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(54) Title: DEVICE FOR STIMULATING THE NATURAL DEFENSES OF A PERSON OR OF ANY CELLULAR SYSTEM

(57) Abstract

This device, which stimulates the natural defenses of a person or of any cellular system, comprises means for generating alternately electrical, magnetic and electromagnetic fields, at overlapping or sequentially ordered levels, with programmed modulations for creating therapeutic energy according to a certain code which resonates with the set of subatomic, atomic, molecular and cellular natural oscillators of an individual or of any cellular system, thus re-establishing metabolic equilibrium.

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Device for stimulating the natural defenses of a person or of any cellular system

The object of this invention is a device for stimulating the natural defenses of a person or of any cellular system, characterized by means for generating alternately electrical, magnetic and electromagnetic fields, at overlapping or sequentially ordered levels, with programmed modulations for creating therapeutic energy according to a certain code which resonates with the set of subatomic, atomic, molecular and cellular natural oscillators of an individual or of any cellular system, thus re-establishing metabolic equilibrium.

The device creates the optimum electromagnetic environment for improving the development and functioning of any cell, whether a human, animal or plant cell.

That is, the device provides vital energy which, for many and sundry reasons, can become depleted. When this occurs, energy is transferred to those cells which need it, using very weak electromagnetic pulses which are virtually harmless to everyone.

First of all, for metabolic and energy-level disorders, this device re-establishes cellular metabolism and thus also the metabolism of the entire ailing organism, creating--especially for the ailing elderly--a general sense of well-being, and improving general physiological activity by 90-100%.

The device is also especially suitable for curing nerve, osteoarticular, arthritic, respiratory, blood, diabetic, and other disorders.

It is difficult to say whether it works better in certain treatments than in others. The fact is that with this device, nothing is administered, neither chemical nor pharmaceutical agents. Instead, the cells are restored to a better condition so that they can better resist disease in general.

The organism already has its own defenses; these are the best type for anything that could threaten the regular vital process. However, the device does not give new defenses, but rather jump-starts existing ones which for some reason have become sluggish and inactive.

The attached diagrams show a preferred, nonbinding and nonrestrictive embodiment of the device according to the invention.

Figure 1 shows the schematic of the device;

Figure 2 is a block diagram.

Descriptions follow which explain the device with regard to its conception.

The basic conceptual principle is that of "recharging" the cellular unit.

The definition of a cell and its regenerative behavior could be stated as follows: THE CELL IS THE FUNDAMENTAL UNIT OF LIVING MATERIAL, AND HAS AUTONOMOUS ORGANIZATIONAL AND REPRODUCTIVE CAPACITY FROM THE MORPHOLOGICAL AND FUNCTIONAL POINT OF VIEW.

The above explanation of these fundamental concepts allows better comprehension of the principles on which this device is based.

Development of the principle of internal communication between cells

All the signals which arrive at the cell from the outside are captured by appropriate "molecular antennae" (receivers). But, like for television electromagnetic waves, a system for transporting and converting the signals (television) in order to have an organized response (image) is necessary; likewise, the cell has developed a system for converting signals coming from the outside.

The transport, conversion and amplification of the signal received will allow the tissue cell or cells to respond in an appropriate manner, according to need.

It is already known that signals can penetrate the cell (steroid hormones), where receivers are located; in this case the signal is direct.

In the case of information which does not manage to cross the barrier of the cell membrane (water-soluble hormones), more complicated mechanisms are necessary: internal signals are transported by a series of small molecules called "secondary messengers". In molecular terms, the process of transmitting this signal depends on a series of proteins contained in the cellular membrane. Each of these transmits a piece of information which causes a change in the form, and therefore in the function, of the contiguous protein. At a certain point, the information reaches the

small molecules or goes straight to organic ions present in the cytoplasm. These are the secondary messengers, the diffusion of which ensures that the signals propagate and are rapidly amplified throughout the cell.

The number of secondary messengers is limited; this means that the paths inside the cell for transmission of signals are universal, and moreover are able to control an enormous variety of different biochemical and physiological processes.

There are two main paths for retransmission of signals. One of these uses a nucleotide as secondary messenger; the other uses a combination of secondary messengers, which includes calcium ions (Ca2+), and two other substances derived from the cell membrane components (phospholipids). The two paths have much in common. In both, the initial composition, that is, the receiving molecule present on the surface of the cell, transmits the information over the plasma membrane and inside this cell, by means of a family of proteins which function as transducers, called G proteins. In both paths, the G proteins activate an amplifier enzyme which is only located in the cell membrane; this transforms the precursor molecules into secondary messengers which spread out through the cell.

In addition, the last stages of the process are similar: in fact, the secondary messengers trigger some cellular proteins to modify their structure, with the result that the functioning of these proteins is activated or deactivated. The secondary messengers, therefore, turn on or

turn off the switches which control the activity of proteins, creating different conditions inside the cell. These conditions will determine the type of response the cell will give to signals received from the outside. In most cases, the secondary messenger bonds to a component of an enzymatic protein, triggering the activity of the component which carries out enzyme functions.

In some cases, these are receivers which cross the membrane and have one part of the protein inside the cell which develops enzymatic activities similar to that first described. In this case, the mechanisms of signal transport and amplification are not necessary, while turning on or turning off the switch is done by the bond of the external signal. Alternatively, in these modes of signal transmission, the action of receivers which have bonded the messenger can consist in selective opening of small pores or channels specific to given ions (for example, calcium) present in the cellular membrane.

In the case of calcium (Ca2+), entry into the cell has the same effect as the presence of secondary messengers. Most information transported by these messenger chains ends up entering the nucleus of the cell, where the expression of genes is controlled or induced.

Also arriving at the nucleus are messages carried by fat-soluble molecules (steroid hormones) which are able to cross the membrane. The receivers for these hormones, as discussed earlier, are located in the cytoplasm. These are proteins whose form is modified by the bond with the signal molecule. The modified protein enters the nucleus and

becomes able to bond to DNA, the large molecule which preserves genetic information, at certain points, where it serves to control activation of the genes present at the point at which it is bound. This effect is known as primary response, in other cases secondary response, that is, the products of the primary response can have as a function--by bonding to DNA--that of activating other genes, amplifying and varying the response.

The response to steroid hormones, as on the other hand that relating to all the other hormones, depends both on the nature of the hormone and on that of the target cell. In fact, it seems that these same receivers for a certain hormone, present in different types of cells, give varying responses, since they bond in a specific manner at different points on the DNA.

Naturally, in order to prevent in the cell and in the organism biological imbalance which will result in pathological conditions, the entire system of signals must be carefully controlled.

One method of controlling is that of indirect signalling, in which the mechanisms of negative feedback, that is, controlled continuous frequency fields, attenuate the primary signals.

Another method of controlling the response is to act on the receivers. After the water-soluble hormones bond with the appropriate receivers on the surface of the target cell, the cells often ingest them by endocytosis and destroy them. In this way, since there are either the same number or

a lesser number of receivers, the capacity to respond to the hormones is also diminished.

In other cases, the receiver is "internalized" by endocytosis and preserved in vesicles, to be then reassembled on the cell membrane.

At times the receiver remains on the cell surface, but changes its conformation in such a way that it cannot bond the hormone, or bonds it but does not transmit signals inside the cell any longer.

All these phenomena last a certain number of hours, after which the cell returns to normal condition and can once again receive signals. Yet another way to control the response is to destroy the secondary messenger in the space of a few minutes using specific enzymes, thus reducing amplification of the signal.

The same thing can happen for primary signals (hormones of a protein nature), which are eliminated by dissolving enzymes.

After reading all the aforementioned, it is easy to see the complexity and sophistication of the network of signals exchanged by cells to ensure that the organism is kept in perfect biological equilibrium.

All it takes is for one of these control systems to slip out of control for any reason, to produce effects whose ramifications are much greater than those of the initial change. Imagine a television which due to some breakdown no longer can be turned off or controlled. A similar state may occur in the cell, when a secondary messenger can no longer be controlled.

This device, in its more specific application, is based therefore on the scientific concept that all the cells which compose the structure of living organic material (animal and plant) have their own electrical vitality, and thus this device balances it, especially in those cases where there is weakening or negative changes which for any reason adversely affect certain conditions of cellular life.

Figure 1 shows the schematic of the device.

The integrated circuit marked as IC2 acts as a pulse divider, and is a 12-stage binary device of the CMOS type. The integrated circuit marked as IC1 functions as a square wave oscillator, sending its composite signal to pin 10 of integrated circuit IC2, enabling the latter to generate from outputs 1-15-14-12-13 the proper stop/start pulses. The pulses will be spaced out by switch S1, which will make it possible, through passage of C18, to distinguish the signal coming from pin 5 of 1C1B.

In connection with the type of signal, High Frequency pulses, there will be a condition of start/stop on the part of these generated signals.

The working range of these pulses, which is around 120 microseconds in respective operating states, is the best therapeutic condition accepted by these cells, and for now, the most suitable operating power of the device.

The negative output (NOR) of the circuit marked as IC1D is amplified by the VHF power transistor, marked as TR4. The output frequencies of transistors TR1 and TR2 are matched by impedances IMP1 and IMP2 to a single intermediate frequency which will center on 12 MHz.

From transistors TR1 and TR2, which function as sequential power oscillators, it is possible to obtain, by continuous emissions, those which cover a frequency range from 20 to around 350 MHz.

This type of "complex" wave will generate a considerable number of harmonics, since the emission will be modulated both in amplitude and in frequency. The passband, which operates at a linear recurrence frequency, is around 100 MHz, and can generate much higher frequencies, emitting nonlinear square waves, with composite harmonics emitted which can reach 500 MHz.

The two monostable adjustable oscillators at the NOR outputs of IC3 control the visual signal at the output through capacitors C13 and C17 by means of two LED diodes, marked on the diagram as DL1 and DL2 respectively. In this case, diodes D1 and D2 as well as diodes D5 and D6 function as rectifiers of VHF signals, thus providing immediate display of the frequency intervals preselected, through switch S1.

Switch S2 will switch channel 2 (CH2 = output 2) at the same time as channel 1.

The circuit is powered with stabilized 24V direct current, with a maximum absorption of 30/35 mA.

The device is installed in connection with a EUROCARD type card with dimensions of 100 x 160 mm.

The 64-pin DIN 41612 on two wires is used as a terminal connector.

The card marked with the designation 9301/M is installed in a standard 19" holder with a height equal to 3 units.

Also placed in the holder, which is the 19" rack type, are two cards labelled 9301/A (feeder) and 9301/T (timer).

Figure 2 shows a block diagram in which C is the converter, I.F. is the amplifier, M the modulator, A.F. the amplifier, O the oscillator.

The signal is coded with n bits (0 or 1), in fact is quantized in 2n levels. The time function, which represents the signal, is sampled through the amplifier of F.I., while the amplitude of each sample is rounded off to the nearest of 2n levels admitted for transmission. The code used is binary code.

Claims

1. Device for stimulating the natural defenses of a person or of any cellular system, characterized by means for generating alternately electrical, magnetic and electromagnetic fields, at overlapping or sequentially ordered levels, with programmed modulations for creating therapeutic energy according to a certain code which resonates with the set of subatomic, atomic, molecular and cellular natural oscillators of an individual or of any cellular system, thus re-establishing metabolic equilibrium.

2. Device according to claim 1 characterized by: a 12-stage CMOS-type binary pulse divider (IC2 Fig. 1) and an integrated circuit (IC1-A-B-C-D) functioning as a square wave oscillator which sends its composite signal to pin (10) of this pulse divider (IC2), enabling the latter to generate from outputs 1-15-14-12-13 the proper stop/start pulses which are spaced out by switch (S1) through capacitor (C18) to distinguish the signal coming from pin (5) of said oscillator (1C1B); the NOR output of circuit (1C1D) is amplified by a VHF power transistor (TR4); the output frequencies of the last transistors (TR1 and TR2) are matched by impedances (IMP1 and IMP2) on a single intermediate frequency which will center around 12 MHz; from these transistors through later transistors (TR1 and TR2) which function as sequential power oscillators, it is possible to obtain by continuous emissions those which cover a frequency range from 20 to around 350 MHz; these emissions of complex continuous waves modulated both in amplitude and frequency make it possible to generate a considerable number of harmonics; the passband, which is

around 100 MHz of these waves, operates at a linear recurrence frequency, emitting nonlinear square waves of the highest frequency so that the signals, with regard to the composite harmonics emitted, can reach 500 MHz.

3. Device according to claim 2, characterized by later monostable oscillators (IC3-A-B-C-D) such that the NOR outputs of two of these oscillators (IC3A; IC3B and IC3C; IC3D) control the visual signal at the output through two capacitors (C13 and C17) by means of two LED diodes (DL1 and DL2), while other diodes (D1, D2, D5, D6) function as rectifiers of VHF signals, making it possible to immediately display preselected frequency intervals through this switch (S1).

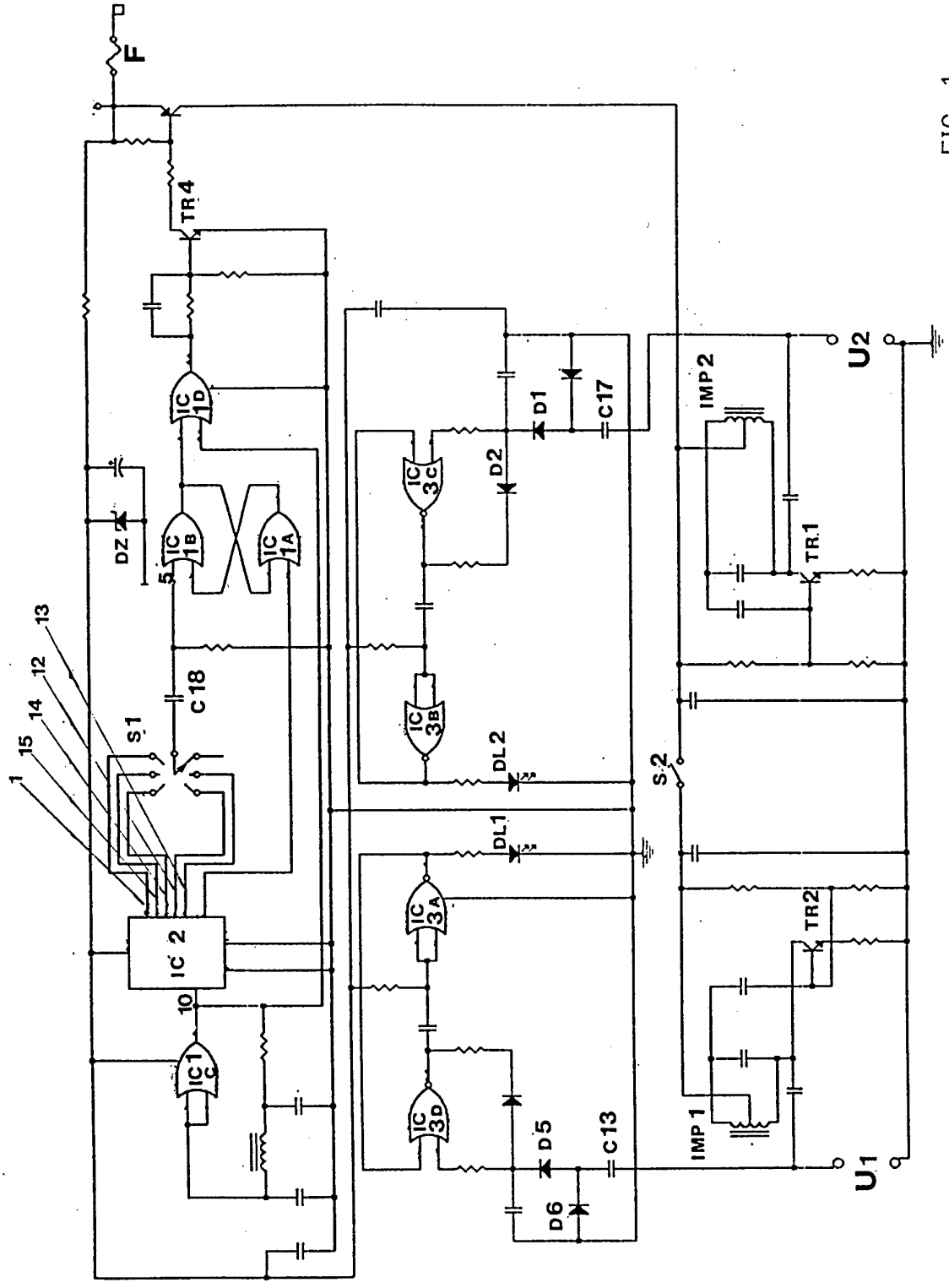
F
TR4
IC 1D
DZ
IC 1B
IC 1A
5
13
12
14
15
1
S1
C18
IC 2
10
IC 1C
IC 3C
D2
D1
C17
IC 3B
DL2
DL1
IC 3A
IC 3D
D5
C13
D6
IMP2
U2
TR1
S2
TR2
IMP1
U1

FIG. 1

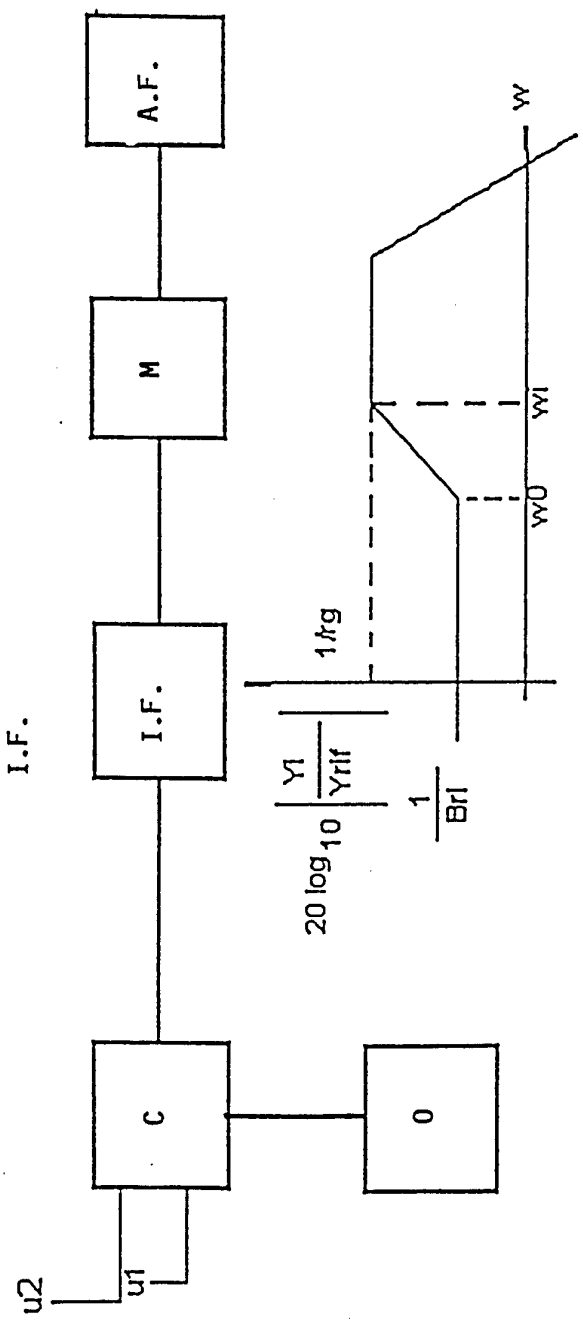

FIG. 2

INTERNATIONAL SEARCH REPORT

Inter onal Application No
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A. CLASSIFICATION OF SUBJECT MATTER

A 61 N 1/40

According to International Patent Classification (IPC) or to both national classification and IPC 6

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A 61 N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP, A, 0 500 983 (MEDI-LINE) 02 September 1992 (02.09.92), the whole document, especially column 4, line 31 - column 7, line 13; claim 1. --	1
A	EP, A, 0 136 530 (BROERS) 10 April 1985 (10.04.85), abstract; page 4, line 1 - - page 6, line 20; claim 1. --	1
A	US, A, 4 611 599 (BENTALL) 16 September 1986 (16.09.86), abstract; summary.	1

[X] Further documents are listed in the continuation of box C.

[ ] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
25 November 1994	04. 01. 95

Name and mailing address of the ISA	Authorized officer
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CH, A, 667 210 (KALFAIAN) 30 September 1988 (30.09.88), the whole document.	1

ANHANG — ANNEX — ANNEXE

zum internationalen Recherchenbericht über die internationale Patentanmeldung Nr.

to the International Search Report to the International Patent Application No.

au rapport de recherche international relatif á la demande de brevet international n°

PCT/EP 94/02842 SAE 96350

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Im Recherchenbericht angeführtes Patentdokument Patent document cited in search report Document de brevet cité dans le rapport de recherche	Datum der Veröffentlichung Publication date Date de publication	Mitglied(er) der Patentfamilie Patent family member(s) Membre(s) de la famille de brevets	Datum der Veröffentlichung Publication date Date de publication
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