July 28, 1936. A. P. C. SCHRAMM 2,048,713

MASSAGE APPLICATOR

Filed March 10, 1934

Fig. 1.

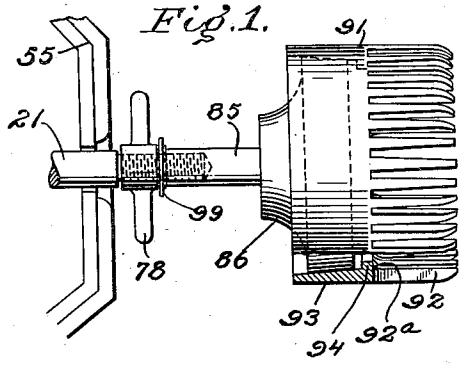


Fig. 2.

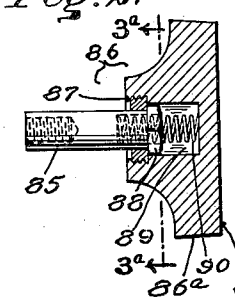


Fig. 4.

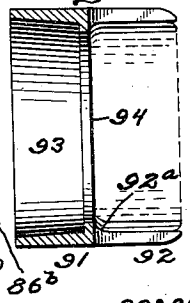


Fig. 3.

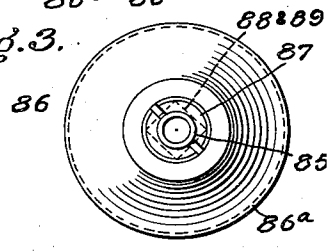


Fig. 5.

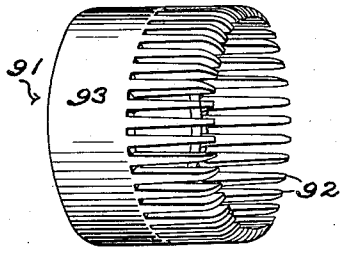


Fig. 3a.

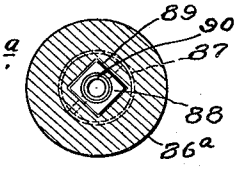


Fig. 6.

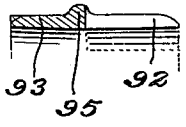


Fig. 7.

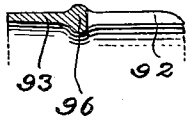


Fig. 8.

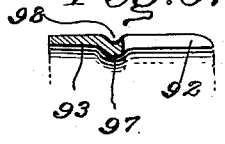


Fig. 9.

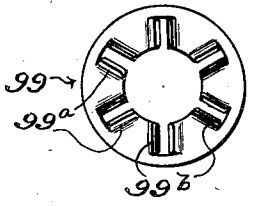
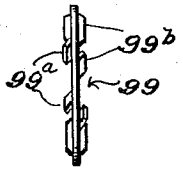


Fig. 10.



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MASSAGE APPLICATOR

Adolf P. C. Schramm, New York, N. Y.

Application March 10, 1934, Serial No. 714,896

4 Claims. (Cl. 128—67)

This invention is a novel massage applicator and has reference to an applicator or massage instrument adapted especially for use in connection with an electric vibrator machine, although in some aspects adapted also for manual massage use.

The applicator herein disclosed as an illustrative embodiment of the present invention is shown designed especially for use on a vibrator of the type wherein the applicator is mounted on a shaft which, in contrast to a lateral or longitudinal vibration oscillates through a small arc about its own axis; this type of vibrator machine being illustrated in my prior application Serial No. 676,611, filed June 20, 1933, of which the present application is in part a continuation.

The general object of the present invention is to afford a massage applicator having certain special operative value and utility as will be hereinafter described. A particular object is to afford an applicator for an oscillating movement in which the pressure is cushioned, as by a spring, affording an easy means of graduating or regulating the force or pressure of operation. A further object is to afford an oscillating applicator in the nature of a comb, being shown as a circular comb, applicable to the scalp; and in this aspect the construction of the circular comb herein shown is believed to be novel whether operated by machine or manually.

Other and further objects and advantages of the present invention will be explained in the hereinafter following description of an illustrative embodiment thereof or will be apparent to those conversant with the subject. To the attainment of such objects and advantages the present invention consists in the novel massage applicator or instrument, and the novel features of combination, arrangement and construction herein illustrated or described.

In the accompanying drawing Figure 1 is a side elevation of a massage applicator embodying this invention, shown partly broken away to indicate details of construction, and shown applied to the oscillating shaft of an electric vibrator corresponding with that illustrated in said prior application.

Fig. 2 is an axial section view of a part of the complete applicator shown in Fig. 1, this portion being capable of use as an applicator without the portion omitted from this figure.

Fig. 3 is a left end elevation of the applicator shown in Fig. 2; and Fig. 3ª is a section on the line 3ª of Fig. 2.

Fig. 4 is an axial section view of the portion of the applicator which is shown in Fig. 1, but which is omitted from Figs. 2 and 3, this being adapted to be combined with the portion shown in Figs. 2 and 3, in the manner illustrated in Fig. 1, or used independently or manually as a massage applicator or comb.

Fig. 5 is a perspective view of the comb portion of the applicator of Fig. 1 detached.

Figs. 6, 7 and 8 are partial section views corresponding with Fig. 4, but showing modified constructions of the instrument or comb thereof.

Figs. 9 and 10 are respectively a face view and edge view of a lock washer, such as is seen in Fig. 1, for holding the applicator securely on the oscillating shaft or shaft of the electric vibrator.

Referring first to Fig. 1, this shows mounted within the vibrator housing **55** the shaft **21** of the vibrator upon which is applied a wing lock nut **78** for the attachment to the vibrator shaft **21** of the threaded shank **85** of the applicator **86** to be described. As explained in said prior application the shaft **21** oscillates through a small arc about its own axis and is thus distinguished from the usual massage vibrator shaft or shank. The means for rapidly oscillating the shaft **21** through a small arc for the purposes hereof is not herein illustrated, reference being made to said prior application illustrating a practical mode of effecting such oscillatory vibration. For example the shaft may operate with 60 complete oscillations per second due to the frequency of the current used, the amplitude being small but the delivered energy substantial.

The applicator **86** is shown as comprising primarily a button or disk shaft instrument having a body **86ª**, partaking of the oscillatory vibration. The applicator is shown provided with the threaded shank **85** already referred to, adapted to be engaged upon the threaded end of the shaft **21**, and there locked by the nut **78**. The oscillatory shaft motion creates a strong tendency of the applicator to become unscrewed and to minimize the detachment of the applicator there is shown interposed between the end of the shank **85** and the lock nut **78** a lock washer **99**. This is shown as a thin steel washer at the inner circumference of which are formed a number of radial slots, six being shown, the metal at each side of each slot being deflected or bent outwardly to the left or right at an incline, so as to produce a system of left teeth **99ª** and right teeth **99ᵇ**, oppositely directed, with substantially sharp edges or corners able to grip respectively the faces of the lock nut and the applicator shank. The spring yielding of the teeth when the parts

are tightly coupled tends to emphasize the biting and holding action on the parts to be locked against rotary detachment.

The details of the button applicator **86** are substantially as illustrated in said prior application. The body **86a** is hollow, with a threaded sleeve **87** engaged in the rear side thereof. The shank **85** extends through the sleeve **87**, and the shank has a square head **88** slidable within a square recess **89** within the body of the applicator. The square head may slide within the recess but is tight fitting so that oscillatory motion of the shank will compel the body to partake thereof. A fairly strong spring **90** occupies the recess **89** and tends to thrust the applicator body resiliently away from its shank.

The operation of the applicator as described to this point may be as follows. The spring **90** may be under very light compression so that it may initially yield easily, permitting the applicator to be applied with very light operative force. The arrangement permits the applicator body to yield axially, the spring exerting a progressively increasing resistance, so that the force of the massage application may be readily graduated by altering the manual pressure upon the shank **85** and therefore the resilient pressure due to the spring **90**, the graduated force of application being at all stages cushioned or resilient. When the face **86b** of the applicator is applied to the point to be massaged the entire disk undergoes rapid bodily oscillation, affording a peculiarly advantageous massage action over a substantial area.

The applicator portion thus far described is shown separately in Figs. 2 and 3. In Fig. 1 it is shown combined with the attachment or comb applicator **91**, which latter is shown separately in Figs. 4 and 5. As seen in Fig. 1 the body **86a** is slightly tapered for the engagement of the comb applicator. The latter is formed with a circular series of teeth **92** projecting longitudinally from a circular body **93**. The series of teeth is therefore circular and concentric with the axis of oscillation. The tapered recess at the rear of the body **93** permits swung frictional engagement with the body **86a** so that when combined as in Fig. 1 no further attachment is necessary. When applied to the scalp the comb undergoes a concentric oscillation, the circular series of teeth moving in their own cylindrical surface. During this concentric oscillation the instrument may be moved about on the scalp thus giving minutely thorough massaging motion to the parts being treated. The comb applicator may be used on a body such as **86a** whether or not the latter is slidable on the shank **85**, and the comb, the body and the shank may all oscillate rigidly with the shaft **21**, without any slide or play.

The comb element or applicator, as shown separately in Figs. 4 and 5, may advantageously be used per se by manual operation, the applicator being grasped by its body **93** and applied as desired to the scalp for combing and massaging actions. With either mode of operation the circular comb applicator advantageously loosens foreign matter from the scalp and greatly aids blood circulation thereunder, improving the growth of hair.

This instrument is shown as comprising a particular construction of considerable mechanical and operative advantage. As shown in Figs. 1, 4 and 5, substantially at the circle of meeting of the teeth **92** and body **93**, the comb is formed with a circumferential rib or short flange **94**. In this form the rib is shown extending inwardly, and the separating spaces between the teeth **92** extend downwardly into the rib, each tooth having a strengthening fillet **92a** where it joins the rib and body. The entire article may be made of a single piece of non-metallic material such as celluloid or bakelite, and is greatly improved by the rib construction, which not merely strengthens the article as a whole, preventing breakage, but affords a means of reenforcing each separate tooth as described, stiffens the entire article and prevents distortion, at the same time tending to prevent the gradual stretching or enlarging of the comb so as to impair its holding fit with the applicator body **86a**.

The form of reenforcing rib as shown in Figs. 1, 4 and 5 is only illustrative as the form may be altered without sacrificing the advantages mentioned. Thus as shown in Fig. 6 the strengthening rib **95** may be at the exterior instead of interior and may advantageously be rounded, like a projecting bead on the circular comb. This not merely gives the advantages mentioned, but provides an article more easily and surely grasped for manipulation and which is more sightly in the presence of the bead. The modification shown in Fig. 7 provides a double bead **96** comprising substantially a short extension or rib at both the inside and outside circumference of the comb. In this case also the teeth preferably extend back into the rib, with strengthening fillets for each tooth, also extending into the rib. Fig. 8 shows another modification in which an interior rib **97** is arranged opposite to an outside circumferential recess **98**, possessing substantially the advantages of the other described forms.

The applicator hereof comprises an axial stem **85** with an implement **86** or **91** slidable axially thereon, but partaking of its oscillatory vibration and a resilient means **90** pressing endwise the implement and adapted progressively to yield with increase of pressure, the implement fitted to the stem to prevent relative rotation thereon. When the implement **86** is used per se it affords a massage button or disk for surface pressure. When combined as in Fig. 1 the implement **91** constitutes a concentric circular comb having a concentric row of parallel teeth, the teeth extending integrally from the cylindrical body, and there being a projecting rib or flange integral with both body and teeth, adjacent to the base of the teeth, the spaces between the teeth preferably extending into the rib and the teeth having fillets merging into the rib.

There have thus been described certain massage applicators attaining the objects of the present invention. Since many matters of combination, arrangement and construction may be variously modified without departing from the principles of the invention it is not intended to limit the invention to such matters except to the extent set forth in the appended claims.

What is claimed is:

1. For use on a rapidly oscillatory shaft a massage applicator comprising a single axial stem, adapted to oscillate with short to and fro arc movements about the axis of its stem, a massage implement slidable axially bodily on the stem but fitted on the stem to prevent rotation thereon and thereby partaking of its oscillatory vibration, and a single spring pressing bodily endwise the entire implement outwardly on said stem and adapted progressively to yield with increase of pressure; thus affording a cushioned oscillating massage movement of variable pressure.

2. A massage applicator having a rapidly oscillatory stem at the axis of oscillation and a body, the body thereon having a spring adapting it to yield resiliently endwise on the stem with increase of massaging pressure but fitted against rotation thereon, whereby to undergo a short bodily oscillation; said body being in the form of a single disk for oscillating surface massage action.

3. An applicator as in claim 1 and wherein the massage implement comprises a body fitted on the stem as stated and concentric circular comb carried by the body with a rigid series of teeth, their ends being in a single plane at right angles to the axis of oscillation.

4. A circular comb having a rigid body of complete integral surgical form, a circular series of stiff teeth projecting integrally endwise from the body, a rib projecting laterally inwardly from near the point of juncture of and beyond the body and teeth, and a second rib similarly projecting outwardly therefrom.

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