

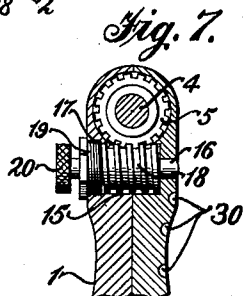
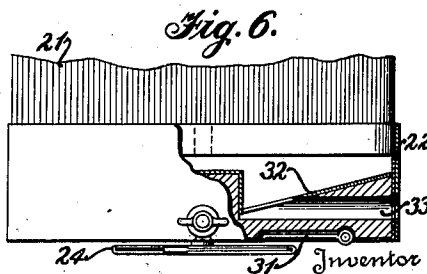
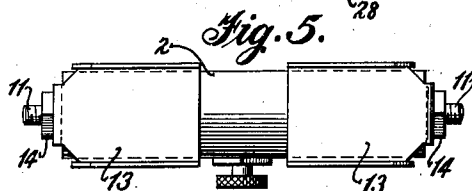
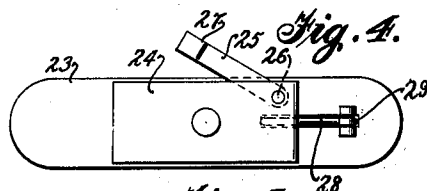
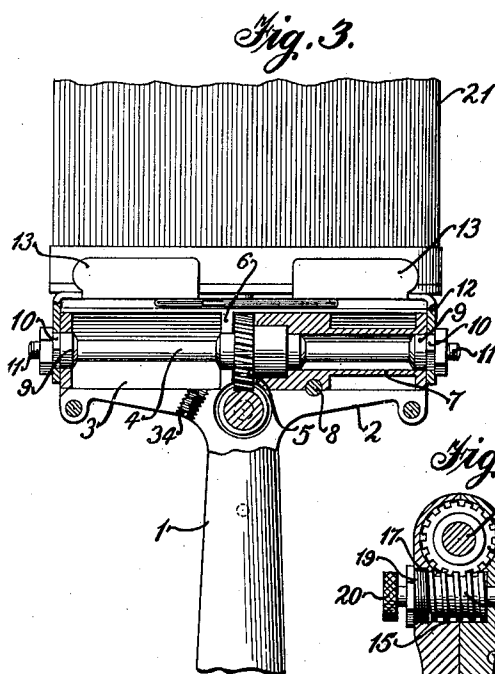
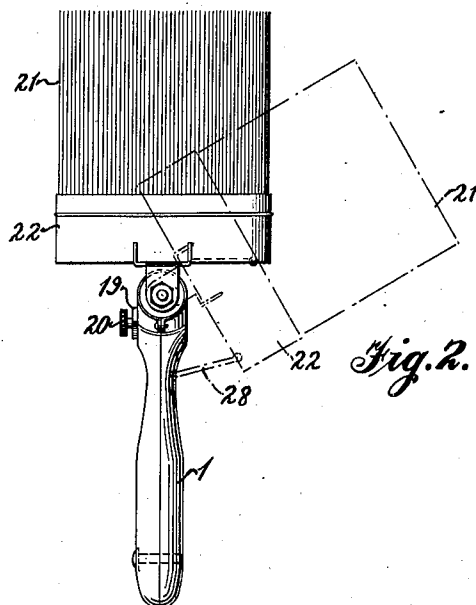
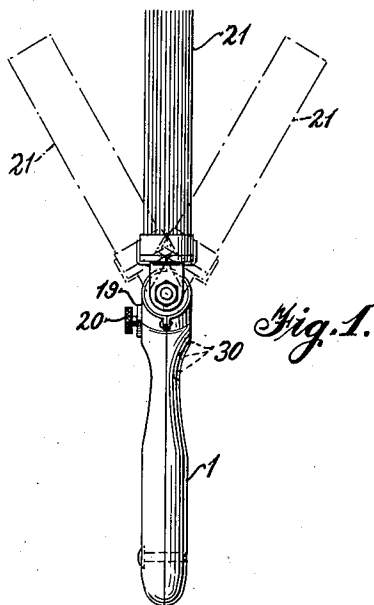
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2,278,283

ADJUSTABLE BRUSH AND BRUSH HANDLE

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2,278,283

ADJUSTABLE BRUSH AND BRUSH HANDLE

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1 Claim. (Cl. 306—12)

This invention consists of a brush handle and a brush adjustably connected to each other and is an improvement over my Patent No. 2,032,664, "Combination of brushes, brush holders and brush handles," issued to me March 3, 1936. The objects, purposes and advantages of this invention are the same as those set forth in the patent referred to, excepting that the desired results are obtained through simpler, easier, less complicated, less expensive and more efficient means than those employed by the patent mentioned.

The improvements of this invention over prior patents will be clearly brought within the light of understanding when the following specification is read in connection with the accompanying drawing, in which:

Fig. 1 is an elevated side view of my invention showing, in full lines, the brush and handle in normal relationship, and indicating, in sectional or dotted lines, how the brush may be tilted at any desired angle with reference to the brush handle;

Fig. 2 is a view similar to Fig. 1, showing, in full lines, the normal position of the brush when connected crosswise of the handle, and illustrating, in sectional or dotted lines, how the brush, when thus connected to the handle, may be tilted, and braced on the handle, so as to bear the same relationship as a hatchet does to its handle;

Fig. 3 shows the brush and handle together, with a portion of the handle broken away exposing to view the means or mechanism employed to tilt the brush at various angles relative to the handle;

Fig. 4 shows the bottom of the brush and the means for clipping the brush to the handle;

Fig. 5 shows the top of the brush handle with the brush removed therefrom;

Fig. 6 shows a modified form of a detachable brush formed with a reservoir at the bottom to catch the paint;

Fig. 7 is a cross-sectional view taken vertically of the handle to show the driving and driven parts of the mechanism inside the brush handle through the operation of which are obtained the various angular positions of the brush with relation to the handle.

Upon closer study of this application and paying particular attention to the parts described herein and referred to by the same numerals which designate them on the accompanying drawing, it will be learned that:

Numeral 1 designates the brush handle of my invention which may be made either of two mated parts of cast or stamped metal, or it may be cast

in one piece with the crosshead hollowed out to receive the mechanism hereinafter described. The handle 1 is provided with a cross head 2 which gives to the whole a T-shaped appearance. The crosshead 2 of the handle 1 is formed hollow, in the shape of a round open tube or pipe, as shown at 3. A shaft 4, carrying a cogged wheel or gear 5, is inserted in the hollow of the crosshead 2, and is held centered therein by means of a web 6 in the center of the tube, a flanged sleeve 7, and a lock-pin 8, said elements cooperating with each other to hold the cogged wheel-bearing shaft in place as shown at Fig. 3.

The shaft 4 is further provided at each end thereof with a rounded flange 9, a polygonal shoulder 10 and a screw-threaded terminus 11.

Numerals 12 designate two brackets having flanged ears 13 on one leg and polygonal apertures on the other to match and fit over the polygonal shoulder 10 on the shaft 4. This pair of brackets are mounted over the T-shaped crosshead of the handle, with the flanged ears 13 facing, but spaced from, each other, with the polygonal apertures fitting over the polygonal shoulders on the shaft, and held in place by the nuts 14 screwed on the threaded ends 11.

The handle 1 is further provided with an aperture or depression 15 having a counter-sunk depression 16 and a screw threaded opening 17. Into this aperture 15 fits a worm geared screw 18, having an inner smooth, rounded terminus which enters the counter-sunk depression 16 and a smooth, outer spindle over which passes the screw-threaded nut 19 and screws into the threads 17, holding the worm-gear screw in place. The outer end of the spindle carrying the worm-screw is provided with a small, gnarled wheel 20 immovably fastened thereto.

The worm-gear screw 18 meshes with the cogged wheel or gear 5 on the shaft 4 and by turning the worm-screw 18, by means of the wheel 20, the shaft 4 is rotated. The flange-eared brackets 12 being held on the shaft 4 by means of the polygonal shoulders 10 and the nuts 14, also turn with the shaft 4, forming, as they turn, various angles with the handle 1.

Numeral 21 designates a brush, of any material, fastened to the base 22 has a flat surface 23. On the center of the surface 23, the bottom of the base 22 is provided with a pivotally secured thereto clip 24, formed by a folded piece of sheet metal, and which folded piece of sheet metal is further provided with a shim or wedge-piece 25, one end of which is pivoted as at 26 (Fig. 4), and the free end thereof provided with a resilient

hump as at 27, said shim or wedge-piece adapted to swing in and out the space between the folds of the clip 24.

Now, to connect the brush to the brush handle, the shim is swung out and the clip is turned crosswise to the base of the brush and slipped through the space provided between the flanged ears 13 of the brackets 12. The flat bottom 23 of the brush base 22 now rests on the ears 13 and the flanges thereof are parallel thereto. The clip 24 is now turned to come under the flanged ears of the brackets, thus putting the brackets between the brush-bottom and the clip. The shim or wedge-piece is now swung completely in between the folds of the clip, wedging the clip tightly between the bracket and the crosshead of the handle, and holding the brush securely on the handle. And whenever it is desired to tilt the brush at angle with relation to the handle, the same is accomplished by merely turning the wheel 20 in either direction until the brush has assumed the desired position.

The modification shown at Fig. 2 is obtained by merely having the clip 24 wider than the gap between the flanged ears 13. Then the brush can be set crosswise of the T-shaped head of the handle and fastened thereto in the manner already described. When the brush is set (hatchet-like) as shown at Fig. 2, it is desired to use a brace 28 hinged as at 29 and adapted to fit in or hold against depressions 30. The bracing effect is emphasized by tilting the brush hard against the brace through the operation of the worm-gear in the handle. The brace 28, when not in use, is kept in a groove 31 (Fig. 6), and out of the way, by friction.

The brush shown at Fig. 6 is provided with a reservoir 32 to catch the paint and drain it through the outlet 33.

The crosshead 2 of the handle 1 is also provided with an oil hole 34 (Fig. 3) for oiling the mechanism inside the crosshead tube. This oil hole is kept closed by a plug-screw, as shown.

The brackets 12 may also be mounted in reverse order, that is to say, with the flanged ears pointing in opposite directions, to accommodate a brush wider than the ones usually used.

It is evident from the foregoing that I have produced a brush handle to which any kind of a brush may be detachably connected, and which brush when so connected can be tilted to and held at any angle by a simple mechanism in the handle. This will enable the operator to reach

into crevices of structures to be painted without the difficulties experienced at the present time with the brushes now in use. I realize that the descriptions and illustrations herein given are only exemplary of my invention and I, therefore, reserve the right to any and all uses that this invention may be put to, and to any similar devices which may hereafter be manufactured and which may properly fall within the spirit and scope of this invention.

Having thus described, set forth and illustrated my invention, what I claim as my own and desire to secure by Letters Patent of the United States is:

In a brush and a handle therefor, the combination of a T-shaped handle made of two identically hollowed out halves so that when the said halves are matched the hollowed parts form a tubular opening lengthwise and clear through the crosshead of the T; a pair of brackets fitted atop of the crosshead of said T-shaped handle, said brackets having upstanding oppositely spaced flanges forming a sort of a groove adapted to receive the correspondingly shaped base of a brush, each of said brackets also having a downwardly extending angularly apertured flange, the apertures of each being adapted to register with the tubular openings at the ends of the cross-head of the handle; a bolt fitted in the tubular contour of the cross-head of the handle, said bolt having gear-cogs or teeth formed around its middle and angularly shaped extensions terminating in screw-threaded ends adapted to match and be secured to the said angularly apertured downwardly extending flanges of the brush-receiving brackets; an aperture at the intersection of the cross-head and stem of the T-shaped handle, said aperture being at right angles to and merging with the tubular portion of the cross-head just at the gear-teeth of the bolt in the tube of the cross-head; in combination with a worm-threaded screw in the lastly-named aperture contacting and meshing with the said gear-teeth, a head on said worm-threaded screw whereby it can be turned in the aperture; and all of said parts and elements so arranged and co-related that when the said worm-threaded screw is turned either to the right or to the left the brackets holding the brush will also turn and correspondingly change the relative angle between the handle and the brush.

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