July 2, 1946. J. F. FRANTZ 2,402,994

PAPERHANGER'S TOOL

Filed March 18, 1943

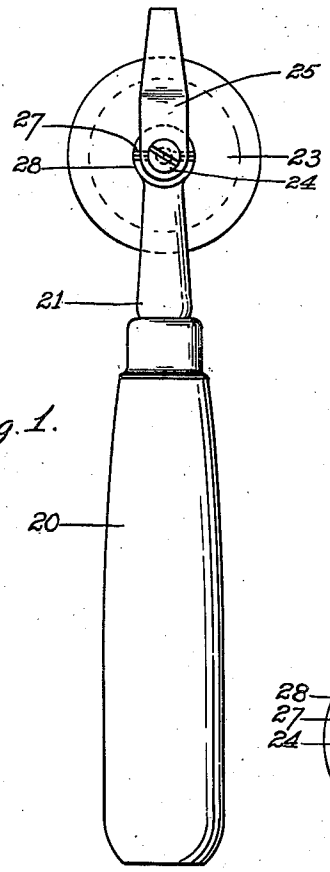


Fig. 1.

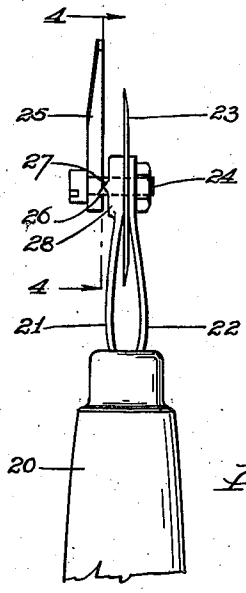
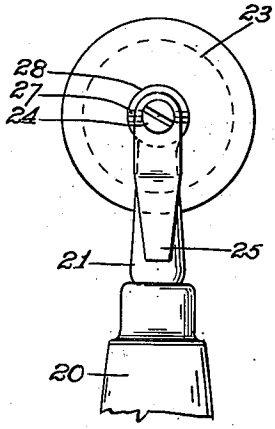


Fig. 2.

Fig. 3.



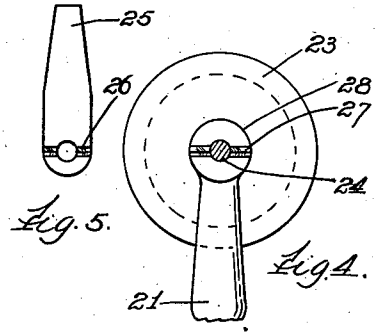


Fig. 5.

Fig. 4.

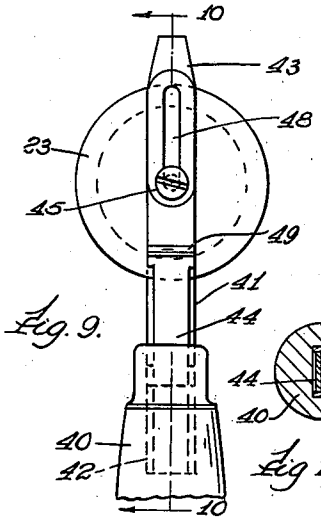


Fig. 9.

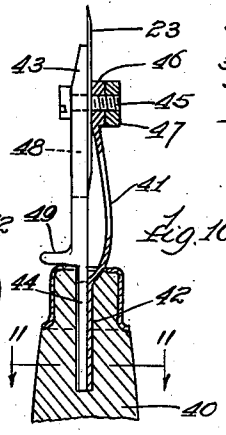


Fig. 10.

Fig. 11.

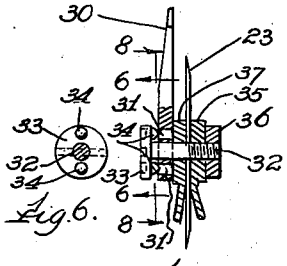


Fig. 6.

Fig 7

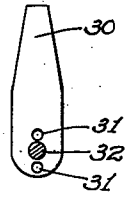


Fig. 8.

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PAPERHANGER'S TOOL

John F. Frantz, Chicago, Ill.

Application March 18, 1943, Serial No. 479,596

1 Claim. (Cl. 7—14.1)

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This invention relates to an improved tool for use by paper hangers and one object of the invention is to provide a combination tool which includes the usual rotary cutter wheel for trimming wall paper preparatory to hanging it, and which also includes a screw driver blade conveniently available for performing miscellaneous adjustments which the paper hanger is called upon to make in the course of his work. Another object of the invention is to provide a combination tool having a single handle supporting at one end a rotary cutting blade or wheel and a screw driver blade, the latter being adjustably mounted for extension beyond the cutting edge of the wheel or retraction into a position at which it will not interfere with the cutting function. A further object of the invention is to provide a combination tool having a cutting wheel pivotally mounted and having a screw driver blade mounted on the pivot of the wheel and adjustable about its pivot from an idle position to a working position. It is also an object of the invention to provide an improved tool for paper hangers comprising a handle, a cutting wheel rotatably supported on the handle, a screw driver blade rotatably adjustable about the axis of the wheel, and means for yieldingly holding the blade in a working position at which it extends past the cutting edge of the wheel in substantial alinement with the handle, or in an idle position at about 180° to its working position.

Other objects and advantages of the invention will appear from the following description taken in connection with the drawing in which:

Fig. 1 is a side elevation of a paper hanger's tool embodying this invention.

Fig. 2 is a partial side elevation of the same taken at right angles to the view in Fig. 1 and showing the wheel and screw driver blade in edge elevation.

Fig. 3 is a partial side elevation similar to Fig. 1, but showing the screw driver blade adjusted to idle position.

Fig. 4 is a detail view taken as a section at line 4—4 on Fig. 2.

Fig. 5 is a detail view of the screw driver blade showing its inner face which is normally assembled next to the bearing of the cutter wheel.

Fig. 6 is a detail sectional view of a modified pivot head taken as indicated at line 6—6 on Fig. 7.

Fig. 7 is a fragmentary elevation partly in section showing a modified construction using an adapter pivot and screw driver blade.

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Fig. 8 is a detail section taken as indicated at line 8—8 on Fig. 7.

Fig. 9 is a side elevation with a portion of the handle broken away showing a modified construction of the tool.

Fig. 10 is a vertical sectional view taken substantially as indicated at line 10—10 on Fig. 9.

Fig. 11 is a transverse detail section taken at line 11—11 on Fig. 10.

While there is shown and described herein certain specific structure embodying the invention, it will be manifest to those skilled in the art that various modifications and re-arrangement of the parts may be made without departing from the spirit and scope of the invention, and that the same is not limited to the particular forms herein disclosed, except insofar as indicated by the appended claim.

In the course of his work a paper hanger is frequently called upon to perform certain miscellaneous adjustments requiring a screw driver, as for example, when he must remove the cover plates of wall switches or electrical outlets, or must lower the "canopy" section of an electric ceiling fixture. Instead of requiring him to carry a screw driver for these relatively minor tasks, the present invention provides a screw driver blade conveniently disposed in combination with the usual rotary cutter wheel which is employed for trimming the edges of wall paper in fitting it preparatory to application to the wall.

Fig. 1 shows such a tool as comprising a handle 20 having a bifurcated shank consisting of the legs 21 and 22 firmly secured in one end of the handle and extending therefrom at opposite sides of a cutter wheel or disk 23. The wheel 23 is rotatably mounted on a pivot bolt 24 carried in the terminal portions of the shank 21, 22. A short screw driver blade 25 is also pivotally mounted on the bolt 24 and is dimensioned to extend beyond the cutting edge of the wheel 23 when it is adjusted as shown in Fig. 1 in substantial alinement with the handle 20.

The blade 25 is yieldingly held in such alined position by the engagement of a transverse groove 26 in one face of the blade and an upstanding rib 27 on the contacting face of the terminal portion 28 of the leg 21. The groove 26 has oppositely sloping side walls and the rib 27 is formed with correspondingly sloping walls so that by forcibly turning the blade 25 on the pivot 24 the groove 26 may be cammed out of engagement with the rib 27 and the blade may be turned through 180° to the idle position shown in Fig. 3 at which the groove 26 and rib 27 will become again engaged

with each other so as to hold the blade yieldingly in this position.

In the structure shown in Figs. 1 to 5 it may be understood that the legs 21 and 22 of the shank are somewhat resilient and that their terminal portions are normally spaced apart to a small extent to provide a running clearance for the rotary cutting wheel 23. Thus when the screw driver blade 25 is turned to disengage the rib 27 from the groove 26 this clearance is temporarily taken up as the rib is cammed out of the groove as shown in Fig. 2 which illustrates the blade 25 turned away from its working position through a small angle as it will appear at the beginning of its adjustment toward the position of Fig. 3, or just before reaching its working position as shown in Fig. 1. It may be understood that the depth of the rib 27 and the groove 26 is somewhat exaggerated in Fig. 2, and that it need not be more than a few thousandths of an inch to insure satisfactory operation.

In some cases it may be desirable to adapt an existing trimming tool to perform both functions by adding a screw driver blade to it and for this purpose I propose to supply a supplemental blade, such as that shown at 30 in Figs. 7 and 8, together with a special pivot bolt 32, also illustrated in said figures. As a modified detent arrangement the blade 30 is shown with a pair of holes 31, 31 at opposite sides of the pivot aperture which receives the bolt 32, and the head 33 of the bolt 32 is formed with a pair of protruding bosses 34, 34 which will interengage with the holes 31, 31 when the blade is adjusted to its working position or at 180° therefrom in its idle position. The bolt 32 is screwed into a threaded opening in the terminal 35 of the shank and the securing nut 36 acts as a jam-nut or lock-nut to anchor the bolt against rotation, with the bosses 34 of its head 33 disposed in alinement with the handle so that they will hold the blade 30 at its working position or in its idle position. The terminals 35 and 37 of the legs of the shank are normally separated sufficiently to provide a running clearance for the cutter wheel 23, and when the blade 30 is rotated from one position of adjustment to the other this

clearance will be taken up temporarily by axial movement of the bolt through the terminal 37. Thus by the substitution of a new pivot bolt 32, and the addition of the screw driver blade 30, a regular trimming tool is readily converted into a combination tool especially adapted for use in the paper hanging process.

A further modification is shown in Figs. 9, 10 and 11, in which the handle 40 is fitted with a special shank 41 having a portion of channel cross-section at 42 which is driven firmly into the handle and provides the anchorage for the shank therein. The screw driver blade 43 serves also as the other leg of the shank, having its lower end portion 44 slidably engaged with the channel portion 42 of the shank 41. The cutter wheel 23 is carried on a pivot bolt 45 which engages threads in the terminal 46 of the shank 41 and is locked in position by means of the nut 47. The screw driver blade 43 has an elongated slot 48 engaging the pivot bolt 45 just under its head and serving to guide the blade in its adjustment from working position as shown in Fig. 9 to the idle position shown in Fig. 10. A thumb piece 49 projects laterally from the blade adjacent the end of the handle 40 to facilitate sliding the blade 43 from one position to the other. The lower end or tang 44 may be fitted snugly between the flanges of the channel portion 42 so as to provide sufficient friction to hold the blade at either position of adjustment.

I claim:

Means for adapting a paper hanger's trimming tool to serve as a screw driver, said means comprising a screw driver blade having a pivot aperture and a pivot bolt therefor, said bolt being adapted to replace an original pivot bolt for a cutter wheel in the trimming tool with the screw driver blade disposed on said bolt in contact with its head, said contacting surfaces having interengaging projection and recess means, at least one of the interengaging features having a surface inclined to the axis of the bolt whereby said features may be forcibly disengaged by rotation of the blade about the bolt.

JOHN F. FRANTZ.