

P. BROADBOOKS.
COMBINED IMPLEMENTS.

No. 170,934.

Patented Dec. 14, 1875.

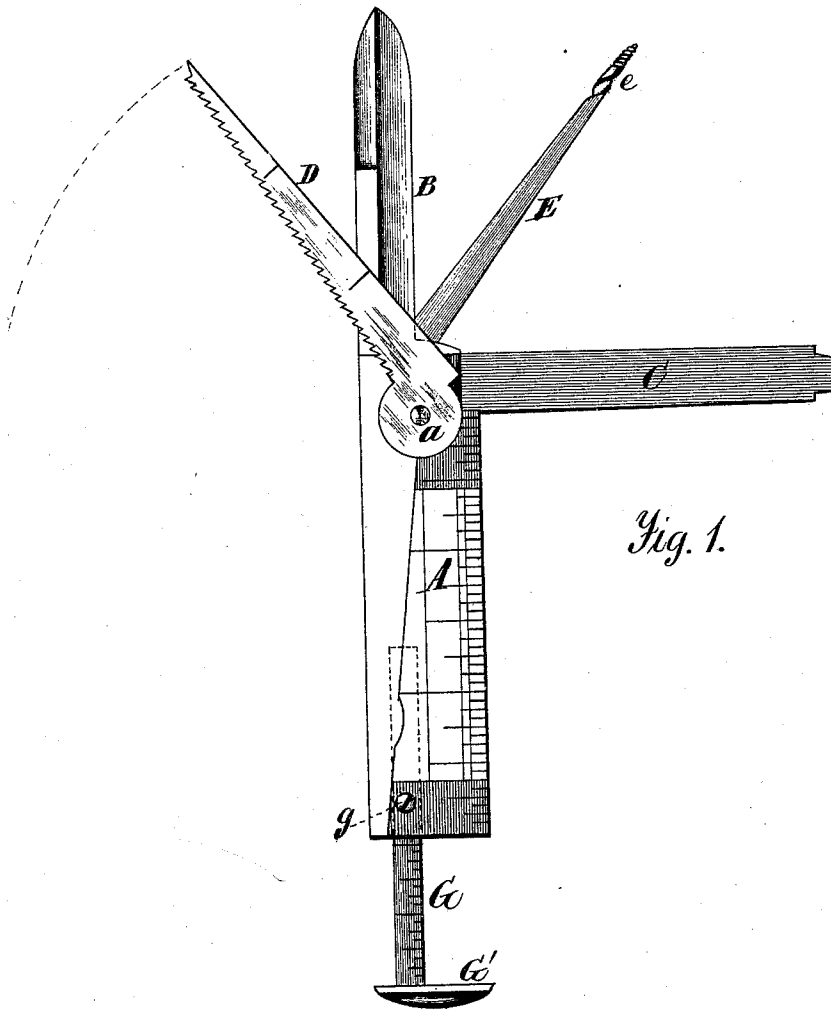


Fig. 1.

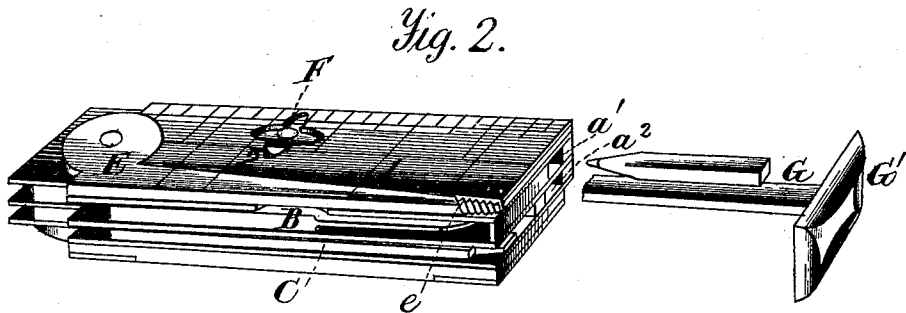


Fig. 2.

Witnesses.
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PETER BROADBOOKS, OF BATAVIA, NEW YORK.

IMPROVEMENT IN COMBINED IMPLEMENTS.

Specification forming part of Letters Patent No. **170,934**, dated December 14, 1875; application filed December 15, 1874.

To all whom it may concern:

Be it known that I, PETER BROADBOOKS, of Batavia, in the county of Genesee and State of New York, have invented a certain Improvement in Combined Implements, of which the following is a specification:

The nature of my invention consists in uniting, with a pocket-knife, a number of tools or instruments, which, besides their capability of independently performing their ordinary functions, also act in combination with each other, or with the handle of the knife, to serve other useful purposes, all as will be fully explained hereinafter.

In the annexed drawings, Figure 1 is a plan view of my improved implement, showing the blade and other instruments opened. Fig. 2 is a perspective view thereof, with all the instruments, except the calipers, closed.

The same letters of reference are used in both figures in the designation of identical parts.

The handle A, made so that it can be used as a straight-edge, is ruled upon either side, and is usually made three inches in length from its end to the center of the pivot-pin *a*. The knife-blade B and the screw-driver C are arranged to fold into the handle; but the saw D and reamer E, forming rule-joints with the handle, fold into suitable recesses upon either side thereof. Either the screw-driver, or the saw, or the reamer, if fully opened, constitutes, together with the handle, a six-inch rule. The saw and reamer fold in opposite directions, and, being pointed, may be used as a pair of compasses, or separately as markers or gravers. The reamer has also a screw-thread, *e*, at the point, and can thus be used as a screw-bit or gimlet. The screw-driver bears with its squared butt-end against

a spring in the back of the handle, in manner like the knife-blade of any ordinary pocket-knife, and when opened half-way, as shown in Fig. 1, is held firmly in position by the force of the spring, at right angles to the handle, forming a square therewith. This feature of a spring-square will form the subject-matter of a separate patent, and I, therefore, disclaim it in this. The knife-blade, screw-driver, saw, and reamer are all pivoted upon the same pin *a*. A spirit-level, F, is inserted in one side of the handle, forming, in connection with the square, a plumb. Two pockets, *a*¹ and *a*², are formed in the end of the handle, one of which is intended to serve as a receptacle for either a pencil, or brad-awls, or a cork-screw, while the other constitutes the socket for the sliding rule G, having a head, G', which serves as one jaw of the calipers, the other jaw of which is formed by the handle. A set-screw, *g*, may be used to clamp the sliding rule in any desired position, so that it can be used as a wrench, and also by reversing it in its socket, which will cause the long end of its head G' to project laterally from the handle, as a gage. The head of the set-screw *g* may be countersunk in the handle, so as to avoid projecting points.

What I claim as my invention, and desire to secure by Letters Patent, is—

As a new article of manufacture, the herein-described implement, composed of the parts substantially as shown and specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER BROADBOOKS.

Witnesses:

STILLMAN POND,
H. B. CONE.