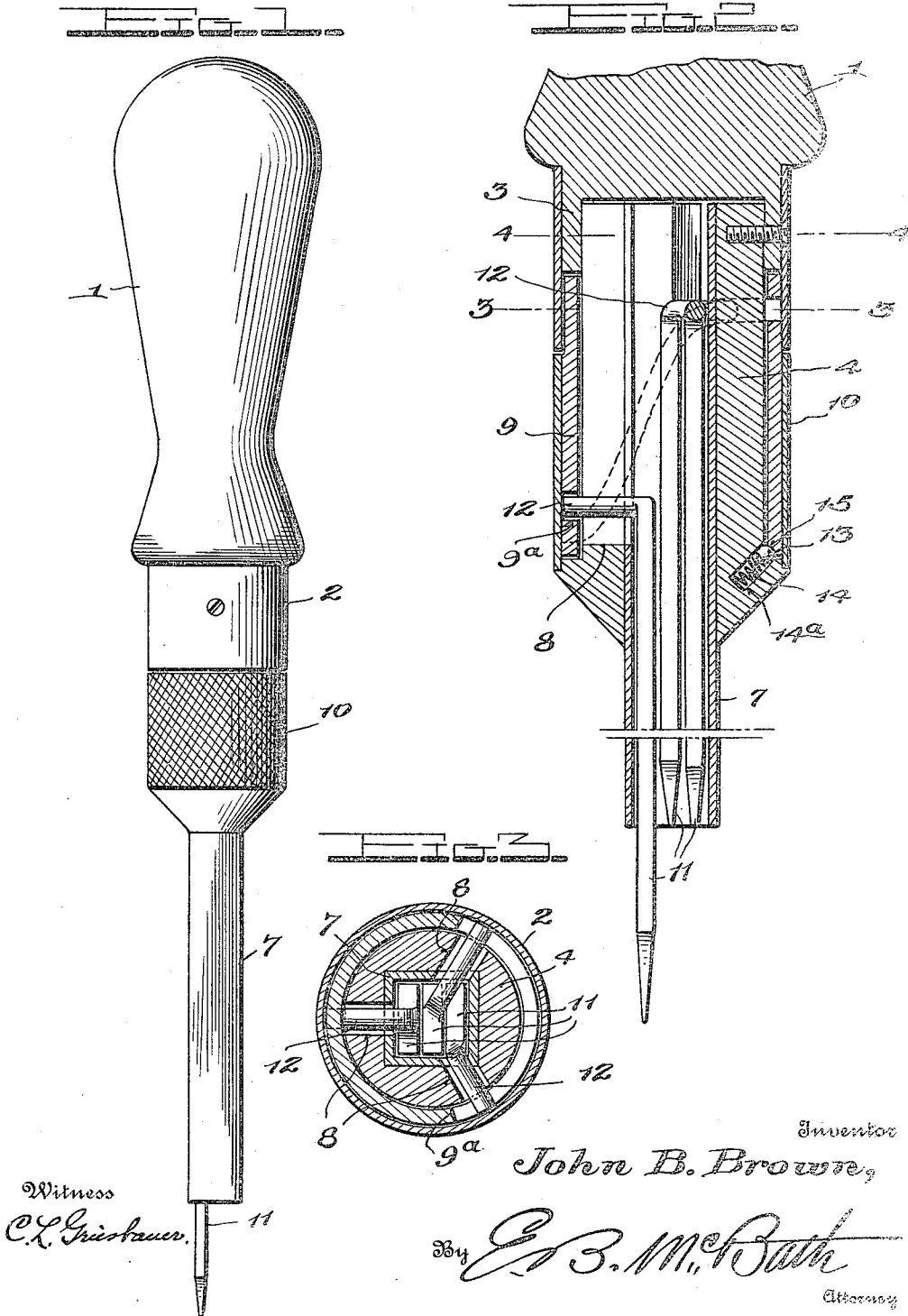


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 APPLICATION FILED NOV. 24, 1915.

Patented May 15, 1917.
 2 SHEETS—SHEET 1.

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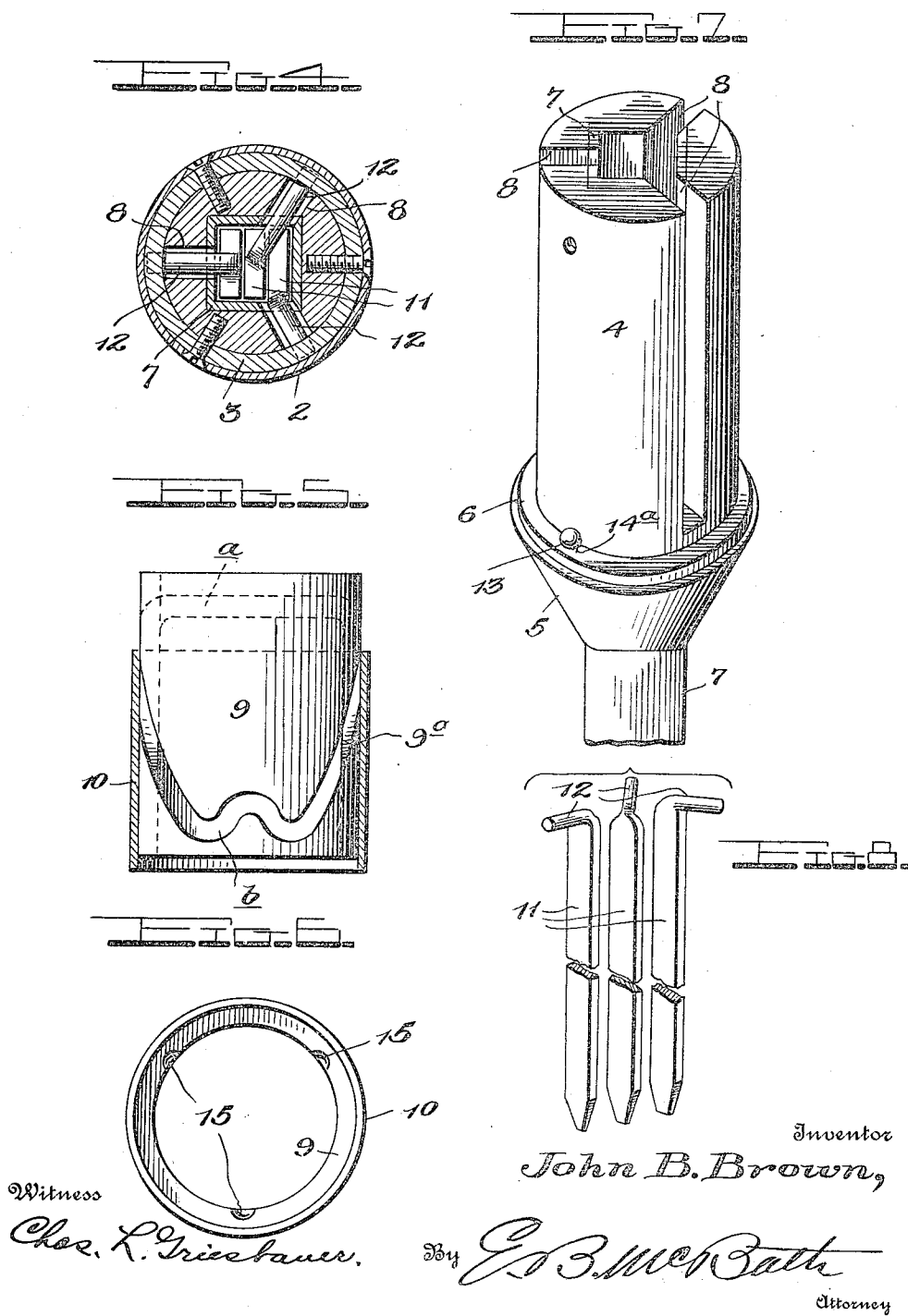
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UNITED STATES PATENT OFFICE.

JOHN B. BROWN, OF AKRON, OHIO.

TRIPLE SCREW-DRIVER.

1,225,922.

Specification of Letters Patent.

Patented May 15, 1917.

Application filed November 24, 1915. Serial No. 63,249.

To all whom it may concern:

Be it known that I, JOHN B. BROWN, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Triple Screw-Drivers, of which the following is a specification.

This invention relates to a triple screw driver, and the object of the invention is a tool of this type having a plurality of blades or screw drivers of different sizes, preferably three, so that there will always be convenient for use a screw driver of approximately the proper size for any screw to be operated on.

A further object of the invention is to provide suitable means whereby the tips of the drivers are normally concealed but any particular one is brought into operative position on partial rotation of a sleeve, and returned to normal or concealed position when through with.

The invention consists also in the novel features of construction hereinafter described, pointed out in the claim and shown in the accompanying drawings, in which:—

Figure 1 is a side elevation of the complete device, one of the screw drivers being in operative position.

Fig. 2 is an enlarged longitudinal section, partly broken away.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a section on the line 4—4 of Fig. 2.

Fig. 5 is a side elevation of a cam sleeve, a retaining sleeve being shown in section.

Fig. 6 is a bottom view of the sleeve.

Fig. 7 is a perspective view of a tool holder.

Fig. 8 is a perspective view of the three screw drivers, partly broken away, and disconnected from the holder and sleeve.

It will be obvious that in the manufacture of any device of this character the nature of the materials used may cause minor variations, as for example where a portion of the device is of wood and a part of metal, two parts may be united which if of one material, as for example all metal, would be integral, or parts which when assembled act as a single unit may be formed separately and then combined for convenience of manufacture.

In illustrating my invention I show a handle 1 of wood provided with a ferrule 2

that projects beyond the handle portion and said handle is recessed as shown at 3.

In said recess is suitably secured, as by a screw, the upper end of a suitable tool holder comprising an inner or upper portion 4 cylindrical in form and integral with an outer cone portion 5. This portion is of greater diameter at its base, the cone being considered as inverted, than the cylinder 4 and is stepped thereby forming the shoulders 6. The holder is completed by a square, hollow shank 7. Where the parts 4 and 5 of the holder are of wood the shank 7, which is of metal is extended through to the inner end of the cylinder 4, as is clearly shown in Figs. 2 and 7. The cylinder 4 is longitudinally slotted as shown at 8 and these slots extend through the shank 7 also, which in the assembled device is a part of the holder, and the cylinder, cone and shank may be considered as a single unit.

These slots are preferably three in number, one for each tool held in the holder.

Rotating on the cylinder 4 are sleeves 9 and 10, said sleeves bearing on the shoulders 6, and the sleeve 9 extending up into the ferrule 2. These sleeves may also be considered as a single unit as they are rigidly secured together, by any suitable means.

The sleeve 9 is provided with a continuous circumferential cam slot which also extends longitudinally with respect to the sleeve and comprising a comparatively straight, transverse portion *a* at the inner end and on one side of the sleeve and a semi-circumferential compound curved portion *b* at the opposite end and on the opposite side, the remainder of the slot 9^a extending along the two remaining sides and connecting the portions *a* and *b*.

This might be formed as an interior groove, but it is more convenient to form it as a slot which of course divides the sleeve 9 into two sections, the sleeve 10 acting as a cover or retaining sleeve.

The screw drivers 11 are slidably held in the shank 7 and their inner ends are angled as indicated at 12. These angled portions extend respectively through the slots 8 and engage the cam groove, resting normally in the portion *a* but being adapted to travel along the portions 9^a into the portion *b*. The slots 8 are equi-distant apart and the cam slot is so proportioned that two of the angled portions 12 will always rest in the portion *a* of the groove and only one at *b*.

time be in the portion *b* in which position the outer end of the screw driver will be projected from the shank and in position for use.

5 The exterior face of the retaining sleeve 10 is milled or roughened and by simply giving the sleeve a partial rotation a screw driver can be brought outwardly into position for use, and as they have screw-head 10 engaging points of different size any desired size can be selected and brought into the position shown in Figs. 1 and 2 by rotating sleeve 10 which also rotates the sleeve 9 and the cam groove.

15 To prevent too free rotation of the sleeves and serve as a lock when one of the screw drivers is in position for use I employ a ball 13 pressed on by a spring 14 located in a bore 14^a, which also forms a seat for the 20 ball and is produced in the cylinder 4 at its juncture with the cone 5, which may be considered as the base of the cylinder.

In the sleeve 9 are produced three recesses 15, corresponding in number to the slots 8, 25 and as the sleeve is rotated the ball is pressed back into the bore 14 until one of said recesses comes into alinement with it when the spring forces it partly into said recess, and the ball forms a lock between the sleeve and 30 the cylinder and its cone base 5.

By means of the above described device I produce a very simple and convenient triple screw driver, any one of the drivers being adapted to be quickly brought into position and all of them being concealed within the 35 holding member when not in use.

I desire the sleeves 9 and 10 to be considered as single units, and also the cylinder 4 and its base 5 and the shank 7 as when 40 formed entirely of metal these parts can be in one piece.

What I claim is:—

In a device of the kind described, the combination with a handle, wood working tools 45 normally concealed therein, a rotatable sleeve having a cam slot normally engaged by said tools and adapted to project and withdraw them one at a time, a spring pressed ball carried by the handle, and recesses carried by the sleeve and adapted to receive said ball, 50 a recess alining with said ball during extreme outward projection of one of said tools, as and for the purpose set forth.

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

JOHN B. BROWN.

Witnesses:

JACOB HEDDESHEIMER,
VICTOR BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."