No. 649,422. Patented May 8, 1900.

F. L. FRY & C. A. KUENZEL.

COMBINATION TOOL.

(Application filed July 6, 1899.)

(No Model.)

Fig. 1.

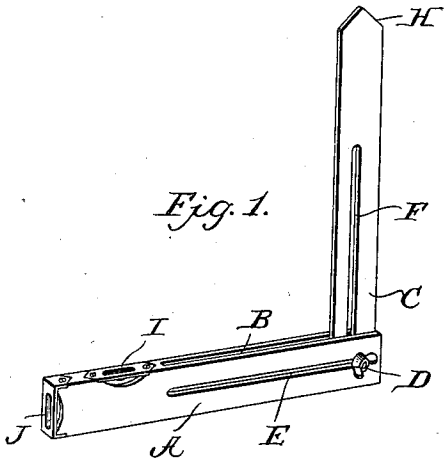


Fig. 2.

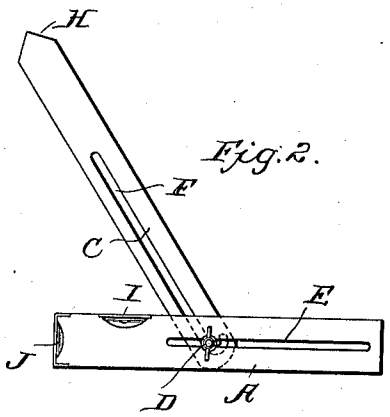


Fig. 3.

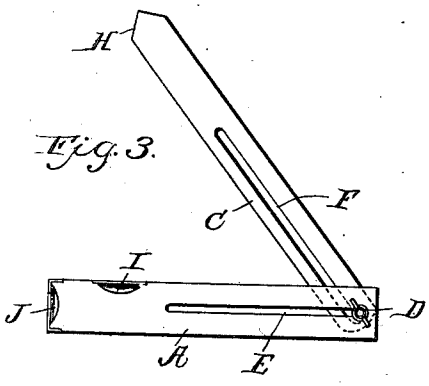


Fig. 4.

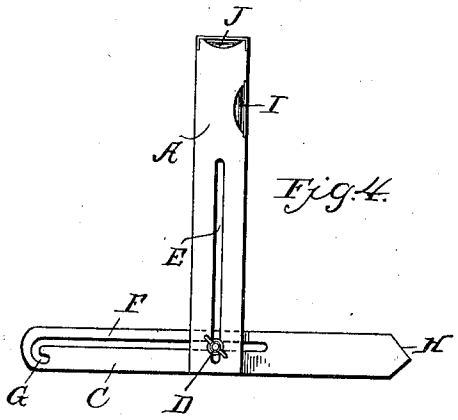
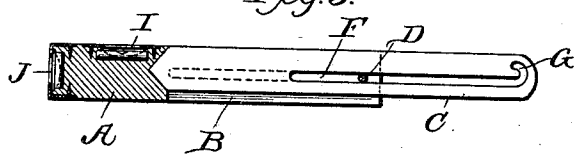


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANK L. FRY AND CHARLES A. KUENZEL, OF PHILADELPHIA, PENNSYLVANIA.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 649,422, dated May 8, 1900.

Application filed July 6, 1899. Serial No. 722,915. (No model.)

To all whom it may concern:

Be it known that we, FRANK L. FRY and CHARLES A. KUENZEL, citizens of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Combination-Tools, of which the following is a specification.

Our invention relates to a new and useful improvement in a combination-tool consisting of a level and spirit-level, and has for its object to provide an effective combination-tool of this description, each member of which may be used as effectually as though not combined with the other members, while greatly reducing the cost of manufacture and accomplishing results which have heretofore not been attainable by the ordinary tools.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective of a combination-tool made in accordance with our improvement, showing the blade adjusted to be used as a square; Fig. 2, a side elevation showing the blade adjusted for producing the obtuse and acute bevels; Fig. 3, a similar view showing the blade adjusted to the end of the stock; Fig. 4, a similar view showing the blade so adjusted as to produce a T-square or plumb, and Fig. 5 a section showing the blade folded for easy transportation or storage.

In carrying out our invention as here embodied we provide a stock A, a portion of which is slotted, as indicated at B, and has secured therebetween the blade C by means of the set-screw and thumb-nut D. This set-screw passes through the slots E, formed in the sides of the stock, so as to permit the adjustment of the blade lengthwise of the stock, as will be readily understood. The blade also is slotted, as indicated at F, and this slot is turned, as shown at G. The object of the peculiar shape of the slot F is to bring the blade in proper relation to the stock for certain purposes, which is accomplished by adjusting the blade so that the set-screw may pass into the turned portion G thereof. The free end of the blade has a right angle H formed thereon which may be utilized for squaring purposes, and when this blade is to be folded it is then utilized for holding it in position, since it fits within a corresponding recess formed in the stock, as clearly shown in Fig. 5. When in this position, the blade is secured against displacement by the setting up of the thumb-nut. A spirit-level I is set within the edge of the stock and so serves for leveling purposes in the usual manner, while a corresponding spirit-level J is set in one end of the stock and is utilized as a plumb, this being accomplished by adjusting the blade as shown in Fig. 4, when the latter becomes a straight-edge, and the indication of the spirit-level J will determine the position of both the blade and the stock, or the stock may be placed against a vertical surface, when the indication of the level J will also determine the trueness of said surface.

Our improved tool is especially adapted for use by stair-builders, since the complete adjustability of the blade relative to the stock permits its use in places and for purposes for which an ordinary bevel cannot be used, as will be readily understood by those skilled in such work, while at the same time this combination-tool may be used for all purposes for which each member thereof is adapted.

The cost of manufacture of a tool made in accordance with our improvement is but little in advance of the cost of an ordinary square or level; but it is far more advantageous than separate tools to produce the same work. When the blade is folded, as shown, the tool may be stored in a small compass or carried in the pocket and is not liable to become entangled with or injure surrounding objects.

Having thus fully described our invention, what we claim as new and useful is—

In combination with a stock A, having a vertical slot B, a transverse slot E, and an an-

gular recess at the inner end of the slot B; a blade C, having a slot F, provided with a curved extension G, said blade having an angular end H, adapted to lie in the recess; and a thumb-screw working in the slots E and F, as and for the purpose described.

In testimony whereof we have hereunto affixed our signatures in the presence of two subscribing witnesses.

FRANK L. FRY.
CHARLES A. KUENZEL.

Witnesses:
HENRY F. BAUER,
JOHN M. SNYDER.