

[54]	WRIST BAND INCLUDING A MERCURY SWITCH TO INDUCE AN ELECTRIC SHOCK	407,116	7/1889	Pratt	128/409 X
		1,207,614	12/1916	Olds	128/409 X
		2,106,658	1/1938	Rakos	340/277
		2,667,350	1/1954	Wilson et al.	272/27 R
[75]	Inventor: Eliot N. Symmes , Seattle, Wash.	3,064,970	11/1962	Thompson	272/27 N
[73]	Assignee: Habi-Chek Corporation , Campbell, Calif.	3,103,660	9/1963	Ticktin	340/407
		3,482,580	12/1969	Hollabaugh	131/178

[22] Filed: **Sept. 23, 1974**

Primary Examiner—Joseph S. Reich

[21] Appl. No.: **508,453**

[52] U.S. Cl. **131/170 A; 272/27 N; 272/27 R; 340/279; 340/407; 35/22 R**
 [51] Int. Cl. **A24f 47/00**
 [58] Field of Search **131/170 A, 171 A, 178; 272/27 N, 27 R; 128/404, 409; 340/277, 279, 407; 35/22 R**

[57] ABSTRACT

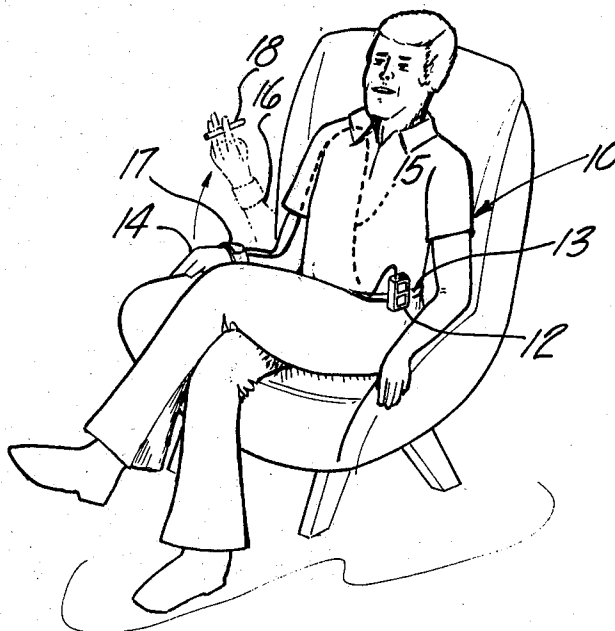
A wrist band including a normally open mercury switch is worn by a person so that when the person raises his arm to put a cigarette to his lips, for example, the mercury switch closes to connect a source of power and induce an electrical shock in the person in order to deter the person from smoking, drinking or the like.

[56] References Cited

UNITED STATES PATENTS

156,053 10/1874 Bryan 128/404 X

10 Claims, 5 Drawing Figures



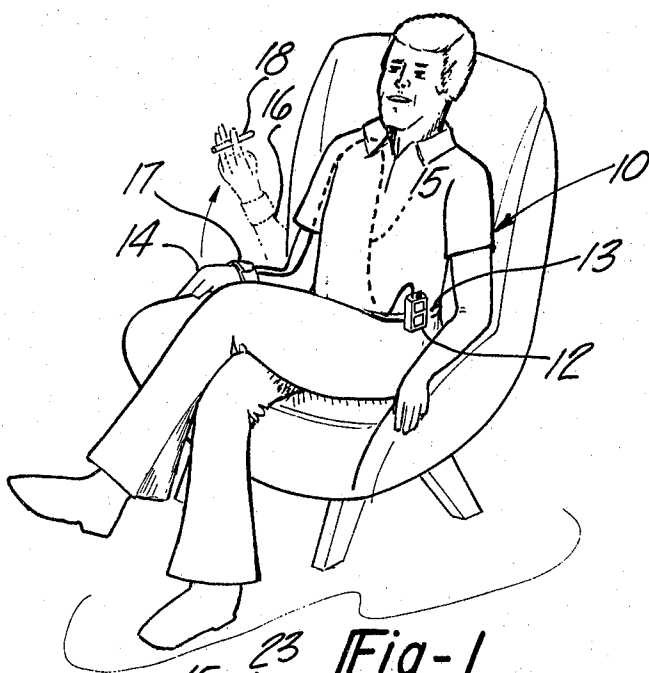


Fig-1

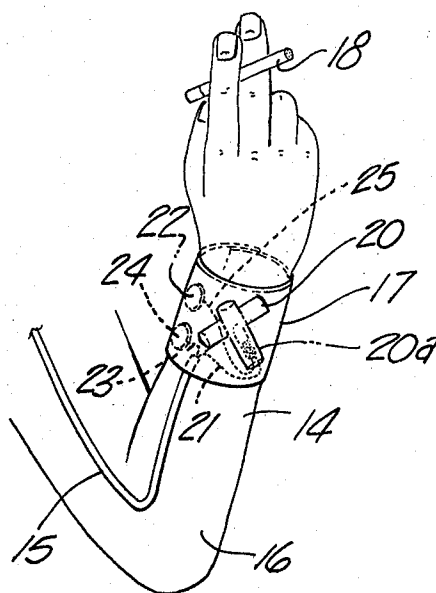


Fig - 2

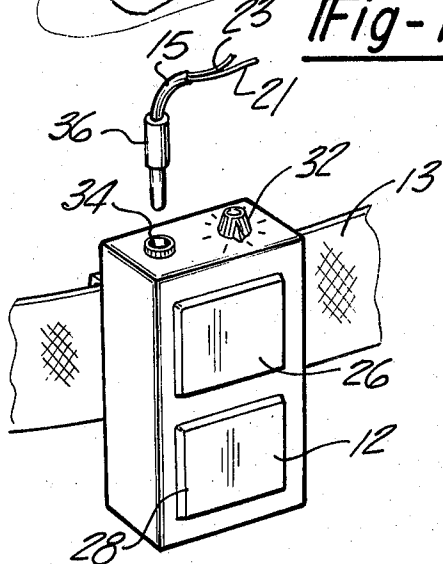


Fig-3

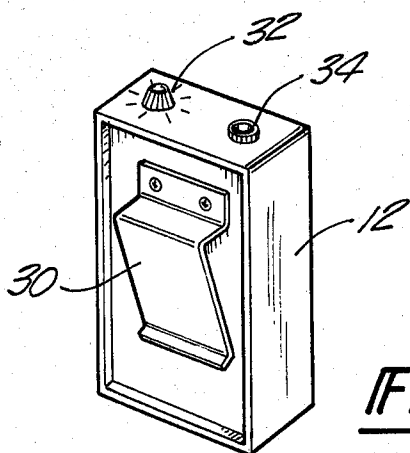


Fig-4

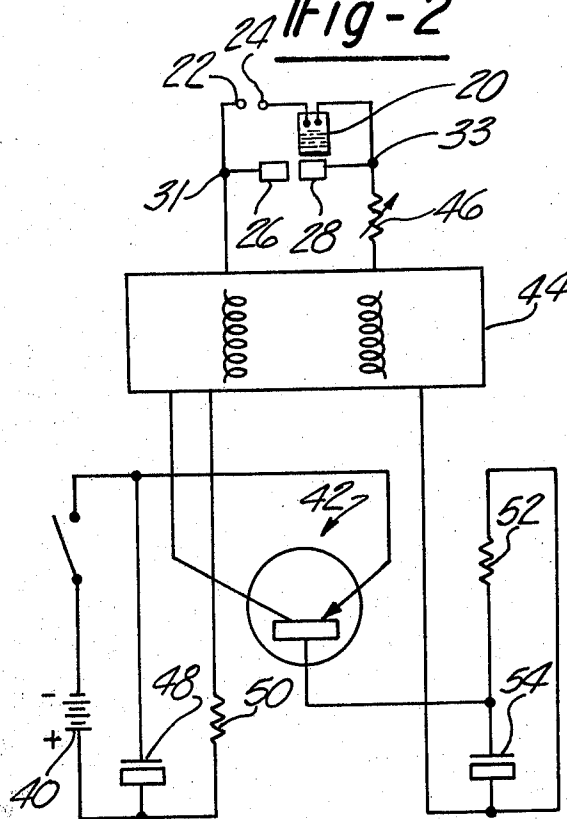


Fig-5

WRIST BAND INCLUDING A MERCURY SWITCH TO INDUCE AN ELECTRIC SHOCK

It is well known that many habits, such as smoking, drinking or the like, adversely affect the health, state of mind and general well being of certain persons. While such persons are aware of the adverse effects such habits produce, they are often incapable of breaking them without some help or treatment.

Among the methods employed in treating a person to assist him in breaking a bad habit is to use means to induce an electric shock whenever the person desires to smoke or drink, for example: Association of the undesirable habit with the electrical shocks tends to diminish the desire in the person to smoke or drink.

Various means and methods for assisting people in building up aversions to undesirable habits are described in a patent issued to and in a patent of applicant Eliot Symmes, U.S. Pat. No. 3,782,006, issued Jan. 1, 1974.

The present invention contemplates using the technique of inducing electric shocks to assist persons in overcoming various habits.

Electric shock inducing devices are well known. Many such devices have included electrical circuitry associated with personal articles which, when handled by a person, causes a shock to be induced in the person. One such article is disclosed in a U.S. Patent to Wilson et al. No. 2,667,350.

Other such devices including electrical circuits for inducing electrical shocks have been specifically directed towards anti-smoking. Such a device is disclosed in a U.S. Patent to Hollabaugh No. 3,482,580.

It is an object of this invention to provide a novel means for assisting a person in overcoming an undesirable habit.

It is a further object of this invention to provide an improved means to assist a person in breaking an undesirable habit which may be used under a variety of different circumstances.

In accordance with the present invention, a wrist band is adapted to be worn by a person desiring to overcome an undesirable habit, such as smoking. The wrist band includes a normally open mercury switch which closes when the person raises his arm. An electrical circuit including a source of power may be included in a case adapted to be clipped on the belt or clothing of the person. The mercury switch is connected to the source of power so that when it is closed by the person lifting his arm, as by moving a cigarette to his lips, a shock is induced in the person.

Other objects and advantages of the present invention will be apparent and suggest themselves to those skilled in the art, from a reading of the following specification and claims, in conjunction with the accompanying drawing, in which:

FIG. 1 illustrates a person wearing apparatus embodying the present invention;

FIG. 2 is an elevational view of the wrist band worn on the arm of the person in FIG. 1;

FIG. 3 is a front view of the power pack worn by the person in FIG. 1;

FIG. 4 is a rear view of the power pack illustrated in FIG. 3, and

FIG. 5 is a schematic diagram of the electrical circuit providing the source of power, in accordance with the present invention.

Referring particularly to FIG. 1 and FIGS. a person 10 is seated and wearing apparatus embodying the subject invention. A power pack 12 is clipped to the belt 13 of the person and a wrist band 17 including electrical components therein is worn on the wrist 14 of the person. Electrical conductor means 15 connects power from the power pack 12 to the wrist band 17.

The wrist band 17 includes a pair of spaced electrical contacts 22 and 24 in direct physical engagement with the skin of the wrist 14. With voltage connected across the contacts 22 and 24 current will flow there between through the skin of the person 10. A mercury switch is included within the wrist band 17. FIG. 2 illustrates the mercury switch in two positions, with 20 representing the actual position within the wrist band and 20A in dotted lines representing the same switch with the person's arm uplifted. The mercury switch 20 is positioned in a manner that it is in a normally open condition when the arm of the person 10 is in the down position, as illustrated in FIG. 1 where the wrist 14 is resting on the arm of the chair.

Mercury switches having mercury within a small casing or housing to move within the casing to electrically connect or disconnect two terminals are well known to those skilled in the art. The mercury switch 20 is closed by mercury moving across a pair of contacts within its casing when the person raises his arm 16 as illustrated in the dotted lines in FIG. 1.

The power pack 12 includes a source of power which may comprise direct current voltage, an alternating current voltage, or oscillating pulse signals. A preferred form of the present invention comprises an electrical pulse signal source which may be varied in amplitude and/or frequency, as is illustrated in FIG. 5.

As illustrated in FIG. 3, along with FIGS. 1 and 2, the conductor 15 includes a plug 36 adapted to fit into the jack 34. The electrical signals from the unit 12, which may be varied in amplitude by a control knob 32 (which could also include an on-off switch) are applied through the conductor 15 to the wrist band 17. One of the conductors 21 is connected to a terminal of the normally open mercury switch 20. The other terminal of the mercury switch 20 is connected to contact 22 through a lead 25. The contact 24 is connected to the return lead 23 back to the unit 12. While the contacts 22 and 24 are spaced with respect to each other, the wrist of the person wearing the wrist band 17 provides a conductive path for an electrical signal applied across the contacts 22 and 24 to induce a shock in the person when the electrical signal is applied as when the mercury switch 20 is closed.

When the mercury switch 20 is open, as when the person 10 has his arm in a down position (FIG. 1) no current will flow from the power pack 12 to the wrist band 17. When the person 10 lifts his arm to put a cigarette 18 into his mouth, the mercury switch 20 closes causing current to flow and an electric shock to be induced in the arm of the person 10.

With the arrangement illustrated, a person under treatment to overcome the habit of smoking cigarettes would be seated in a normal fashion. When he attempts to move a cigarette to his mouth, he would receive a shock. As a result he will tend to associate smoking with an undesirable shock. Repeated actions and shocks associated with smoking will tend to reduce the craving to smoke.

Referring to FIGS. 3 and 4, the power pack 12 includes a mounting spring clip 30 which makes it readily attachable to the belt 13 worn by the person. Of course, the power pack may be suitably secured to the clothing of a person rather than to the belt, if desired.

The plug 36 and jack 34 connected, and the spring clip 30 attachment arrangement make it convenient for a person to disconnect the unit 12 from the rest of the apparatus and use the unit 12 independently. For example, the power pack 12 may be used separately by placing it on a desk. The recess in the rear of the unit 12 receives the spring 30 therein and makes it convenient to lay the unit substantially flat on a desk.

A pair of electrodes 26 and 28 are connected across the output terminals 31 and 33 (FIG. 5) of the unit 12. When a person physically contacts the electrodes 26 and 28, by touching them with his fingers, for example, he will receive a shock similar to that induced in the wrist previously described in connection with the mercury switch as when the wrist band 17 is worn.

With the unit 12 detached and placed on a desk, a person may choose to consciously apply a shock to himself whenever he thinks of or gets a craving to smoke or to perform some other undesirable habit, such as drinking.

Referring particularly to FIG. 5, a transistor pulse oscillator is illustrated as being the source of power within the power pack or unit 12.

The pulse oscillator comprises a transistor 42 having an RC network including a capacitor 48 and a resistor 50 in its emitter circuit and a second RC network including resistor 52 and capacitor 54 in its base circuit. A battery 40 provides the power for the circuit and a feed back transformer 44 provides feedback from one RC circuit to the other, charging and discharging the capacitors 48 and 54 to produce output pulse signals. A variable resistor 46 controls the amplitude of the output pulses.

Pulse generating circuits are well known to those skilled in the art and, consequently, no detailed description of the operation is deemed necessary. For example, numerous types of multivibrator circuits include pulse outputs from selected parts of their circuits.

The various elements described in the other Figures including the mercury switch 20, contacts 22 and 24 and electrodes 26 and 28 are also illustrated in FIG. 5 to facilitate the understanding of the invention.

It is seen from FIG. 5 that the contacts 22, 24 are serially connected to each other across the output terminals 31 and 33 of the source of power. The spaced electrodes 26, 28 are also connected across the output terminals 31 and 33 and in parallel relationship with the contacts 22, 24 and mercury switch 20.

What is claimed is:

1. Electrical apparatus for inducing a shock in a person in response to a movement of one of his arms comprising

a wrist band adapted to be worn on the arm of said person,

a source of electrical power including means for attaching said source to the clothing of said person, a pair of spaced electrodes attached to said wrist band and disposed to physically contact the wrist of said person,

a mercury switch disposed on said wrist band to be opened or closed dependent upon the position thereof, means connecting said mercury switch to said pair of spaced electrodes,

means connecting said source of power to said pair of spaced electrodes through said mercury switch, whereby the closure of said mercury switch causes current to flow from said source of power through said spaced contacts and the arm of said person upon movement thereof, to induce a shock therein when said apparatus is worn by said person.

2. Electrical apparatus as set forth in claim 1 wherein said source of power comprises a housing including electrical circuitry therein and said means for attaching comprises a spring clip disposed to be attached to a belt worn by said person.

3. Electrical apparatus as set forth in claim 2 wherein said housing comprises a jack for receiving a plug connector and said means for connecting said source of power to said pair of spaced electrodes includes a plug connector to be inserted and withdrawn from said jack.

4. Electrical apparatus as set forth in claim 3 wherein said housing further includes an adjustment knob for varying the amplitude of the electrical signal supplied by said source of power.

5. Electrical apparatus as set forth in claim 4 wherein said housing further includes a pair of spaced electrodes connected to output terminals of said source of power to permit a person to voluntarily self induce a shock when said jack and plug connector are disconnected.

6. Electrical apparatus as set forth in claim 5 wherein said electrical circuitry included in said source of power comprises a pulse oscillating circuit.

7. Electrical apparatus as set forth in claim 6 wherein a side portion of said housing includes a recessed portion for receiving said spring clip therein to permit said housing to be placed on a flat surface when said housing is disconnected from said means for connecting said source of power to said pair of spaced electrodes.

8. Electrical apparatus as set forth in claim 1 wherein said mercury switch and said pair of contacts are serially connected across said source of power.

9. Electrical apparatus as set forth in claim 8 wherein said mercury switch is normally open when said wrist band is worn on the arm of said person while the arm is in a horizontal position and said mercury switch closes when the arm of said person is raised towards a vertical position.

10. Electrical apparatus as set forth in claim 9 wherein said pair of spaced electrodes is connected in parallel across said source of power.

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