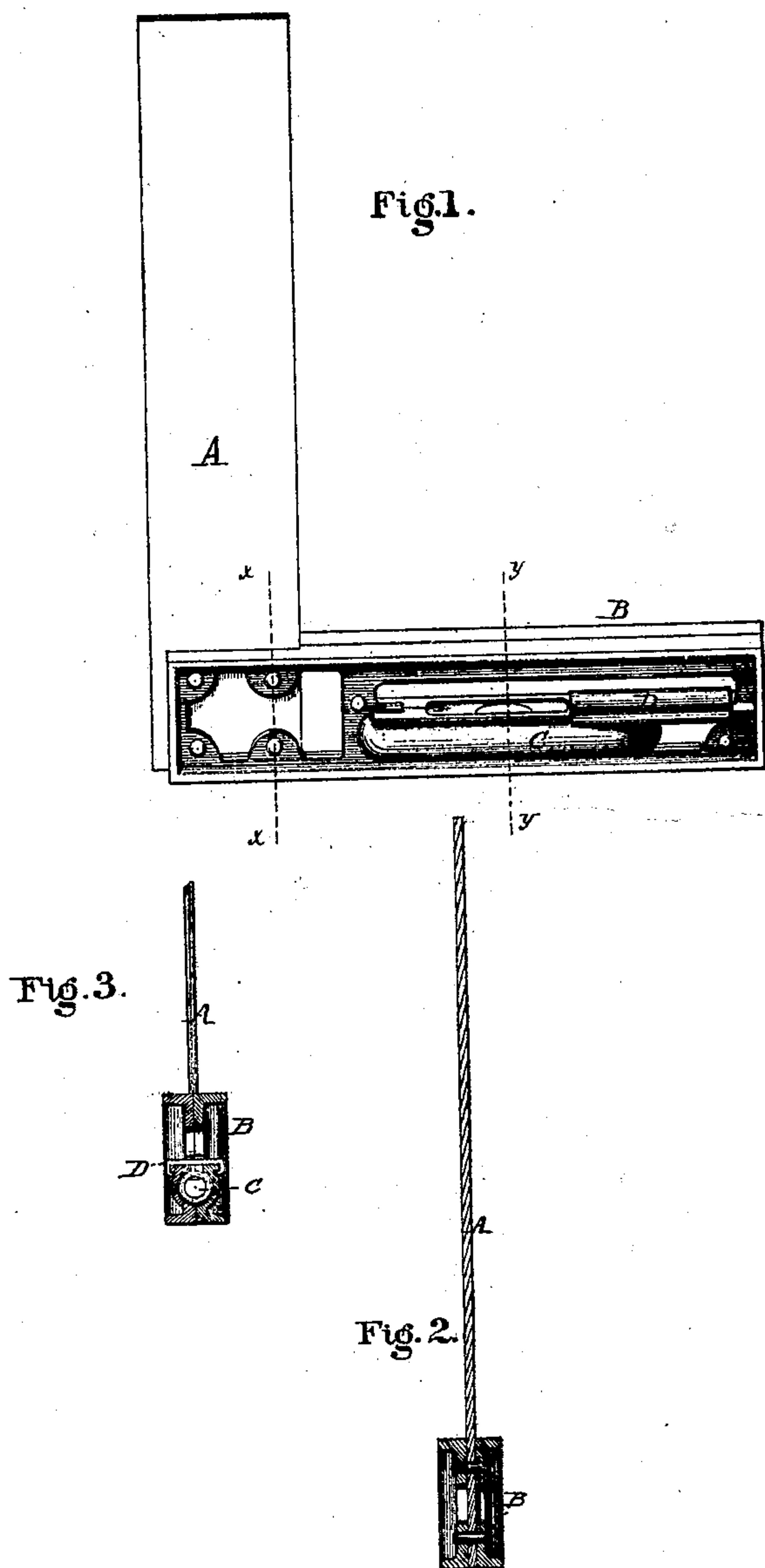


H. L. Buckwalter,

Square Level.

No. 108,875.

Patented Nov. 1. 1870.



Witnesses: *L. Kailer*
Phil. T. Dodge

Inventor
H. L. Buckwalter
by Dodge & Munn
his attys.

United States Patent Office.

HENRY L. BUCKWALTER, OF LIMERICK TOWNSHIP, PENNSYLVANIA.

Letters Patent No. 108,875, dated November 1, 1870.

IMPROVEMENT IN TRY-SQUARES AND LEVELS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY L. BUCKWALTER, of the township of Limerick, in the county of Montgomery and State of Pennsylvania, have invented a Combined Try-Square and Level, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to tools for use by carpenters and other mechanics; and

It consists in a novel construction and combination of a try-square and spirit-level, as hereinafter more fully explained.

Figure 1 is a perspective view of the combined tool, complete;

Figure 2 is a transverse section on the line $x x$ of fig. 1; and

Figure 3 is a similar view on the line $y y$ of fig. 1.

In many mechanical operations it is desirable to have both a square and a spirit-level ready for use at will, and to accomplish this object I combine the two in one, in such a manner as to produce a single tool capable of being used for the two-fold purpose of a try-square and a level.

In making this combined tool, I use the ordinary steel blade A, and secure it to a metallic handle, B. This handle is composed of two skeleton plates, which are exact duplicates, placed face to face, and firmly united by rivets, as represented in the drawing.

These plates are cast with a recess in their adjoining faces at one end, of proper size to permit the end of the blade A to be inserted therein, where it is securely fastened by rivets, as shown in figs. 1 and 2.

They are further formed with a longitudinal cavity in their adjoining faces, near their lower edge, these cavities being semicircular in their cross-section, so that, when the two parts are united, they will form a

circular cavity or chamber about half the length of the handle, for the reception of a glass tube containing a suitable liquid, the same as is generally employed in spirit-levels, and as represented by C, figs. 1 and 3.

The handle is provided with a long transverse opening directly over the tube C, with a vertical opening leading from it down to the tube C, to enable the latter to be readily seen.

Over this tube C is placed a metal slide, D, which has its edges bent downward and engaging under corresponding flanges formed on the sides just over the tube C, so as to hold the cover D in place, and, when necessary, permit it to be slid to and fro, and thus cover the tube C, to protect it from injury or uncover it for use when desired.

The plates forming the handle will, of course, be planed or ground on their outer edges, so as to make them true and smooth, they being formed with a projecting flange around their edges, as represented, to give a broad surface and firm bearing, the balance being made thin and light as possible consistent with the requisite strength.

When thus constructed, the whole forms a very compact, neat, and convenient tool.

Having thus described my invention,

What I claim is—

A combined try-square and level, having its handle composed of the two metallic plates B, said plates being formed with recesses or cavities on their inner faces, so as to confine the spirit-level tube and the blade between them, when united, substantially as described.

HENRY L. BUCKWALTER.

Witnesses:

SOLOMON S. MILLS,
DAVIS HAUSE.