

A new or improved medical electric and magnetic appliance.

Contributors

Cooke, Tom
Cooke, John Robert

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183 Euston Road
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COMPLETE SPECIFICATION.

“ A New or Improved Medical Electric and Magnetic Appliance ”

We, TOM COOKE, 1 Shaftesbury Avenue, Belgrave, Leicester, Architect, and JOHN ROBERT COOKE, Primethorpe, Broughton Astley, Rugby, Builder, do hereby declare the nature of this said invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention has reference to electric and magnetic appliances used for medical purposes and has for its object to provide such an appliance disguised in the form of a walking stick, though it will be obvious from the following description that the invention may if desired be applied to other articles than a walking stick.

The invention comprises amongst its essential features a walking stick made in sections, a battery or other source of electric current located within one of the said sections and adapted to send an electric current through the handle of the stick, and means for making and breaking the circuit as the stick makes contact with and is lifted off the ground respectively.

The current is conducted from the battery to the metal handle of the walking stick or through metal plates attached thereto, whence it passes into the hands of the user.

The arrangement of the parts is such that when pressure is brought to bear upon the stick as the end is placed in the ground in walking, the stick as a whole is compressed, relative telescopic movement taking place between its sections. This relative movement is employed to operate a make and break switch so that a current circulates in the handle of the stick only during such time as pressure is brought to bear on it and maintained as aforesaid. Immediately the said pressure is removed, springs arranged between the sections, return them to their normal positions and in doing so at the same time break the circuit.

The stick may also be provided with a spring ferrule which has an anti-vibratory effect and absorbs the sudden jar consequent on the stick first meeting the ground.

In order that the invention may be properly understood reference is made in further describing the same to the accompanying drawings, wherein

Figure 1., shows an outside view of a medical electric and magnetic appliance constructed according to this invention.

Figure 2., is a central vertical section of the same on an enlarged scale, and

Figure 3., a detail view of a modification.

Like parts are designated by the same reference characters in all the figures.

Referring to the drawings, 2 is the walking stick which is made in telescopic sections, and 3 is a battery located therein and adapted to cause an electric current to circulate in the metal handle 4 of the stick, as and when required, by means of a make and break switch 5 operated by the relative telescopic movements of the said sections when the stick is in use.

Externally the stick 2 may be of any conventional type and in the example shown is made in two main sections 2^a, 2^b, of which the lower section 2^b may be made in two or more parts united by screw connections 11.

The upper section 2^a carries the handle 4 and is preferably formed hollow throughout and of metal or other conducting material.

[Price 8d.]

T. and J. R. Cooke's New or Improved Medical Electric and Magnetic Appliance.

The battery 3 may be of any suitable type such as a 'dry' battery and is located within the top part of the upper section 2^a

Beneath the battery and supported between collars 7 of insulating material is a self-induction coil or its equivalent 8 which transforms the low tension battery current into a current of sufficiently high tension to produce a beneficial effect on the user of the stick.

The battery 3 is introduced into the stick through a hole or opening 18 in the handle 4 which hole is normally closed by a sliding cover 22 fixed by a screw 23. The poles of the battery comprise a stud 19 at the bottom end, and a blade spring 6 at the upper end. The stud 19 makes contact with one terminal 20 of the coil 8 and the spring 6 makes constant electrical contact with the metal handle 4.

The current flows from the battery, through the self-induction coil or its equivalent and then by means of the switch 5 along a conducting wire 9 to the handle 4 through the metal of which the current circulates and finally returns.

The switch preferably comprises two spring tongues or contacts 5^a, 5^b, carried by the section 2^a and by the adjacent upper part of the section 2^b respectively.

A spiral compression spring 10 is arranged between the two said sections of the stick, being located between a plate or disc 12 soldered, brazed or otherwise secured within the lower part of the section 2^a, and the bottom of a socket 13 screwing into the upper part of section 2^b. A screw or stud 25 passing through the lower part of section 2^a and through slots in the socket 13 holds the two sections firmly together while at the same time it allows for relative movement between them in the direction of their length.

The bottom extremity of the lower section 2^b is provided with a tubular socket 14 into which a solid plug forming the ferrule 15 telescopes against the action of a spring 16 when the stick first makes contact with the ground. The plug is provided with an enlarged head or with lips which engage with the spun over the edges of the open end of the socket 14 to prevent the plug from falling out.

The action of the stick in use is as follows;—

During walking the first shock or jar as the stick makes contact with the ground is absorbed by the telescopic spring ferrule 14. As the pressure on the stick continues the sections 2^a, 2^b, are caused to close up telescopically thus resulting in relative movement between them. This movement throws the switch into action the spring contact 5^b carried by section 2^b engaging with the second spring contact 5^a located in the upper section 2^a thus completing the circuit. Current now flows from the battery 3, through the self-induction coil 8, thence through the switch 5 and wire conductor 9 to the metal handle 4 from which it passes into the hand of the individual and finally returns through the metal of the handle 4 of the stick. As the stick is raised from the ground the pressure thereon is removed and the spring 10 returns the sections to their normal relative positions thereby separating the spring contacts 5^a, 5^b, constituting the switch, and breaking the circuit.

Where it is desired to use the stick in a manner other than as a walking stick the construction of the same may be varied. For example, when it is desired to apply the device to the feet of the individual the handle 4 of the stick may be made extensible as shown in detail, Figure 3, where the said handle 4 is fitted with a telescopic member 17 in electrical connection therewith by studs 21 and guide slots 24.

In use, the stick is held by its stem in the hand while the feet abut against the extended handle. The pull thus put on the stick causes relative movement of its sections with the result that the switch is operated and a current is caused to circulate throughout the handle and its extension whence it passes into the feet of the individual and produces well known beneficial effects.

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Having now particularly described and ascertained the nature of this said invention and in what manner the same is to be performed we declare that what we claim is:—

- 5 1. A medical electric and magnetic appliance comprising a walking stick carrying a battery or its equivalent and combined with intermediate means in such a manner as to send an electric current through the handle of the stick for the purpose described.
- 10 2. A medical electric and magnetic appliance comprising an articulated stick adapted to make contact with one or more parts of the body and provided with a battery which, while the stick is subjected to a tensile or compressive stress, sends an electric current through the part of the stick in contact with the body for the purpose described.
- 15 3. A medical electric and magnetic appliance comprising a walking stick carrying a battery or its equivalent and means for making and breaking an electric circuit in the handle of the stick as the latter meets and leaves the ground respectively for the purpose described.
- 20 4. A medical electric and magnetic appliance comprising in combination, a walking stick made in sections with or without an extensible or telescopic handle, a battery adapted to send an electric current through the said handle and a controlling switch operated by the relative movements of the said sections while the stick is being used for the purpose described.
- 25 5. A walking stick made in telescopic sections having a battery and a self-induction coil located within one of the said sections adapted to send a high tension electric current through the handle of the stick and a switch to make and break the circuit for the purpose described.
- 30 6. A walking stick made in spring controlled sections and carrying a battery and a self-induction coil adapted to send a high tension current through the handle of the stick and a switch to control the current arranged between two adjacent sections and operated by the relative movements of the latter so that the switch is 'on' only during the time the stick is in compression.
- 35 7. The combination with a walking stick of the kind herein described of a spring controlled ferrule for the purpose described.
8. A medical electric and magnetic appliance constructed, arranged and adapted to operate substantially in the manner as and for the purposes described and as illustrated in the accompanying drawings.

Dated this 11th day of November 1904.

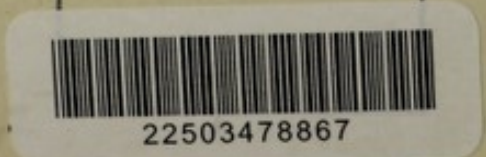
TOM COOKE.
JOHN ROBERT COOKE.
Boult, Wade & Kilburn,
Agents for the Applicants.

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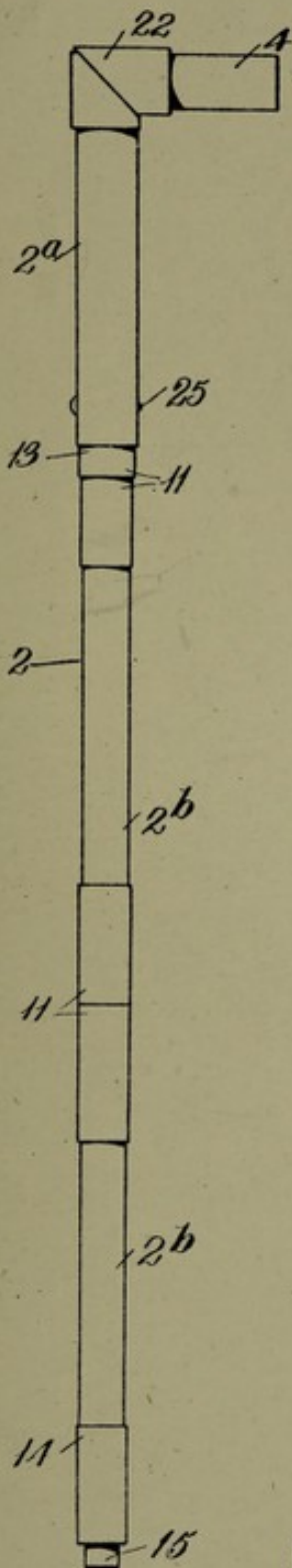


Fig: 1.

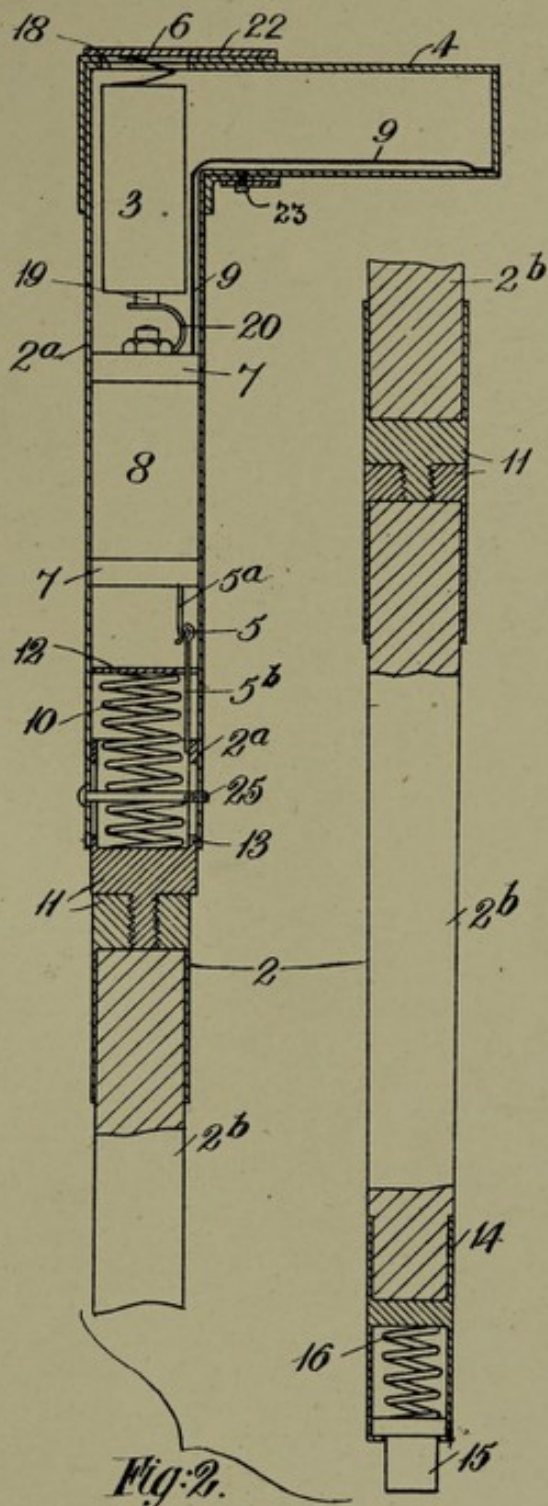


Fig: 2.

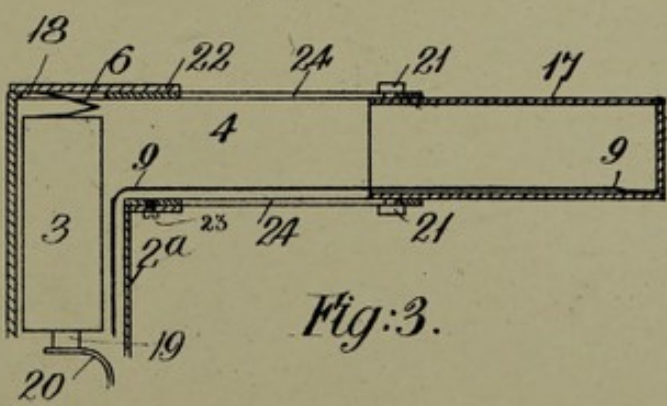


Fig: 3.

[This Drawing is a reproduction of the Original on a reduced scale]

