

No. 815,381.

PATENTED MAR. 20, 1906.

P. L. ROBERTSON.
COMBINATION TOOL.
APPLICATION FILED APR. 24, 1905.

2 SHEETS—SHEET 1.

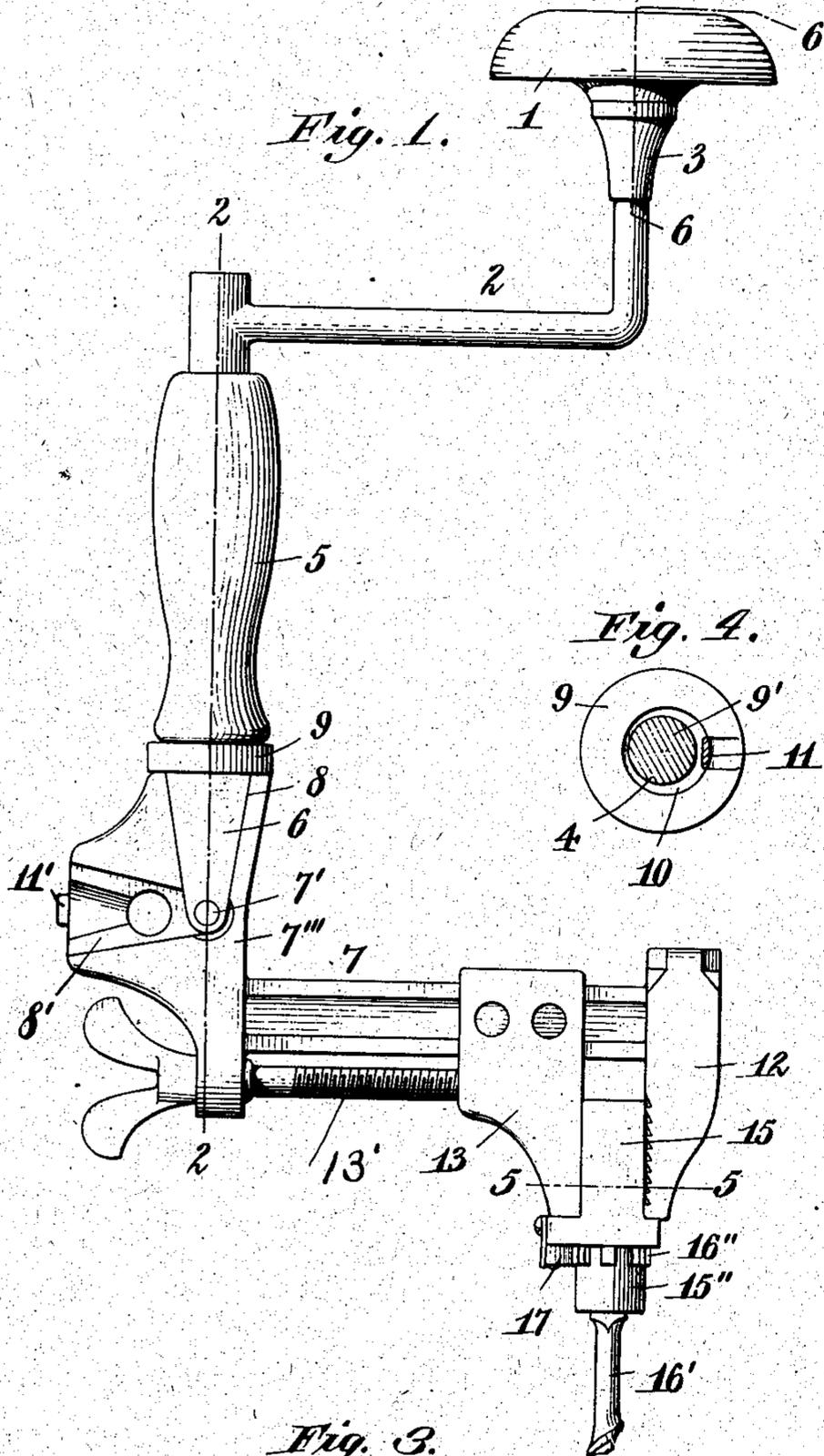


Fig. 2.

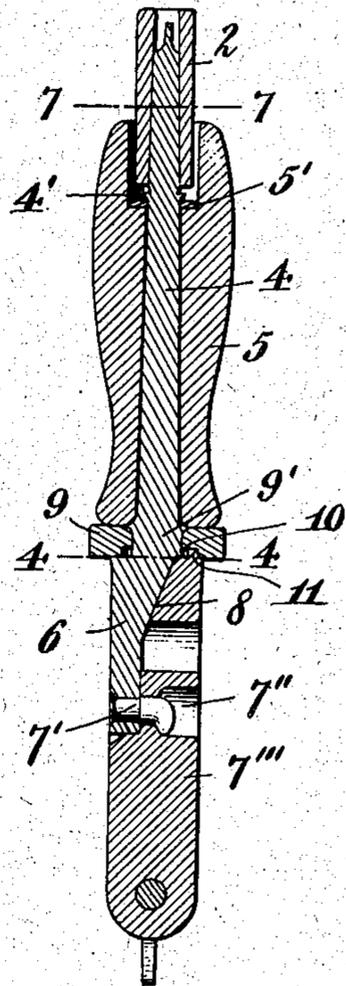


Fig. 4.

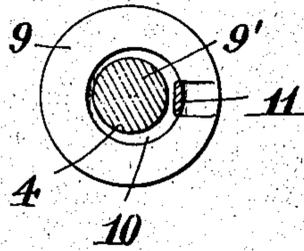


Fig. 3.

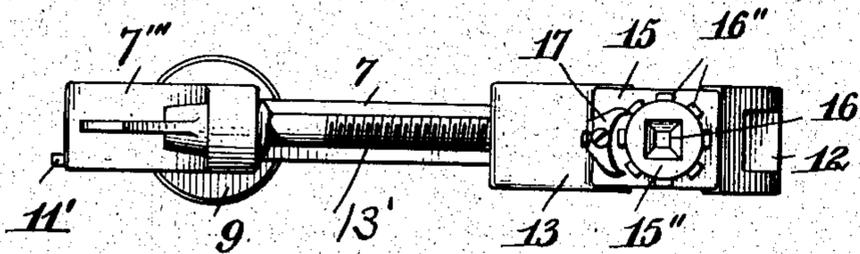
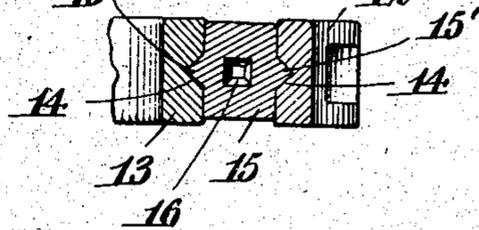


Fig. 5.



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2 SHEETS—SHEET 2.

Fig. 6.

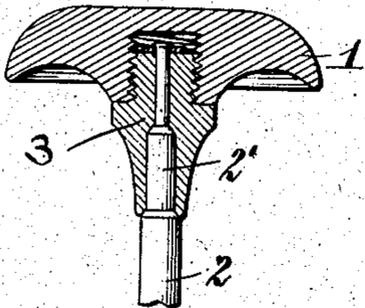


Fig. 7.



Fig. 8.

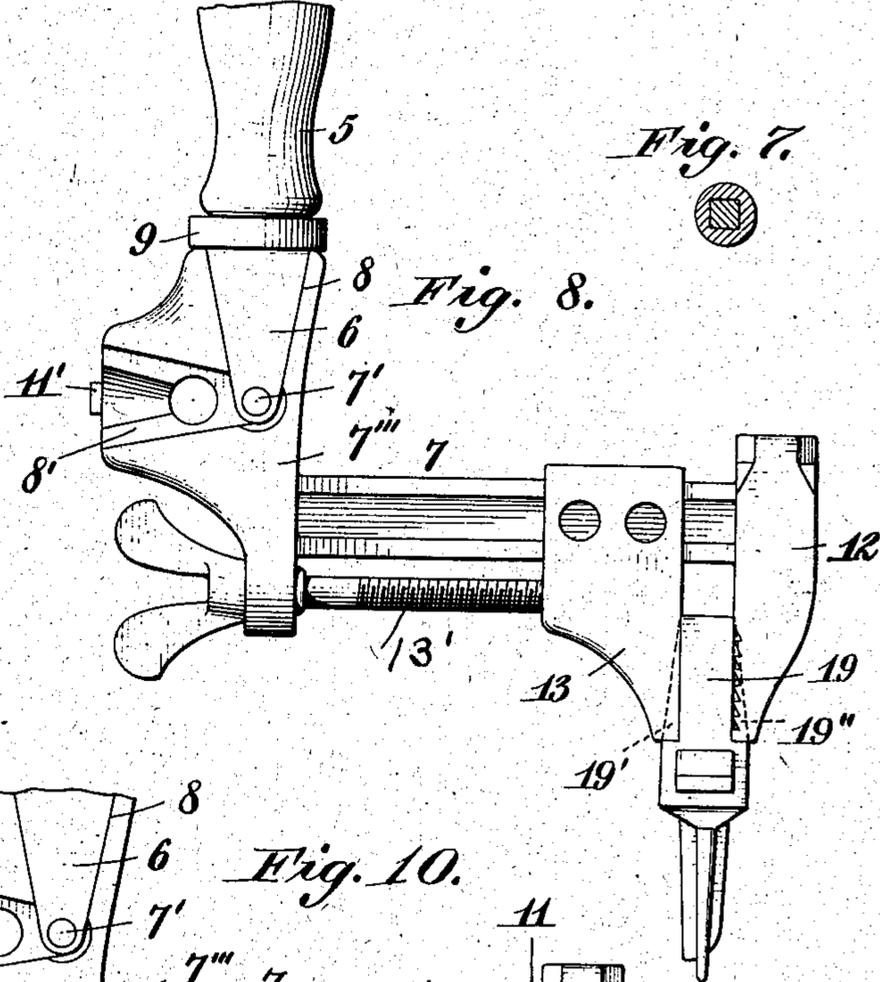


Fig. 9.

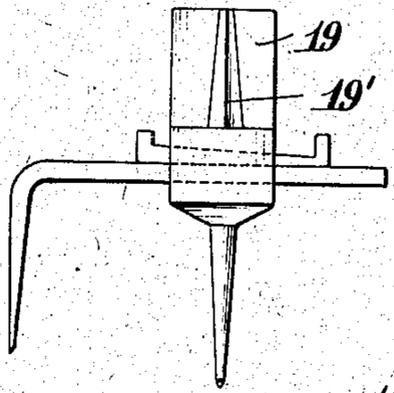


Fig. 10.

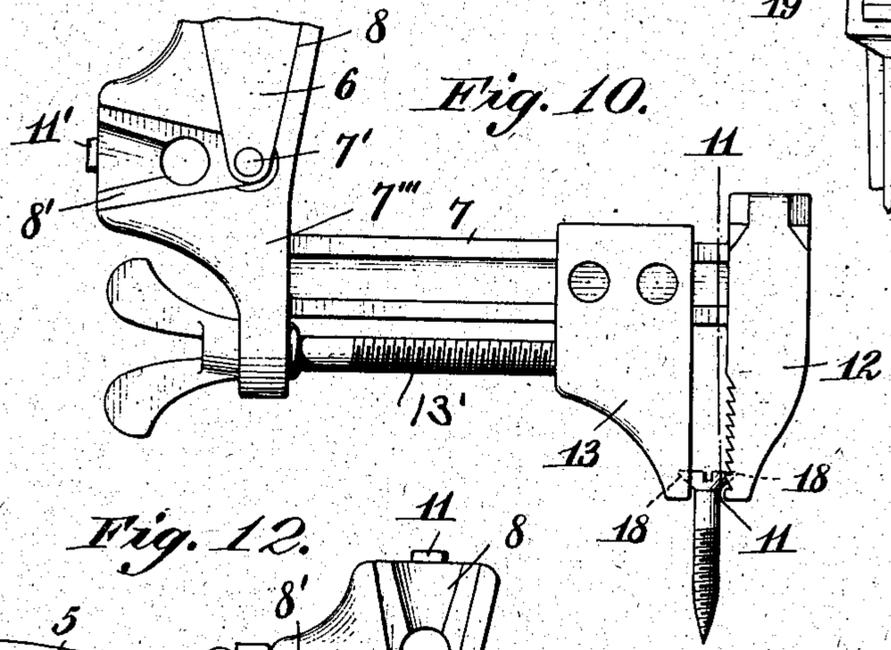


Fig. 11.

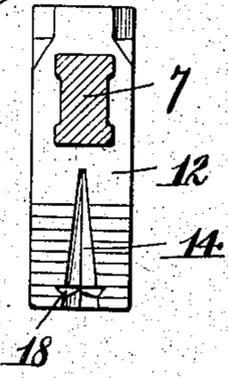
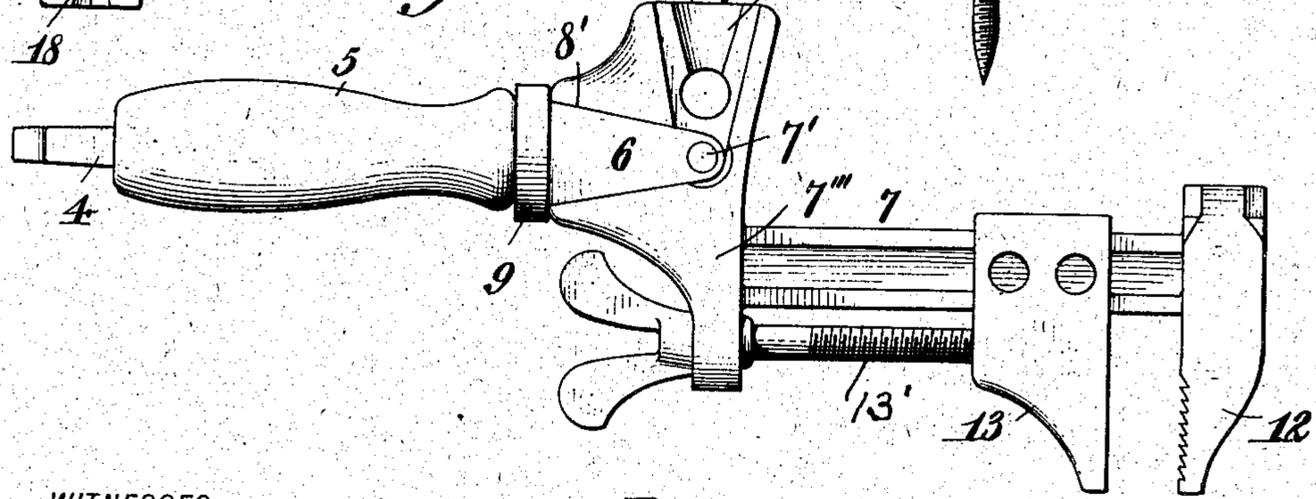


Fig. 12.



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PETER L. ROBERTSON, OF CANFIELD, CANADA.

COMBINATION-TOOL.

No. 815,381.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed April 24, 1905. Serial No. 257,128.

To all whom it may concern:

Be it known that I, PETER L. ROBERTSON, a subject of the King of Great Britain, residing at Canfield, in the county of Haldimand, Province of Ontario, Canada, have invented certain new and useful Improvements in Combination-Tools, of which the following is a specification.

My invention relates to improvements in combination-tools, and has for its object the provision of a novel and useful tool of this character which may be adapted for use in a variety of different ways.

A further object is the provision of a tool which will be strong, durable, and adjustable and which has parts interchangeable for adaptation to different manipulations.

The invention consists in a combination-tool constructed and interchangeably arranged as to its parts so as to constitute a brace-bit, a screw-driver, a wrench, or a scribe, these being several of the uses to which the tool may be applied.

In arranging the parts of the tool to adapt the same for different uses some parts thereof are detached, and in other cases some parts are differently adjusted and located.

The invention further consists in certain novel features of construction and combinations and arrangements of parts, as will be hereinafter described, pointed out in the claims, and illustrated in the accompanying drawings.

In the drawings I have illustrated the physical embodiment of my invention adapted for use as a bit-brace, scribe, screw-driver, and modified as a wrench.

Figure 1 is a view embodying my invention, showing the parts connected to form a brace and a bit carried thereby. Fig. 2 is a sectional view taken on line 2 2, Fig. 1. Fig. 3 is a bottom view of Fig. 1. Fig. 4 is an enlarged section on line 4 4, Fig. 2, looking up. Fig. 5 is a section on line 5 5, Fig. 1, the view being upward. Fig. 6 is a sectional view on line 6 6, Fig. 1. Fig. 7 is a section taken on line 7 7, Fig. 2. Fig. 8 is a view showing the tool when used as a scribe. Fig. 9 is a detail view of the scribe shown in Fig. 8. Fig. 10 is a broken view similar to Fig. 1, showing the device used as a screw-driver. Fig. 11 is a sectional view on line 11 11, Fig. 10. Fig. 12 illustrates the tool when used as a wrench.

Referring to the drawings, the numeral 1 designates the handle which is connected to the pressure-bar 2 by the threaded sleeve 3,

which fits over the tapered and double-coned end 2' of the pressure-bar. The pressure-bar 2 is removably held to the tapered end of a rod 4, which rod passes through the sleeve 5 and forms a bearing therefor. At its lower end the rod 4 is formed with a tapered enlargement or head 6, which, as clearly shown in the sectional view Fig. 2, is connected to the head of the wrench portion or shank 7 by the stud or screw 7', the head of the stud being turned over to bear against the inner end of a recess 7''. The head of the shank 7 is provided with two recesses 8 and 8' complementary to the tapered end 6 of rod 4. Thus it will be seen that in either of these depressions 8 or 8', depending on the use for which the tool is desired, the handles 1 and 5 may be located parallel with or at right angles to the wrench portion, the head 6 fitting in depression 8 or 8'.

The rod 4 is held in either of its parallel or right-angled positions by means of the locking-annulus 9, which surrounds the enlarged portion 9' of the rod 4 and is located between the handle-sleeve 5 and head 6 of rod 4 and the head of wrench portion 7 of the tool. The locking-annulus 9 is provided with a groove 10, arranged eccentrically therein, and when in position said groove is of course eccentric to the rod 4. Two projections 11 11' are located on the head 7, one at the side of each of the depressions 8 and 8'. These projections are adapted to enter the groove 10 of the annulus 9, and when the latter is turned the eccentricity of the groove causes its walls to bear on one of said lugs and clamp the same, thus securely locking the handle to the wrench portion either parallel with or at right angles thereto. The rod 4 is held in the revoluble sleeve-handle 5 by the washer 5' and by upsetting the rod 4, as shown at 4'.

The wrench shank or portion 7 is provided at its outer end with a fixed jaw 12, having gripping-teeth, as usual, and a movable jaw 13. Jaw 13 is operated by the feed-screw 13', which is revolubly held in the head or enlargement 7''' of the portion 7 at the inner end of the shank. The two jaws 12 and 13 are each provided with V-shaped grooves 14 14 to receive the tapered head of a bit or to receive a ratchet-carrying block 15, having ribs 15' thereon which are complementary to the grooves 14 14. The ratchet-block 15 is provided with a revoluble sleeve 15'', having an opening 16 for a bit 16' and has also a se-

ries of teeth 16'', against which the spring-pressed pawl 17 engages to cause sleeve 15'' to revolve in usual manner in either direction. The jaws 12 and 13 are also provided with cross-kerfs 18, in which the head of a screw (see Fig. 10) may be clamped, and the tool may thus be operated to send the screw into the desired object. When the scriber is used, as illustrated in Fig. 8, the head 19 is inserted between the jaws 12 and 13, and the ribs 19' 19'' are entered into the grooves 14 of the jaws, as will be understood.

From the above description, taken in connection with the drawings, it becomes obvious that I have produced a tool which will fulfil all the conditions set forth as the object and purpose of my invention.

As illustrated in the Fig. 1, the tool forms an efficient bit-brace, and in the other figures the adaptation of the tool illustrates the device as a scriber, a screw-driver, and finally as a wrench.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination in a tool, of a shank having thereon a fixed and a movable jaw, of an adjustable handle having a tapered head, recesses in the shank to receive said head, a projection located adjacent each of said recesses, a locking-annulus on the handle having an eccentric groove therein adapted to receive said projections for locking the handle in adjusted position.

2. In a tool of the class described, the combination with a tool-shank formed with a head, recesses formed in said head, projections adjacent said recesses, of a handle formed with a tapered head adapted to engage one of

the recesses, a locking-annulus on the handle having an eccentric groove therein adapted to engage the projections on the head and secure the handle at adjusted angles to the shank.

3. In a tool of the class described, the combination with the tool-shank formed with a head, tapered recesses in said head, projections adjacent said recesses, of a rod having a handle thereon and an enlarged lower portion, the tapered head on the end of said rod adapted to engage one of the tapered recesses, the locking-annulus on the enlarged portion of the rod having an eccentric groove therein adapted to engage one of the projections on the head of the shank to lock the handle at an angle or parallel to said shank.

4. In a combination-tool, the combination with the tool-shank formed with a head, tapered recesses in said head, projections adjacent said recesses, of a rod having a handle thereon and an enlarged lower portion, the tapered head on the end of said rod adapted to engage one of the tapered recesses, the stud passing through said head and the tool-shank, the locking-annulus mounted on the enlarged portion of the rod having an eccentric groove therein adapted to engage one of the projections on the head of the shank to lock the handle at an angle or parallel to the tool-shank.

In testimony whereof I have affixed my signature in the presence of two subscribing witnesses.

PETER L. ROBERTSON.

Witnesses:

RICHARD BUTLER,

JAS. M. SHEPARD.