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J. C. HOOVER, JR

2,297,765

KEY REMOVING TOOL

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Fig. 1.

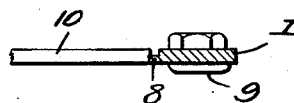
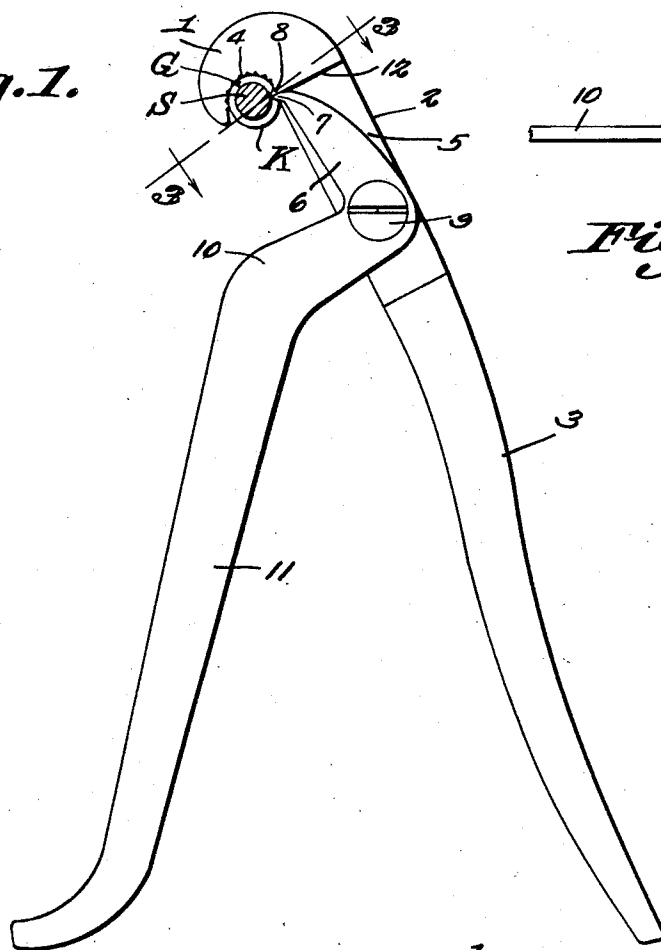


Fig. 3.

Fig. 4.

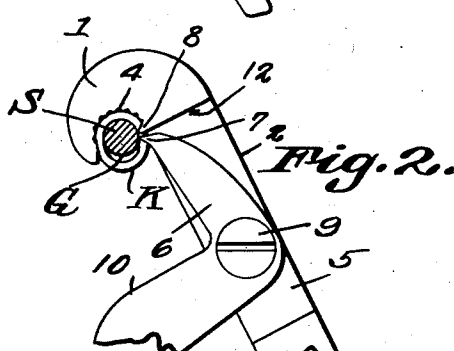
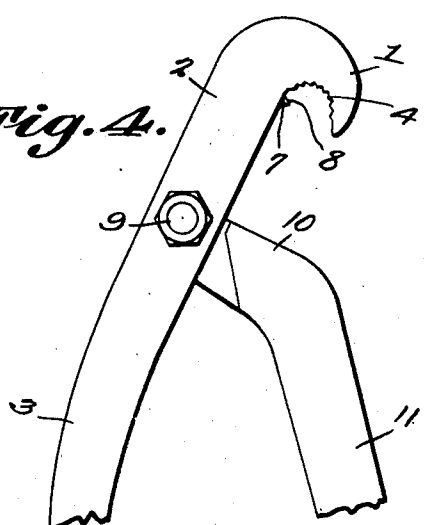


Fig. 2.

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KEY REMOVING TOOL

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Application August 9, 1940, Serial No. 352,019

1 Claim. (Cl. 81—5.1)

This invention relates to a hand tool designed primarily for removing from their seats split circular keys. Heretofore considerable difficulty has been encountered where it has been found necessary to remove a retaining ring or key of this type.

An object of the present invention is to provide a simple and inexpensive tool which can be manipulated readily and which will operate efficiently to spread the key and to enable it to be easily taken out of the groove in which it is seated.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts herein-after more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawing the preferred form of the invention has been shown.

In said drawing

Figure 1 is a side elevation of the tool in position on a structure containing a split key to be removed, said structure being shown in section.

Figure 2 is a similar view of the jaw portion of the tool showing the positions of the parts while the key is being pushed out of its seat.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is an elevation showing that side of the tool opposite to the one shown in Figure 1, the arms being broken away.

Referring to the figures by characters or reference, 1 designates a hook-like jaw located at one end of a lever 2 the other end of which constitutes an elongated handle 3. The inner or concave surface of the jaw 1 is substantially semi-circular and is preferably roughened by providing it with small teeth or serrations 4.

That portion of the lever 3 adjacent to the jaw 1 is reduced in thickness by providing an elongated recess 5 in one side and in this recessed portion is pivotally mounted a jaw 6 provided at its free end with an offset point 7 which is adapted to extend close to a short prong 8 which projects from the jaw 1 where the concave surface 4 merges into the straight portion of the lever 2. Jaw 6 is held to the lever 3 by its pivot device 9 which can be in the form of a screw and extending from this short pivot is an angular lever 10

one end portion of which constitutes an elongated handle 11.

In using this tool the jaw 6 is swung back into the recess 5 so that the point 7 will bear against the transverse shoulder 12 formed by the end wall of recess 5 nearest jaw 1. When the point is in this position it terminates close to the tip of the point 8. Jaw 1 is then placed about the split key or ring K to be removed from a groove or seat G in a shaft S or the like. The tool is so located that while the toothed or serrated surface 4 of the jaw 1 is in engagement with a portion of the outer surface of the key, the points 7 and 8 will be located between or at the meeting ends of the split key. Handle 11 is then pressed toward the handle 3 and this will cause the point 7 to wedge between the ends of the key so that they will thus be spread apart, the point or prong 8 holding back one end of the key while the other end is moved away therefrom by the point 7. With the key thus loosened as shown, for example, in Figure 2, it is an easy matter thereafter to remove it from its groove or seat G.

It has been found in practice that a tool of this type is very useful for the purpose intended because of its efficiency and the ease with which it can be operated.

What is claimed is:

In a tool for spreading split keys of the class described, levers each having a handle formed by one end, a hook-like jaw at the other end of one of the levers providing a seat for a straddled key, a prong extended from that end of the seat nearest its lever, an elongated jaw at the other end of the other lever, said last named lever having angularly related portions, a pivotal connection between the levers at the junction of the two portions of said last named lever, an offset point at the free end of the elongated jaw positioned to move against the prong when the levers are moved apart to one extreme position, thereby to position the point and prong for simultaneous insertion between the ends of a split key, said levers being shiftable toward each other to move apart the inserted point and prong, thereby to spread the engaged key straddled by the hook-like jaw, said point and prong being mounted for relative swinging movement in the same plane, the point and prong, when in contact, constituting a wedge.

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