Sept. 13, 1932. O. A. SMITH 1,876,780

TOOL EXTRACTOR

Filed Jan. 11, 1932

Fig. 1

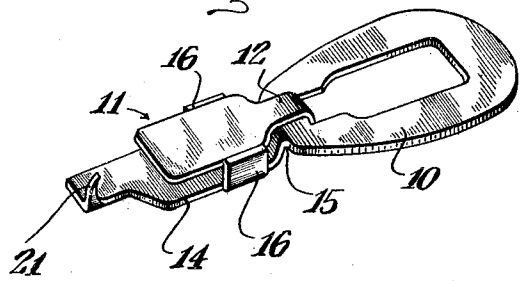


Fig. 2

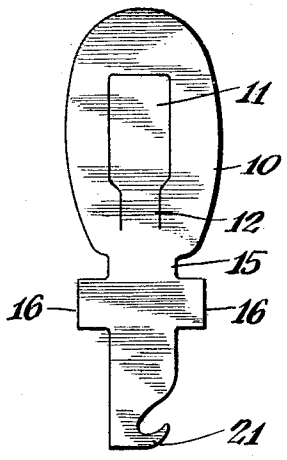


Fig. 3

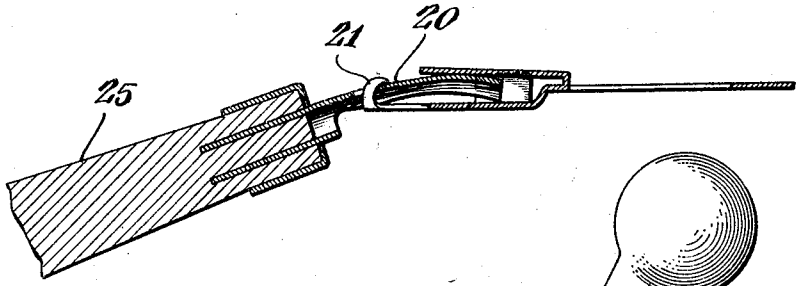
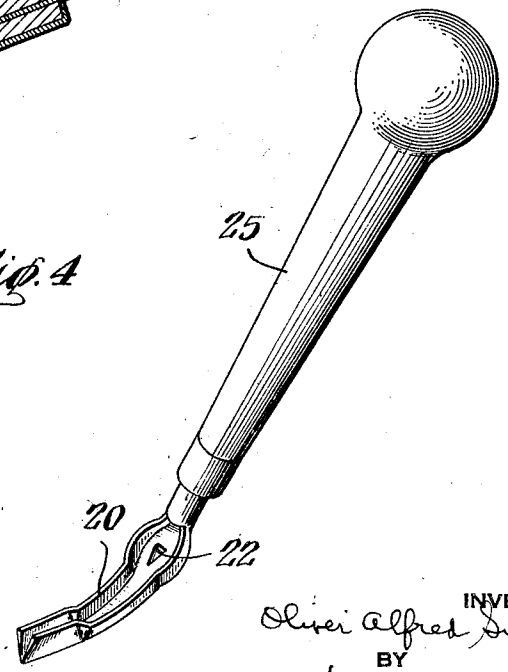


Fig. 4



INVENTOR
Oliver Alfred Smith
BY
Hoguet & Neary
ATTORNEY

Patented Sept. 13, 1932 1,876,780

UNITED STATES PATENT OFFICE

OLIVER ALFRED SMITH, OF BIRMINGHAM, ENGLAND

TOOL EXTRACTOR

Application filed January 11, 1932. Serial No. 585,837.

This invention relates to tool extractors and particularly to a device for extracting tools such as pen like tools that are inserted like a pen in a suitable holder.

In wood carving, linoleum carving or the like a multiplicity of different types of tools are required to effect the desired and most artistic result. Obviously, to have a separate tool and tool holder to perform each of the several cutting operations would require a bulky and expensive set of tools. Since great strength is unnecessary in each particular form of cutting tool, it has been found that pen like tools adapted to be inserted in a suitable holder are especially suited to perform fine cutting and carving operations, and a plurality of cutting tools of this nature, all of which may be inserted in a single standard holder, will materially reduce the bulk and expense of a complete carving tool outfit.

Such tools that are fitted into holders for convenience during operation, often become jammed due to the pressure exerted upon them during use. When these tools are sharp faced cutting tools such as gouges, chisels or the like, it is difficult and dangerous to remove such tools from a holder, manually, and since these pen like tools usually have curved surfaces and are made of hardened steel, a vice or pair of pliers or the like could not readily be used to remove them, as the pressure which would have to be applied by such devices to effect the removal of the tools from a holder when they are jammed, would be such that the tools would usually be broken.

In accordance with this invention, I provide a member having a suitable end portion, an extending portion, which may be integral or attached to the end portion, with said extending portion having a bent portion adapted to engage a perforation in a pen tool or the like. The extending portion may have bent portions on its sides to act as a guide for a tool and hold it in place when tension is being applied on the extractor handle to effect the insertion of a tool in or its removal from a tool holder.

An object of the invention is to provide a tool adapted to readily extract a pen like tool from a tool holder.

Another object of the invention is to provide a tool which may be stamped from a single sheet of metal and which, when bent into shape, is adapted to extract a pen like tool from a tool holder.

A further object of the invention is to provide a tool which will cooperate with a properly prepared pen like tool for the purpose of extracting the pen like tool from a tool holder.

These and other objects will be apparent to those skilled in this particular art from the claims and the description in the specification in connection with the drawing in which:

Figure 1 is a perspective view of a tool extractor illustrative of this invention.

Figure 2 is a plan view of a stamped blank before it has been bent to form a tool as illustrated in Figure 1.

Figure 3 is a sectional side view of an extractor tool engaging a pen like tool held in a pen tool holder.

Figure 4 is a perspective view of a pen tool held in a pen tool holder.

In the embodiment of the invention which has been chosen for purposes of illustration and referring now to the drawing; in Figure 1 is shown an extractor tool having a hand portion 10 with a cut out portion 11 secured to the hand portion by a neck 12 and bent forward parallel to an extension 14 secured to the hand portion 10 by an offset portion 15. The portions 10, 11 and 14 are herein shown as being integral.

The extending portion 14 has side members 16 that are bent up substantially perpendicular to the member 14, and form, in conjunction with the cut out portion 11, when bent as shown in Figure 1, a guide or guard for a pen like tool 20 as illustrated in Figures 3 and 4. A stamped out projection 21 proximate the end of the extending member 14 as shown in Figure 2, is adapted to be bent up and when the extracting tool is completed as shown in Figures 1 and 3, the member 21 will engage a perforation 22 of a pen like tool and, in conjunction with the guide and guard members 11 and 16, hold the tool so that it may be readily inserted in or removed from

a holder 25. The engagement of the member 21 with a perforation in a pen tool is shown in Figure 3.

A specific tool extractor has been described in some detail as being especially adapted to insert or remove pen like tools from a tool holder but obviously such a tool may have other uses and it is to be understood that changes, additions, substitutions and omissions may be made therein within the spirit of the invention as defined by the appended claims.

I claim:

1. In a device for inserting a tool in and extracting it from a tool holder, a hand member having a partially cut-out portion bent at a substantial angle thereto and forming a resilient guard for an extension of said hand member, bent portions on either side of said extension forming side guards, a projection on said extension inclined toward said hand member and adapted automatically to engage a perforation in said tool for the purpose of inserting it in and extracting it from the tool holder.

2. In a device for inserting a tool in and extracting it from a tool holder, a hand member having a partially cut-out offset portion bent at a substantial angle thereto and forming a resilient guard for an extension of said hand member offset therefrom, bent portions on either side of said offset extension forming side guards, a projection on said extension inclined toward said hand member and adapted automatically to engage a perforation in said tool for the purpose of inserting it in and extracting it from the tool holder.

3. In a device for inserting a tool in and extracting it from a tool holder, a hand member having a partially cut-out portion bent at substantially 180° thereto and forming a resilient guard for an extension of said hand member offset therefrom, bent portions on either side of said offset extension forming side guards, a projection on said offset extension inclined toward said hand member and adapted automatically to engage a perforation in said tool for the purpose of inserting it in and extracting it from the tool holder.

4. In a device for inserting a tool in and extracting it from a tool holder, a member having a projection adapted automatically to engage a perforation in said tool for the purpose of inserting it in and extracting it from the tool holder, a bent portion on said member acting as a guide for said tool, and a hand member for said inserting and extracting device having a bent portion acting as a resilient guide and a guard for said tool.

5. In a device for inserting a tool in and extracting it from a tool holder, a handle for said device, a member secured to said handle having a projection inclined toward said handle and adapted automatically to engage a perforation in said tool for the purpose of inserting it in and extracting it from the tool holder, said member constituting a guard for one side of said tool, and three guards for other sides of said tool, one of said guards being resilient to allow for variations in the shape of the tool.

In testimony whereof, I have signed my name to this specification this 23rd day of December, 1931.

OLIVER ALFRED SMITH.