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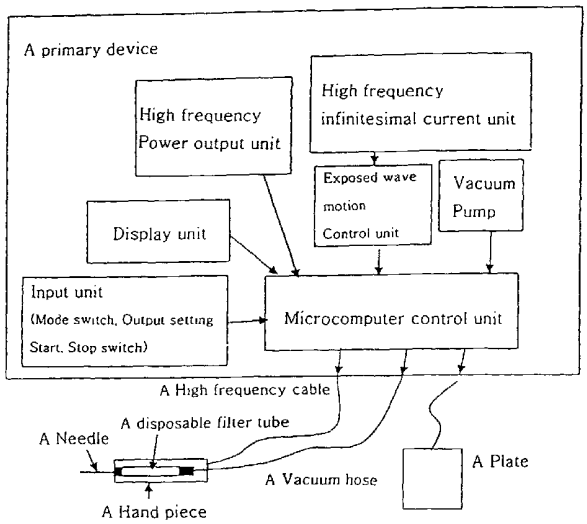
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ELECTRO REDUCTING PORE & SEBUM



(57) Abstract: The invention is a device that efficiently sucks a sebum accumulated and secreted inside of a facial skin pore. To eliminate a sebm we need to melt it by transmitting a high-frequency power to an inside of the pore through a sterile needle. In this invention the special feature is to put the stainless material needle in the inside of a pore, and melt a sebum by transmitting an high frequency micro electric current in order to extend a corium cell through the needle, then this device inhales and collects the sebum. We also make a connection part of the needle with a conductible material. In addition thanks to this invention, we can eliminate the accumulated sebum inside of a pore, and the pore can recover the function of sebum excretion. We will also be freed from a skin disease causing from these sebum. For these reasons, a skin color will be come back from a damaged dark color to an original skin color, totally white skin color. Considering a sanitary if a cosmetic industry uses this invention, many women will give goodwillabout this invention.

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Descriptions

The name of invention

ELECTRO REDUCTING PORE & SEBUM

Technical Field

The sebum elimination field of the dermatology and plastic surgery's surgical operation technology

Background Art

In general in order to eliminate the sebum we use the strong cleansing by using a steamed towel or an ultrasonic vibration. Or by applying the intensive heat to facial skin we melt the sebum, then we use a power of the suction or a skin mask. Besides there is an inhaler by using a vacuum inhaling power. However those ways totally couldn't get rid of the sebum placed deep and hardened due to placing for a long time in side of a pore. Moreover because of the intensive heat and strong cleansing there are some bad influences on the surrounding skin.

Disclosure of Invention

This invention is a device about the high frequency sebum inhaler that sucks and eliminates the sebum that is secreted from a pore placed in facial skin. There are several skin diseases caused from the accumulated sebum, the excessively secreted sebum, and pimples. These diseases came from pimples and the sebum have a side effect that pores become bigger and bigger due to the scar formation mechanism after taking medical treatment. So we use the generating heat effect resulted from a strong high-frequency power that is the

specific way to melt efficiently the sebum generated these skin problems, at the same time in order to shrink the pore this invention flows micro high frequency electric current in corium cell so that we can get the purpose of this device that it lead to extend the corium cell and sucks the sebum. In order to suck the sebum we put a particular needle in a pore that has a smaller diameter than a diameter of the pore, and this device needs to strongly suck by using a vacuum inhaling power. Besides, simultaneously it needs the operation of melting the sebum because how hard the sebum may be, the hardened sebum needs to change its form from a solid condition to a liquid condition for the purpose of transpiration. There are several ways to melt a sebum, however we decided the heat generation by the high frequency appropriates for melting it so as to melt optionally only the sebum without giving other effects to a skin. For these reasons, this device transmits a high-frequency power to an inside of the pore through the needle. Moreover, This device is composed of a device, a valve adjuster, a controller and a hand piece. The first one equips with a collector with a filter after inhaling from the hole placed on the center of a needle the melted sebum by using the vacuum inhaling power. A second thing controls to increases and decreases that power depending on the condition of the sebum, and third one adjusts a high-frequency power, the amount of micro high-frequency electric current, and a number of exposed wave motion. In addition the hand piece equipped a changeable needle transmits a vacuum power and a high frequency synchronously, and an adoption that all connection parts seal hermetically with a rubber is the special feature.

Brief Disclosure of Drawings

FIG 1. is the composition drawing of Electro Reducting Pore & Sebum explained in this invention;

FIG 2. is the cross-sectional view of the hand piece explained in this invention

Best Mode for Carrying Out the Invention

A hand piece, a sebum battle and a primary device form a composition of this invention. The hand piece is composed by a high frequency electrode connected to a needle, and a vacuum hose, connected to the hole placed on the center of the needle. It is also possible for this needle to tear and stick from the hand piece. The primary device is composed by a valve controller, a power controller, a controller and a visual field device. The first one controls the vacuum pressure, and a second one controls 10 steps to control thermal energy of a strong powered high frequency. The third one controls 10 steps to adjust a current amount of an micro electric current came from a gentle high frequency current and a wave motion number of the exposure. The last one displays those things. In order to putting data of each set up value we use the buttons that 'INTENSITY', to control strong high frequency power, 'MICRO CURRENT', to control a amount of a micro electric current, 'FREQUENCY', to control the exposed wave motion number of a micro electric current. These functions are divided by three such as the mode of suction, the mode of high frequency heat generation, and the mode of an micro electric current. Besides each mode can use simultaneously or independently by using the mode switch that 'SUCTION MODE', 'HEATING DIFFUSION MODE' and 'MICROCURRENT MODE'. After putting fixed input data, the operation of this device starts to push the 'START' button, and when you want to stop this device, you just push the 'STOP' button. During the operation the vacuum hose placed inside of a hand piece generates the power of a vacuum inhaling, and a high frequency transmits to the surface of a needle to melt a sebum and downsize a pore. At that time the sucked sebum changed its form to liquid condition is collected in the sebum battle placed on the hose and the battle is equipped with a filter.

What is Claimed is:

1. This invention generates a vacuum inhaling power through the hole placed on the center of a needle made of stainless metal material. At the same time on the surface of the needle a heat and high frequency current are generated by a strong high frequency power, and a high frequency skin pore contracting device let a sebum be melted and sucked. Further more it provides to downsize a pore.

FIG 1.

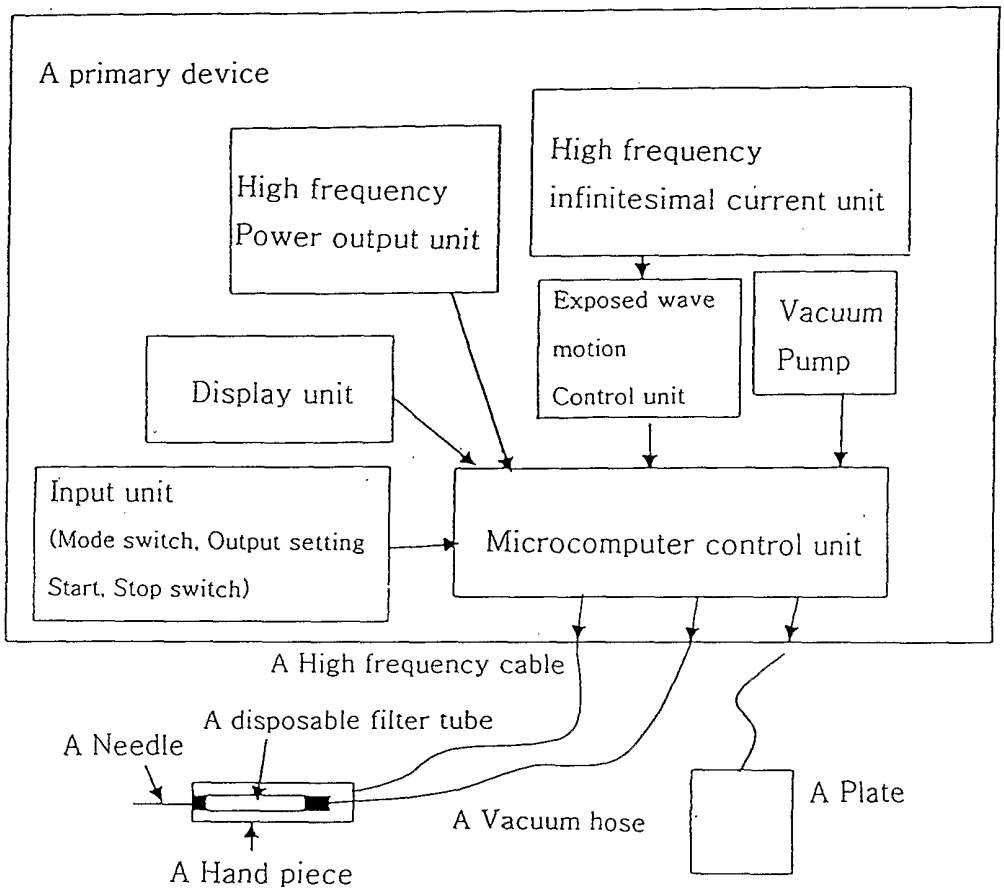
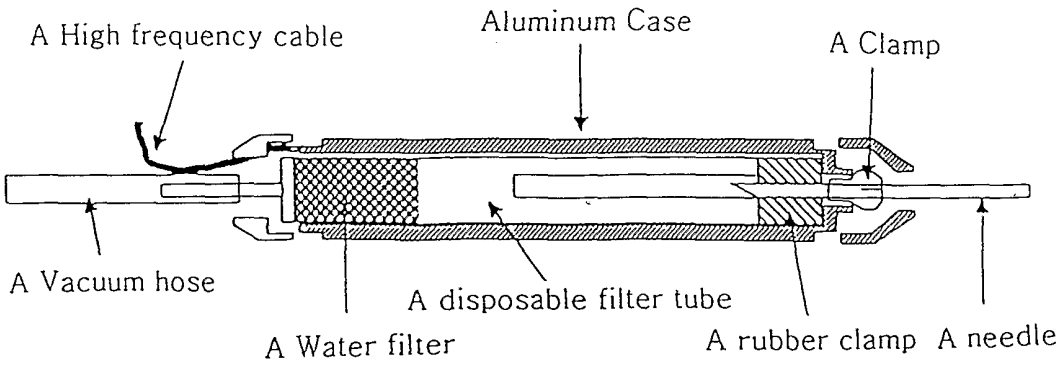

A primary device
High frequency
Power output unit
High frequency
infinitesimal current unit
Exposed wave
motion
Control unit
Vacuum
Pump
Display unit
Input unit
(Mode switch, Output setting
Start, Stop switch)
Microcomputer control unit
A High frequency cable
A disposable filter tube
A Needle
A Plate
A Vacuum hose
A Hand piece

FIG 2.


A High frequency cable
Aluminum Case
A Clamp
A Vacuum hose
A disposable filter tube
A Water filter
A rubber clamp
A needle

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR01/00177

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 A61B 18/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)

IPC 7 A61B

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched

KOREAN PATENTS AND UTILITY MODELS
JAPANESE UTILITY MODELS

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search trerms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6102885A (Lenwrence S. Bass) 15. AUGUST. 2000 (15.8.2000), FIG1,3, ABSTRACT, COLUMN1 LINE1- COLUMN5 LINE19, CLAIMS1,2,5-10	1
Y	US 6139518A(Peter G. Mozsary) 31. OCTOBER. 2000 (31. 10. 2000), SEE ENTIRE DOCUMENT	1
Y	US 5195959A (Paul C. Smith) 23. MARCH 1993 (23.3.1993), SEE ENTIRE DOCUMENT	1
Y	US 5609573A (Paul Sandock) 11. MARCH 1997 (11.3.1997), SEE ENTIRE DOCUMENT	1

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevence
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"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
"X" document of particular relevence; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevence; 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
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 OCTOBER 2001 (15.10.2001)	17 OCTOBER 2001 (17.10.2001)
Name and mailing address of the ISA/KR Korean Intellectual Property Office Facsimile No.	Authorized officer WON, Jong Dai Telephone No.

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR01/00177

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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US 6139518A	31. OCTOBER. 2000	US6258054	July 10, 2001
		US6139518	Oct. 31, 2000
		US5911700	June 15, 1999
		EP1006895A1	June 14, 2000
		BR9808317A	May 16, 2000
		AU6692898A1	Sept. 29, 1998
US 5195959A	23. MARCH 1993	NONE	
US 5609573A	11. MARCH 1997	NONE	