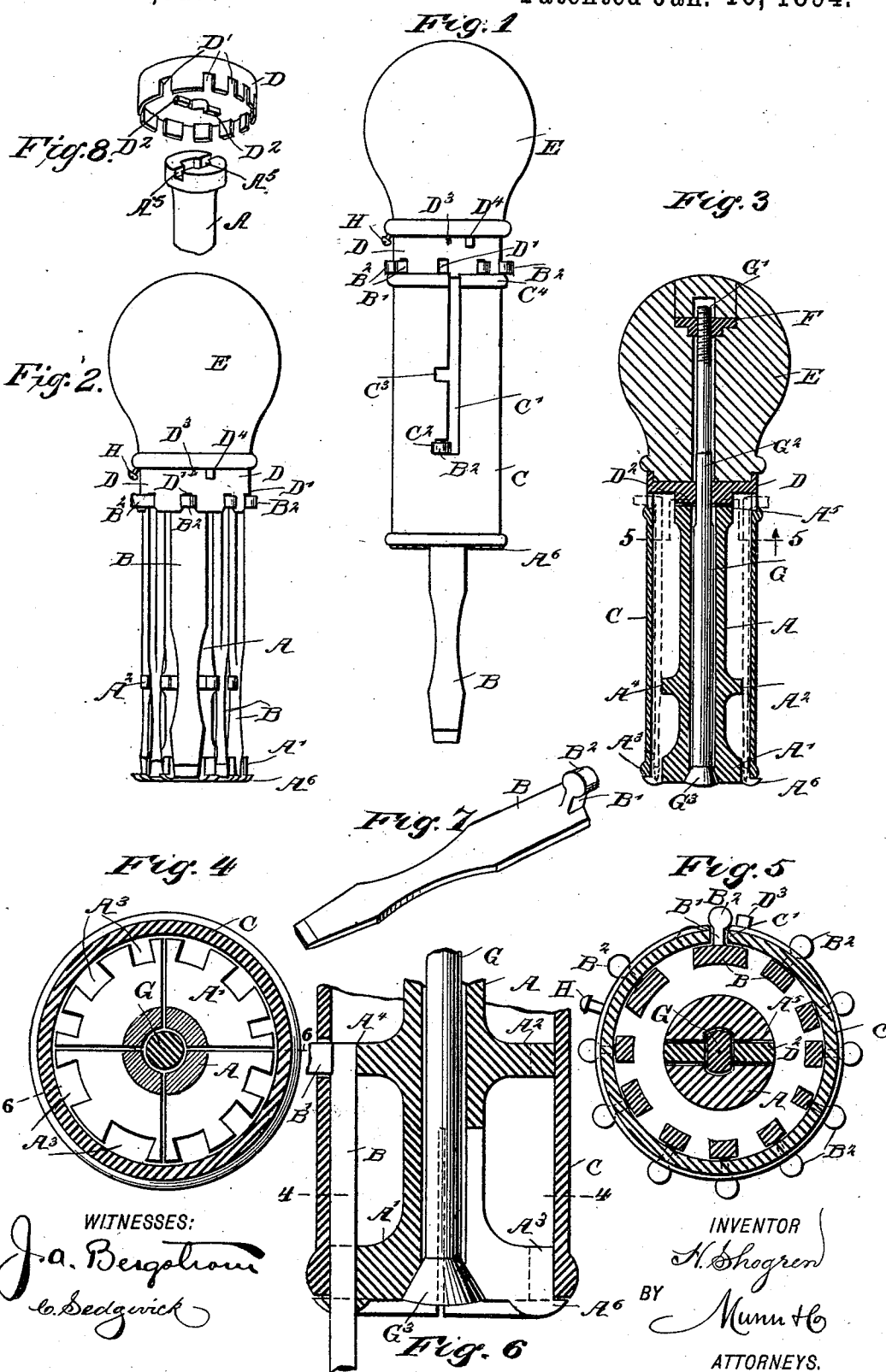


(No Model.)

H. SHOGREN.
TOOL HOLDER.

No. 512,911.

Patented Jan. 16, 1894.



UNITED STATES PATENT OFFICE.

HENRY SHOGREN, OF PORTLAND, OREGON, ASSIGNOR TO HIMSELF AND
NIELS J. BLAGEN, OF SAME PLACE.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 512,911, dated January 16, 1894.

Application filed March 15, 1893. Serial No. 466,034. (No model.)

To all whom it may concern:

Be it known that I, HENRY SHOGREN, of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Tool-Holder, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved tool holder, which is simple and durable in construction, and arranged to hold a variety of tools such as screw-drivers, awls, small chisels, &c., each of which can be conveniently projected from one end of the holder and securely held in this position.

The invention consists of a cylinder supporting the tools and having a split lower end, a bolt passing through the cylinder and having a head for spreading the split end, and a handle screwing on the bolt for drawing the latter to open or release the split end of the cylinder.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement with one of the tools projected. Fig. 2 is a like view of the same with the shell removed and the tools withdrawn in the cylinder. Fig. 3 is a sectional side elevation of the improvement with the tools removed. Fig. 4 is a sectional plan view of the same on the line 4—4 of Fig. 6. Fig. 5 is an inverted sectional plan view of the same on the line 5—5 of Fig. 3. Fig. 6 is an enlarged sectional side elevation of the lower end of the improvement on the line 6—6 of Fig. 4. Fig. 7 is a perspective view of one of the tools, and Fig. 8 is a detail perspective view of the upper end of the cylinder and the ring connected therewith.

The improved tool holder is provided with a cylinder A formed near its lower end with annular flanges A' and A² provided with registering slots A³, A⁴ respectively, in which are fitted to slide the tools B, it being understood that each tool is guided in two registering slots of the flanges A' and A².

The tools are held in place on the cylinder by an exterior cylindrical shell C provided with a lengthwise extending slot C' having two side notches C² and C³, as is plainly illustrated in Fig. 1. The slot C' and the notches C² and C³ are adapted to be engaged by a lug B' formed on each of the tools B, so that the latter, when moved downward, are projected from the lower end of the cylinder A. On the outer end of each lug B' is formed a knob B², extending on the outside of the shell C and serving to conveniently move the respective tool downward on the cylinder, the lug B' then traveling down the slot C' until the desired position is reached and the lug B' is opposite either of the notches C² or C³, and then the operator presses the knob B² to the left to move the lug B' into the corresponding notch C² or C³. The upper end of the slot C' is adapted to register with one of a series of notches D' formed in a ring D connected with the upper end of the cylinder and mounted to turn loosely in the upper end of the shell C, as will be readily understood by reference to Fig. 3. Each of the notches D' receives a lug B' of the corresponding tool B at the time the several tools are in an innermost position; that is, withdrawn in the cylinder A, so as to hold the several tools in this position, the lugs B' then resting on the upper edge of the shell C.

The top of the ring D is made cup-shaped, and in it is mounted to turn the lower end of a handle E, containing, in its upper end, a nut F, in which screws the threaded end G' of a bolt G extending downward centrally through the handle E, the ring D and the cylinder A, as shown in Figs. 3 and 6. Part of the bolt G is made flat, as at G², to engage a correspondingly shaped aperture in the web of the ring D, so that the said ring, when turned, carries the bolt G with it. The lower end of the bolt G is formed with a conical head G³ fitting into a correspondingly shaped recess in the lower end of the cylinder A, the said lower end being split, as indicated in Fig. 4, a suitable distance upward close to the upper flange A². See Fig. 6. The upper end of the cylinder A is provided with a transverse recess A⁵ engaged by a lug D² formed on the under side of the web of the ring D, so that when the latter is turned the cylinder turns with

it, thus moving the tools around in the shell C when the latter is held stationary and the ring is turned. By this means the corresponding notch D' in the ring can be brought in register with the upper end of the slot C' to project the desired tool, the shank of which is normally engaged in that notch D'. By making the ring D separate from the cylinder and connecting it to the cylinder in the manner described, provision is made for readily applying the shell to the cylinder and inserting the tools in the said shell.

On the handle E is secured a screw H adapted to pass over a small projection D³ formed on the outside of the ring D, the further movement of the screw H being limited by a second projection D⁴ arranged next to the projection D³, as is plainly shown in Figs. 1 and 2.

In order to prevent the cylinder A from being drawn upward out of the shell C, I provide the lower flange A' with shoulders A⁶ adapted to engage the lower edge of the shell C, as is plainly shown in Figs. 3 and 6.

The operation is as follows: When the several tools are in an innermost position; that is, are inclosed within the shell C, and the operator desires to project one of the tools, say a screw-driver, then he turns the handle E to the left to bring the notch D' carrying the lug B' of the screw-driver B in alignment with the upper end of the slot C', so that the tool B can be pushed downward by the operator taking hold of the knob B² and pressing downward to move the tool in the same direction, the shank passing from its notch D' into the slot C' and down the same until either of the notches C³ or C² is reached, after which the operator turns the knob to the right to engage the lug B' with the corresponding notch C³ or C². By turning the knob in this direction, the cylinder A with the ring D and handle E are turned to the right to move the notch D' out of register with the slot C'; the operator then holds the shell C and turns the handle E, so that the nut F thereon screws on the threaded end G' of the bolt G, thus drawing the latter upward and thereby causing its head G³ to spread the split lower end of the cylinder A, whereby the flange A' is pressed in frictional contact with the inner surface of the shell C, thus locking the cylinder A in place and likewise the several tools supported in the said cylinder. When the tool has been used and the operator desires to withdraw the screw-driver, he turns the handle E to the left to unlock the bolt G, at the same time moving the screw H past the small lug D³ and against the larger lug D⁴, so that on further turning of the handle the screw H causes the ring to turn to the left, thereby moving the cylinder in the same direction and disengaging the lug B' from the respective notch C² or C³. The lug B' is then in the slot C' and the operator can then conveniently push the knob B² upward to move the lug B' back into the then registering notch D'. The operator can then again

turn the handle E until the lug of another desired tool registers with the upper end of the slot C', and the above described operation can be repeated; that is, this registering tool can be projected in the manner described. It will be seen that by this arrangement the tools are securely held in an innermost position and the desired tool can be readily projected and securely locked in place, it being understood that when the tool is used and the holder turned from left to right the handle E ceases to screw up the bolt G to firmly tighten the split end of the cylinder A on the lower end of the shell C.

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

1. A tool holder comprising a cylinder adapted to support the tools and having a split lower end a shell surrounding the cylinder, a bolt passing through the said cylinder and having a head for spreading the split end of the cylinder, and a handle screwing on the said bolt for drawing the same longitudinally to cause its head to spread the split end of the cylinder, substantially as shown and described.

2. A tool holder comprising an expansible cylinder adapted to support tools, a shell surrounding the said cylinder, a ring having a central web engaging the upper end of the said cylinder to connect it to the cylinder, a handle mounted to turn on the said ring, and a bolt passing through the said cylinder, ring and handle and engaging a nut in the latter, substantially as shown and described.

3. A tool holder comprising a cylinder having a split lower end and notched flanges for supporting the tools, a shell surrounding the said cylinder and adapted to be firmly engaged by the split lower end of the said cylinder, a ring having a central web engaging a notch in the upper end of the said cylinder, the said ring being mounted to turn loosely on the upper end of the said shell, a handle mounted to turn on the said ring, a bolt passing through the said cylinder, ring and part of the handle, the said bolt having a flattened part passing through a correspondingly shaped aperture in the web of the said ring and cylinder, and a nut held in the said handle and in which screws the upper end of the said bolt, substantially as shown and described.

4. In a tool holder the combination of a cylinder adapted to support the tools, each of which is provided with a lug and a knob, a shell surrounding the said cylinder to hold the tools in place therein, the said shell being provided with a slot and notches extending therefrom, a ring mounted to turn in the upper end of the said shell and provided with notches adapted to register with the said slot in the shell, and means, substantially as shown and described, for turning the said ring to move its notches into and out of register with the said slot, as set forth.

5. In a tool holder the combination of a cyl-

inder adapted to support the tools, each of which is provided with a lug and a knob, a shell surrounding the said cylinder to hold the tools in place therein, the said shell being provided with a slot and notches extending therefrom, a ring mounted to turn in the upper end of the said shell and provided with notches adapted to register with the said slot in the shell, means, substantially as shown and described, for turning the said ring to move its notches into and out of register with the said slot, and a means for clamping the tools between the cylinder and shell, as set forth.

15 6. In a tool holder, the combination of an expansible cylinder having tool receiving seats in its periphery and provided with a notched ring or flange at one end, a longitudi-

nally slotted sleeve loose on the cylinder, and means for expanding the said cylinder, substantially as and for the purpose set forth. 20

7. In a tool holder, the combination of an expansible cylinder having a flanged lower end, and provided with tool receiving seats in its periphery, a ring secured to the upper end of the cylinder and provided with notches, a shell fitting loosely upon the cylinder between the flange and ring and provided with a slot having notches in one side, and means for expanding the cylinder to clamp the shell to the cylinder and the tools in position, substantially as described. 25 30

HENRY SHOGREN.

Witnesses:

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C. E. YETMAN.