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[54] **HINGE PINTLE REMOVING TOOL**
2 Claims, 5 Drawing Figs.

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 254/131
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 [50] Field of Search 29/200, 200
 D, 275; 7/12; 254/25, 131

ABSTRACT: A handtool adapted to loosen and remove a headed pintle from a door hinge and primarily designed for carpenters. It comprises a one-piece tool embodying a shank having one end to receive intermittent blows from a hammer. The other end has a multipurpose head which embodies first usable means for prying and loosening the headed end of the pintle and second usable end thrust means releasably cooperable with the pintle in a manner to enable the user to drive and completely remove the pintle.

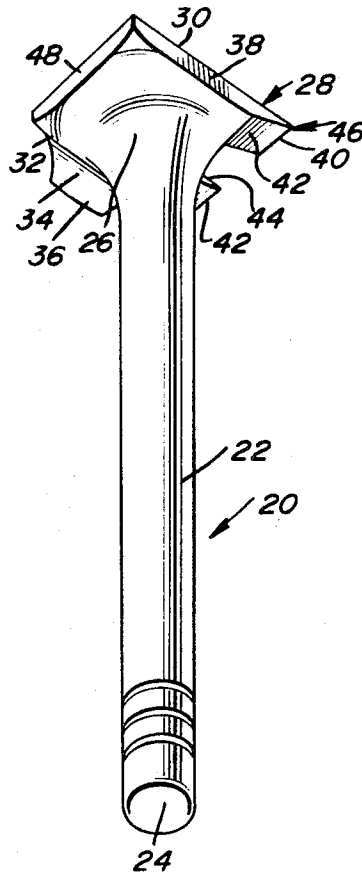


Fig. 1

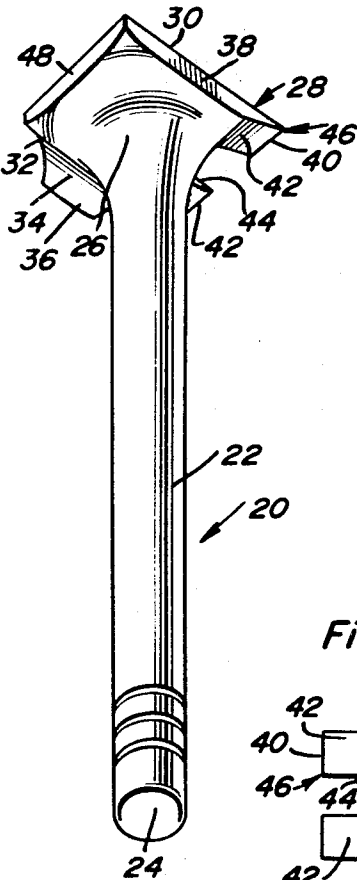


Fig. 2

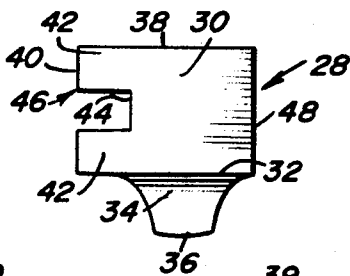


Fig. 3

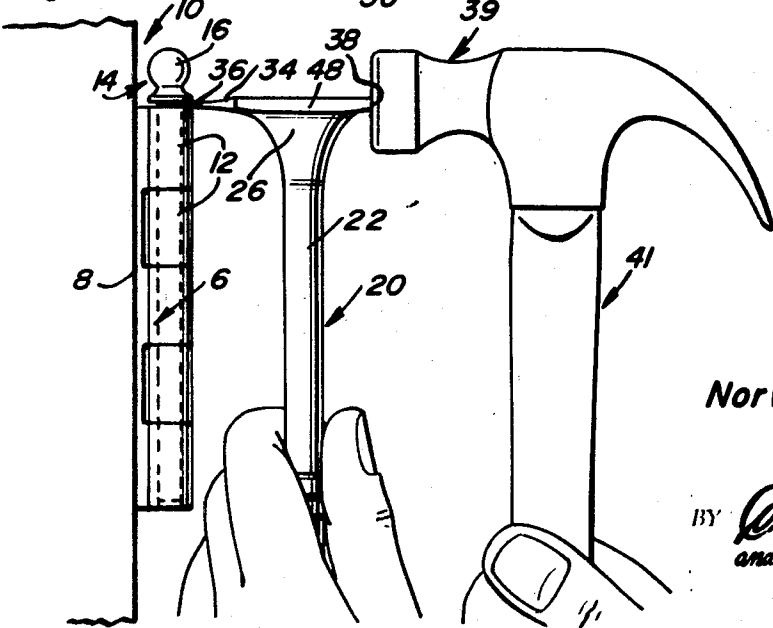


Fig. 4

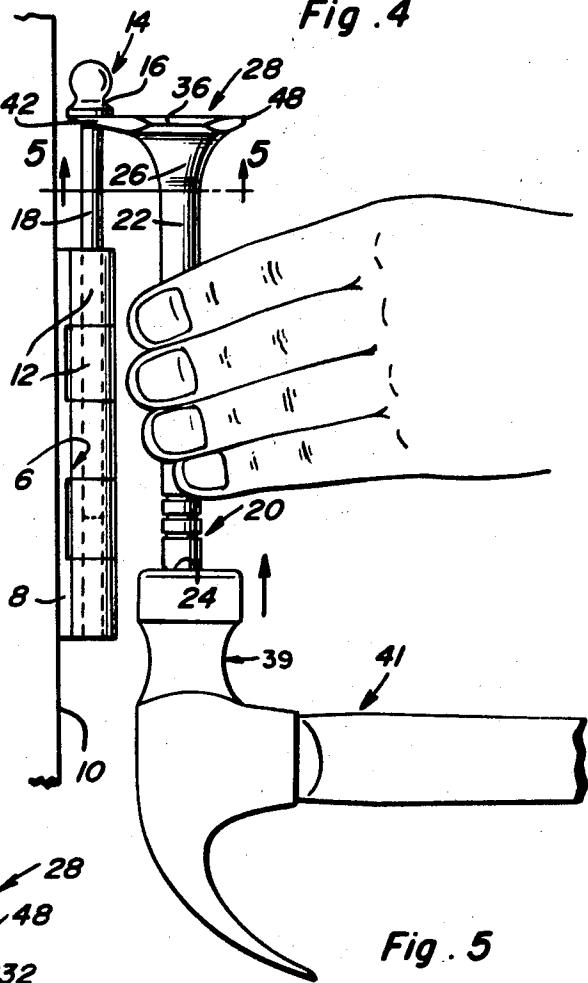
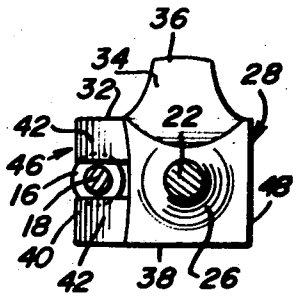


Fig. 5



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HINGE PINTLE REMOVING TOOL

The present invention relates to certain new and useful improvements in a handtool which lends itself to use by carpenters, painters, homeowners and other persons and pertains, more particularly, to a simple, practical and economical tool which is suitably adapted to dislodge, loosen and remove a headed pintle from the aligned hinge knuckles of a butt-type door hinge.

With a view toward simplifying the instant presentation the tool shown can best be categorized as a carpenter's tool. Despite the fact that the experienced and well-trained carpenter usually provides himself with special tools for many and varied job requirements it is prevailing practice for him to resort to the use of a screwdriver when he is called upon to pry up, loosen and remove a hinge pintle. He lines up the bit or blade of the screwdriver with the space, if any, between the head of the pintle and the uppermost hinge knuckle. He then drives the bit between the coating surfaces of the knuckle and head of the pintle and, as a general rule, carries out the desired pintle loosening and removing step. Even so and nevertheless a carpenter, unless he is patient and careful, may encounter difficulty when the screwdriver slips or glances off the pintle and digs a hole in the door or frame or perhaps scars a carefully painted surface. For these and other reasons there has long existed the need for a special purpose hinge pintle loosening and removing tool. It follows that the object of the present invention is to provide a tool which is such in construction and capability that it well serves the purposes for which it has been evolved and successfully produced and used.

A tool as herein disclosed is such that it will be made available and sold in hardware stores, building supply houses where carpenters and mechanics trade and for homeowners and members of the public in so-called 5 and 10 cent stores.

Briefly the special purpose tool herein under advisement is an innovation in that it is of one piece sturdy construction and is characterized by an elongated rigid shank which when used in the manner shown, has upper and lower ends. The upper end embodies an integral rigid multipurpose head whose upper surface is preferably flat. This head may be and preferably is generally rectangular in plan and has four circumferentially spaced coplanar marginal edges. One marginal edge is provided with first usable means which adapts itself for prying, dislodging and loosening the headed end of the hinge pintle. A circumferentially spaced marginal edge is bifurcated and the furcations and intervening crotch provide a fork which is here referred to broadly as second usable end thrust means. The last-named means is adapted to firmly but releasably embrace the pintle and abut the headed end of the pintle while the user applies a hammer to the lower end of the shank and lifts and drives the headed pintle from the aforementioned pintle-accommodating knuckles.

More specifically a marginal edge which is diametrically opposite the first usable means provides an impact surface for a hammer which is brought into play during the initial prying and loosening step. The marginal edge which is diametrically opposite the second usable end thrust means is straight and of requisite thickness to provide an optionally usable impact surface, that is, a surface which may under certain conditions be necessary when and if it becomes necessary to drive the end thrust means into cooperating relation with the headed end of the pintle. The lower end of the shank is also of requisite diameter and is preferably flat to receive the blows from a hammer during the pintle lifting and removal step.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view in perspective of a hinge pintle removing tool constructed in accordance with the principles of the present invention and readied for use.

FIG. 2 is a top plan view showing the configuration and construction of the flat-surfaced multipurpose head.

FIG. 3 is a view showing a fragmentary portion of a door, a hinge, the headed hinge pintle and showing the first usable means and how it is applied and hammered into position for initially prying and readying the pintle for unhampered removal.

FIG. 4 is a view in side elevation similar to FIG. 3 and which shows the manner in which the second usable and thrust means or multipurpose head is brought into play and how the shank is hammered to lift and bodily remove the headed pintle.

And FIG. 5 is a section taken approximately on the plane of the section line 5—5 of FIG. 4.

With reference first to FIGS. 3 and 4 the butt-type hinge is denoted by the numeral 6, the leaves thereof 8 being screwed or otherwise fastened on the surface of a door or the like 10. The usual end-to-end aligned knuckles are denoted at 12. The insertable and removable headed hinge pin is denoted at 14 and the shoulder-forming head is designated at 16 and the pin or pintle proper is denoted at 18 and is fitted in the usual way in the aforementioned knuckles. As already pointed out it is common practice to attempt to dislodge and remove the pintle 14 with a screwdriver.

The improved pintle removing tool is of one-piece construction and is denoted, generally stated, by the numeral 20. It is made of tool steel and comprises a stout shank 22 having a flat lower end 24. The upper end 26 is provided with the aforementioned multipurpose head 28. This head is substantially or generally rectangular in plan as brought out in FIG. 2 in particular and has a flat top or upper surface 30. It also has four distinguishable straight across marginal edges one of which is denoted by the numeral 32 (FIG. 2) and is provided with the aforementioned first usable means, that is means for prying, dislodging and loosening the headed end of the pintle. More specifically this means comprises a wedge-shaped blade 34 which projects outwardly beyond the marginal edge 32 and has a feather-edged tip or lip 36 which is adapted to be forcibly wedged into usable position between the headed end 16 of the pintle and the hinge knuckle 12 which is cooperable therewith in the manner shown in FIG. 3. To best accomplish this result the marginal edge 38 which is diametrically opposite to the wedge 34 provides suitable impact surface for the head portion 39 of an ordinary carpenter's hammer 41. The edge to the left in FIG. 2 and denoted at 40 provides the second usable end thrust means which is adapted to embrace the pintle in the manner shown in FIGS. 4 and 5. More specifically this edge is bifurcated to provide a pair of luglike furcations 42 and an intervening notch or crotch 44. This bifurcated construction provides a fork which is denoted, generally stated, by the numeral 46. It is evident that this suitably designed fork can be brought into play and used in the manner shown in FIG. 4. This is to say, the lugs or fingers 42 embrace the pintle and the flat surfaces thereof can be brought into contact with the shoulder-forming head 16 thus releasably connecting the tool with the headed pintle. When properly applied the tool can be used in the manner illustrated in FIG. 4. To the ends desired the head of the hammer is intermittently struck upon the impact end or surface 24 in a manner that the headed pintle can be driven step-by-step from the hinge knuckles 12. There may be some instances where because of paint or other reasons it is necessary to actually hammer the fork into place and under the circumstances the marginal edge 48 diametrically opposite the fork can be used (similar to the manner shown in FIG. 3) for hammering purposes (not shown).

The manner in which the component parts of the tool 20 coact in forming the desired tool is thought to be evident from the views of the drawing particularly FIGS. 1 and 2. The manner in which the prying and dislodging and loosening wedge 34 is best utilized is shown understandably in FIG. 3. The manner in which the fork means 46 is applied and the tool is hammered and driven for purposes of driving out the

headed pintle 14 is believed to be evident from FIGS. 4 and 5. Under these circumstances it is submitted that a more detailed description is perhaps unnecessary.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

I claim:

1. For use by carpenters, carpet layers, homeowners and others, a handtool capable of being held by the fingers of one hand and expressly designed and adapted to enable the user to use a carpenters hammer in connection therewith in a manner to initially dislodge, loosen and free a headed hinge pintle and to drive out and remove said pintle from aligned knuckles in a door hinge or the like, said tool comprising an elongated rigid punch-type shank having upper and lower ends, said upper end having an integral one-piece multipurpose head, said head being substantially rectangular in plan and provided with a plurality of coplanar oriented marginal edges, namely a first edge provided with an integral outstanding wedge-shaped blade having a leading featheredged tip which can be forcibly wedge into a given prying position between the headed end of

the pintle and an adjacent hinge knuckle, a second edge complementary to and diametrically opposite said first edge and said wedge-shaped blade and being flat-surfaced and provided with an anvil-like impact receiving surface by way of which said wedge-shaped blade can be driven by a hammer in a predetermined manner, a third marginal edge situated between said first and second edges and centrally bifurcated to provide a fork, said fork embodying a crotch for reception and retention of said pintle and a pair of like wedge-shape fingers which are adapted to straddle the pintle when being used, said head also having a fourth marginal edge and being flat-faced and of a dimension to provide an anvil-like impact surface likewise capable of receiving intermittent blows from said hammer, the lower end of said shank being flat and fashioned into and providing a selectively usable blow receiving impact surface.

2. The handtool defined in and according to claim 1 and wherein said head has a substantially flat top surface which is of a dimension in plan greater than the cross-sectional dimension of said shank, the upper end of the shank being attached to the central portion of the underneath side of the head and said head projecting outwardly and beyond and overhanging the cooperating peripheral surface portions of said shank.

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