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A. S. JOHNSON

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BRUSH CONSTRUCTION

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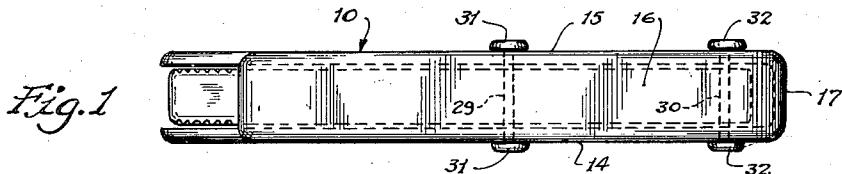


Fig. 1

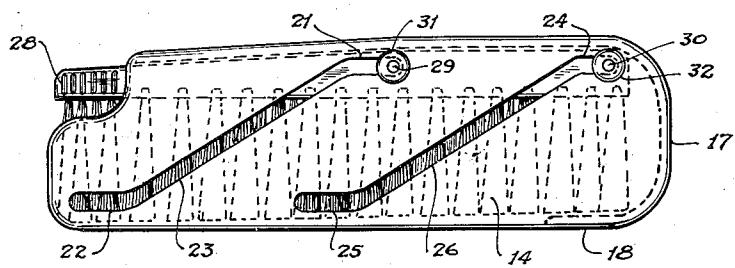


Fig. 2

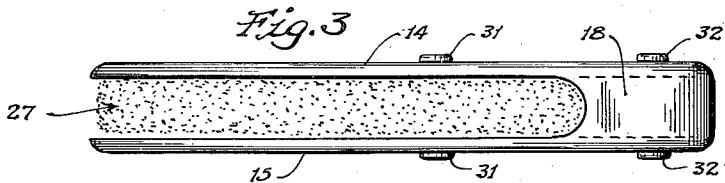


Fig. 3

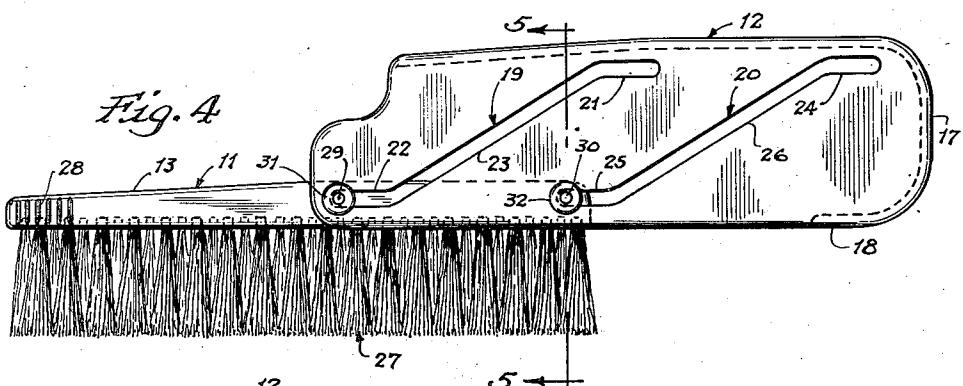


Fig. 4

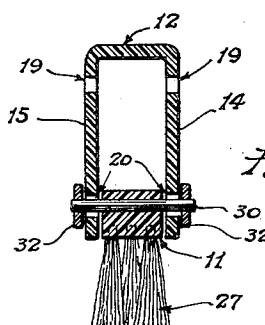


Fig. 5

INVENTOR.  
Austin S. Johnson  
BY  
Wallace and Cannon

ATTORNEYS

## UNITED STATES PATENT OFFICE

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## BRUSH CONSTRUCTION

Austin S. Johnson, Chicago, Ill.

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3 Claims. (Cl. 15—184)

**1**

This invention relates to brushes and more particularly to brushes intended to be carried in the pocket or hand luggage.

Most brushes heretofore known to the art which have been intended to be carried on the person or in the personal luggage of an individual, such as, for example, hair brushes or clothes brushes, have not been provided with a suitable carrying case so that the bristles thereof collected dirt and other foreign matter. In most instances where carrying cases have heretofore been provided for such brushes, the cases or protective coverings have been of the type which when the brush is in use it is completely disassociated from the brush. Such construction has many undesirable features, a principal one being that when the case has been removed to use the brush, it is easy to inadvertently misplace the case so that when it is again desired to place the brush in the case the individual is put to considerable inconvenience in locating the same.

In a few instances, brushes have heretofore been known to the art wherein the brush element and a protective casing or covering therefor have been permanently interconnected. However, in those few instances such brushes have heretofore involved a complicated construction which is not desirable from a commercially economical production standpoint and are relatively difficult to maintain in repair. It is an object of my invention to permanently associate a brush member with a protective casing therefor in such a manner that the complete assembly may be economically manufactured and has a minimum number of parts.

It is a further object of my invention to associate a brush with a protective casing in such a manner that the brush may easily be removed from or placed in the protective casing.

Yet, a further object of my invention is to associate a brush member with a casing therefor in such a manner that when the brush is retracted into the casing the bristles thereof are adequately protected by the casing and when the brush is removed from the casing into operative position to be used in brushing, the casing forms a convenient handle which may be grasped in the hand during the brushing operation.

It is a further object of my invention to associate the brush in such a manner with the casing

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that the brush is at all times connected to the casing and when the brush is retracted into the casing a portion of the casing underlies the bristles of the brush.

Other and further objects of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawing which, by way of illustration shows a preferred embodiment and the principle thereof and what I now consider to be the best mode in which I have contemplated applying that principle. Other embodiments of the invention embodying the same or equivalent principle may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

In the drawings:

Fig. 1 is a top plan view of a brush embodying the principles of my invention showing the brush retracted into the case in carrying position;

Fig. 2 is a side elevational view of the brush as shown in Fig. 1;

Fig. 3 is a bottom plan view of the brush as shown in Figs. 1 and 2;

Fig. 4 is a side elevational view showing the brush in operative position extended from the casing;

Fig. 5 is a sectional view substantially taken on the line 5—5 in Fig. 4.

The brush 10 shown in the drawings comprises in general a brush member or brush head 11 and a casing 12 therefor. The casing 12 and the back 13 of the brush 11 may be made of any suitable material such as wood, steel, hard rubber or a plastic. However, I prefer to construct the casing 12 and the back 13 from a suitable transparent plastic available on the market such as, for example, the plastic sold under the trade name Lucite.

The casing 12 comprises side walls 14 and 15, a top wall 16, a rear wall 17, and a bottom wall 18 which extends forwardly along a portion of the length of the casing 12 from the rear wall 17 and thereby stiffens and gives support to the side walls 14 and 15 at the lower edges thereof. As best seen in Figs. 1 and 3 the front end portion of the casing 12 and the forward bottom portion of the casing 12 are open so that, as will be more specifically set forth hereinafter, the brush 11

may be easily inserted into the casing 12 and retracted therefrom. Slots 19 and 20 are provided in each of the side walls 14 and 15 for purposes which will be presently described. As best seen in Figs. 2 and 4 each of the slots 19 comprises substantially parallel upper and lower end portions 21 and 22, respectively, the inner end portions of which are interconnected by a slanting transverse portion 23. Similarly, each of the slots 20 comprises substantially parallel upper and lower end portions 24 and 25, respectively, the inner end portions of which are interconnected by a slanting transverse portion 26.

The brush member 11 comprises a back 13 into which are set bristles 27 in a manner well known to the art. The front end portion of the back 13 has corrugations formed thereon, or may be otherwise roughened, to provide a finger grip 28 for the easy insertion of the brush into and the removal of the brush from the casing 12. Follower means in the form of guide rods 29 and 30 extend through the back 13 transversely to the longitudinal axis thereof, and when the brush member 11 is mounted in the casing 12 the rod 29 extends through the slots 19 in the side walls 14 and 15 of the casing 12 while the rod 30 extends through the slots 20 in the side walls 14 and 15 in the casing 12. Thus, the brush 11 is supported from the casing 12 by the rods 29 and 30 which extend through the back 13 and the slots 19 and 20 respectively. The rods 29 and 30 are retained in position through the back 13 and the slots 19 and 20 respectively by means of retaining washers 31 and 32 respectively. The washers 31 and 32 are placed on the ends of the respective rods and the ends of the rods are then flattened or upset to prevent the washers from slipping off.

In operation it will be noted that when it is desired to carry my brush in a pocket or pack it in luggage the brush 11 is enclosed within the casing 12 in the position shown in Figs. 1, 2 and 3 with the rods 29 and 30 resting in the upper portions 21 and 24 of the slots 19 and 20 respectively. It will be noted that when in this position the bottom wall 18 which extends forwardly from the rear wall 17 underlies the most rearwardly positioned bristles 27. When it is desired to use the brush member 11 in a brushing operation the brush member 11 may be easily removed from the casing 12 by grasping the finger grip 28 in one hand and the rear portion of the casing 12 in the other hand and, by pulling on the brush 12, thereby move the rods 29 and 30 forwardly and downwardly from the upper portions 21 and 24 to the lower portions 22 and 25 of the slots 19 and 20, respectively, in which latter position the bristles 27 extend from the casing 12 in usable position, as shown in Fig. 4. It will be noted that when the brush member 11 is extended from the casing 12 as best shown in Fig. 4 the rear portion of the casing 12 provides a convenient handle which may be grasped in the hand during the brushing operation.

To replace the brush 11 within the casing 12 the operator may push on the forward end portion of the brush 11 and the rearward end portion of the case 12 and thereby slide the rods 29 and 30 up the inclined portions 23 and 26 of the slots 19 and 20 until they come to rest in the rear of the flat portions 21 and 24, respectively, of the slots 19 and 20, at which point the bristles 27 will again be positioned within the case 12 and protected thereby.

From the foregoing description of the construc-

tion and operation of my brush taken in conjunction with the accompanying drawings it will be apparent that I have provided a novel and practical brush wherein the bristles are well protected when the brush is in closed or carrying position within the case, and embodying a novel combination of parts which is sturdy in construction, positive in action, simple to operate, and will give long and continuous service.

Hence, while I have illustrated and described the preferred embodiments of my invention, it is to be understood that this is capable of variation and modification and I therefore do not wish to be limited to the precise details set forth, but 15 desire to avail myself of such changes and alterations as fall within the purview of the following claims.

I claim:

1. In a brush assembly, a hollow housing having spaced side walls and a top wall and one end wall so as to thereby afford one open end and an open bottom in said housing, an elongated brush comprising a back and bristles extending from one face of said back, said brush being of such a size as to fit in a protected position within said housing with said back thereof disposed adjacent said top wall and with said bristles disposed between said side walls and extending toward said open bottom, and cooperating guide pins on said brush back and guide slots in said side walls to guide said brush from said protected relation along a path extended at an angle relative to said top wall and generally toward the juncture of said open end with said open bottom to an operative position wherein said brush back projects endwise from said housing parallel and adjacent to said open bottom while said bristles are projected laterally of the housing beyond the plane of the open bottom thereof.
2. In a brush assembly, a hollow housing having spaced side walls and a top wall and having at least one open end and an open bottom in said housing, an elongated brush comprising a back and bristles extending from one face of said back, 45 said brush being of such a size as to fit in a protected position within said housing with said back thereof disposed adjacent said top wall and with said bristles disposed between said side walls, and cooperating guide pins on said brush back and 50 guide slots in said side walls to guide said brush from said protected relation along a path extended at an angle relative to said top wall and generally toward the juncture of said open end with said open bottom to an operative position 55 wherein said brush back projects endwise from said housing while said bristles are projected laterally of the housing beyond the plane of the open bottom thereof.
3. In a brush assembly, a hollow housing having spaced side walls and a top wall and having at least one open end and an open bottom in said housing, an elongated brush comprising a back and bristles extending from one face of said back, said brush being of such a size as to fit in a protected position within said housing with said back thereof disposed adjacent said top wall and with said bristles disposed between said side walls, and cooperating guide pins on said brush back and guide slots in said side walls to guide 65 said brush from said protected relation along a path extended at an angle relative to said top wall and generally toward the juncture of said open end with said open bottom to an operative position wherein said brush back projects endwise from said housing while said bristles are projected laterally of the housing beyond the plane of the open bottom thereof.
4. In a brush assembly, a hollow housing having spaced side walls and a top wall and having at least one open end and an open bottom in said housing, an elongated brush comprising a back and bristles extending from one face of said back, said brush being of such a size as to fit in a protected position within said housing with said back thereof disposed adjacent said top wall and with said bristles disposed between said side walls, and cooperating guide pins on said brush back and guide slots in said side walls to guide 70 said brush from said protected relation along a path extended at an angle relative to said top wall and generally toward the juncture of said open end with said open bottom to an operative position wherein said brush back projects endwise from said housing while said bristles are projected laterally of the housing beyond the plane of the open bottom thereof.

jected laterally of the housing beyond the plane of the open bottom thereof, said guide slots having extended end portions at each end thereof disposed parallel to said top wall so that the terminal portion of the movement of the brush into either its protected position or its operative position is parallel to said top wall.

AUSTIN S. JOHNSON.

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