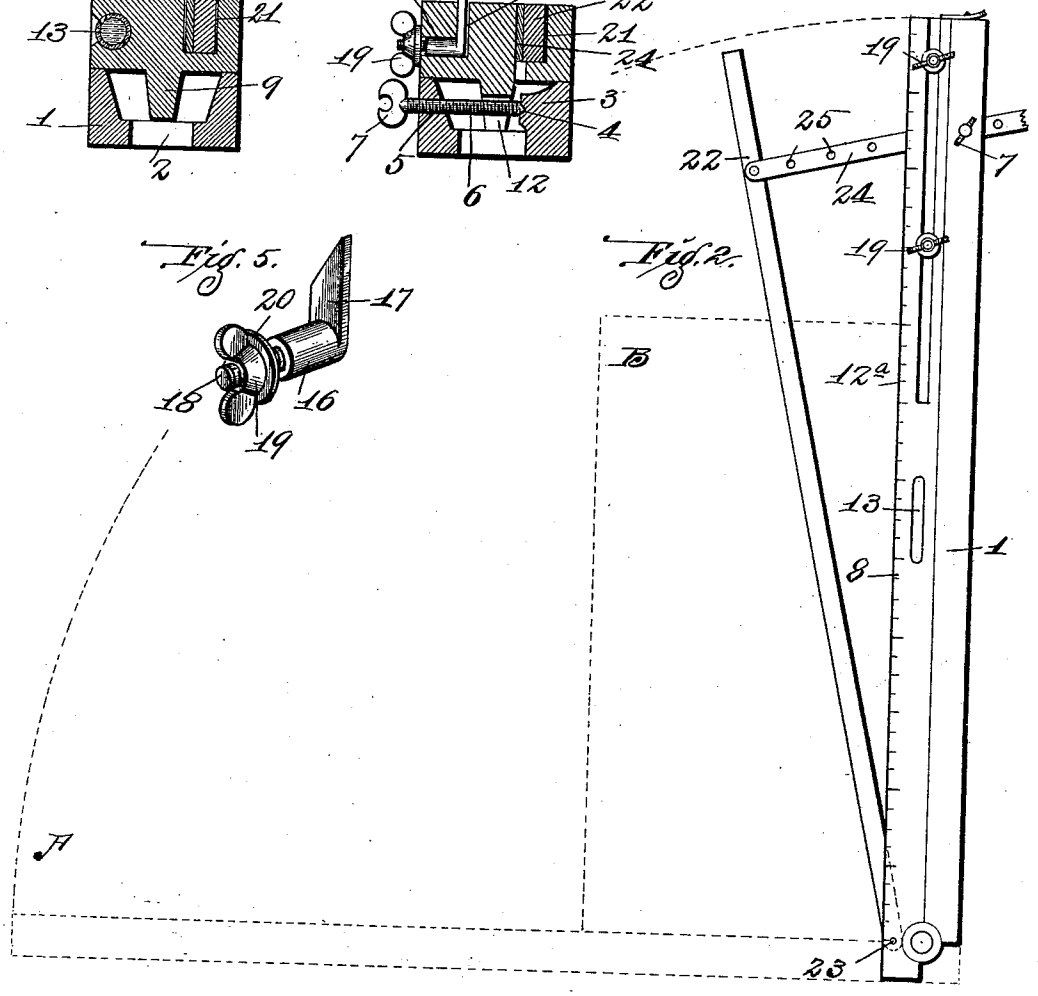


Fig. 5.

Fig. 2.



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WILLIAM H. GRIM, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO JAMES H. HAGGERTY, OF SAME PLACE.

COMBINATION-TOOL FOR BRICKLAYERS.

SPECIFICATION forming part of Letters Patent No. 558,383, dated April 14, 1896.

Application filed October 21, 1895. Serial No. 566,372. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. GRIM, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in a Combination-Tool for Bricklayers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved combination-tool for bricklayers; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

In the drawings, Figure 1 is a view in perspective of my improved combination-tool, the same being in a closed position. Fig. 2 is a side elevation of my improved tool, the same being shown as being used for marking brick to be used in an arch, &c. Fig. 3 is an enlarged cross-sectional view taken approximately on the indicated lines 3 3 of Fig. 1. Fig. 4 is an enlarged cross-sectional view taken approximately on the indicated line 4 4 of Fig. 1. Fig. 5 is a view in perspective of an adjustable gage pin or point such as is contemplated by my invention.

Referring by numerals to the accompanying drawings, 1 indicates the base of my combination-tool, the same being in the form of a channel-bar, and the portion of metal in the center of said bar is removed, as indicated by 2, in order to lessen the weight of said bar. Formed integral with the inner face of one of the flanges of this bar 1 is a lug 3, in which an indentation 4 is formed, and directly opposite this indentation 4, in the opposite flange of the bar, is a horizontally-arranged screw-threaded aperture 5, through which passes a screw-threaded shank 6 of a winged bolt 7.

Hinged to one end of the bar 1 is a bar 8 of the same width and thickness as said bar 1, and said bar 8 projects a slight distance beyond the end of the bar 1, to which it is hinged, in order that said bars may be only opened at right angles to one another, thus forming, when so opened, a try-square.

Formed integral with the inner face of the bar 8 is a flange 9, which, when the bars are folded together, occupies a position within the channel in the bar 1. Fixed to the free end of the bar 8 is a spring-catch 10, the same being adapted to engage the pin 11 on the end of the bar 1 when said bars are folded together. A notch 12, formed in the flange 9, receives the screw-threaded shank 6 of the winged bolt 7 when the bars are folded.

Marked along one edge of the bar 8 is a series of graduations 12^a, the same being preferably an inch apart, and, if desired, intermediate graduations may be made use of. Located in the face of the bar 8, on which the graduation-marks are placed, is a spirit-level 13, the same being preferably located at a point half-way between the ends of said bar 8. Formed in the bar 8 or at the free end thereof is a vertically-arranged longitudinally-extending slot 14, the same being to one side of the center of said bar, and communicating with the lower end of said slot 14 is a longitudinally-extending horizontally-arranged slot 15.

Arranged to move longitudinally in the slot 15 is a pair of heads 16, with each of which is formed integral an attenuated point or finger 17, the same extending upwardly through the vertically-arranged slot 14.

Formed integral with and extending outwardly from the heads 16 are screw-threaded pins 18, on which, outside the bar 8, are located winged nuts 19, there being washers 20 interposed between said winged nuts and the face of the bar 8. Formed in the top side of the bar 8 and extending longitudinally the entire length thereof is a rectangular groove 21.

22 indicates a rectangular bar of the same thickness as is the rectangular groove 21, and said bar 22 is pivoted upon the pin 23 that passes transversely between the sides of the bar 8 at a point adjacent the hinge between said bars 1 and 8. When said bar 22 is folded into the rectangular groove 21, it lies flush with the top surface of the bar 8 and extends to the top or forward end of said bar. Pivoted to one side of the bar 22, adjacent the forward end thereof, is a bar 24, in which is formed a series of equidistant apertures 25, and when the bar 22 occupies its normal position within the rectangular groove 21 this bar 24 lies adjacent said bar and within said rectangular groove 21.

Formed in the bar 8, adjacent the upper end thereof and connecting the rectangular groove 21 with the inner face of said bar, is a rectangular aperture 26.

The various uses to which my combination-tool is put and the operation attendant said uses are as follows:

When the tool is used as a try-square, the spring-latch 10 is disengaged from the pin 11 and the bar 8 and various parts carried thereby are swung outwardly and downwardly from the bar 1, as indicated by dotted lines A in Fig. 2, and when said bar 8 is swung to its fullest extent, and is at right angles to the bar 1, the tool may be used as a try-square for any purpose desired by the operator.

When the tool is to be used for cutting arch or skewback brick, the bars 22 and 24 are swung outwardly from the bar 8, until said bar 24 can be withdrawn entirely from the rectangular groove 21. The winged bolt 7 is now unscrewed, so that the point thereof is disengaged from the indentation 4. The outer end of the bar 24 is now passed through the rectangular aperture 26, and the bar 22 is moved toward the bar 8, until the same stands at the angle that it is desired to cut or mark the brick. The winged bolt 7 is now tightened upon the bar 24, and the point thereof passes through one of the apertures 25 in said bar. The face of the bar 8 is now placed along the edge of the brick, as indicated by dotted lines B in Fig. 2, and the bar 22 will lie directly upon the top of said brick and form a guide for the instrument to mark on said brick the angle at which it is to be cut. As the bars 22 and 24 are set in their positions, any number of brick desired can be expeditiously and successively marked.

When the tool is used for a gage or compass, the winged nuts 19 are loosened upon the pins 18 and the fingers 17, formed integral with the heads 16, that are formed integral with the pins 18, are moved longitudinally in the slots 14 and 15 until they are the desired distance apart, when the winged nuts 19 are tightened, thereby locating said attenuated fingers 17 at the proper points, and when so located the tool can be used upon brick or other work, as desired.

The use of my improved tool for a level and rule is obvious, though it may be stated that when said tool is used as a rule, or when it is packed for transportation, it is desirable that the attenuated fingers 17 be turned downwardly, so that they occupy positions within the vertical slot 14.

A combination-tool constructed in accordance with the foregoing description is simple, inexpensive, very compact, can be easily carried along with the ordinary kit of tools, can be instantly positioned for the various uses required, and is very effective in the uses and operations hereinbefore described.

I claim—

A combination-tool comprising the base 1, being in the form of a channel-bar, the lug 3 having the indentation 4 on the inner face of one of the flanges of said base 1, the screw-threaded winged bolt 7 inserted in the aperture 5 which is in the other of said flanges and directly opposite said indentation 4, the point of said bolt resting in said indentation, the bar 8 hinged to said bar 1, the flange 9 on the inner face of said bar 8, the spring-catch 10 on the free end of the bar 8, the pin 11 to be engaged by said catch, said flange 9 having the notch 12, the graduations 12^a on the edge of the bar 8, the spirit-level 13 located in the graduated face of said bar 8, the said bar 8 having the vertically-arranged longitudinally-extending slot 14 and the longitudinally-extending horizontally-arranged slot 15, the pair of heads 16 arranged to move in the slot 15, the attenuated point 17 on each of said heads 16 and extending upwardly through the vertically-arranged slot 14, the screw-threaded pins 18 extending outwardly from said heads 16, the winged nuts 19 on said pins outside the bar 8, the rectangular bar 22 arranged to work in the groove 21 formed longitudinally in the top side of the bar 8, the pin 23 by which said bar 22 is pivoted in the groove 21 at a point adjacent the hinge between the said bars 1 and 8, and the bar 24 pivoted to one side of said bar 22 adjacent its forward end, said bar 24 having the series of apertures 25, through which the winged bolt 7 operates and being arranged to lie adjacent said bar 22 within the said groove 21, when the tool is folded, and to pass through the rectangular aperture 26 in the bar 8, when the bars are extended or opened, all arranged and combined substantially as and for the purposes stated.

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

WILLIAM H. GRIM.

Witnesses:
JOHN C. HIGDON,
MAUD GRIFFIN.