Improvements in electric apparatus for therapeutic use.

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Complete Specification Left, 28th Jan., 1904—Accepted, 17th Mar., 1904

PROVISIONAL SPECIFICATION.

Improvements in Electric Apparatus for Therapeutic use.

I FREDERICK COURTENAY FISHER, of 64 Hampton Park, Redland, Bristol, Gentleman do hereby declare the nature of this invention to be as follows.—

This invention consists of an apparatus for therapeutic purposes to be placed on the various parts of the body whereby an electro magnetic, a faradic or electro magnetic faradic current may be supplied. It consists of one or more electro magnets with or without secondary coil or coils which may be used with or without conductor or conductors and an interruptor when necessary, and is so arranged that it can be applied or worn on the body and connected to a battery or batteries or other generator of electricity, using sometimes primary and sometimes primary and secondary currents combined.

The generator ot electricity which it is preferred to use consists of three dry cells which can be placed on the table or carried in a pocket or worn in a wallet attached to the person.

The belt is constructed on suitable material varying in width and length with elastic belting securely fixed to one half of the belt, the other half of the belt sliding on the elastic belting to adjust position of electrodes and magnets, an adjustable clasp being provided upon the elastic belting to suit the size of person.

A suitable snap button is used to attach the primary wire to cells from thence through contact breaker to bobbin and wound with several turns round a bundle of wires or laminated stamped plates wrapped with insulation from thence to further sets of bundles of wires or stamped plates where more than one is used, thence to the other pole of the battery. The wires between the windings being made up with flexible wire to prevent breaking or binding.

The secondary wire after winding over the primary wire has one end carried over to a stud on the resistance switch and terminates at the electrode. The other end is wound on the next winding of primary and so on, to as many primaries as are used and ending finally in an electrode.

The electrodes are connected to each other communicating with the secondary wire and are placed on the opposite side of the belt to the windings and magnets.

The belts may be made up as before described but without secondary wire and they may be made up without contact breaker and electrodes being merely a primary, or laminated wire or plates.

A pad may be made up in the same way as described for the belt with the only difference that the shape is more of a rectangle and carries two loose electrodes, wires of secondary being free and of suitable length to apply to any part of the body without necessarily attaching the pad to the body.

The electrodes may be applied either by holding or strapping to the person while metallic cloth may be used as electrodes.

For making and breaking the circuit of electricity the contact breaker may be made up of a fork magnet of laminated iron or bundles of iron wire insu-

lated, wound with one or more turns of wire. An iron armature pivoted on a plate attached to the laminated iron, under which a fine spring is attached to keep the armature from the poles when no attraction is in the poles of the magnet. A plate which is insulated from the magnet and plate carrying the pivoted armature, extends over the armature which is provided with a platinized face so as to enable the latter to be set or adjusted for sparking by swinging on its pivot the armature being slightly tapered from one side to the other.

Dated this 29th day of September 1903.

LEWIS W. GOOLD,
Patent Agent by Examination,
Agent for Applicant, 5 Corporation Street, Birmingham.

COMPLETE SPECIFICATION.

Improvements in Electric Apparatus for Therapeutic use.

I FREDERICK COURTENAY FISHER, of Colston House, Host Street, Bristol, in the County of Gloucester, Gentleman, formerly of 64 Hampton Park, Redland, Bristol, do hereby declare the nature of this 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 consists of an apparatus for therapeutic purposes to be placed on the various parts of the body whereby an electric magnetic, a faradic or electro magnetic faradic current may be supplied. It consists of one or more electro magnets with or without secondary coil or coils which may be used with or without conductor or conductors and an interrupter when necessary, and is so arranged that it can be applied or worn on the body and connected to a battery or batteries or other generator of electricity, using sometimes primary, sometimes secondary and sometimes primary and secondary currents combined, while the genarator of electricity which it is preferred to use consists of dry cells which can be placed on the table or carried in a pocket or worn in a wallet attached to the person.

In order that this invention may be clearly understood and more easily carried into practice I have appanded hereunto two sheets of drawings upon which I have illustrated the nature of my said invention.

Figure 1 is an external elevation of part of an interrupted electro galvanic and faradic belt having primary and secondary wire connections.

Figure 2 is a similar elevation to that of Figure 1 but illustrating a faradic belt having a secondary current.

Figure 3 is also a similar elevation to that of Figure 1 but illustrating an electric belt having an interrupted primary or galvanic current.

Figure 4 is an elevation of a pad shewing the application thereto of the interrupted electro galvanic and faradic system with primary and secondary currents.

Figure 5 is an elevation of a pad illustrating the application thereto of a faradic or secondary current.

Figure 6 is an elevation of a pad illustrating the application thereto of an interrupted primary or galvanic current.

Figure 7 is a side view of one form of contact breaker.

Figure 8 is an end view of Figure 4.

The electro galvanic and faradic belt as illustrated by Figure 1 is constructed on suitable material A varying in width and length with elastic belting B securely fixed to one part of the belt at a^1, the other part or parts A^2 of the belt being made to slide upon the elastic belting for the purpose of adjusting the

position of the electrodes and coils, an adjustable clasp or buckle C being provided upon the elastic belting to enable the belt to be accomodated to suit the size of person.

A suitable snap is used to attach the primary wire P to cells and from thence through contact breaker E to coil F, then wound with several turns round a bundle of wires or laminated stamped plates H wrapped with insulation and from thence to further sets of bundles of wires or stamped plates H, in cases where more than one is used being then connected to the other pole of the battery. The wires between the winding are made up with flexible wire to prevent breaking or binding.

The secondary wire S after winding over the primary wire has one end carried over to a stud on the resistance switch I, while the other end is wound on the next winding of primary and so on, to as many primaries as are used ending finally at an electrode.

The electrodes K are connected to each other by means of the secondary wire and are placed on the opposite side of the belt to the winding F and poles H.

The belt may be made up as illustrated by Figure 2 in which the connections are so arranged as to provide a secondary or faradic current or they may be made up without a secondary wire as illustrated by Figure 3 or they be made up without contact breaker and electrodes, in which case they consist merely of a primary or laminated wire or plates, but such arrangement is mounted upon a silk belting in two parts the one A^2 of which slides upon the elastic belting B for the purpose of adjustment as before described.

Pads M may be made up as illustrated by Figures 4, 5 and 6 in the same way as described for the belt with the only difference that the shape is more of a rectangle and carries two loose electrodes k^1 and k^2, the secondary wires S being in such case free and of suitable length to apply to any part of the body, such for instance as a metallic sock for the foot and without necessarily attaching the pad to the body.

The electrodes such as k^1 k^2 may be applied either by holding or strapping to the person while metallic cloth may be used as electrodes.

For making and breaking the circuit of electricity the contact breaker may be made up (as illustrated by Figures 7 and 8) of a fork magnet R of laminated iron, or bundles of iron wire insulated, wound with one or more turns of wire. An iron armature S pivoted on a plate W at s^1 attached to the laminated iron, under which a fine spring Z is attached to keep the armature from the poles when no attraction is in the poles of the magnet. A plate V which is insulated from the magnet and plate carrying the pivoted armature, extends over the armature which is provided with a platinized face so as to enable the latter to be set or adjusted for sparking by swinging on its pivot s^1 the armature being slightly tapered from one side to the other, a platinized set screw being provided for allowing of the more perfect regulation of the breaker.

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

1st. The improvements in electric belts for therapeutic use characterized by a belt in two or more parts which are connected together by elastic belting one or more of which parts are mounted to slide upon the elastic belting for the purpose of adjustment of the electrodes which are secured to the sliding parts in combination with a battery and primary and secondary wires forming coils with poles of wires or laminated plates and with an intermediate contact breaker substantially as and for the purposes set forth.

2nd. The improvements in electric belts for therapeutic use characterized by a belt in two or more parts which are connected together by elastic belting one or more of which parts are mounted to slide upon the elastic belting for the purpose of adjustment of the coils which are secured to the sliding parts and

which are made up of a primary wire upon poles of laminated wires or plates the whole being arranged in combination with a battery and with a contact breaker, substantially for the purpose set forth.

3rd. The improvements in electric apparatus for therapeutic use characterized by a pad having electrodes and primary and secondary wires forming a series of coils with poles of wires or laminated plates in combination with a battery and one or more separate electrodes connected by secondary or secondary and primary wires for attachment to any part of the body either separately from or with the pad itself, substantially as and for the purpose set forth.

4th. The improvements in electric apparatus for therapeutic use characterized by a pad having electrodes and primary wires forming a series of coils with poles of wires or laminated plates in combination with a battery and one or more separate electrodes connected by primary wires for attachment to any part of the body either separately from or with the pad itself, substantially as and for the purpose set forth.

5th. The improvements in electric apparatus characterized by contact breaker consisting of a fork magnet, a pivoted iron armature having a platinized face and a fine spring to retain the armature from the poles and a platinized screw for adjustment, substantially as and for the purpose set forth.

Dated this 27th day of January 1904.

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FIG. 1

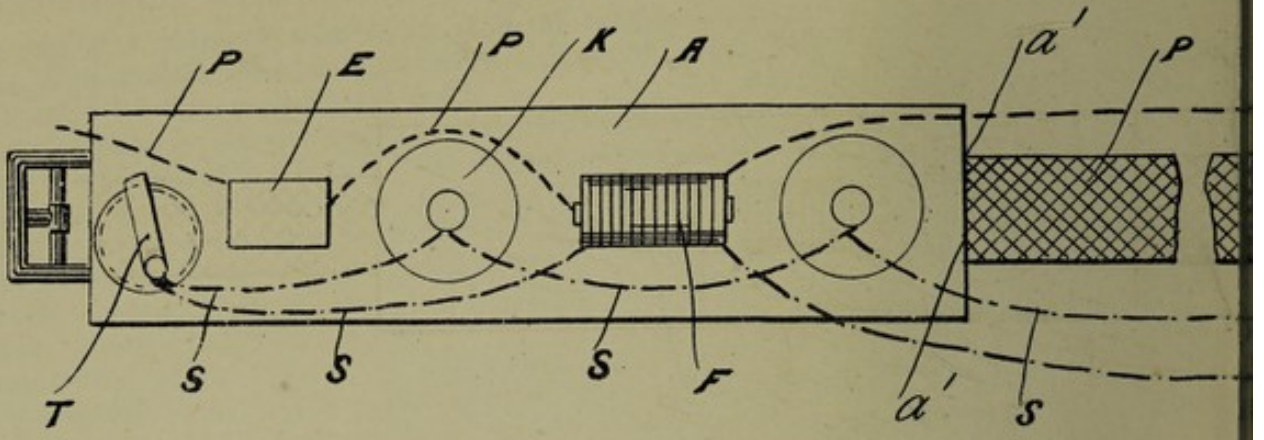


FIG. 2

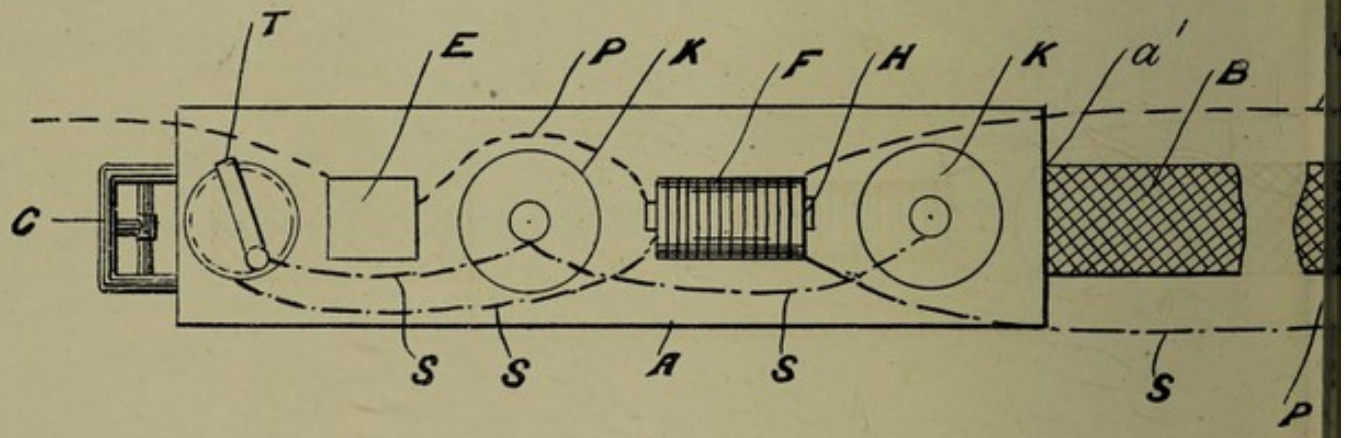
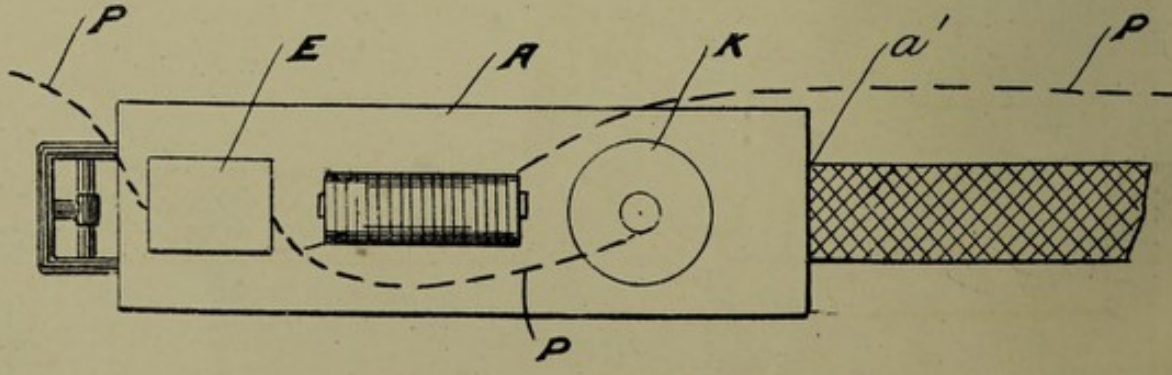
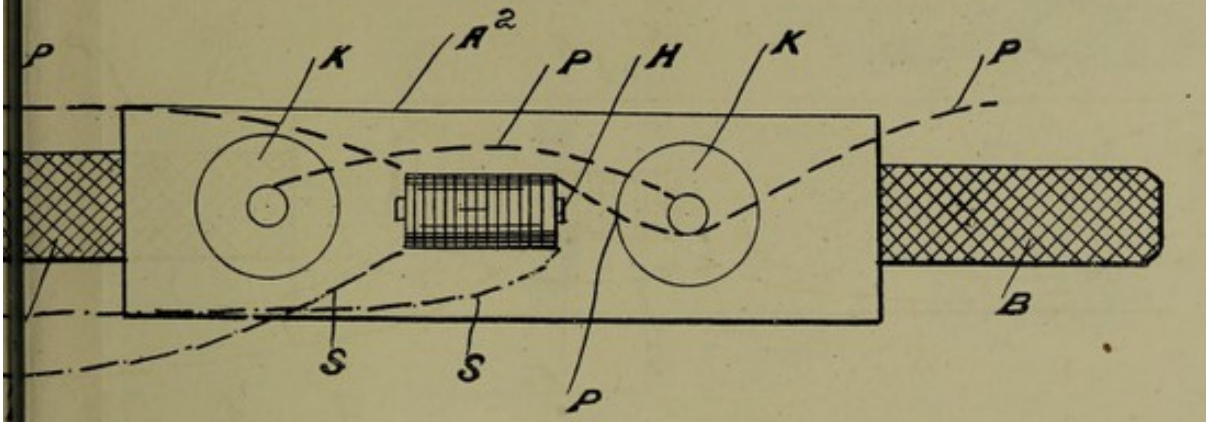
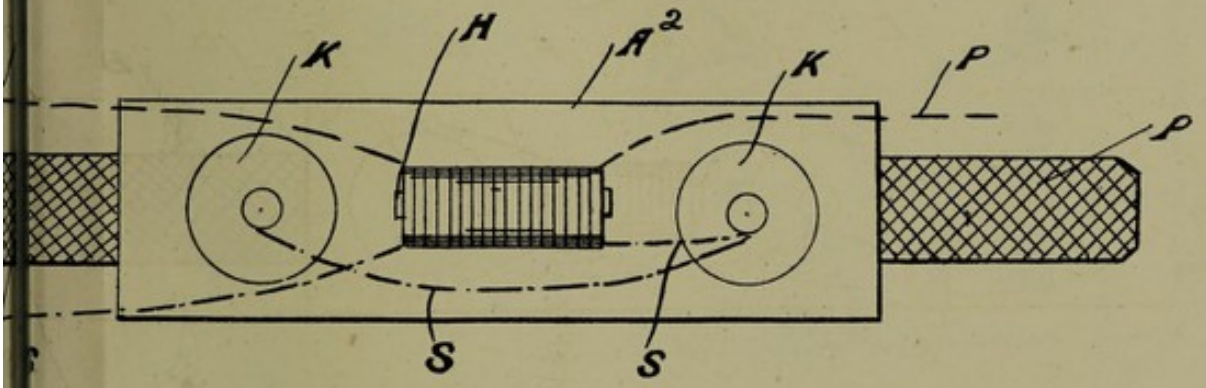


FIG. 3.







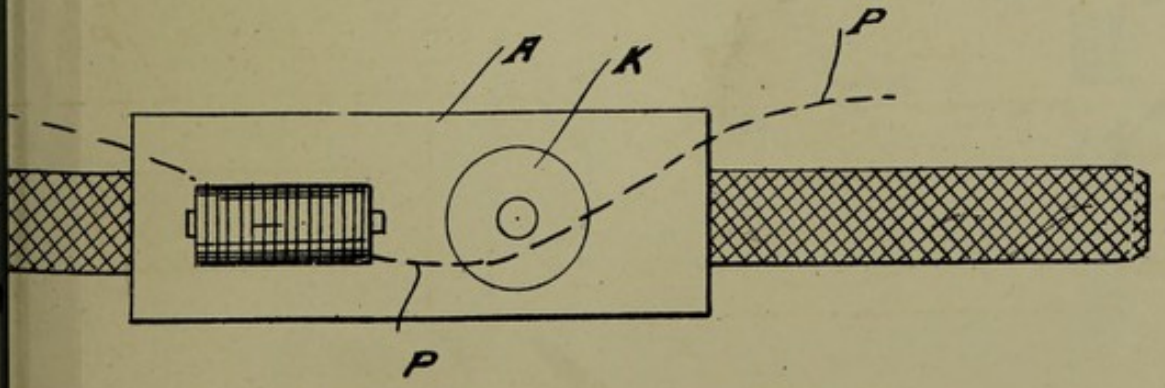


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FIG. 6.

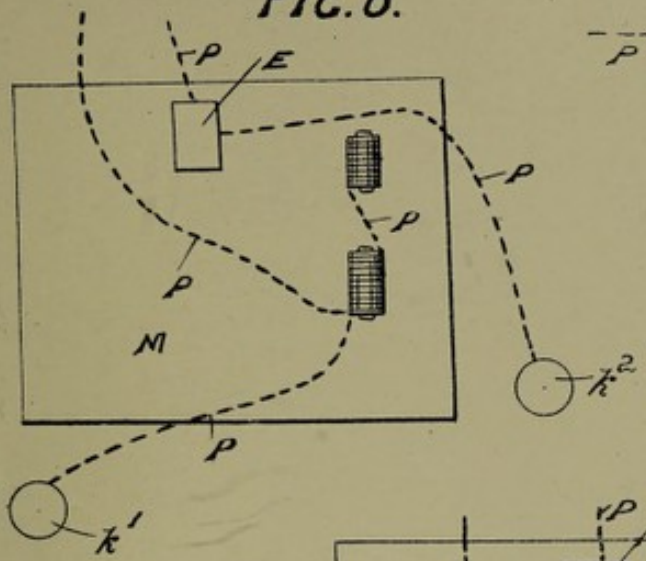


FIG. 7.

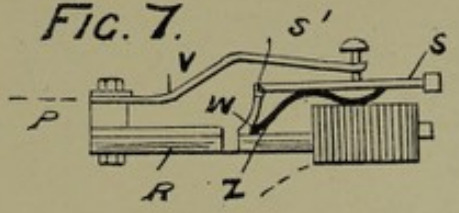


FIG. 8.

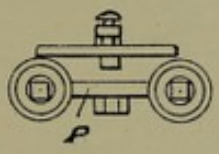


FIG. 5.

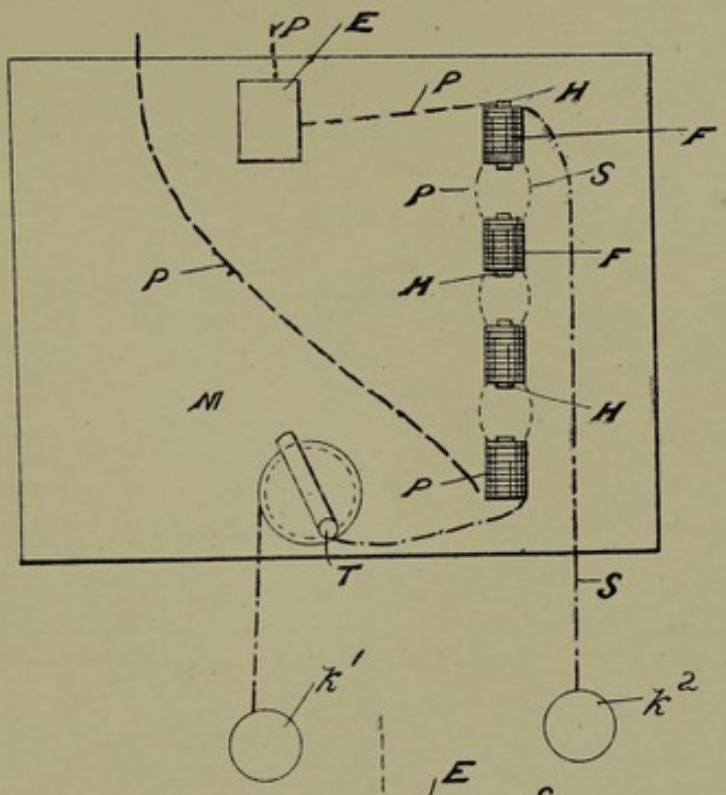
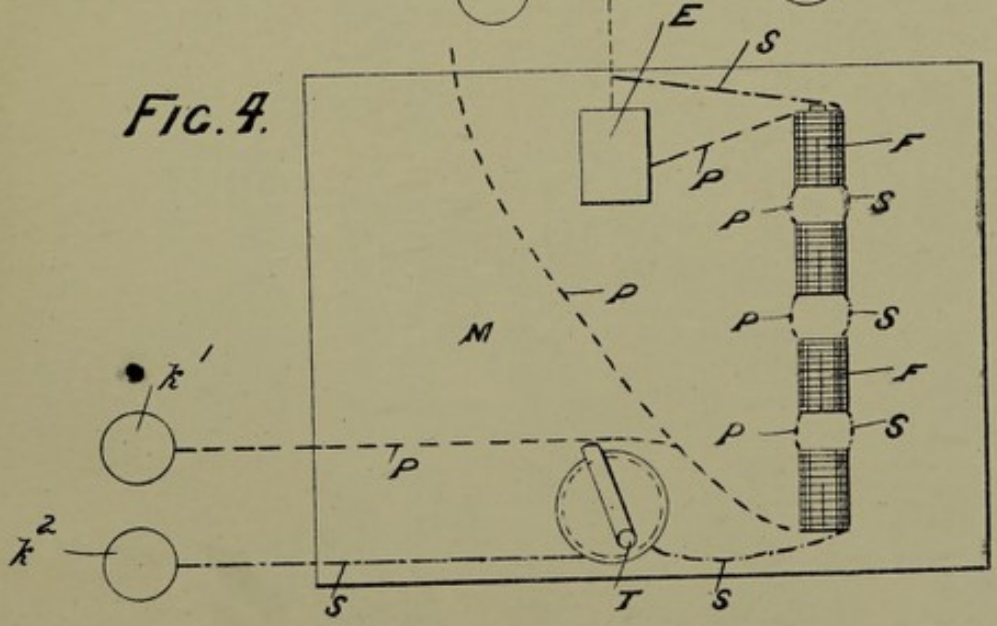


FIG. 4.



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

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