April 2, 1957 H. C. CARPENTER 2,787,016

PAINT BRUSH AND BRISTLE ADJUSTING MEANS THEREFOR

Filed Feb. 21, 1955

Fig. 1.

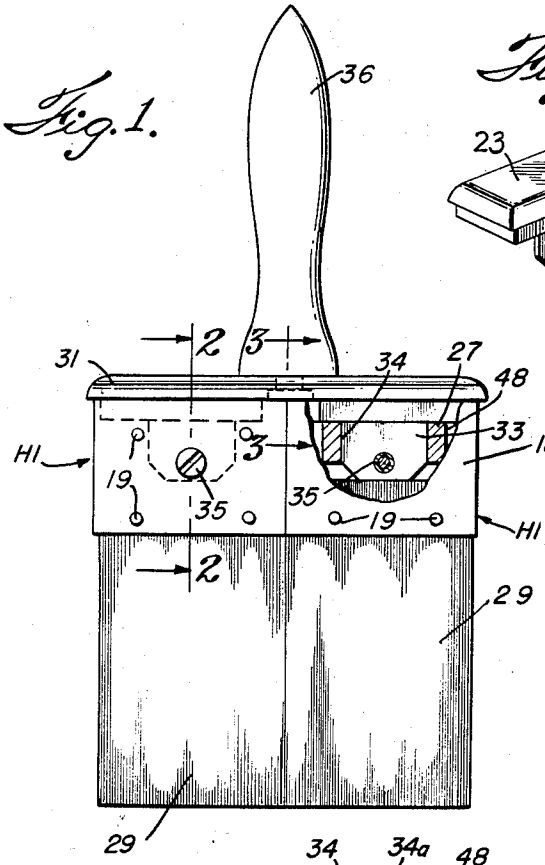


Fig. 4.

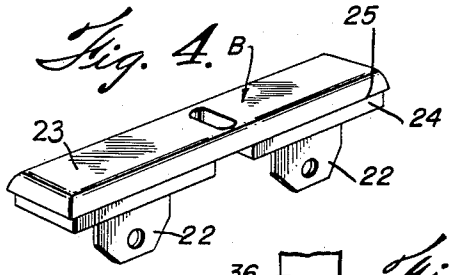
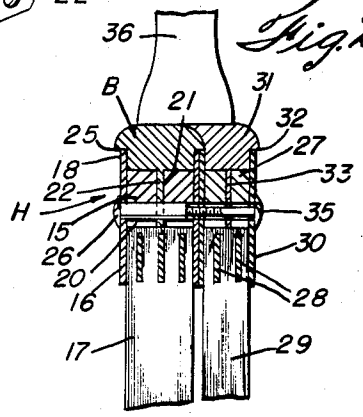


Fig. 2.



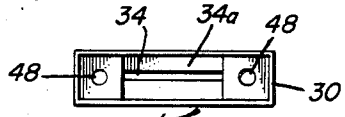
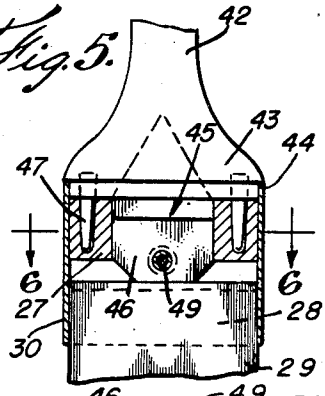


Fig. 7.

Fig. 5.



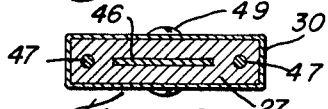
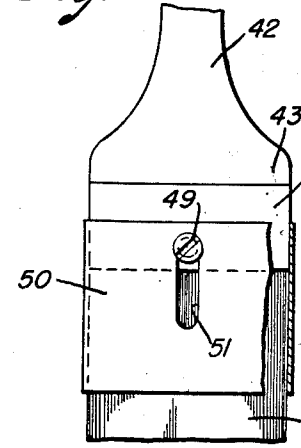


Fig. 6.

Fig. 8.



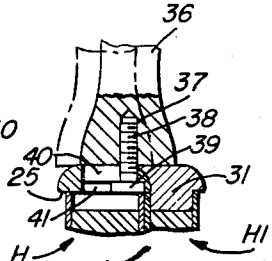


Fig. 3.

INVENTOR.
HERBERT C. CARPENTER
BY
Attorney

United States Patent Office 2,787,016 Patented Apr. 2, 1957

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PAINT BRUSH AND BRISTLE ADJUSTING MEANS THEREFOR

Herbert C. Carpenter, Fresno, Calif.

Application February 21, 1955, Serial No. 489,326

6 Claims. (Cl. 15—202)

My invention relates to paint brushes of the type embodying a plurality of brush sections that as assembled are usable as a unitary large or wide brush for the painting of walls and other large surfaces, but when disassembled provide smaller and narrower brushes for individual use in the painting of sashes and other narrow surfaces.

It is a purpose of my invention to provide a paint brush of the above described type which embodies a main brush section which is relatively wide, and a plurality of subsidiary brush sections which are relatively narrow and have a combined width which is the same as the main brush section, and means for mounting all of the brush sections on a common handle so that the subsidiary brush sections are at one side of the main brush section to combine therewith in the formation of a unitary wide and relatively thick brush, such mounting means affording detachment of the subsidiary sections from the main section to allow individual use of any one of the sections and particularly the subsidiary sections when the bristles become so shortened by wear as to render them useless as a wide brush, but suitable for narrow brushes.

A further purpose of my invention is the provision in a brush of this character of a mounting means for the common handle whereby it can be moved to and secured in either of two positions, one in which it is centered with respect to the main brush section affording balanced use of such section when used alone in painting, and the other in which it affords balanced use of all of the brush sections when assembled to form a unitary brush.

It is also a purpose of my invention to provide subsidiary brush sections each having a head so constructed as to not only permit it to be readily combined with the main brush section, but when detached therefrom affords secure mounting of a handle thereon for use as a narrow brush.

Another purpose of my invention is the provision of a device in the nature of an attachment for a paint brush, and which by adjusting it on the brush the effective length of the bristles thereof as used in painting can be varied. As applied to one of the subsidiary brush sections once it is detached from the main brush section because of shortening of its bristles as a result of wear to a length too short for use in the wide brush, and too long for use as a narrow brush, the device can be so adjusted on the brush section as to move the point at which the bristles can be flexed nearer the brush head, and thus reduce the effective brushing length of the bristles to a degree suitable for the narrow brush. My device is also applicable to any one of the subsidiary brush sections before its bristles have been shortened by wear, since by proper adjustment of the device thereon the effective length of the bristles can be shortened as required for use as a narrow brush to paint narrow surfaces.

I will describe only two forms of paint brushes, and one form of bristle adjusting means, each embodying my invention, and will then point out the novel features thereof in claims.

In the accompanying drawings:

Fig. 1 is a view showing in side elevation one form of paint brush embodying my invention, with a portion thereof in section.

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a detailed perspective view of one of the mounting bars.

Fig. 5 is an elevational view partly in section showing one of the subsidiary brush sections and with a handle secured thereto.

Fig. 6 is a horizontal sectional view taken on the line 6—6 of Fig. 5.

Fig. 7 is a top plan view of the subsidiary brush section shown in Fig. 5.

Fig. 8 is a fragmentary side elevational view showing one of the subsidiary brush sections having incorporated therein a device for varying the effective length of the bristles thereof.

Referring more particularly to the drawings, in Figs. 1 and 2 is shown a main brush section comprising a brush head designated generally at H which is preferably made of wood and comprises an upper block 15 and a lower block 16 both of rectangular form. The lower block may be made up of a plurality of longitudinal strips in the conventional manner and to which are glued or otherwise secured the upper ends of bristles 17.

A ferrule 18, constructed of metal, is secured by fastening members 19, such as nails, to the upper and lower blocks 15 and 16 so as to maintain the latter in parallel spaced relation one to the other to form an intervening gap 20 through which air is admitted to the upper ends of the bristles to facilitate drainage of paint therefrom, as is conventional. The upper block 15 is provided with a pair of vertical slots 21 at spaced points longitudinally thereof and extending completely through the block.

The slots 21 are adapted for the reception of a pair of tongues 22 fixed to and projecting downwardly from the lower side of a mounting bar B preferably constructed of metal and including a flat top portion 23, and a bottom portion 24 inset at its side and end edges to form intervening shoulders 25. The tongues 22 may be of the chamfered form as shown to facilitate insertion thereof into the slots 21, and in so doing the bottom portion 24 of the mounting bar is extended into the ferrule 18 to abut the upper side of the block 15, while the upper edges of the ferrule abut the shoulders 25.

The tongues 22 are secured within the slots 21 to maintain the brush section securely mounted on the bar B through the use of a pair of screws 26 extended through one side wall of the ferrule 18, and through suitable openings in the upper block 15 and the tongues. These screws have shanks which terminate short of the other side wall of the ferrule 18, and they are internally screw threaded to receive other screws as will be described later herein. The screws 26 may, in a suitable manner, be permanently secured in the brush head, since once the parts constituting the main brush are assembled, it becomes unnecessary to remove the screws.

The paint brush of Fig. 1 also includes two subsidiary brush sections, and each section comprises a head H1 composed of an upper block 27, and a lower strip block 28 in which brush bristles 29 are secured, preferably in the same manner as described in connection with the bristles 17. These two blocks are likewise secured in spaced relation one to the other by means of a metal ferrule 30, and by the employment of nails 19.

The construction of the ferrule **30** is such that its upper edge extends above the block **27** to provide a seat in which a mounting bar **31** is received, one side and the ends of the bar being formed with shoulders **32**, against which the corresponding edges of the ferrule abut.

The opposite side of the bar **31** is shaped as shown in Fig. 2 so that when assembled with the mounting bar B, it will lie contiguous thereto and provide a flat top side for the two bars, and with the upper edge of the opposite side of the ferrule **30** abutting the corresponding shoulder **25** of the bar B, and with the two ferrules **30** and **18** lying one against the other.

As with the bar B the bar **31** is provided on its under side with a pair of tongues **33** which extend downwardly into slots **34** in the upper blocks **27** of the two subsidiary brush sections. These slots **34** are in the bottoms of recesses **34***a* formed in the upper blocks. These subsidiary brush sections, together with the ferrules thereof, are adapted to be secured to the mounting bar **31**, and the latter in turn to the mounting bar B to form a unitary paint brush consisting of three brush sections, by the use of screws **35** which extend through the ferrules **30**, tongues **33** and the upper blocks **27**, and with the inner ends of the screws projecting from the ferrules and into the ferrule **18** where they are threaded in the tubular screws **26**.

Thus it becomes manifest that the two subsidiary brush sections are mounted at one side of the main brush section, and since the combined width of the subsidiary brush sections is equal to that of the main brush section, the resulting structure provides a single and relatively wide and thick brush especially adapted for painting walls and other large flat surfaces.

If it is desired to use the main brush section alone, the bristles thereof being adequate to hold sufficient paint for the painting of surfaces of smaller areas than walls, such as panels and cupboard doors, the subsidiary sections are not mounted on the main section, or if already thereon, are readily detachable therefrom by removing the screws **35** to allow the mounting bar **31** to be detached from the bar B, and the bar **31** detached from the heads **H1**.

In order that the brush sections as assembled to form a unitary brush may be used to paint, or the main brush section used alone, a handle **36** is provided. This handle has one end thereof provided with an axial and screw threaded bore or socket **37** (see Fig. 3), and in which is received a screw-threaded shank **38** of a bolt that has a head **39** of non-circular form. The shank **38** is movable laterally in a slot **40** extending crosswise at the center of the mounting bar B. Beneath this slot is a recess **41** in the lower side of the upper portion **25** of the bar B, and in this recess the bolt head **39** is non-rotatably received but movable lengthwise in the recess.

The aforedescribed construction provides means by which the handle **36** can occupy the position shown in Figs. 2 and 3 in which it is substantially centered at the top side of the bars B and **31**, to balance and thus facilitate manipulation of the brush sections as a unit in painting, or to occupy the position shown in broken lines in Fig. 3 in which it is centered on the bar B to balance and thus facilitate manipulation in painting of the main brush section.

The handle **36** can be secured in either of the foredescribed positions by screwing it downwardly on the bolt until it abuts one or both of the bars B and **31**, when it functions to pull the bolt upwardly causing the head **39** to be tightened against the upper wall of the recess **41**, thus holding the handle in one or the other position. To move the handle from one position to the other it is only necessary to unscrew it from the bolt until it disengages the bar or bars, when it can be shifted to the desired position and resecured therein as previously described.

When, through continued use of the brush, the bristles **17** and **29** wear away to a length unsuitable for use as a wall brush, the narrow subsidiary brush sections can be detached from the main brush section in the manner previously described, and individually used in the painting of window and door sashes, or other relatively narrow surfaces, merely by attaching a handle **42** to each of the sections.

As shown in Fig. 5, the handle **42** has an integral flat head **43** indented at its edges to form a continuous shoulder **44**, and provided on its under side with a rectangular projection or plug **45** which is of such a size as to snugly fit within the recess **34***a* of one of the heads **H1**. Fixed in the head **43** and projecting downwardly from the plug **45** is a metal tongue **46** of the same shape as one of the tongues **33**. At opposite ends of the plug **45** a pair of tapered pins **47** are fixed in the head **43**.

The upper block **27** of the section head **H1** is formed on its upper face at opposite ends of the recess **34***a* with a pair of tapered sockets **48** in which the pins **47** are adapted to be received.

As the handle **42** is mounted on the head **H1** the pins **47** are received in the sockets **48** and frictionally held therein by virtue of the taper of both, while the block **45** is snugly fitted within the recess **34***a*, and the tongue **46** extended into the slot **34**. Also, the head **43** snugly fits within the ferrule **30** with the upper edges of the latter abutting the shoulder **44**.

Once the handle **42** is associated with the subsidiary brush section as above described, a two-part fastening member **49** of the same construction, but of less length than the screws **26** and **35**, is extended through the ferrule **30**, between the upper and lower blocks **27** and **28** and then through the tongue **46**. Thus the tongue is secured to the section head, and by virtue of the pins **47**, the block **45**, and the manner in which the head seats in the ferrule, the brush section is securely held in the handle against movement in any direction relative thereto.

While I have shown and described the main brush section as constituting a single brush, it is to be understood that it may be made in two parts as are the subsidiary brush sections, so that when the bristles thereof wear to an unsuitable length for painting large flat surfaces, they too can be detached one from the other and used with handles **42** like the subsidiary sections for painting sashes and the like. With this modified construction, the brush as a unit will have four brush sections instead of three that are individually useable.

In Fig. 8 is shown one of the subsidiary brush sections with a handle **42** attached and a sleeve **50** slidably fitted on the ferrule **30** for longitudinal adjustment thereon to position its lower end at any point along the length of the bristles **29**, and in which it can be secured by the fastening member **49** as extended through slots **51** in the sleeve.

The purpose of this adjustable sleeve **50** is to vary the effective length of the bristles **29**. If the bristles are too long or short for proper use in a narrow brush, they can be shortened by downward adjustment of the sleeve, or lengthened by upward adjustment as the bristles shorten as a result of wear. It will be understood that various size sleeves can be used on various size brushes to achieve the same advantages.

Although I have herein shown and described only two forms of paint brushes, and one form of bristle adjusting means, each embodying my invention, it is to be understood that various changes and modifications may be made therein without departing from the spirit of the invention and the spirit and scope of the appended claims.

What I claim is:

1. A paint brush, including: a main brush section having a slotted head, and a ferrule secured about the head; a mounting bar having tongues fixed thereto and received in the slots of said head; a plurality of subsidiary brush sections each having a slotted head, and a ferrule secured

about the same; a mounting bar for the subsidiary sections having tongues received in the slots of said heads; means extending through the ferrules, heads and tongues of all of the brush sections for detachably securing the tongues in the slots of the section heads; and a handle carried by one of the mounting bars.

2. A paint brush including: a main brush section having a slotted head, and a ferrule secured about the head; a mounting bar having tongues fixed thereto and received in the slots of said head; a plurality of subsidiary brush sections each having a slotted head, and a ferrule secured about the same; a mounting bar for the subsidiary sections having tongues received in the slots of said heads; means for detachably securing the tongues of the mounting bars in the slots of the respective heads; a handle; and means mounting the handle on the first mentioned mounting bar to occupy one position in which it is centered thereon, and another position in which it is centered in respect to both of the mounting bars.

3. A paint brush, including: a main brush section having a head; a mounting bar; a plurality of subsidiary brush sections the combined width of which is equal to the width of the main brush section; each subsidiary brush section including a slotted head; a mounting bar for the subsidiary brush sections having tongues received in the slots of said heads; fastening members extending through said heads and said tongues and engaging in the head of the main brush section for detachably securing the mounting bars to each other and the heads of the subsidiary brush sections to the respective mounting bar.

4. A paint brush, including: a bristle-carrying head having a recess therein, sockets at opposite ends of the recess, and a slot in the bottom of the recess; a handle having a terminal head formed with a projection fitted in the recess; a tongue secured to the terminal head, projecting therefrom and extending into the slot; pins on the terminal head at opposite ends of the projection and

extending into the sockets; and a removable fastening member extending through the terminal head and the tongue for securing the two heads to each other.

5. A paint brush, including: a bristle-carrying head having an end recess therein, sockets at opposite ends of the recess, and a slot in the bottom of the recess; a ferrule secured about the head and projecting beyond the recessed end thereof; a handle having a terminal head with a shouldered portion fitted in the projecting portion of the ferrule; a projection on the terminal head fitted in the recess; a tongue secured to the terminal head, projecting therefrom and extending into the slot; pins on the terminal head at opposite ends of the projection and extending into the sockets; and a removable fastening member extending through the terminal head and the tongue for securing the two heads to each other.

6. A paint brush as embodied in claim 5, wherein a sleeve is fitted slidably on the ferrule in surrounding relation to the bristles carried by said head, and provided with a slot through which said member extends to secure the sleeve in any position of longitudinal adjustment whereby the bristles can be supported laterally against flexing at any point along their length.

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