

[54] SPACKLING KNIFE TOOL

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[51] Int. Cl. .... B25f 1/00, B25c 11/00

[58] Field of Search ..... 7/14.1 A, 1 R, 1 B, 7/17; 254/18, 25, 21

[56] References Cited

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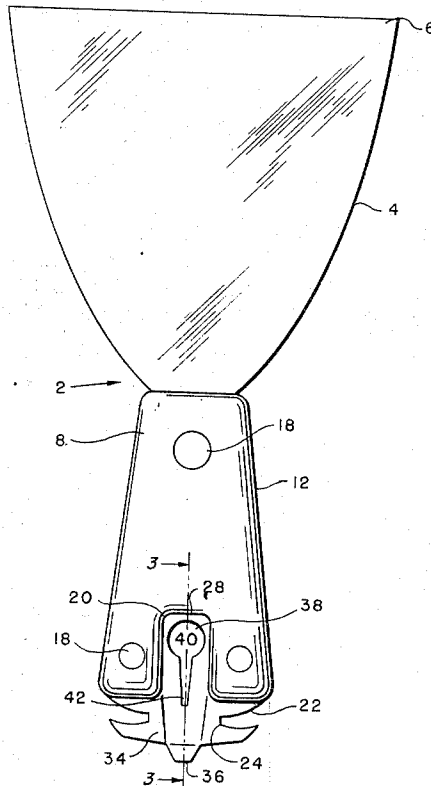
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 Assistant Examiner—Roscoe V. Parker  
 Attorney—Edward S. Irons et al.

[57] ABSTRACT

A spackling knife tool which performs the functions of a spackling knife, a nail puller, a picture-hanger remover, a screwdriver, and has means for gouging out cracks in plaster surfaces to provide a base to receive patching material. The tool is comprised of a flat blade member having a relatively wide end portion which serves as the spackling knife, and a shank portion to which top and bottom handle halves are riveted. At the end of the shank portion there is formed a chisel point which may be employed as a screwdriver. On each side of the shank portion adjacent the end thereof are picture-hanger removers formed by a tapered slot extending inward from the edge of the shank portion, and a pointed portion formed at the outer edge of said slots adjacent the end of the shank portion. Inwardly of the chisel point, a longitudinally oriented portion of the shank member is depressed below the plane of the blade to form a nail-puller having a bottom, side walls, and an inclined ramp leading from the bottom to the shank. The bottom and inclined wall have a nail aperture formed therein.

16 Claims, 10 Drawing Figures



3 Sheets-Sheet 1

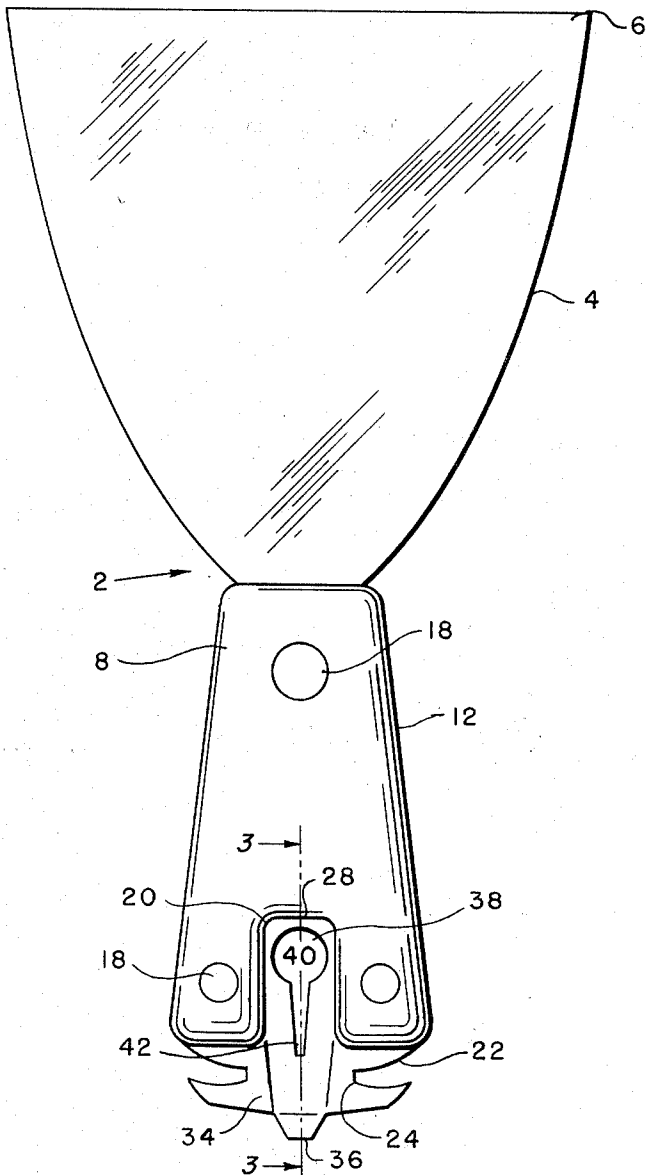


FIG. 1

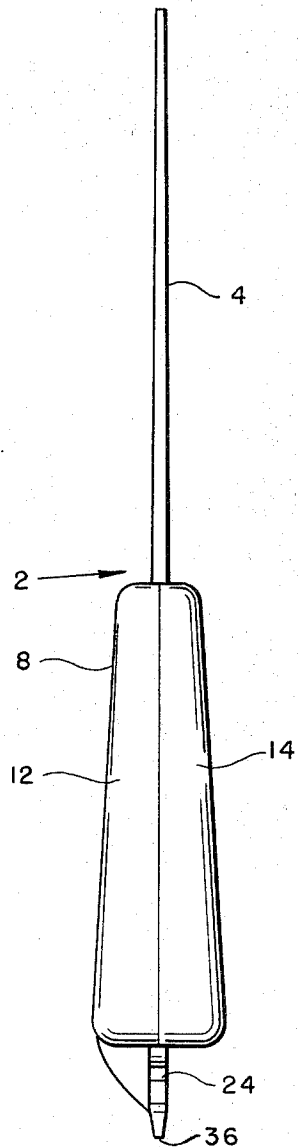


FIG. 2

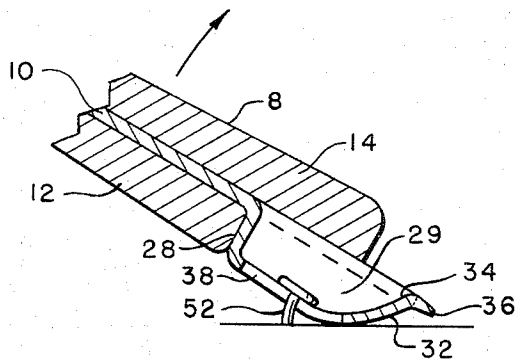
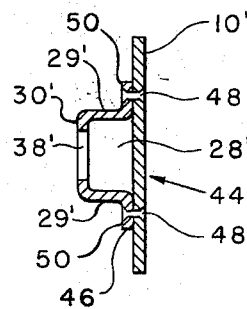
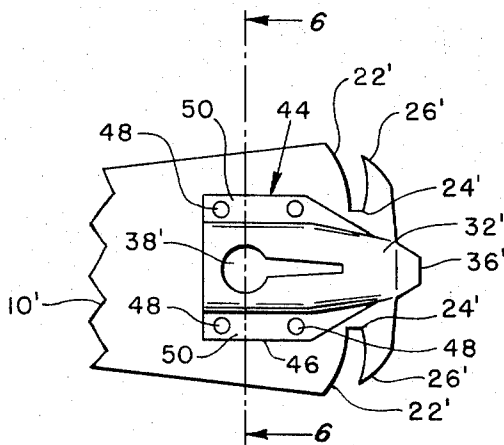
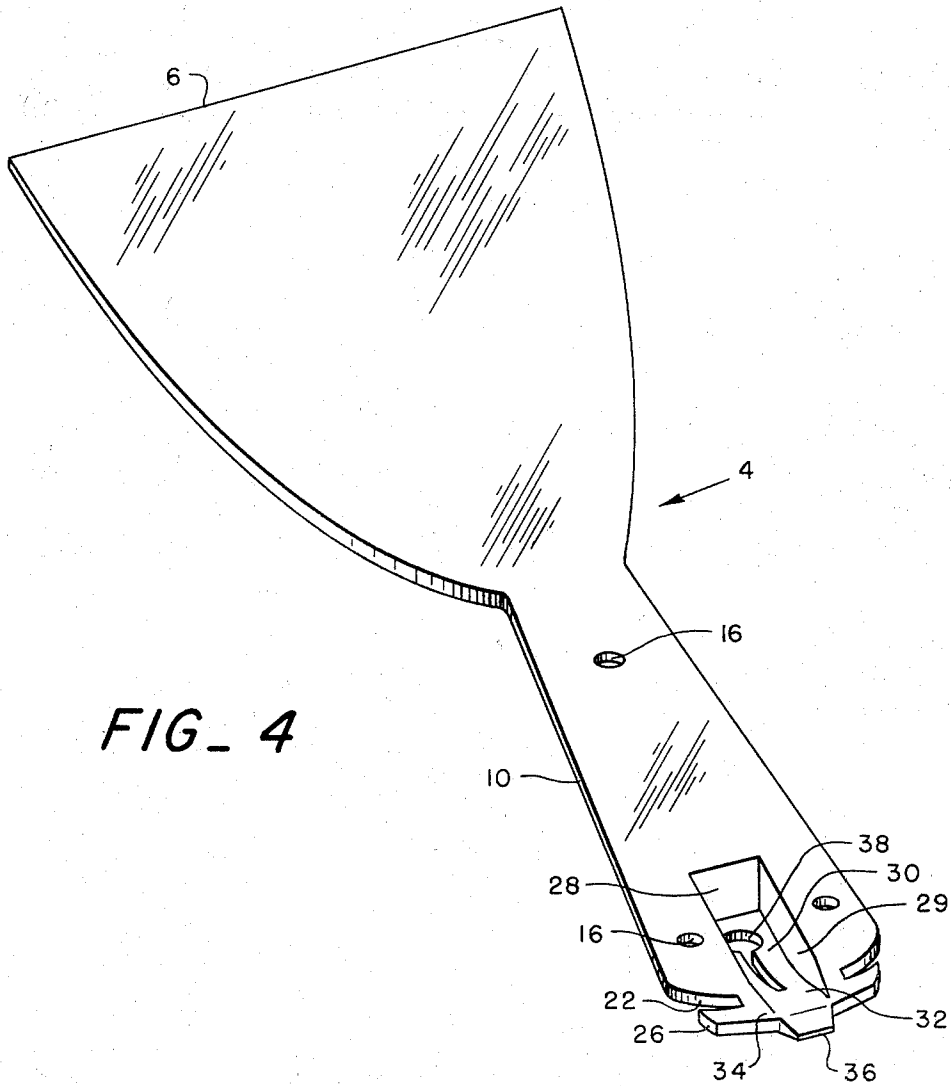


FIG. 3



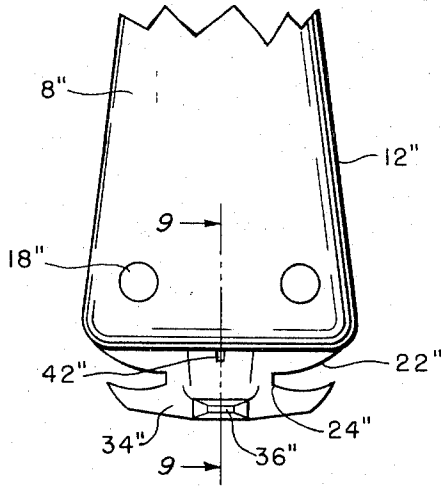


FIG. 7

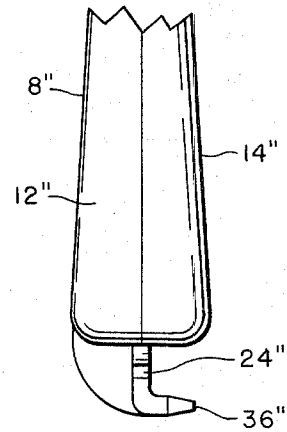


FIG. 8

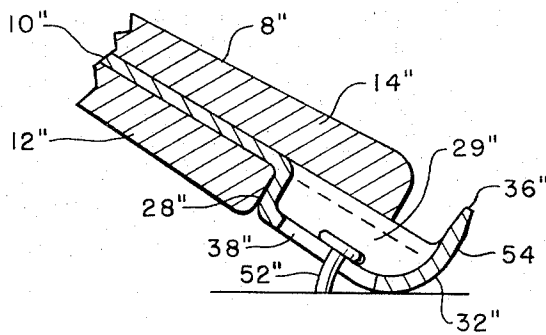


FIG. 9

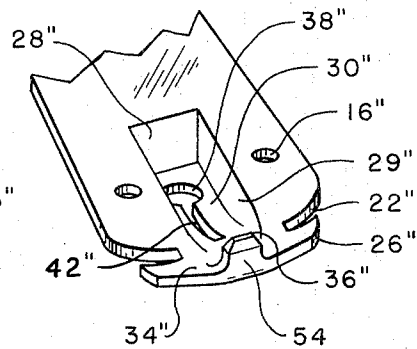


FIG. 10

## SPACKLING KNIFE TOOL

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

This invention relates to a spackling knife tool of the type used by painters and plasterers. Such knives generally comprise a handle to which is attached a relatively wide flexible blade for applying to and smoothing out plaster or other patching material on surfaces that are to be painted which have holes, gouges, cracks and the like requiring repair. The present invention relates to spackling knives which perform the combined functions of nail and tack pullers, screwdrivers, and picture-hanger removers.

It is well known that in the course of preparing, for example, the interior wall of a house for painting, it is often required that nails or picture hangers be removed, that small cracks in the surface be pointed up in order to hold patching material, and that the worker frequently has use for a screwdriver implement to pry open cans of patching material or paint or to turn screws. In most instances, the person performing the work carries a separate tool to perform each of these functions. In some cases where the worker is equipped only with a common spackling knife the edge of the blade is used to pry nails and picture hangers from wall surfaces and even to pry open cans of patching material and paint. Not infrequently this results in the dulling, bending or chipping of the edge of the spackling knife blade, thus rendering the tool useless for its designed purpose of making smooth finished repairs to defects in the surface.

Attempts in the prior art to overcome these problems by combining several of the above tool functions into a single spackling knife tool have resulted in combination tools which may perform only one additional function other than that of the ordinary spackling knife or have resulted in complex constructions requiring numerous parts which are moveable with respect to each other. Such complex tools are expensive and they often are awkward to use and easily broken under everyday working conditions.

## 2. Prior Art

U. S. Pat. No. 699,207 Moe discloses a combination tool comprised of a putty knife to the handle of which are pivotally attached a screwdriver member and a member carrying a pair of claws. Each member to be operative must be pivotally swung to a position away from the handle of the putty knife. In addition to the pivotal members the tool disclosed in Moe requires a number of locking elements in order to hold the members locked in their operative positions.

U. S. Pat. No. 1,779,293 Rodgers discloses a painter's implement comprised of a putty knife carried by one end of the handle, the other end of the handle having attached thereto a separate element which combines a hammering surface and a claw opening for drawing tacks and points.

In U. S. Pat. No. 1,277,290 Campbell, there is disclosed a combination tool in which one sheet metal element comprises a blade and a screwdriver at either end thereof. The element is pivoted on a handle member. In this tool, the element must be rotated to one position to employ the blade as a putty or plastering knife and to another position to use the screwdriver element. A notched portion of the handle end may be used to pull tacks.

In U. S. Pat. No. 825,063 Lawbaugh, a putty knife tool which incorporates in the handle an extendable and retractable tack puller that also serves as a screwdriver is disclosed. In this case, two spring means are required in order to make operative the tack puller and screwdriver means. In addition, when utilized as a screwdriver, twisting forces are exerted on the ends of the claws of the tack puller which could easily bend the claws making the device inoperative for drawing out tacks.

In U. S. Pat. No. 1,277,767 Stafford there is disclosed a putty knife the handle of which has hammer and claw portions. The claws are located in parallel relationship with the long side of the handle, a portion of the handle under the claws being notched out. Grasping of a nail or tack head by the claw members is extremely difficult because of the position of the claws.

## SUMMARY OF THE INVENTION

According to the present invention, there is provided an improved plasterer's spackling knife which is simply constructed, has no moving parts and performs the function of the spackling knife, a nail puller, a picture-hanger puller, and a screwdriver, as well as providing means for pointing up or gouging out relatively small cracks in surfaces to receive patching materials. The combination tool of the present invention usually comprises only three parts, a blade and two handle sections. The spackling knife portion of the blade is relatively wide and tapers to a base extending into a shank member which is encased between two handle portions, a top handle portion and a bottom handle portion. At the end of the shank portion opposite the wide blade end, there is formed a chisel point which serves as a screwdriver. On both side edges of the shank portion of the blade which extends slightly beyond the handle portions are tapered slots formed generally perpendicular to the longitudinal axis of the shank portion. These are tapered to relatively narrow apexes. Adjacent each such slot and formed by the part of the edge of the shank portion between each slot and the end of the shank portion is a pointed arm which serves to pry out picture hangers to be removed from surfaces and which may be utilized to gouge out fine hairline cracks in the surface to be repaired. Behind the screwdriver chisel point, a longitudinally oriented section of the shank portion is depressed below the plane of the blade to form a nail puller. The nail puller has two parallel sides the top of which are connected to the main part of the shank portion of the blade and the bottom edges of which are inclined from the lower ends to upper ends which connect with the planar portion of the main part of the shank portion inwardly of the end of the shank portion at the chisel point. The bottom of the nail puller is connected to the side walls and has a generally circular aperture therein at its lowermost area which is inward from the end of the shank portion. The side of the circular aperture towards the end of the shank portion is formed into a tapered slot which extends into the inclined portion of the bottom of the nail puller.

The chisel point may extend outwardly from the end of the shank portion in the same plane thereof or alternately may extend at a generally right angle from the plane of the shank. In the latter case the chisel point preferably does not extend beyond a longitudinal extension of the surface of the handle.

As indicated, the handle of the tool is formed of a top and bottom member. The top member covers the top side of the shank portion of the blade except for the part of the shank portion between the slots in the edges of the shank portion and the end of the shank portion. The bottom portion of the handle covers the opposite side of the shank member in the same manner as the top portion of the handle covers the other side of the shank member except that at the lower end of the bottom portion of the handle a central U-shaped opening is formed therein to accommodate the nail puller which extends below the plane of the shank member.

#### BRIEF DESCRIPTION OF THE DRAWING

In the accompanying drawing:

FIG. 1 is a plan view of the spackling knife tool of the present invention viewed from the bottom thereof.

FIG. 2 is a side view of the tool shown in FIG. 1.

FIG. 3 is a partial section taken along the longitudinal axis of the tool of FIG. 1 and showing the tool used to pull a nail from a surface.

FIG. 4 is a perspective view of the tool shown in FIGS. 1 through 3 with the handle members removed.

FIG. 5 is a plan view showing a portion of the bottom of the blade member of an alternate embodiment of the invention.

FIG. 6 is a sectional view of the blade of FIG. 5 taken along lines 6—6 of FIG. 5.

FIG. 7 is a plan view of a portion of the spackling knife tool showing an alternate embodiment of the chisel point.

FIG. 8 is a side view of the tool shown in FIG. 7.

FIG. 9 is a sectional view taken along lines 9—9 of FIG. 7.

FIG. 10 is a perspective view of the blade member of the embodiment of the invention shown in FIGS. 7—9.

#### DESCRIPTION OF PREFERRED EMBODIMENTS

As shown in the accompanying drawing, the spackling knife tool 2 of the present invention generally comprises a blade 4 having a wide end 6 which is utilized for spackling operations. The blade 4 tapers from the spackling end 6 to a relatively narrow shank portion 10 which is enclosed within a handle 8. The handle 8 is comprised of two parts, a bottom 12 and a top 14 which ordinarily are made of wood or plastic material. The two parts 12 and 14 of the handle 8 are secured to the shank portion 10 of the blade 4 by means of rivets 18 or similar fastening means which pass through apertures 16 in the shank portion 10 of the blade 4 and corresponding apertures in the handle parts 12 and 14. As shown in FIG. 1, the bottom part 12 of the handle 8 has a generally U-shaped cut-out 20 to accommodate the nail remover portion of the tool described below.

As shown in the drawing, the shank portion 10 of the blade 4 extends beyond the end of the handle 8. Each side edge of the shank portion 10 of the blade 4 has formed therein a curved and tapered slot 22 which terminates in an apex 24. Below the slots 22, each side of the shank portion 10 between the slot 22 and end of portion 10 if formed into a tapered pointed arm portion 26. The tapered pointed arm portion 26 and slots 22 are dimensioned so that the portions 26 may be inserted up to apexes 24 into the openings in common picture hangers.

Extending below the plane of the blade 4, but formed integrally therewith along the longitudinal axis of the

blade 4 is a nail puller that is accommodated with the U-shaped cut-out opening 20 in the bottom part 12 of the handle 8. The nail puller is formed by pressing the shank portion 10 to form a back wall 28, side walls 29, and bottom 30 which extends from the base of the back wall 28 into upwardly inclined curved ramp 32 which merges into the end 34 of the shank portion 10 of the blade. The bottom 30 has an opening 40 comprising a generally circular aperture 38 formed therein to accommodate the heads of nails. The side of the circular aperture 38 adjacent the inclined ramp 32 opens into the tapered slot 42 which extends longitudinally into ramp 32 as shown.

Extending from the end 34 of the shank portion 10 in the same plane thereof is a tapered screwdriver chisel point 36.

In the embodiment thus described, the blade 4 comprising the spackling portion of the blade, the nail puller, picture hanger remover, and screwdriver are integrally formed from a single piece of metal by known pressing, cutting, and tempering techniques. The handle parts 12 and 14 preferably are made of a molded plastic or wood. They may be riveted to the shank 10 of the blade 4 as shown or secured to the shank 10 by adhesives.

The pointed arms 26 terminate within extensions of the side edges of shank 10 and the handle 8 which greatly minimizes the possibility of the pointed arms 26 catching on the material of a worker's pocket when carrying the tool in his pocket.

The spackling knife 2 as described is a very useful tool for painters and plasterers. The end 6 of the blade 8 serves as a patching tool for smoothing plaster or other patching material. The nail puller which extends from the bottom side of the shank 10 of the blade 4 through the opening 20 in the handle portion 12 is very convenient to use compared to nail pullers of prior art combination tools. In FIG. 3 the tool is shown removing a nail 52 from a surface. The nail head is in the slot portion of the aperture 38 and the handle 8 of the tool is rotated in the direction indicated by the arrow.

As mentioned the pointed arms 26 of the picture hanger remover may also be utilized to gouge out fine cracks to receive patching materials.

In FIGS. 5 and 6, there is shown an alternate embodiment of the nail puller portion of the tool. In this embodiment, the nail puller is designated as 44, and is formed from a separately formed piece of metal 46 which is secured to the shank portion 10' of the blade by rivets 48 through the flange portions 50 which are formed at right angles to the side walls 29'. The bottom 30' has a nail aperture 38' formed therein extending longitudinally into the upwardly inclined ramp 32'. The ramp 32' terminates behind the chisel point 36' formed at the end of the shank 10'. While a back wall 28' is shown, it is understood that the end of the metal part 46 indicated by the wall 28' could alternately be open, thus simplifying the metal stamping operation.

The picture hanger remover is formed on the shank 10' as in the first embodiment by the tapered slots 22' terminating at the apexes 24' and the points 26'.

The shank portion 10' in this embodiment differs from the shank portion 10 of the first embodiment in not having the nail puller pressed from it and has apertures formed in it to accommodate the rivets 48. Since the metal of the shank 10' is not pressed to form the nail puller the end portion 34 (FIG. 4) form which the

screwdriver chisel point 36 (36') and the picture hanger remover points 26 (26') extensions will be stronger.

In FIGS. 7 - 10, there is shown an alternate embodiment of the screwdriver chisel point of the tool. In this embodiment, the chisel point is formed at a generally right angle to the plane of the blade. In this embodiment, when the picture hanger removers are being used, the chisel point of the screwdriver will not point towards the surface being treated. This eliminates the possibility of the chisel point screwdriver gouging a hole in the surface when the picture hanger remover is being used. In FIGS 7 - 10, the shank portion of the blade is shown at 10'' enclosed by the handle 8'' comprised of the bottom part 12'' and the top part 14''. The handle parts 12'' and 14'' are secured to the shank portion 10'' by rivets 18'' which pass through apertures 16'' in the shank portion 10''. Each side edge of the shank portion 10'' has a curved and tapered slot 22'' formed therein. The slot terminates at the apex 24''. Below the slots 22'' between the slots 22'' and the end of shank portion 10'' are formed tapered pointed arms 26''.

As in the first embodiment, the nail puller is formed integrally from the shank portion 10'' and comprises a back wall 28'', side walls 29'', and a bottom 30'' extending from the base of the back wall 28'' into an upwardly inclined ramp 32''. The bottom 30'' has formed therein generally circular aperture 38'' to receive nail heads. The circular aperture 38'' leads into the tapered slot 42'' which extends longitudinally into the ramp 32''. The inclined ramp 32'' curves upwardly into the plane of shank portion 10''. An extension 54'' terminating in chisel point 36'' extends above the plane of the shank member 10'' at a generally right angle to the plane of the shank portion 10''. The end of the chisel point 36'' preferably terminates within the margin of the top surface of the handle part 14'' to minimize the tendency for the end 36'' to snag in a worker's clothing when the tool is carried in a worker's pocket. In the present embodiment, the orientation of the chisel point 36'' eliminates the possibility of the chisel point gouging holes in the surface to be treated when the arms 26'' are utilized to pry out picture hangers. The operation of the nail puller in this embodiment is the same as in previous embodiments as shown in FIG. 9 wherein the tool is being used to remove a nail 52''.

The tool of the present invention is simple in its construction, has no moving parts, and yet performs the multiple functions of mostly all the various tools employed in preparing and patching walls prior to painting or paperhanging.

While the invention has been explained by detailed description of certain specific embodiments, it is understood that various modifications and substitutions can be made in any of them within the scope of the appended claims which are intended also to include equivalents of such embodiments.

What is claimed is:

1. A hand tool comprising a flat metal blade member having a top and a bottom surface, said blade member having a relatively wide spackling blade end portion which tapers into a longitudinally extending shank portion, a chisel point screwdriver at the end of said shank portion, a picture hanger remover formed in a side edge of said shank portion adjacent the end of said shank portion, said picture hanger remover comprising

a tapered slot extending inwardly from the edge of said side edge of said shank portion and terminating at an apex, and a tapered pointed arm portion of said shank between said slot and the end of said shank portion and forming the wall of said slot adjacent said end of said shank portion, and a nail puller on the bottom surface of said shank portion of said blade member and oriented longitudinally to said shank member, said nail puller having a pair of spaced side walls depending from the bottom surface of said shank portion, a bottom connected to the bases of said side walls, said bottom extending into an upwardly inclined ramp which ramp terminates at its upper end inwardly of said chisel point at the end of said shank portion and a nail aperture in said bottom extending in the form of a tapered slot into said ramp.

2. A tool as claimed in claim 1 wherein the top and bottom surfaces of said shank portion have a top handle part and a bottom handle part attached to each respectively, said handle parts terminating short of the end of said shank portion whereby said picture hanger puller is not covered by said handle parts.

3. A tool as claimed in claim 2 wherein said bottom handle part has a U-shaped cut-out at the end thereof to accommodate said nail puller.

4. A tool as claimed in claim 3 wherein said nail puller is formed integrally with said shank portion.

5. A tool as claimed in claim 3 wherein a picture hanger remover is formed in both side edges of said shank portion.

6. A tool as claimed in claim 5 wherein the tapered pointed portions of said picture hanger removers terminate within extensions of the sides of said handle.

7. A tool as claimed in claim 1 wherein said nail puller is formed integrally with said shank portion.

8. A tool as claimed in claim 1 wherein a picture hanger remover is formed in both side edges of said shank portion.

9. A hand tool comprising a flat metal blade member having a top and a bottom surface, said blade member having a relatively wide spackling blade end portion which tapers into a longitudinally extending shank portion, a chisel point screwdriver at the end of said shank portion, said chisel point extending from said shank portion at a generally right angle from the plane of said shank portion; a picture hanger remover formed in a side edge of said shank portion adjacent the end of said shank portion, said picture hanger remover comprising a tapered slot extending inwardly from the edge of said side edge of said shank portion and terminating at an apex, and a tapered pointed arm portion of said shank between said slot and the end of said shank portion and forming the wall of said slot adjacent said end of said shank portion, and a nail puller on the bottom surface of said shank portion of said blade member and oriented longitudinally to said shank member, said nail puller having a pair of spaced side walls depending from the bottom surface of said shank portion, a bottom connected to the bases of said side walls, said bottom extending into an upwardly inclined ramp which ramp terminates at its upper end in the plane of said shank portion; and a nail aperture in said bottom extending in the form of a tapered slot into said ramp.

10. A tool as claimed in claim 9 wherein the top and bottom surfaces of said shank portion have a top handle part and a bottom handle part attached to each respectively, said handle parts terminating short of the

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end of said shank portion whereby said picture hanger puller is not covered by said handle parts.

11. A tool as claimed in claim 10 wherein said bottom handle part has a U-shaped cut-out at the end thereof to accommodate said nail puller.

12. A tool as claimed in claim 9 wherein said nail puller is formed integrally with said shank portion.

13. A tool as claimed in claim 10 wherein said nail puller is formed integrally with said shank portion.

14. A tool as claimed in claim 9 wherein a picture

hanger remover is formed in both side edges of said shank portion.

15. A tool as claimed in claim 10 wherein a picture hanger remover is formed in both side edges of said shank portion.

16. A tool as claimed in claim 15 wherein the tapered pointed portions of said picture hanger removers terminate within extensions of the sides of said handle.

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