R. H. SHAY.

TOOL HOLDER.

APPLICATION FILED DEC. 3, 1917.

1,279,025.

Patented Sept. 17, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

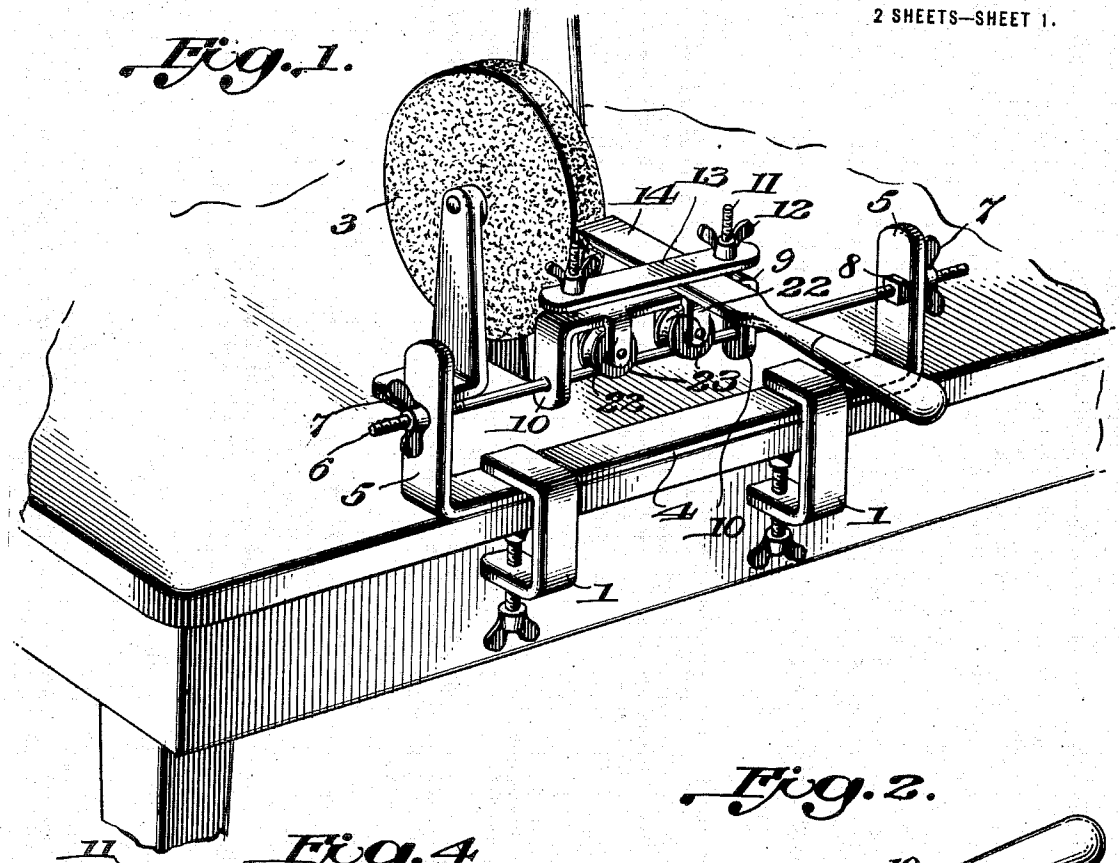


Fig. 2.

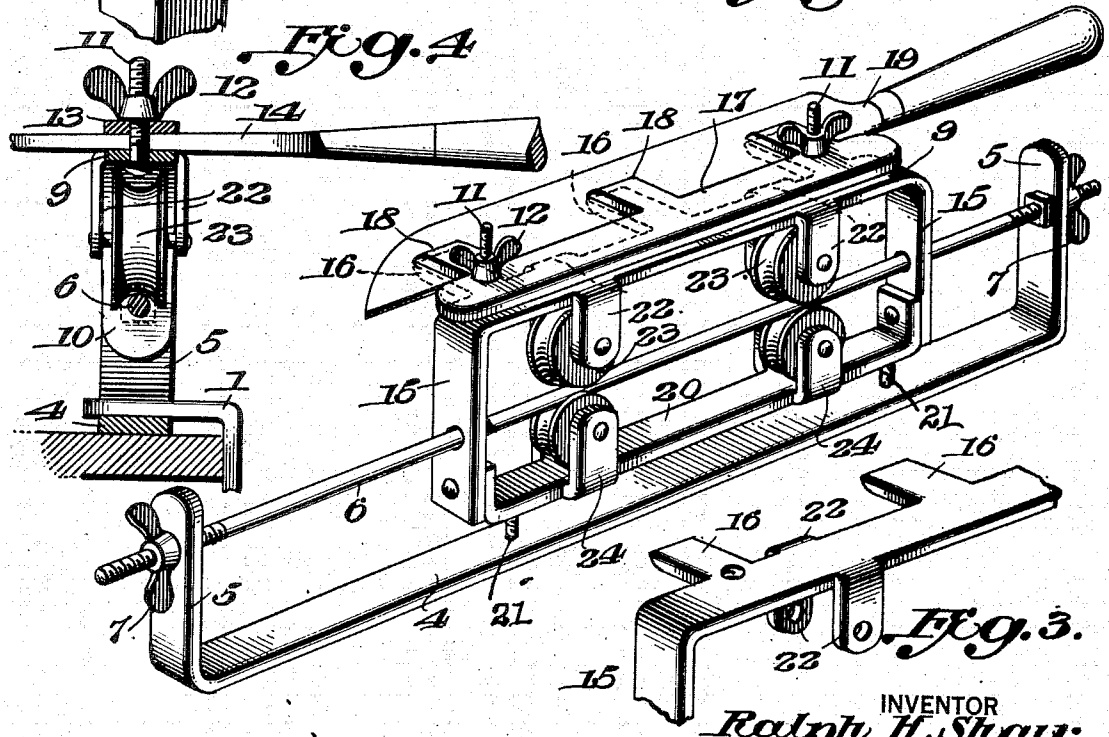


Fig. 4

Fig. 3.

INVENTOR

Ralph H. Shay;

BY

ATTORNEYS

R. H. SHAY.

TOOL HOLDER.

APPLICATION FILED DEC. 3, 1917.

1,279,025.

Patented Sept. 17, 1918.

2 SHEETS—SHEET 2.

Fig. 5.

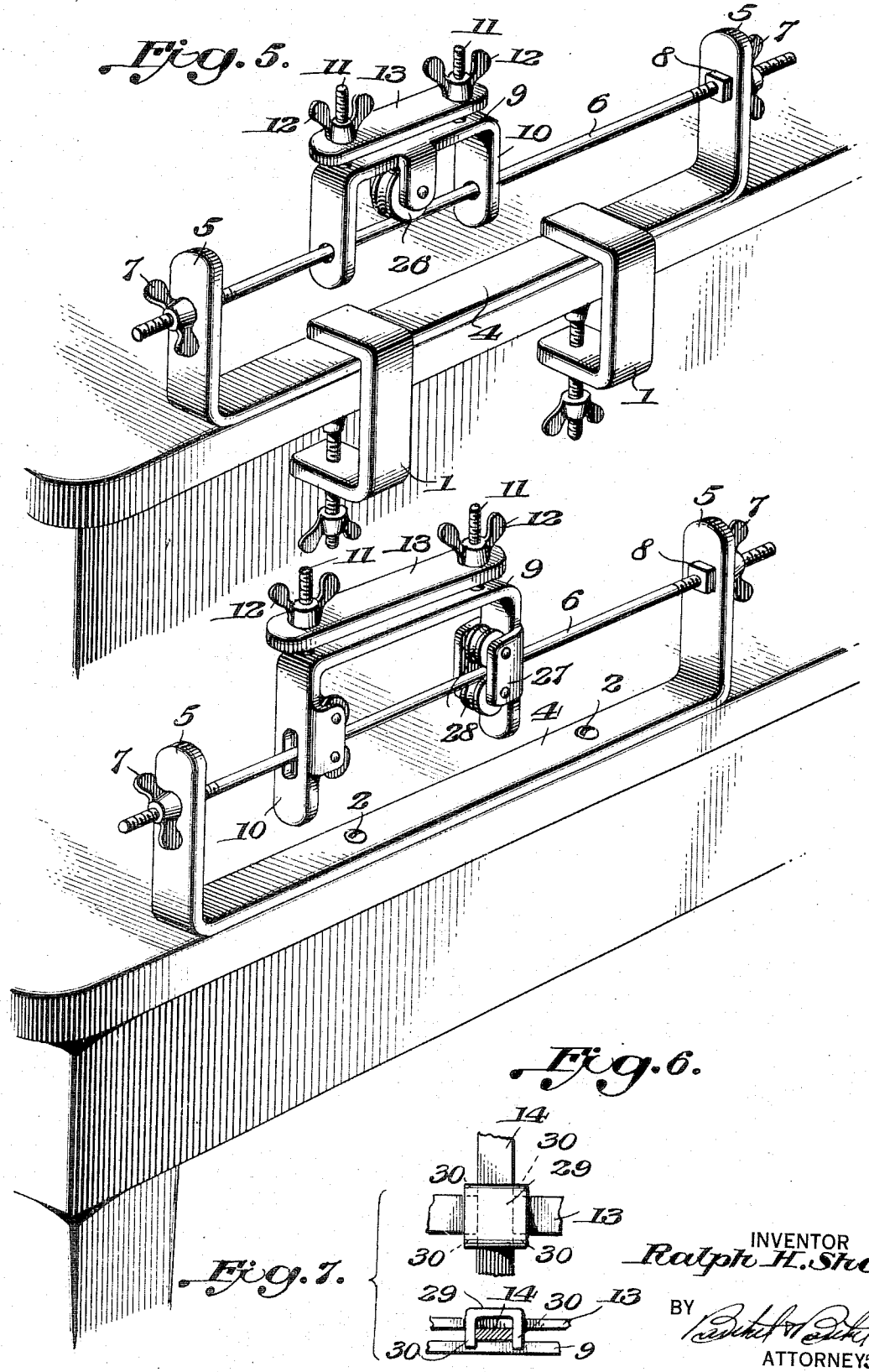


Fig. 6.

Fig. 7.

INVENTOR

Ralph H. Shay;

BY

ATTORNEYS

UNITED STATES PATENT OFFICE.

RALPH H. SHAY, OF DETROIT, MICHIGAN.

TOOL-HOLDER.

1,279,025. Specification of Letters Patent. Patented Sept. 17, 1918.

Application filed December 3, 1917. Serial No. 205,037.

To all whom it may concern:

Be it known that I, RALPH H. SHAY, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a tool holder, and has special reference to a holder or support for tools, implements and other devices before grinding, polishing or various kinds of abrasive wheels or rotary bodies, so that the tools or implements may be easily and quickly adjusted or have portions thereof ground and sharpened.

My invention aims to provide a tool holder of the above type embodying a reciprocable and tiltable carrier which will permit of a tool or implement thereon being placed at a desired angle relatively to a grinding wheel and the tool or implement accurately and uniformly sharpened by the grinding wheel, without material injury to the same.

My invention further resides in various types of carriers, and one in particular which is reversible or invertible and permits of various kinds of tools or implements being attached thereto when it is desired to sharpen the same. These forms of my invention will be hereinafter specifically described and then claimed, and reference will now be had to the drawing, wherein there are illustrated the preferred embodiments of my invention, but it is to be understood that the structural elements are susceptible to such variations and modifications as fall within the scope of the appended claims.

In the drawings,

Figure 1 is a view of a tool holder showing a tool held thereby in operative relation to a grinding wheel;

Fig. 2 is a perspective view of a reversible tool holder;

Fig. 3 is a perspective view of a portion of the carriage of the reversible holder;

Fig. 4 is a cross sectional view of a modified form of tool holder;

Fig. 5 is a perspective view of the same;

Fig. 6 is a perspective view of a modified form of carriage forming part of the holder; and

Fig. 7 shows views of a carriage attachment.

In all forms of my invention, there is a frame adapted to be connected to a table or other supports by clamps 1, screws 2 or other fastening means, so that the frame will be firmly held relatively to a grinding wheel 3 operatively held on the table or support. The frame comprises a base bar 4 having the ends thereof provided with uprights 5 and these uprights support the ends of a rail or rod 6 disposed parallel to and in spaced relation to the base bar 4. The ends of the rail or rod 6 are screwthreaded to receive winged thumb nuts 7 and locking nuts 8, said nuts permitting of the frame or rod being adjusted or detached. Movable relatively to the rail or rod 6 is a carrier that may be shifted longitudinally of the rail or tilted in a plane at right angles to the axis of said rail. The carrier is in the form of a yoke 9 having end walls 10 thereof apertured or slotted to receive the rail 6.

The top of the yoke 9 is provided with screwthreaded studs 11 or winged thumb nuts 12 and said studs and nuts are adapted for holding a clamping bar 13. It is between this clamping bar and the yoke that the tool or implement, as a chisel 14, may be placed and firmly held relatively to the yoke so that the chisel 14 may be shifted transversely of the grinding wheel 3 and the cutting edge of the chisel placed at a desired tangent relatively to the periphery of the grinding wheel.

In Figs. 2 and 3, a yoke 15 has been shown as having the top thereof provided with projections 16 and this form of yoke has a clamping bar 17 provided with projections 18. The projections 16 and 18 are adapted to coöperate in holding the blade of a knife 19, so that the cutting edge of the knife may be sharpened by the grinding wheel 3.

The end walls of the yoke 15 are connected by a bar 20 and this bar has studs 21 to receive nuts and a clamping bar (not shown). This form of yoke is invertible and may be provided with different clamping bars for holding various kinds of tools or implements.

The yokes 9 and 15 have sets of bearings

22 for grooved wheels or rollers 23 engaging the rail 6 and supporting each yoke relatively thereto with the end walls of said yokes out of engagement with the rail. The wheels or rollers 23 do not interfere with a tilting action of the yokes or the inverting of the yoke 15. In connection with the yoke 15, the bar 20 has a set of bearings 24 for grooved wheels or rollers 25 and the wheels or rollers 25 coöperate with the wheels or rollers 23 of the yoke 15 in supporting said yoke on the rail 6, in either position.

In Fig. 5 the yoke has a single bearing for a single grooved wheel or roller 26, and in Fig. 6, the end walls of the yoke have bearings 27 for sets of grooved wheels or rollers 28.

To maintain the chisel 14 at a right angle to its yoke and clamping bar, a pronged plate 29 may be employed, this plate being in the form of an attachment, as shown in Fig. 7. The plate can be placed on the clamping bar and the prongs 30 thereof will extend downwardly at the sides of the clamping bar and also at the sides of the chisel 14, and it will be impossible for the chisel to shift in a lateral direction after being clamped in position, and this attachment prevents the cutting edge of the chisel from being ground other than across the chisel blade at a right angle to its longitudinal edges.

With the frame 4 properly positioned relatively to the grinding wheel 3, the tool or implement to be ground may be safely handled, and it is practically impossible to break the tool or implement, or injure the grinding wheel, due to carelessness, and it will be noted that the tool holder may be readily carried in a carpenter's kit to be used when it is desired to dress a tool or implement.

What I claim is:—

A tool holder comprising a frame having end walls, a detachable rail carried by the end walls of said frame, a yoke having end walls loose on said rail so that said yoke may be swung about the axis of said rail, grooved wheels in said yoke engaging opposed sides of said rail, and a clamping bar applicable to either longitudinal face of said yoke for holding a tool thereon.

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

RALPH H. SHAY.

Witnesses:
KARL H. BUTLER,
ANNA M. DORR.