

Generating and applying electricity for medicinal or other purposes, &c.; : letters patent to Robert Vacy Ash of Marylands Road, Saint Peter's Park in the county of Middlesex for an invention of "An improved method of generating and applying electricity for medicinal or other purposes, and in the " : Sealed the 1st July 1879, and dated the 28th April 1879.

Contributors

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A.D. 1883, 14<sup>th</sup> APRIL. N° 1895.  
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**Generating and Applying Electricity for Medicinal or other
Purposes, &c.**

LETTERS PATENT to Robert Vacy Ash of Marylands Road, Saint Peter's Park
in the County of Middlesex for an Invention of "AN IMPROVED METHOD OF
GENERATING AND APPLYING ELECTRICITY FOR MEDICINAL OR OTHER PURPOSES,
AND IN THE MEANS EMPLOYED THEREFOR"

PROVISIONAL SPECIFICATION left by the said Robert Vacy Ash at the
Office of the Commissioners of Patents on the 14th April 1883.

ROBERT VACY ASH of Marylands Road S^t Peters Park in the County of
Middlesex "AN IMPROVED METHOD OF GENERATING AND APPLYING ELECTRICITY
5 FOR MEDICINAL OR OTHER PURPOSES AND IN THE MEANS EMPLOYED THEREFOR"

The object and design of this Invention is to afford a more perfect means than
has yet been attained for the production of electric and magnetic currents and
discharges in and upon substances and surfaces of wearing apparel worn by human
or other living beings in such a manner as to ensure the production of currents or
10 discharges in any required direction and with the proper power over the whole
surface to be treated The means hitherto employed for this purpose have been
chains or bands having the properties of chains in which the joints or connections
always become corroded after short use whereby the electrical action is reduced
and finally stopped so far as the terminal plates are concerned in which case the
15 chain or band becomes inoperative The system of chains also involve the removal
of the chain or band to different parts of the body in fact to the part desired
whereas according to my invention, hereinafter described there is this important
difference that the moisture or vapour of one part is made to perform the part of
the liquid excitant to generate a current which owing to the "polar extensions"
20 is applied to another part of the body.

The magnetic or electrical effects are to be produced according to my invention
by an arrangement of sensitive metallic or other magnetic or electrical current

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producers and in such a manner that when in use and upon the body the electric or magnetic energy will be excited automatically but when not worn or in use there will be a cessation of such energy thus avoiding continual waste.

As an example, When carrying my invention into practice I interweave sew or otherwise combine or attach to textile fabrics strands of copper surrounded spirally 5 by zinc, wire, or other equivalent metals, and with open spaces, threads or strands of nonconductors interposed, the elements will, whilst adapting themselves to the curves or undulations of the body, be electric and magnetic current producers or other current producers having polar extensions of Silver Gold, or platinum so as not to produce an injurious effect on the surface by actual application, or when 10 a conducting medium is interposed between the poles and the surface to be operated upon, conduction and influence as the case may be, are effected—For instance when the respirator is constructed of the wires mentioned or other equivalent wires such as zinc and silver or zinc and platinum or the like then the moisture of the breath keeps up the electrical excitation The duration is regulated 15 in the usual way *videlicet* by applying the positive or negative pole where required. The system I have adopted of weaving the elements of copper and Zinc or other combinations mentioned into the substance of fabrics is also new I illustrate this by the example of stiffening stays or other similar articles of clothing by inserting my spirally made exciters of electricity in the place of the usual stay bones and 20 connecting the ends in a suitable manner according to the well known electrical laws for producing the required potential by terminating the one or more series in such a manner that while no injury results to the surface the current is conveyed to the Patient and the moisture from the skin in the condition of vapour excites the galvanic series above named and thereby produces the current of 25 electricity which can be applied at any convenient part determined by the Physician

The means of producing the electrical and magnetic currents possesses novelty from the manner in which the wires are arranged rather than from the composition of the elements, copper and zinc, or zinc, and silver, gold, platinum, or the like. 30

The automatic excitation is one of the principal features of this invention and differs greatly from the galvanic chains which are usually excited by vinegar and water, which soon dries up and the action then from this cause also ceases. This point is more clearly seen by regarding my improved form of webb battery as possessed of a means of absorption by which it constantly renews itself Never- 35 theless on removal from the source of moisture or vapour the action rapidly ceases thus avoiding waste.

With respect to the construction which has been referred to and with regard to the absorbing power of the cotton or other medium between the metals I would point out that the thickness of this varies in proportion to the internal resistance 40 required in this my improved construction of webb battery, the thicker the medium the greater the resistance will be and the spaces facilitate evaporation and like the non conducting threads increase the internal resistance.

The metals whether wire like or flattened, if small, will readily be moulded to any required figure necessary for the human body or other living being. The 45 polar extensions may be long or short as the case may be and are always to be of Gold silver or platinum, or any other metal, if any, which shall be incapable of poisoning the skin.

In the case of surfaces too sensitive for actual application of the metallic poles I provide any moderately good conducting material and place it over the conductor 50 or poles.

When the combined metals are manufactured with the textile fabric in the continuous form the conductors and generators are parallel and spirally arranged so as to facilitate the multiple arc formation and so secure the requisite potential.— In some cases I should prefer to employ the flattened formations of conductor as 55 the same system of excitation already explained would be adopted in each case, that is to say I do not limit myself to the use of wires

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The combined metals being regarded as so many threads in a woven material and woven in are then to be cut at so many ends as may be necessary according to the number required in series and then joined according to the well known rules for "multiple arc" and "series connections"

- 5 The wire like form not to be always used. The principle of excitation would remain the same whether the wire be round, flat, grooved or even if the conductor should be tabular.

- The chains already made have been referred to and owing to their weight and numerous other reasons not necessary to refer to here I have thought it only
10 necessary to point out how my invention differs from these devices and to call special attention to the automatic action of my webb battery.

- The battery itself is not necessarily in the centre of the fabric into or on to which it is woven or within which it is contained but as a Carpet for example is made on a webb so also I reserve to myself the method of using my webb as a base
15 on which to set up or give a plush-like or other soft and absorbant surface to be presented towards the skin.

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said Robert Vacy Ash in the Great Seal Patent Office on the 13th October 1883.

- 20 ROBERT VACY ASH of Marylands Road St Peters Park in the County of Middlesex "AN IMPROVED METHOD OF GENERATING AND APPLYING ELECTRICITY FOR MEDICINAL OR OTHER PURPOSES AND IN THE MEANS EMPLOYED THEREFOR"

- The object and design of this Invention is to afford a more perfect means than has yet been attained for the production of electric and magnetic currents and
25 discharges in and upon substances and surfaces of wearing apparel worn by human or other living beings in such a manner as to ensure the production of currents or discharges in any required direction and with the proper power over the whole surface to be treated.—The means hitherto employed for this purpose have been chains or bands having the properties of chains in which the joints or connections
30 always become corroded after short use whereby the electrical action is reduced and finally stopped so far as the terminal plates are concerned in which case the chain or band becomes inoperative. The system of chains also involve the removal of the chain or band to different parts of the body in fact to the part desired whereas according to my invention hereinafter described there is this
35 important difference that the moisture or vapour of one part is made to perform the part of the liquid excitant to generate a current which owing to the "polar extensions" is applied to another part of the body.

The magnetic or electrical effects are to be produced according to my Invention by an arrangement of sensitive metallic or other magnetic or electrical current

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producers and in such a manner that when in use and upon the body the electrical or magnetic energy will be excited automatically but when not worn or in use there will be a cessation of such energy thus avoiding continual waste.

As an example. When carrying my Invention into practice I interweave sew or otherwise combine or attach to textile fabrics strands of copper surrounded 5 spirally by zinc wire, or other equivalent metals, and with open spaces, threads or strands of nonconductors interposed, the elements will, whilst adapting themselves to the curves or undulations of the body, be electric and magnetic current producers or other current producers having polar extensions of Silver, Gold, or platinum so as not to produce an injurious effect on the surface by actual application, or when 10 a conducting medium is interposed between the poles and the surface to be operated upon, conduction and influence as the case may be, are effected.

For instance when the respirator is constructed of the wires mentioned or other equivalent wires such as zinc and silver or zinc and platinum or the like then the moisture of the breath keeps up the electrical excitation. The duration is regu- 15 lated in the usual way *videlicet*, by applying the positive or negative pole where required. The system I have adopted of weaving the elements of copper and zinc or other combinations mentioned into the substance of fabrics is also new, I illustrate this by the example of stiffening stays or other similar articles of clothing by inserting my spirally made exciters of electricity in the place of the usual stay 20 bones and connecting the ends in a suitable manner according to the well known electrical laws for producing the required potential by terminating the one or more series in such a manner that while no injury results to the surface the current is conveyed to the Patient and the moisture from the skin in the condition of vapour excites the galvanic series above named and thereby produces the current 25 of electricity which can be applied at any convenient part determined by the Physician.

The means of producing the electrical and magnetic currents possesses novelty from the manner in which the wires are arranged rather than from the composition of the elements copper and zinc, or zinc and silver, gold, platinum or the 30 like.

The automatic excitation is one of the principal features of this Invention and differs greatly from the galvanic chains which are usually excited by vinegar and water, which soon dries up and the action then from this cause also ceases. This point is more clearly seen by regarding my improved form of web-battery as 35 possessed of a means of absorption by which it constantly renews itself. Nevertheless on removal from the source of moisture or vapour the action rapidly ceases thus avoiding waste.

With respect to the construction which has been referred to and with regard to the absorbing power of the cotton or other medium between the metals I would 40 point out that the thickness of this varies in proportion to the internal resistance required in this my improved construction of web-battery, the thicker the medium the greater the resistance will be and the spaces facilitate evaporation and like the non conducting threads increase the internal resistance

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5 "series connections."

The wire-like form not to be always used.—The principle of excitation would remain the same whether the wire be round, flat, grooved, or even, if the conductor should be tubular.

The chains already made have been referred to and owing to their weight and
10 numerous other reasons not necessary to refer to here I have thought it only necessary to point out how my invention differs from these devices and to call special attention to the automatic action of my web-battery.

The battery itself is not necessarily in the centre of the fabric into or on to which it is woven or within which it is contained but as a carpet for example is
15 made on a web, so also I reserve to myself the method of using my web as a base on which to set up or give a plush-like or other soft and absorbent surface to be presented towards the skin.

Having now described the nature of my said Invention together with the means of carrying the same into practical effect I wish it to be understood that what I
20 claim as new and as of my Invention is

The novel construction, combination and arrangement of a medicinal electro or magnetic battery to be employed in the manner and for the purpose as herein substantially described.

In witness whereof I the said Robert Vacy Ash have hereunto set my hand
25 and seal this the eighteenth day of September in the year of Our Lord One thousand eight hundred and eighty three.

ROBERT VACY ASH (L.S.)

Witness:—

THOMAS WRIGLEY

30 75. Chancery Lane
London W.C.

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