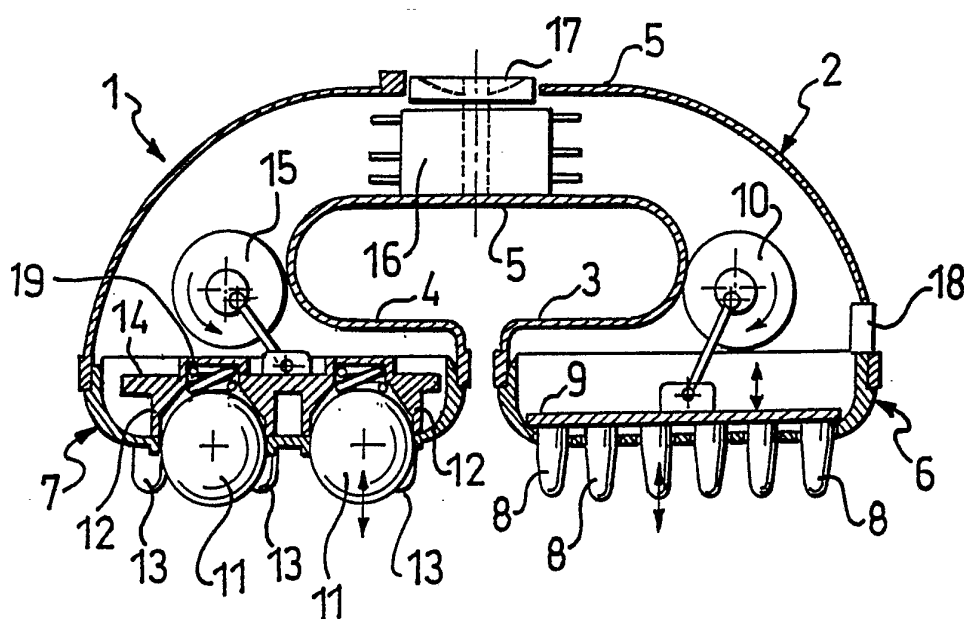




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/EP90/00781</p> <p>(22) International Filing Date: 14 May 1990 (14.05.90)</p> <p>(30) Priority data: 21723 B/89                      14 September 1989 (14.09.89) IT</p> <p>(71) Applicant (for all designated States except US): DANIELS S.R.L. [IT/IT]; Via Einstein, 16/18, I-20019 Settimo Milanese (IT).</p> <p>(72) Inventor; and (75) Inventor/Applicant (for US only): DORIA, Alessandro [IT/IT]; Via Losanna, 16, I-20154 Milano (IT).</p> <p>(74) Agents: CHECCACCI, Giorgio et al.; Jacobacci Casetta &amp; Perani, Via Visconti di Modrone, 7, I-20122 Milano (IT).</p>	<p>(81) Designated States: AT, AT (European patent), AU, BB, BE (European patent), BF (OAPI patent), BG, BJ (OAPI patent), BR, CA, CF (OAPI patent), CG (OAPI patent), CH, CH (European patent), CM (OAPI patent), DE*, DE (European patent)*, DK, DK (European patent), ES, ES (European patent), FI, FR (European patent), GA (OAPI patent), GB, GB (European patent), HU, IT (European patent), JP, KP, KR, LK, LU, LU (European patent), MC, MG, ML (OAPI patent), MR (OAPI patent), MW, NL, NL (European patent), NO, RO, SD, SE, SE (European patent), SN (OAPI patent), SU, TD (OAPI patent), TG (OAPI patent), US.</p> <p><b>Published</b> <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>	

(54) Title: AN ELECTRIC MASSAGER



## (57) Abstract

The massager comprises a body (2) having two massaging heads (6, 7) provided with finger (8) and ball (11) protrusions respectively; the heads (6, 7) are set apart from each other enough to permit either head to operate independently.

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AN ELECTRIC MASSAGERDESCRIPTIONTECHNICAL FIELD

This invention relates to an electric massager primarily intended as a domestic appliance for stimulating blood circulation, invigorating the muscle and skin of human body, and fighting cellulitis.

BACKGROUND ART

Massagers for domestic use are known, which comprise a hand held body incorporating an electric motor; the motor drives via an eccentric coupling a massaging head having several rounded protrusions. A massager of this kind is disclosed by EP-A-229531.

SUMMARY OF THE INVENTION

It is an object of the invention to provide a massager which can apply a most appropriate and effective massaging action to a concerned part of the human body, and is simple and convenient to operate.

This object is achieved according to the invention by a hand held body massager, comprising a body (2) having two massaging heads (6,7) provided with finger (8) and ball (11) protrusions respectively, the heads (6,7) being set apart from each other enough to permit either head to operate independently.

The features and advantages of the invention will become apparent from the following detailed description of a preferred embodiment thereof, given in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF DRAWINGS

Figure 1 is a perspective view of a massager according to the invention;

Figure 2 is a bottom plan view of the massager shown in

Figure 1; and

Figure 3 is a side elevation view, in section, showing schematically the massager of Figure 1.

#### MODE FOR CARRYING OUT THE INVENTION

With reference to the drawing views, generally indicated at 1 is an electric massager, particularly a hand held massager intended for household use.

The massager 1 comprises a body 2 made of a rigid synthetic plastics material, of adequate strength and lightweight, which is configured basically as a telephone handset, wherein there are defined two adjacent co-planar end portions 3 and 4 having a flattened, substantially semicircular plan shape, and a bridge middle portion 5 between the end portions 3, 4 which constitutes a handle for the massager 1.

The massager 1 further comprises two massaging heads, indicated at 6 and 7, which are mounted to the body 2 at the end portions 3 and 4 thereof, respectively.

It should be noted that the massaging heads 6 and 7 are held apart by a sufficient distance from each other to allow either of them to be used independently, as explained hereinafter.

In particular, massaging head 6 carries stiff fingers 8 of equal length, extending in perpendicular directions to the working surface of the head and being distributed at regular intervals thereacross.

The fingers 8 fit slidably in respective holes formed in the head 6, at said working surface, and are solidly mounted on a plate 9 at their ends received inside the head. The plate 9 is associated, in turn, with an electric motor means 10 carried on the interior of the head 6 and operative to put the plate 9, and hence the fingers 8, into vibration. Also provided are spring means, known per se and not shown, which intervene between the plate 9 and the working surface of the head 6.

Massaging head 7 is provided with balls 11; rotatably and elastically carried in respective holders 12 with the

interposition of spring means 19. The balls 5 protrude outwards from the head 7 through respective holes formed in the working surface of the head, and are distributed at regular intervals across that surface.

Secured on the head 7, across the working surface and around the balls 11, are also a plurality of stiff fingers 13 having rounded ends.

The holders 12 for the balls 11 are solidly mounted on a plate 14, which is associated with a conventional electric motor means 15, operative to put the plate 14, and hence the balls 11, into vibration. The fingers 13 are solidly mounted on the end portion 4 of the body 2 and are not put into vibration.

The motor means 10 and 15 may be operated individually or together through a selector switch 16 mounted on the bridge portion 5 and provided with a control knob 17. Also provided is an electric tap 18 connected electrically to the selector switch 15 and the motor means 10, 15 for hooking the massager 1 to the electric mains.

As for operation of the massager, after plugging in the massager 1, the knob 17 of the selector switch is moved to a position correspondent with the massaging action sought, to activate one or the other of the massaging heads, or both heads simultaneously; thereafter, holding the body 2 by its bridge portion 5, the selected massaging head(s) is pressed onto a body part to be massaged.

More specifically, the motor means 10 for the head 6 with the vibrating fingers 8 will be activated where a powerful, deep and constant massaging action is desired, with the head 6 held pressed onto the body part concerned for a desired time period.

The motor means 15 for the head 7 with the vibrating balls 11 will be activated instead for a milder massaging action, or across sinuous parts of the body, with the head 7 caused to run across such parts of the body. This action is particularly effective for distributing cream and the like and for enhancing

the absorption of the same.

Lastly, by activating both heads 6 and 7, a thorough combined massaging action can be obtained.

The massager of this invention has proved to be quite effective, easy and convenient to use, and to perform in a reliable and safe manner.

## CLAIMS

1. A hand held body massager, comprising a body (2) having two massaging heads (6,7) provided with finger (8) and ball (11) protrusions respectively, the heads (6,7) being set apart from each other enough to permit either head to operate independently.

2. A massager according to claim 1, wherein the body (2) comprises a bridge portion (5) between the massaging heads (6,7), the bridge portion (5) constituting a handle for holding the massager.

3. A massager according to claim 1, comprising two independent motor means (10,15) for the two massaging heads (6,7) respectively, the motor means (10,15) being independently operable to put the finger (8) and ball (11) protrusions into vibration.

4. A massager according to claim 1, wherein all the finger protrusions (8) are solidly mounted on a single plate (9), movable within the respective massaging head (6).

5. A massager according to claim 1, wherein all the ball protrusions (11) are elastically mounted on a single plate (14), movable within the respective massaging head (7).

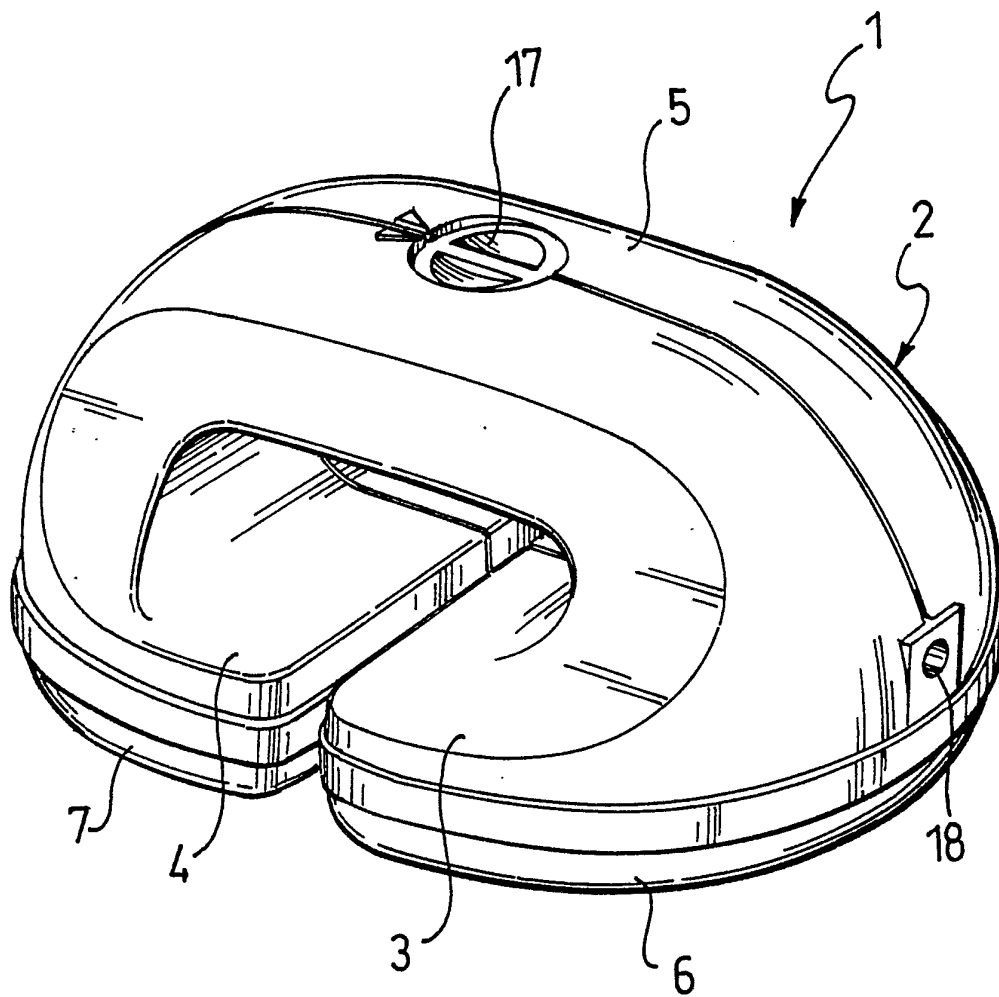



FIG.1



# INTERNATIONAL SEARCH REPORT

International Application No PCT/EP 90/00781

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (if several classification symbols apply, indicate all) <sup>6</sup>		
According to International Patent Classification (IPC) or to both National Classification and IPC		
IPC <sup>5</sup> : A 61 H 23/02, A 61 H 15/00		
<b>II. FIELDS SEARCHED</b>		
Minimum Documentation Searched <sup>7</sup>		
Classification System	Classification Symbols	
IPC <sup>5</sup>	A 61 H	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched <sup>8</sup>		
<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT <sup>9</sup></b>		
Category <sup>10</sup>	Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages <sup>12</sup>	Relevant to Claim No. <sup>13</sup>
X	US, A, 4082089 (MORIYAMA et al.) 4 April 1978 see figures 1,2; column 1, line 65 - column 2, line 15  --	1-2
X	FR, A, 758222 (BOSCH AG) 12 January 1934 see figure; page 1, lines 24-43	1
Y	--	3-4
X	CH, A, 191336 (SODECO) 16 August 1937 see figures 1,2; page 2, left-hand column, lines 11-28  --	1
./.		
<p><sup>10</sup> Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"A" document member of the same patent family</p>		
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Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
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Category *	Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages	Relevant to Claim No.
X	DE, C, 559096 (HAFEMANN) 15 September 1932 see figures 1-4; claims  --	1
Y	US, A, 4149530 (GOW) 17 April 1979 see figure 5; column 4, lines 62-67  --	3
Y	DE, A, 1951644 (GREIFFENBERG) 22 April 1971 see figure 8; page 8, last paragraph - page 9, paragraph 1  --	4
A	CH, A, 555675 (KLÖCKNER) 15 November 1974 see figure 1  --	2
A	GB, A, 314282 (SUGDEN) 18 July 1929 see figures 1-2  --	5
A	US, A, 2988084 (DOUGLAS) 13 June 1961 see figure 2; column 1, lines 52-67  -----	5

**ANNEX TO THE INTERNATIONAL SEARCH REPORT  
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EP 9000781  
SA 36831

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A- 4082089	04-04-78	None	
FR-A- 758222		DE-C- 614949 GB-A- 412436	
CH-A- 191336		None	
DE-C- 559096		None	
US-A- 4149530	17-04-79	None	
DE-A- 1951644	22-04-71	None	
CH-A- 555675	15-11-74	None	
GB-A- 314282		None	
US-A- 2988084		None	