

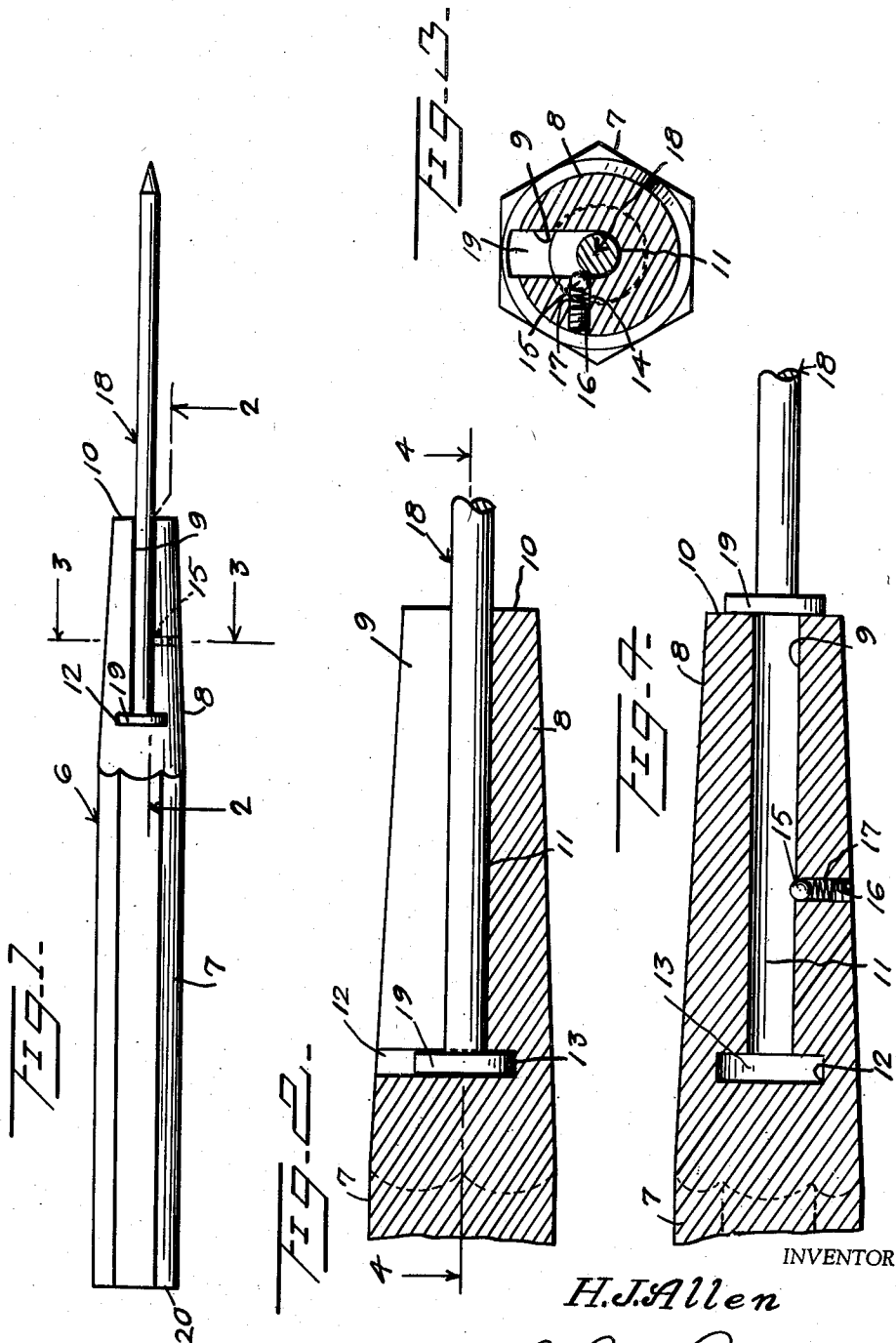
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NAIL OR SPIKE HOLDER AND DRIVER

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## NAIL OR SPIKE HOLDER AND DRIVER

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1 Claim. (Cl. 1—47)

This invention relates to a novel holder and driver for nails and spikes and is primarily adapted to provide a tool which can be effectively employed for holding and driving spikes and nails in relatively inaccessible spaces such as angles and corners where it is normally difficult to hold and drive the nail.

More particularly, it is an object of the present invention to provide a holder and driver in which a nail or spike can be held and partially driven while the head and a part of the shank thereof is contained in the holder, and which holder and driver has a restricted flat end which is so constructed that it can be disposed flush against the nail or spike head for completing the driving of the nail or spike with the axis of the holder and driver disposed in alignment with the axis of the nail or spike to prevent bending of the fastening during the final stages of the driving thereof.

A further object of the invention is to provide a nail or spike holder and driver having means for releasably retaining a nail or spike applied thereto and enabling the tool to be utilized for holding and driving nails of several cross sectional sizes.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a plan view of the nail holder and driver with a nail or spike shown applied thereto;

Figure 2 is an enlarged fragmentary longitudinal sectional view, taken substantially along a plane as indicated by the line 2—2 of Figure 1;

Figure 3 is a cross sectional view thereof, on an enlarged scale, taken substantially along a plane as indicated by the line 3—3 of Figure 1, and

Figure 4 is a longitudinal sectional view taken substantially along a plane as indicated by the line 4—4 of Figure 2 and showing a different position of the tool relative to the nail or spike.

Referring more specifically to the drawing, the nail or spike holder and driver in its entirety and comprising the invention is designated generally 6 and comprises an elongated straight rod-like body formed of a good grade of metal such as hardened tool steel a substantial part of which is of noncircular cross section to form the tool handle or grip 7. Said tool handle or grip 7 is preferably of hexagon shape in cross section. The tool 6 includes an elongated tapered opposite end 8 which is preferably of circular cross section and which has a groove 9 of substantial length formed therein and one end of which opens outwardly of the forward end 10 of said tapered forward tool portion 8. The groove 9 is of substantial depth and includes a bed portion 11 of semicircular cross section which is straight from end-to-end thereof and disposed parallel to the longitudinal axis of the tool 6. The width of the groove 9 corresponds to the diameter of the semicircular bed portion 11 and the depth of said groove at any point throughout its length is equal to the radius of said part of the tapered end portion 8 plus the

radius of the semicircular bed portion 11. The tapered end portion 8 is also provided with a groove 12 constituting a transverse enlargement of the inner end of the groove 9 which is of a width substantially greater than the width of said groove 9, as seen in Figure 4, and of a depth greater than the depth of the inner end of the groove 9. The transversely disposed groove 12 likewise has a transversely disposed semicircular bottom portion 13 the center of which coincides with the center of the groove bed 11.

The tapered end portion 8 is provided with a transverse bore 14, as seen in Figures 3 and 4, which opens into the groove 9 above and adjacent the bed 11 thereof and which is disposed perpendicular to the plane of said groove. A latch ball 15 is disposed in the inner end of the bore 14 and a plug forming a spring seat 16 is threadedly mounted adjustably in the outer end of the bore 14, which is threaded to accommodate said spring seat. A small compression spring 17 is disposed under tension between the ball 15 and spring seat 16, and the tension of said spring can be varied by adjustment of the spring seat. The inner end of the bore 14 is peened to prevent the latch ball from being ejected therefrom by the spring 17 and so that only a small portion of the latch ball, as illustrated in Figures 3 and 4, will protrude from said bore into the groove 9.

The groove 9 is adapted to accommodate the end portion of the shank of a nail or spike 18 which is located adjacent the head 19 thereof, with a semicircular half of said shank portion engaging the semicircular groove bed 11, as seen in Figures 2 and 3. The nail head 19 fits in the transverse groove or recess 12 and approximately one half thereof engaging the semicircular bottom 13 of said groove 12, so that the axis of the nail or spike 18 substantially coincides with the axis of the tool 6. The ball latch 15 is forced by a part of the nail shank to a retracted position in the bore 14 as the nail or spike is applied to the tool or holder 6 and is returned to a projected position by the spring 17 as the nail shank seats in the groove bed 11 to releasably secure the nail or spike in the tapered forward end portion 8 of the tool. It will be apparent that the tool 6 is sized to accommodate the nail or spike 18 and may also accommodate and function with nails or spikes of one or two smaller sizes. It will also be understood that the tool 6 may be made in various sizes, various lengths and diameters and that the sizes of the groove 9 and recess 12 may be varied in tools of different sizes for accommodating nails and spikes of various sizes.

The handle portion or grip 7 has a flat outer end forming an anvil surface 20 adapted to be struck by an impact tool such as a hammer, not shown. The tool 6 is held by the handle 7 with either hand and with the nail or spike 18 applied thereto as shown in Figures 1 to 3, and the end 20 is struck by the impact tool held in the other hand for driving the nail or spike up to a point approaching the forward end 10 of the tool. The tool 6 is then disengaged laterally from the nail or spike 18 and the flat end 10 is placed against the outer side of the nail head 19 to complete the driving of the nail or spike. It will thus be apparent that the nail or spike 18 can be conveniently driven into a corner or an angle where it would otherwise be extremely difficult to hold and drive the nail and that the driving operation can be accomplished with the tool 6 without risk of striking the hand and without marring the corner or angle surface into which the nail is driven, by striking said surface with the hammer. The end of the groove 9 opening through the tool end 10 is of a width substantially less than the diameter of said tool end and substantially less than the diameter of the nail or spike head 19. Thus, the tool end 10 can engage flush against a substantial area of the

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outer side of the head 19 to complete the driving of the nail or spike as illustrated in Figure 4 and with the axis of the tool 6 disposed substantially in alignment with the axis of the nail or spike 18, so that the possibility of the nail or spike being bent during the final stages of the driving thereof will be reduced to a minimum. The diameter of the flat forward tool end 10 is preferably slightly greater than the diameter of the head 19 and the center thereof coincides with the axis of the tool 6.

Various modifications and changes are contemplated and may be resorted to, without departing from the function or scope of the invention as hereinafter defined by the appended claim.

I claim as my invention:

A nail or spike holder and driver comprising an elongated body member having a rear end portion forming a handle and a forward end portion constituting a nail or spike holder, said body member being substantially straight from end-to-end thereof, said forward end portion being tapered toward the forward end thereof and having a flat end face and a longitudinally extending groove opening outwardly of said end face, said groove increasing in depth inwardly of said tapered forward end portion and having a bed portion of substantially semicircular cross section, said bed portion being of a diameter equal to the width of said groove and substantially less than the depth thereof and having its center disposed in alignment with the axis of said body portion, said tapered forward end portion having a transversely disposed recess forming an enlargement of the other rear end of said groove and having a substantially semicircular bottom portion of larger diameter than the bed por-

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tion of the groove and disposed concentric thereto, said transverse recess being adapted to accommodate the head portion of a spike or nail a part of the shank of which is disposed in said groove and in engagement with the bed portion of the groove for positioning the nail or spike in axial alignment with the holder, spring latch means mounted in said tapered forward end portion and including a yieldable latch element protruding transversely into the groove adjacent to but spaced from the bed portion thereof and adapted to contact the nail shank when disposed in the bed portion of the groove for releasably retaining the nail or spike centered in the holder and for resisting movement of the nail either longitudinally or laterally of the holder, said flat end face being circular and of a diameter at least as great as the width of said transverse recess to engage flush against the head of the nail or spike when detached from the holder and after the nail or spike has been partially driven, and said holder having an opposite flat rear end forming an anvil surface for receiving impact strokes for driving the nail or spike.

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