

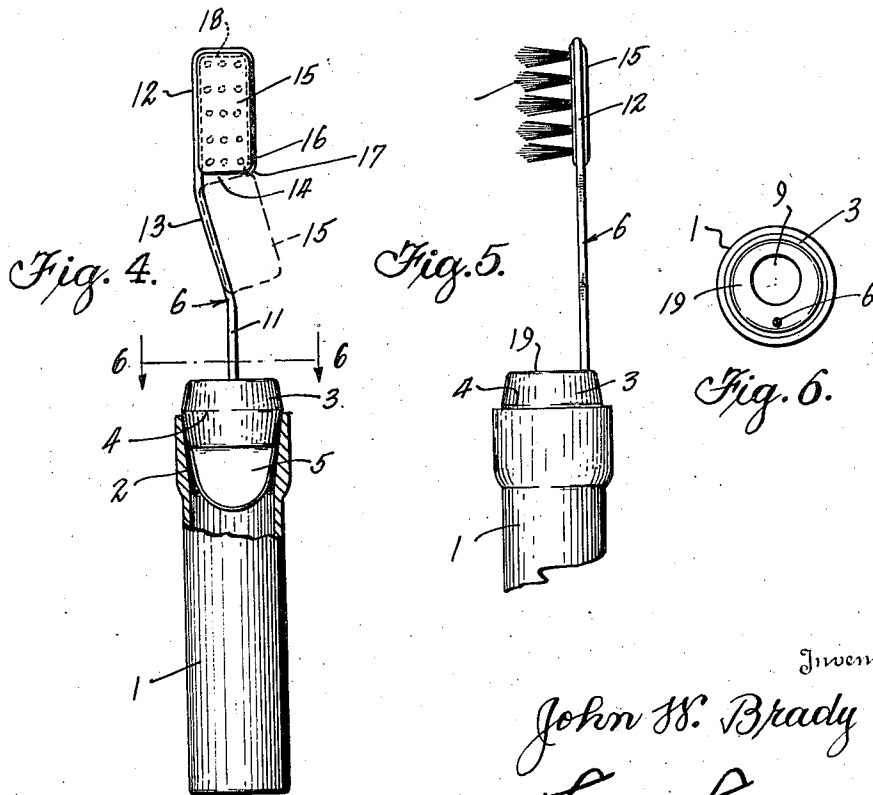
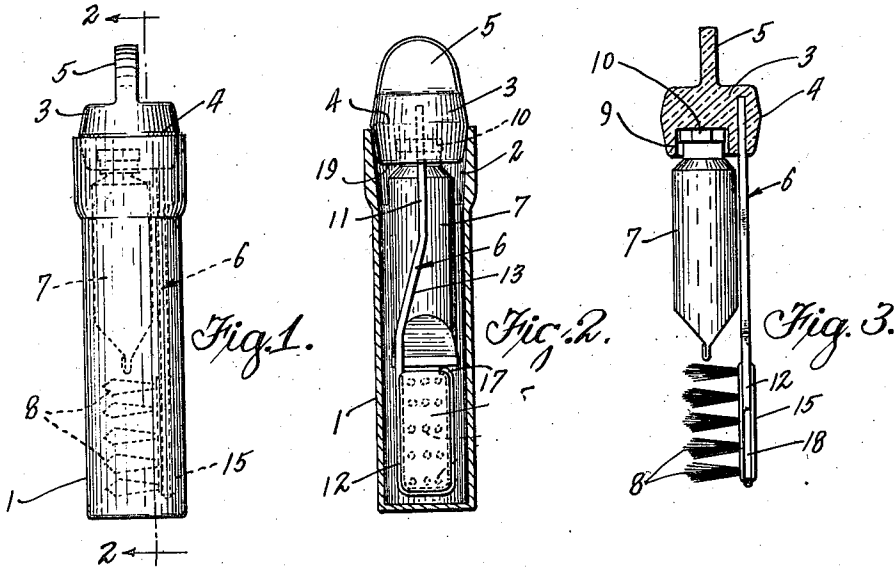
Feb. 9, 1943.

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2,310,571

TOOTHBRUSH PACK

Filed Sept. 12, 1941



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UNITED STATES PATENT OFFICE

2,310,571

TOOTHBRUSH PACK

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Application September 12, 1941, Serial No. 410,555

4 Claims. (Cl. 132-84)

This invention relates to a toothbrush pack, and the object of the invention is to produce a pack of simple construction, which will enable a toothbrush and a tube of toothpaste to be readily carried in a closed case, but so constructed that by simple movements the toothbrush can be set up on the end of the case to enable the case to operate as a handle in using the brush.

The invention is particularly applicable in the construction of a case of this kind, in which a reversible head is provided which operates as a base for attachment of a stem that carries the brush; and one of the objects of the invention is to provide a construction that will enable the brush to be readily removed for replacement when its bristles have become worn, and at the same time provide ample clearance space so that a tube of toothpaste can be carried between the bristles of the brush and the reversible head.

A further object of the invention is to provide the reversible head with a stem of improved form, which will enable it to perform the functions referred to above, and at the same time to give the stem a form which will facilitate the guiding of a new brush back and brush into the loop that is formed at the end of the stem for carrying the brush.

Further objects of the invention will appear hereinafter.

The invention consists in the novel parts and combination of parts to be described hereinafter, all of which contribute to produce an efficient toothbrush pack.

A preferred embodiment of the invention is described in the following specification, while the broad scope of the invention is pointed out in the appended claims.

In the drawing:

Fig. 1 is a side elevation of the pack in its closed condition.

Fig. 2 is a vertical section, but showing the brush as viewed from the back.

Fig. 3 is a side elevation of the brush and toothpaste tube, but with the reversible head shown in cross-section, and with a portion of the loop of the stem broken away to illustrate how this loop at the end of the stem engages the back of the brush to hold the same in position.

Fig. 4 is a side elevation and partial section showing the parts with the reversible head applied in its reversed or operating position, as when the brush is to be used. In dotted lines, the manner in which the stem of the brush operates to guide the brush into position is indicated.

Fig. 5 is a side elevation showing the lower portion of the case broken away, and showing the brush as viewed from its side.

Fig. 6 is a cross-section through the stem taken on the line 6-6 of Fig. 4, and further illustrating details of the invention.

In practicing the invention, I provide a tubular case 1 that is preferably made out of some composition such as tenite, or some other composition that is not readily breakable. At its open end this case is preferably provided with an enlarged and slightly conical mouth 2 in which is carried a reversible head 3. This head has its largest diameter at the line 4, and tapers conically in both directions from this point. At the outer side of the head when the case is in its closed relation, the handle or fin 5 is provided to facilitate pulling the head out and reversing it.

On the inner face of the head in its normal position such as illustrated in Figs. 1 and 2, a stem 6 carried in the head is located eccentrically on the head so that this stem lies quite near the wall or side of the holder. This is illustrated by the dotted lines in Fig. 6.

By placing this stem eccentrically in this way, a considerable space is formed between the stem and the remote side of the holder, and in this space a tube 7 of toothpaste is carried.

In this way the tube is made to occupy the space between the head 3 and the bristles 8 which project toward the axis of the tubular case, and in order to assist in keeping the paste-tube 7 in its properly aligned position, I prefer to provide the inner face of the head 3 with a socket 9 to receive the cap 10 of the paste-tube.

As the length of this tube should be sufficient to enable its lower end to lie near the bristles, in using the paste, it is preferable to squeeze the paste out of the tube by a lateral pressure on its sides, rather than rolling the tube up from its lower end.

The stem 6 is preferably constructed of stout wire having some resiliency, and this stem includes a substantially straight shank 11 that is secured in the head 3 when it is molded. Although this stem can carry a permanently secured brush, I prefer to construct it so that the brush can be removed when desired, so as to replace it with a new brush. In order to accomplish this, I prefer to form the inner end of the stem 6 into an elongated "loop" 12 which forms a resilient socket of substantially rectangular form (see Fig. 4) and one side of this loop connects integrally with an inclined extension 13 that is integral with the shank 11. The socket or loop 12

is preferably formed by bending the outer end of the material, that forms the stem. In the present instance the wire forming the loop is bent around with a return bend, so as to leave an opening or throat 14 at which the brush back 15 can be introduced. In order to accomplish this, and at the same time retain the brush in the loop, the unsecured side 16 of the loop is formed with an inwardly projecting bend or dog 17 that projects toward the inclined extension 13. Furthermore, the edge of the brush back 15 is provided with a continuous peripheral groove 18. The inclined extension 13 operates as a guide in placing the brush back in the loop 12. This is indicated in Fig. 4 by the dotted lines that indicate the outline of the brush back. In putting the brush in position, one side edge can be placed against the inclined extension with the nib or catch 17 resting in the groove 18 at the opposite side. Then by showing upwardly on the lower end of the brush back, the free side or tongue 16 of the loop can be sprung outwardly so as to permit the brush back to pass up into the loop. When the brush back is completely seated, then the nib or catch 17 will project slightly across the lower end of the brush and lock it in place. Of course, the brush can be readily removed by reversing the movements just described.

It is not essential that the head 3 be constructed as a plug for closing the mouth of the case 1. It is merely necessary that the head 3 and the case be so constructed as to permit the head to be applied in a reversed position with the stem 6 extending outwardly as indicated in Figs. 4 and 5, when the brush is set up for use. This plug form, however, for the head, is advantageous because in the set-up position of the brush, a flat face 18 of considerable area presents itself, against which the person using the brush can press his thumb or forefinger, in order to securely hold the handle and at the same time prevent any possibility that the manipulation of the brush in the mouth would cause the head 3 to come out of the mouth 2 of the case.

While it would be possible to use a tapering thread on the conical faces of the head 3 to constitute a rigid connection in either position of the head, the use of such thread would require more time for moving the brush from its pack position to its open position, and that would be objectionable.

This toothbrush pack is particularly useful in traveling, because it makes it unnecessary to wrap up the toothpaste and tube, or the brush, the bristles of which are protected by the tubular case.

What I claim is:

1. In a toothbrush pack, the combination of a tubular case, a reversible head normally closing the end of said case, a stem secured in said head at an eccentric point and extending into the interior of the case adjacent the wall thereof, having an elongated resilient loop open at one end, a brush having a back with a groove engaging the said loop to secure the brush to the free end of said stem, with its bristles projecting toward the axis of the case, and a toothpaste tube held in the case between the bristles and said head.

2. In a toothbrush pack, the combination of a tubular case, a reversible head normally closing the end of said case, a stem having a shank secured in said head at an eccentric point extending into the interior of the case adjacent the wall thereof, said stem having an elongated resilient loop at its inner end with an inclined extension integrally connecting the shank with the loop, said loop having a throat at its inner end for the insertion of the brush, a brush having a back with a peripheral groove adapted to be slid into the throat of the loop so that the sides of the loop engage in the peripheral groove to maintain the brush back yieldingly in the loop, said brush having bristles projecting toward the axis of the case; and a toothpaste tube received in the space between the bristles and said head.

3. In a toothbrush pack, the combination of a tubular case, a reversible head normally closing the end of said case, a stem secured in said head at an eccentric point and extending into the interior of the case adjacent the wall thereof, having an elongated resilient loop open at one end, a brush having a back with a groove engaging the said loop to secure the brush to the free end of said stem, with its bristles projecting toward the axis of the case, and a toothpaste tube held in the case between the bristles and said head, the inner face of said head having a socket to receive the cap end of the paste-tube.

4. In a toothbrush pack, the combination of a tubular case, a reversible head normally closing the end of said case, a stem secured in said head at an eccentric point and extending into the interior of the case adjacent the wall thereof, said stem being bent at its outer end to form a resilient socket, a brush having a back constructed to fit into said socket and engage the same to secure the brush to the free end of said stem with its bristles projecting toward the axis of the case, and a toothpaste tube held in the case between the bristles and said head.

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