H. SALZ.

TOOL HANDLE.

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1,166,485.

Patented Jan. 4, 1916.

Fig. 1.

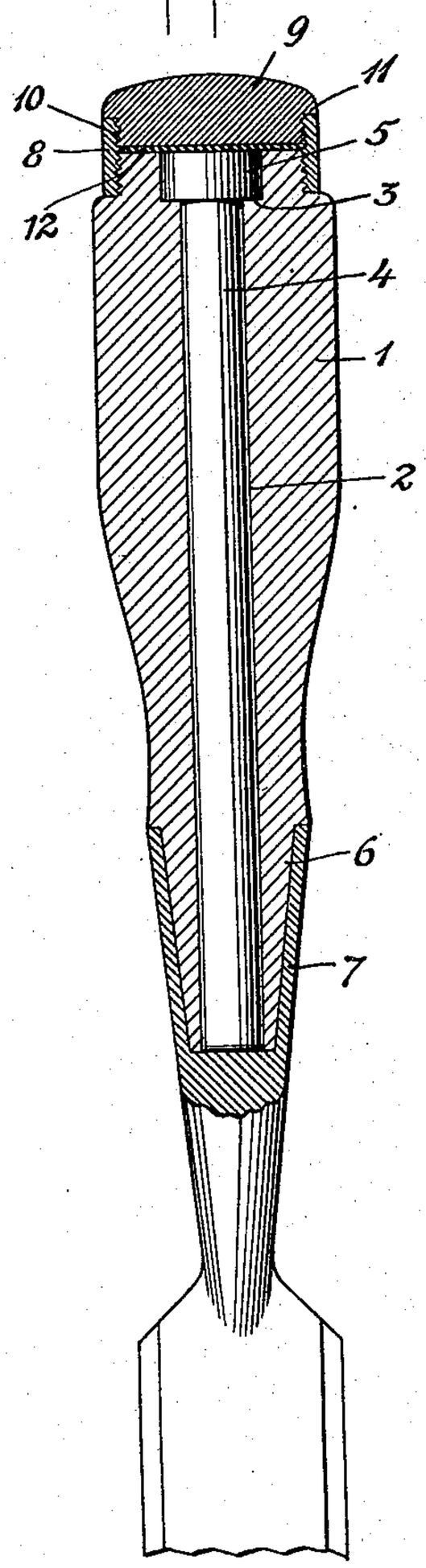
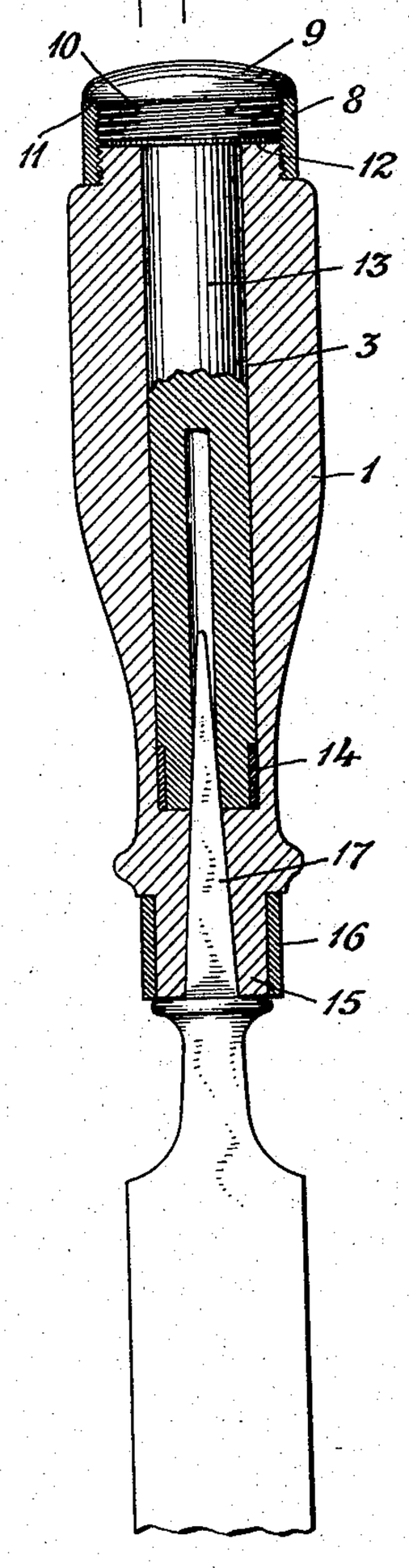


Fig. 2.



WITNESSES

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TOOL-HANDLE.

1,166,485. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed April 21, 1914. Serial No. 833,344.

To all whom it may concern:

Be it known that I, HENRICK SALZ, a subject of the Emperor of Germany, residing at Hoboken, county of Hudson, State of New Jersey, have invented a certain new and useful Improvement in Tool-Handles, of which the following is a specification.

My invention relates to an improved article of manufacture comprising a tool handle adapted to receive impact blows from a hammer or other implement while using the tool.

The object of my improved handle is to overcome the likelihood of the handle splitting or breaking during use of the tool. Further it is intended that the head or cap which is adapted to receive the blows from a hammer may be renewable so that when the cap becomes mutilated or shattered so as to be less useful it may be unscrewed and a new cap placed on the end of the handle.

In the case of handles for tools provided with a tapered shank my invention comprises an internal plug provided with a ferrule within the handle so arranged that the shank is more firmly held in the handle and the handle is not likely to split in use.

For tools in which the handle is inserted in a socket I have provided the handle with an internal bore filled with a metal plug which is adapted to reinforce the handle, the plug being held in place by the screw cap, which, in my device, is adapted to be screwed into a ferrule on the upper end of the handle. In both cases the compression and friction of the wood holds the handle to the tool.

In the accompanying drawings I have illustrated two forms of my invention, Figure 1 representing the reinforced handle for socket tools and Fig. 2 the reinforced handle for tapered shank tools.

Each of these forms, it will be seen, is provided with a ferrule at the upper end into which is screwed the top cap.

Referring to the drawings, 1 represents the handle body which is provided with an interior bore 2, through the axis of the handle, which is counterbored at 3 as shown in Fig. 1, the bored out portion being completely filled preferably with a steel pin 4 having a head 5 adapted to fit the counterbore. The lower end of the handle in Fig. 1 is tapered at 6 to fit the taper of the tool 7 substantially as illustrated. The upper end of the handle is turned down to a smaller diameter and is provided with a ferrule 8 which is secured to the handle by screw threads or other suitable means and is wide enough to permit a portion thereof to extend beyond the end of the handle. This internally threaded extending portion of the ferrule is adapted to receive the body portion of the top-cap or head 9 which is threaded at 10 and preferably provided with an overhanging flange 11 substantially as illustrated. The outer surface and edges of the flange are preferably rounded and the material of the cap or head may be of fiber or similar material adapted to withstand hammer blows. Preferably I insert, between the cap 9 and the upper end of the handle, a disk 12 of rubber or similar elastic packing which is adapted to cushion the blow and hold the reinforcing pin in place.

Referring to Fig. 2 of the drawings, it will be seen that the handle 1 is counterbored to a greater depth, or within perhaps an inch of the lower end of the handle, and this counterbore is adapted to receive a plug 13, preferably of soft wood, which plug is fitted at its lower end with a ferrule 14 whose external diameter is substantially equivalent to the internal diameter of the counter bore 3. The plug is preferably made to fit tight in the counter bore and if desired may be held in place by glue or other suitable means. The lower ends of the handle and of the plug 13 are bored out in alinement with a small hole adapted to receive the tapered shank 17 of the tool with which the handle is to be used. The lower end of the handle at 15 is provided with an external ferrule 16 which, as usual with this construction, is adapted to prevent splitting of the handle. In securing the handle to the tool it will be understood that the handle is driven on to the shank which spreads and compresses the wood between the tool shank and the ferrules. The inner plug being of soft wood will be more compressed and will serve to make the connection between tool and handle slightly flexible, which will result in longer use for the handle.

Handles of this character, as ordinarily constructed, are likely to shatter or split above the ferrule 16, especially when severely used in prying or when hammered vigorously on the head. Hence the object of my device is to place the small ferrule 14 within the

handle proper at such a position as to receive and steady the upper end of the shank 17 of the tool, so that it will practically prevent any possibility of the handle above the lower ferrule becoming split or shattered. In this form of device the upper end of the handle is provided with a ferrule 8 preferably screw threaded on to the upper end of the handle which may be of reduced diameter as illustrated. This ferrule 8 as with the form 5, shown in Fig. 1, is adapted to receive a screw threaded top-cap or head 9, which may be made of fiber or other suitable material not likely to readily deteriorate or become fractured when hammered upon during use of the tool. The cushion disk 12 between the upper end of the handle and the cap 9 is also employed to assist in cushioning the blow and holding the parts in close engagement.

From the description of my invention it will readily be understood that the tool handle may be manufacteured and sold in complete form and may be attached by the user to the tool. It will further be apparent that two or more caps or heads may be supplied or bought separtely so that when one head becomes battered up or broken it may be unscrewed and a new head substituted, this lengthening the life of the handle and extending its usefulness.

It will be understood that various forms of my improved handle may be made to meet the demands, or to fit tools of various characters and various modifications in the structural detail may be made without departing from the spirit and scope of the claims.

I claim:—

1. As an article of manufacture, a tool handle provided with a central counterbore, a plug of penetrable material adapted to grip a forcibly inserted tool shank, said plug fitting said counterbore, a ferrule on the lower end of and of the same outside diameter as said plug, said plug being provided with a central hole while the lower end of said handle beyond the counterbore is provided with a hole of less diameter than the counterbore and coaxial with the hole in said plug, the shank of the tool being adapted to pass through the hole in the lower end of the handle and enter the hole in said plug.

2. As an article of manufacture, a tool handle provided with a central counterbore, a plug of penetrable material adapted to grip a forcibly inserted tool shank, said plug fitting said counterbore, a ferrule on the lower end of the plug, said plug being provided at its lower end with a central hole, a ferrule on the lower end of the handle which is provided with a hole of smaller diameter than the counterbore and coaxial with the hole in said plug, a larger ferrule on the upper end of the handle, said last named ferrule being internally screw-threaded, and a cap externally screw-threaded and adapted to be secured to the handle by screwing it into said last named ferrule, the cap being adapted to hold said plug in place and to receive hammer blows, the shank of the tool being adapted to be inserted in the holes in said handle and plug said ferrules being adapted to prevent splitting of the handle at either end and at the middle.

3. As an article of manufacture, a tool handle provided with a central bore, a plug adapted to fit said bore, a ferrule of the same diameter as the bore secured to the end of said plug, a ferrule secured to the upper end of said handle and internally screw-threaded, a flanged cap having its body portion screw-threaded to fit the threaded ferrule, and an elastic disk within the ferrule between said cap and the end of the handle and plug.

4. As an article of manufacture, a tool handle provided with an interior bore extending axially into the handle, a plug member of soft wood fitting said bore and extending to within a short distance of the lower end of said handle, a ferrule surrounding the lower end of said plug and fitting said bore, a ferrule on the upper end of the handle provided with internal screw-threads, a top cap having a flange extending over the top of said ferrule, the body portion being threaded and screwed into said ferrule and an elastic shock absorbing member between said cap and the top end of said handle.

In testimony whereof, I have hereunto set my hand in the presence of two subscribing witnesses.

HENRICK SALZ.

Witnesses:
M. H. LOCKWOOD,
JOHN A. FERGUSON.