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TCP TWD  
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(54) Dispensing brush attachment for bottled barbecue sauce

(57) A dispensing brush attachment 20 for a bottle containing e.g. barbecue sauce, comprises a connecting socket 10 with its lower end 11 squeezed onto the mouth of the bottle and its upper end 12 detachably mating with a connecting sleeve (22 Fig. 4) of a brush assembly so that when an opened bottle is held upside-down, the sauce flows through the flow channel 23 within the connecting sleeve (22, Fig. 4) through the brush seat 21 among a plurality of grooves, (232, Fig. 5) and through the brush bristles. A ball valve 24 disposed in the path of the flow channel 23 regulates the sauce flow. The socket has a built-in tamper-proof seal (13, Fig. 2 and Fig. 3) which is broken by a pull ring. The outer periphery of the upper end 12 of the socket 10 is provided with male threads 121, enabling a female-threaded cap to be placed thereon for the closure of the bottle. Cord means (261, Fig. 4) connect the brush head assembly 20 onto the neck of the bottle for carrying purposes when the assembly is detached from the bottle and the bottle is capped.

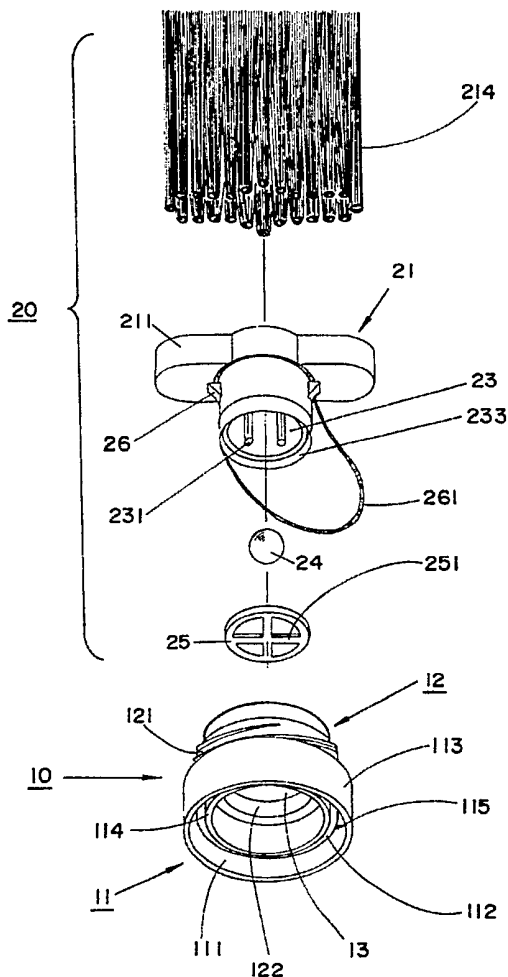


FIG. 1

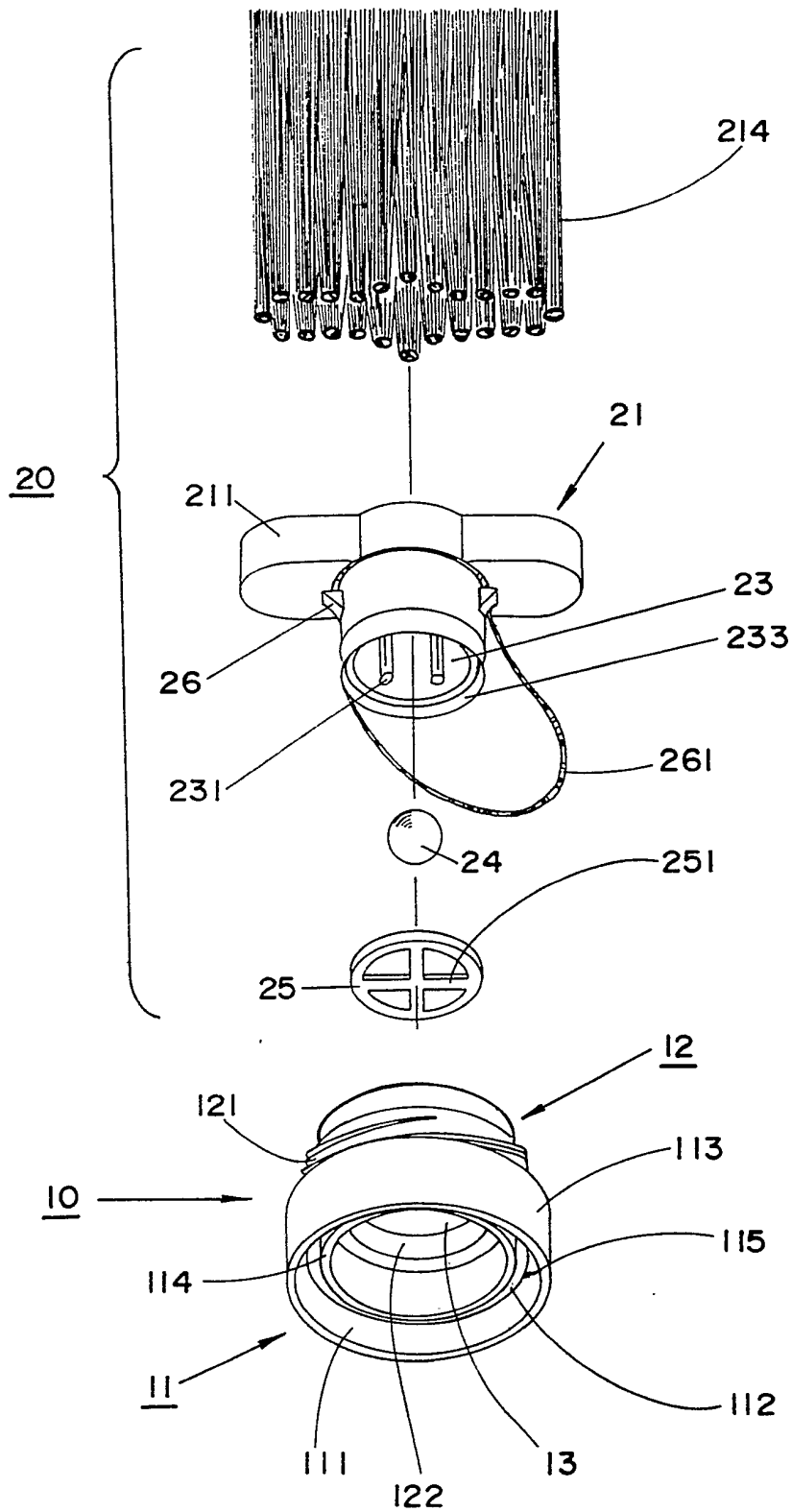


FIG. 1

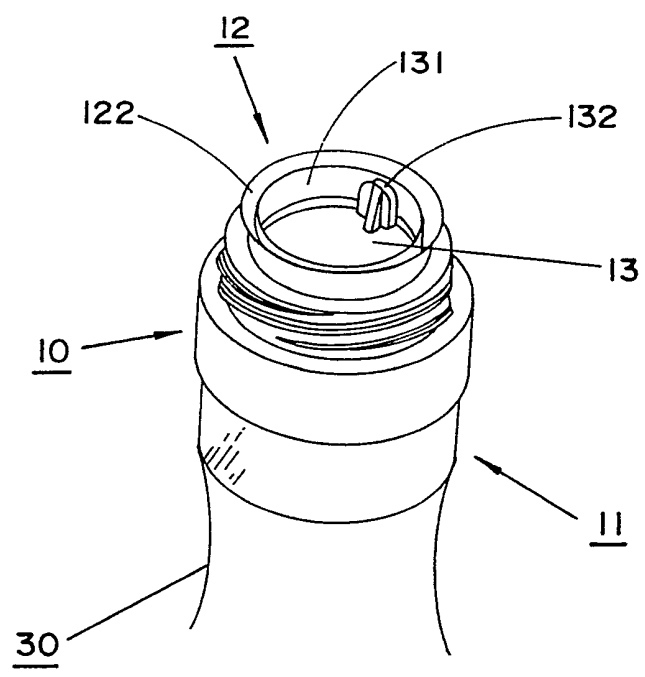


FIG. 2

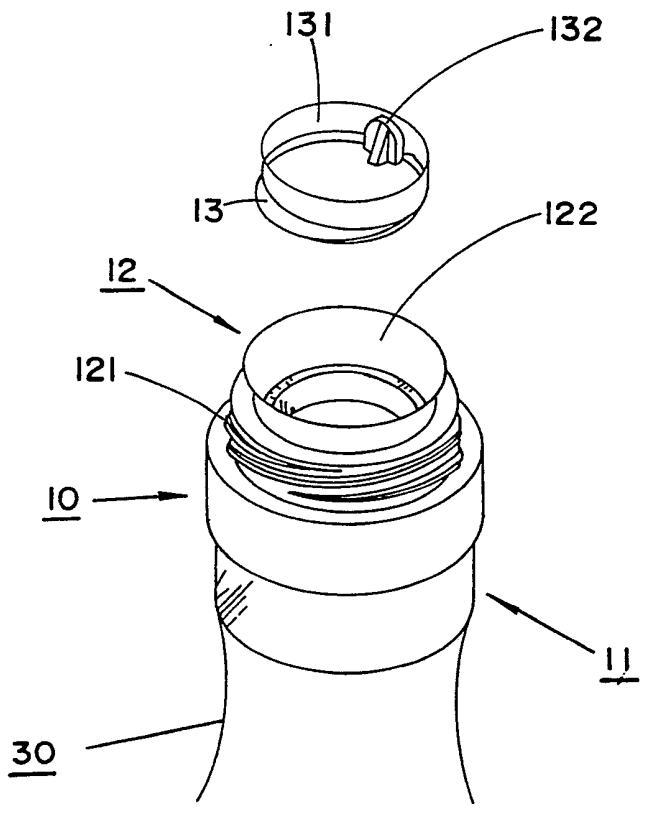
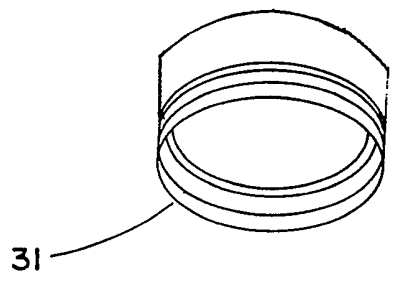


FIG. 3

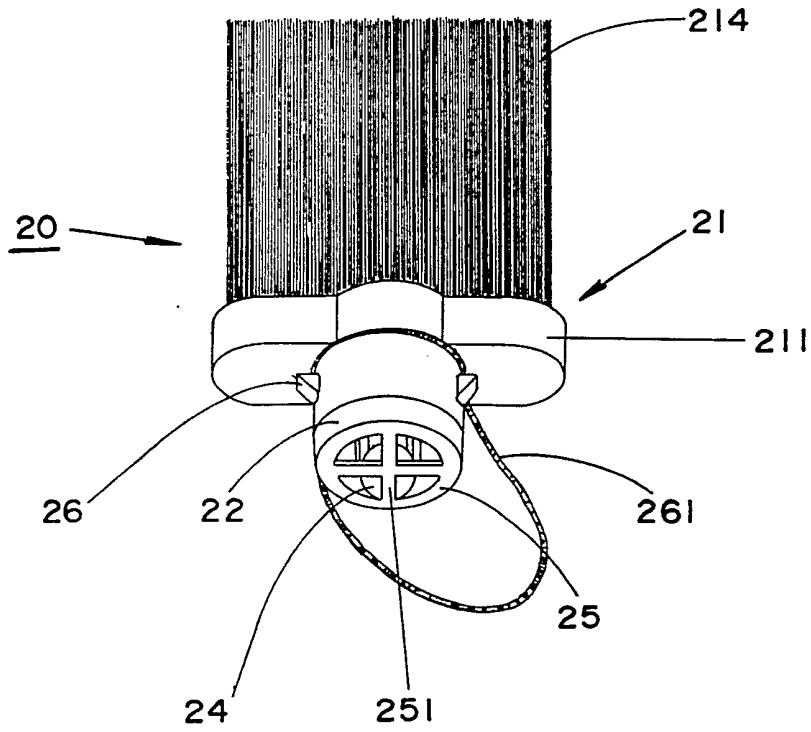
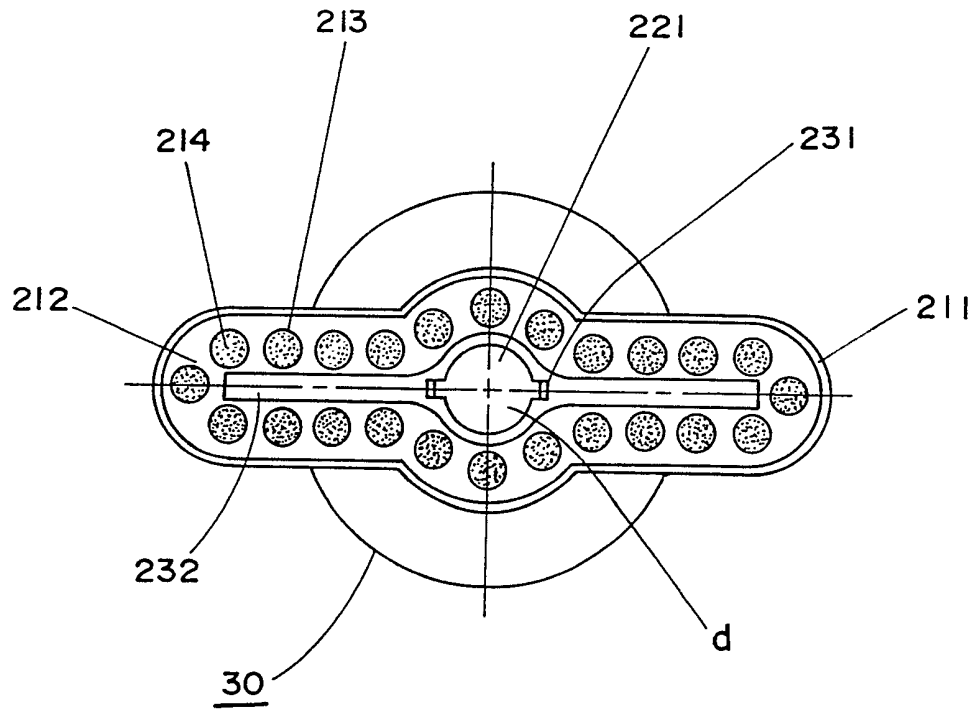
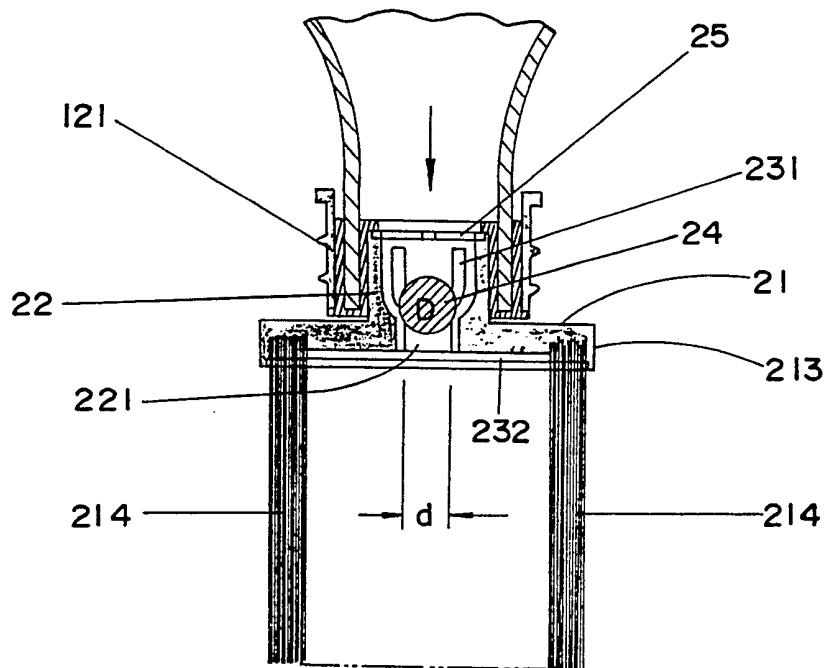


FIG. 4

FIG. 5FIG. 6

**DISPENSING BRUSH ATTACHMENT  
FOR BOTTLED BARBECUE SAUCE**

The present invention relates generally to a brush means and more particularly to a dispensing brush attachment for a bottle barbecue sauce comprising a socket means with its lower end connected to the bottle mouth and its upper end to a brush head for dispensing. The upper end of the socket having male thread provided around its outer periphery is adapted to mate with the lower end of a closure cap when the bottle contents are not in use and the brush head is detached from the bottle mouth. A built-in tamper-proof seal is made integrally with the socket and can be pulled off to enable serving the bottle contents.

Barbecuing has been a popular out-door activity nowadays carried out at camping and picnics. Barbecue sauce is an indispensable item which is usually bottled and upon using, spread around with a brush. Suppliers of bottle sauce sometimes provide brushes as a bonus to the consumers. However, the adaptation of the brush to the bottle for direct dispensing is what is dreamed about by users.

Some products in this respect have been available in a rather crude form e.g. when a brush with a hollow shaft handle serves such a purpose by being inserted directly into a sauce containing a bottle mouth of

which the outside periphery is provided with male threads to mate with a female threaded cap as the brush is detached. The insertion of the brush is rather clumsy and rough and the user would feel uncomfortable and appear to be clumsy facing such an operation. Besides, the detached brush is no longer related to the bottle and hence may easily be lost when being separately stored.

Therefore, the main object of the present invention is to provide a detachable brush assembly, with an additional socket having its lower end pre-squeezed onto an unthreaded mouth of a sauce bottle and readily engaged herewith so as to be an inseparable or an integral part thereof while the upper end of the socket is easily insertable into a connecting sleeve of a brush head assembly to alleviate the undesirable short-comings of a conventional brush head. The upper end is instead provided with male threads to mate with a female threaded cap.

Another object of the present invention is to provide a brush head assembly having a flow channel provided within the connecting sleeve to which a brush seat is attached. With distribution grooves disposed therein to spread the sauce flow among bristle receiving holes for dispensing, and within the flow path of the channel, a ball check valve is provided to regulate the flow.

A further object to the present invention is to provide attaching means to the brush head assembly including a pair of lugs on which a cord is provided to facilitate suspension of the detached brush head from the bottle neck, so that the brush head could not easily get lost when not in use.

Still another object of the present invention is to provide a built-in tamper-proof seal made integrally within the upper end of the connecting socket, upon opening of the bottle for serving the bottle contents, the seal can be easily peeled off with a puller ring hinged to the seal.

Other objects and features of the present invention will become apparent with the following detailed description taken in conjunction with the annexed drawings depicting a preferred embodiment according to the present invention, in which:

Fig.1 is an exploded perspective view of a preferred embodiment of the dispensing brush attachment for bottled barbecue sauce according to the present invention.

Fig. 2 is a perspective view depicting a connecting socket as applied to the mouth of a barbecue sauce bottle with a built-in tamper-proof seal;

Fig. 3 is a view similar to Fig. 2, but with seal pulled off prior to the use of the sauce;

Fig. 4 is a perspective view of the related brush



head showing a grated check grid of a flow regulating ball;

Fig. 5 is a top view of the seat brush head;

Fig. 6 is a longitudinal section of the brush head assembly revealing the flow pathway with a regulating ball in position. A list of components is provided hereunder to facilitate the reading of the drawings.

Now referring to Fig. 1 for a preferred embodiment of the dispensing brush attachment of the present invention. The brush attachment can be clearly seen to comprise a bottle-connecting socket 10 and a brush head assembly 20 wherein the connecting socket 10 includes a lower end 11 for receiving the mouth of a sauce containing bottle 30 (Figs. 2 and 3); an upper end 12 for receiving a brush head assembly 20, where the assembly 20 includes a brush seat 21, a connecting sleeve 22 extended from the brush seat 21, and is forced into a flow channel 23 within the sleeve 22; and characterised in that, the lower end 11 of the socket 10 has a tapered inlet 111 leading to a bottle mouth retaining groove 112 extending circumferentially, a recess being formed between a pair of concentric cylindrical walls, i.e. the outer wall 113 and inner wall 114. A plurality of minute tangentially extending flanges 115 are provided with the groove 112 outside the inner wall 114, for tightly squeezing onto the

sauce containing bottle mouth and elastically gripping it. The upper end 12 is formed with a hollow through passageway adapted for smoothly receiving the insertion of the connecting sleeve 22 of the brush head assembly 5 20 so that The inside of the bottle can communicate with the dispensing brush.

Referring in the meantime to Figs 4, 5 and 6, the brush head assembly 20 is composed of a brush seat 21 extending from the connecting sleeve 12. The seat 21 10 is surrounded by a wall 211 which is seen to have a generally oval shape, and to form a shallow recess 212. A plurality of distribution grooves 232 defined within the recess 212 communicate from the flow channel 23 within the connecting sleeve 22 of the assembly 20 15 through a flow path opening 221 and are seen to be dispersed among the distribution grooves 232 leading toward a plurality of bristle receiving holes 213 where respective bundles of bristles 214 are received.

At the end of the connecting sleeve 22 remote from 20 the brush seat 21, a grate retaining seat 233 is provided to receive a grate member 25 with check grid 251 disposed thereon. The bottle contents entering through the grate 25 into the flow channel or flow path 23 leading to a flow path opening 221 having a diameter 25 d, then spreads through distribution grooves 232. A pair of flow guide ribs 231 extending along the flow path serve to guide the flow into the opening 221. A

ball of diameter D is disposed within the flow path for regulating the flow during the dispensing of the bottle contents, where  $D > d$ ; thus the ball can serve as a check valve. However, the grate is located at the opposite  
5 end of the flow path so as to prevent the ball 20 from falling out of the flow path, when the brush head is held upright.

The upper end 12 of the connecting socket 10 is also provided with male thread 121 to mate with a  
10 female threaded cap 31 for the closure of the bottle 30.

From Fig. 4, it can also be seen that a pair of attaching lugs 26 are disposed diametrically opposite one another outside the connecting sleeve 22 to receive  
15 an endless loop of cord 261 suspended thereupon to facilitate suspension from a bottle neck when the brush-head assembly is detached from the socket 10.

In Figs. 2 and 3, a tamper-proof seal 13 is shown respectively in a built-in mode and in a pull-off mode.  
20 The seal 13 is formed integrally with a seal retainer 122 disposed within the upper end 12 of the socket 10 and can be easily pulled off with a self-contained puller ring 131 adhered to a puller hinge 132 connected with the seal 12. Upon opening of the bottle before  
25 the insertion of the brush assembly 20, the seal 12 is pulled off.

The above description by way of preferred

embodiment is for illustration purpose only and not for  
limitation. Those who are skilled in the art can  
modify in many possibilities without departing from the  
spirit of this invention and shall be deemed as  
5 covering under the scope of the annexed claims.

## COMPONENT LIST

- 10 connecting socket
- 11 lower end, bottle receiving
  - 111 taper inlet
  - 112 bottle mouth retaining groove
  - 113 outer cylindrical wall
  - 114 inner cylindrical wall
  - 115 minute flanges
- 12 upper end, brush assembly receiving
  - 121 male thread for cap
  - 122 seal retainer
- 13 seal, tamper-proof
  - 131 seal puller ring
  - 132 puller hinge
- 20 brush head assembly
- 21 brush seat
  - 211 seat wall
  - 212 recess
  - 213 bristle receiving hole
  - 214 bristles
- 22 connecting sleeve
  - 221 flow path opening (d)
- 23 flow channel
  - 231 flow guide rib
  - 232 distribution groove
  - 233 grate retaining seat
- 24 flow regulating ball (D)
- 25 grate member
  - 251 check grid
- 26 attaching lug
  - 261 attaching cord
- 30 bottle
- 31 cap, female-threaded

**CLAIMS**

1. A dispensing brush attachment adapted for being attached to a bottle normally filled with a viscous liquid, comprising in combination;

a bottle-connectable socket having an open end adapted for receiving a bottle neck, and an other end opposite said open end for receiving a brush-head assembly, a through-passage forming a flow path extending between said ends,

said brush-head assembly including a brush seat, and a connecting sleeve extending away from said brush seat, a flow channel being formed in said connecting sleeve,

said open-end being formed with a tapered inlet bordered by a circumferentially extending bottle-mouth retaining groove formed with a plurality of tangentially extending flanges adapted to elastically engage said bottle neck,

said connecting sleeve being insertable into said bottle-containing socket.

2. The dispensing brush attachment according to claim 1, wherein said brush seat includes a circumferentially extending wall, said wall being formed with a recess communicating with a plurality of distribution grooves extending within said recess, said distribution grooves communicating with said flow path,

a plurality of bristle-receiving holes in said brush seat communicating with said flow path.

3. The dispensing brush attachment as claimed in claim 2, wherein said connectable sleeve is formed near  
5 said open end of said bottle-connecting socket with a flow-path opening having a predetermined diameter "D", and terminating in a grate-retaining seat, and further including a grate member fitting into said grate-retaining seat, and being provided with a check-grid, a  
10 pair of flow-guide ribs extending along said flow path for guiding the liquid flow into said flow-path opening, a ball of a diameter "D" exceeding said predetermined diameter "d" of said flow-path opening for regulating the liquid flow through said flow-path,  
15 when said brush-head assembly is operatively pointing downwardly, but being seated on said check grid, when said brush-head assembly is pointing upwardly, whereby said ball serves as a check valve during flow of said liquid, while said grate member prevents said ball from  
20 being released from said flow-path, when said brush head assembly is held in an upright position.

4. The dispensing brush attachment as claimed in claim 1, wherein said bottle-connecting socket is provided with a male thread adapted to mate with a  
25 female thread provided on a cap for closure of the bottle.

5. The dispensing brush attachment as claimed in

claim 1, wherein said connecting sleeve is provided with two attachment lugs disposed diametrically opposite one another for receiving an endless loop of a cord, said cord being adapted to be suspended from the  
5 bottle neck, when said brush-head assembly is detached from the bottle.

6. The dispensing brush attachment as claimed in claim 1, further comprising a tamper-proof seal formed integrally with a seal retainer disposed on said  
10 open end of said socket, and a self-containing pulling ring affixed to a hinge connected to said socket.



**Relevant Technical fields**

- (i) UK Cl (Edition L) A4K (KBA, KBX, KEA)  
B8T (TWD, TCM, TCP)
- (ii) Int Cl (Edition 5) A46B

**Search Examiner**

DR C L DAVIES

**Databases (see over)**

(i) UK Patent Office

(ii)

**Date of Search**

18 FEBRUARY 1993

Documents considered relevant following a search in respect of claims

1-6

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
A	GB 2012575 A (RECKITT) see Figure 1	
A	US 4710048 A (VARTOUGHIAN) see Figure 1	

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**Categories of documents**

**X:** Document indicating lack of novelty or of inventive step.

**Y:** Document indicating lack of inventive step if combined with one or more other documents of the same category.

**A:** Document indicating technological background and/or state of the art.

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