No. 845,836. PATENTED MAR. 5, 1907.

J. D. WILMOT.

ELECTRIC IGNITER.

APPLICATION FILED AUG. 29, 1906.

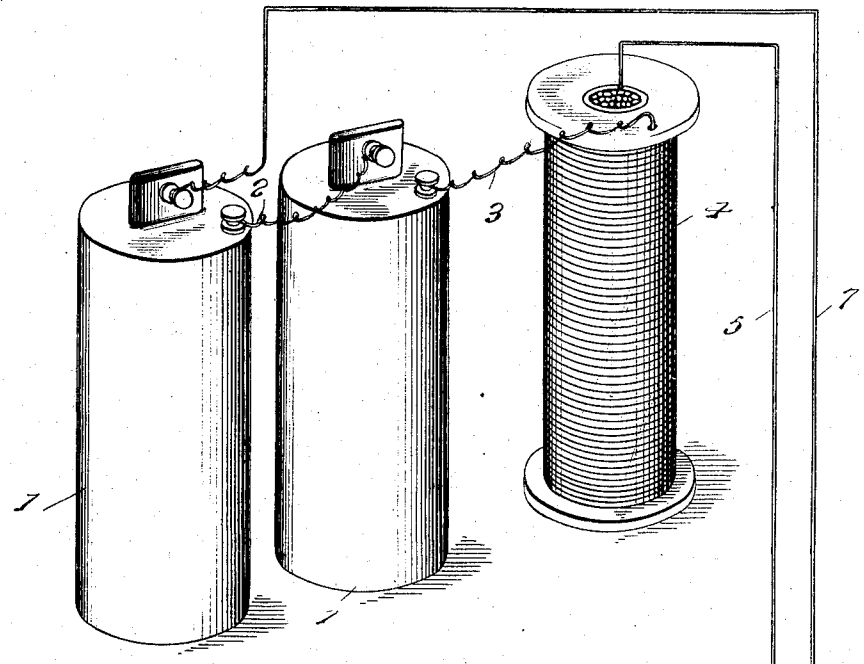


Fig. 1.

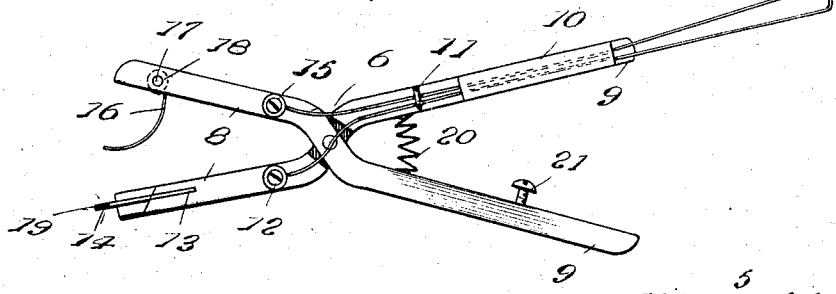
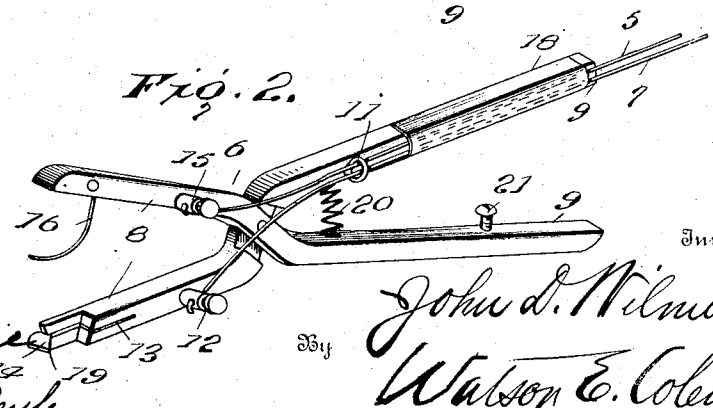


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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ELECTRIC IGNITER.

No. 845,836. Specification of Letters Patent. Patented March 5, 1907.

Application filed August 29, 1906. Serial No. 332,490.

To all whom it may concern:

Be it known that I, JOHN DANIEL WILMOT, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Electric Igniters, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to electric igniters, and more particularly to a device of the character described especially adapted for use in igniting gas ranges, stoves, and the like, one of the objects being to provide an igniter of the class described that shall be simple and comparatively inexpensive in construction, durable, and effectual in operation.

Other objects and advantages of the invention, as well as the structural features by which such objects are attained, will be apparent from the specification, taken in connection with the accompanying drawing, in which—

Figure 1 is a perspective view of the dry batteries and solenoid and a top plan of the sparker or igniter, and Fig. 2 is a perspective view of the sparker or igniter.

Referring to the drawing, 1 designates two dry batteries, one having a positive and the other a negative pole, which are connected with each other by a kicker-coil 2, one of said batteries being also connected by a kicker-coil 3 with a solenoid 4. An insulated wire 5 connects the core of the solenoid with a sparker 6, and a like wire 7 connects one of said batteries to said sparker, which comprises pivotally-connected arms, the forward ends or jaws being indicated by 8, and the rear ends, which operate as handles, whereby said jaws are actuated, being designated by 9. The wires 5 and 7 extend parallel longitudinally of one of said handles 9 and are held in position thereon by means of a covering 10, of rubber cloth or other suitable insulating material, and also by the staple 11. One of said wires is connected to a plug 12 on one of the jaws 8, said plug being connected with a metal plate 13, preferably copper, embedded in the jaw and having its outer pointed end 14 projecting slightly beyond the end of said jaw. The other wire extends to a plug 15 on the opposite jaw and is connected to said plug. Also connected with this plug is a wire 16, which is embedded in the jaw and coiled around a pin 17 therein to form a coil-spring 18, the outer end of said wire projecting through an opening in the jaw and extending laterally, as shown, said laterally-extending portion being arranged to contact the plate when the jaws are brought together and also being bent to allow it to slide past the projecting point 19 on said metal plate. A coil-spring 20 is arranged between the handles 9, the tension thereof forcing the handles apart, and a set-screw 21 limits the movement of the handles toward each other.

In operation the operator grasps the handles by closing one hand thereover and presses them together against the tension of said spring until the set-screw is encountered. This closing movement brings the jaws 8 together, and the projecting point of the wire 16, contacting the laterally-extending point 19 on the metallic plate 13, closes the circuit and creates a spark as the wire slips past said point. When the handles are released, the tension of the spring 20 forces the handles, and consequently the jaws, apart and another spark is created as the wire slips back over the point 19 in returning.

From the foregoing it is thought the construction, operation, and advantages of my said invention will be obvious, and further explanation is not deemed necessary.

While the preferred embodiments of the invention are shown and described, it will be understood that I do not wish to be limited to the precise construction herein set forth, since various changes in the form, proportion, and the minor details of construction may be made without departing from the spirit or sacrificing any of the advantages of the invention as defined by the appended claims.

Having thus described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an electric igniter, a pair of crossed, hand-levers of non-conducting material, pivotally connected intermediate their ends and formed at their short ends with opposing jaws, one of the latter having a longitudinal slot or notch in its outer end, and the other having a recess or cavity in its inner face, a transverse pin arranged in said cavity, a coil-spring upon said pin and having one of its ends projecting out of the cavity and curved to provide an electrical contact, and a metal plate secured in said slot in the other of said jaws and projecting beyond said jaw to provide an electrical contact-point adapted to

be engaged by the curved, projecting end of said spring when said jaws are opened and closed.

2. In an electric igniter, a pair of crossed, hand-levers of non-conducting material, pivotally connected intermediate their ends and formed at their short ends with opposing jaws, one of the latter having a longitudinal slot or notch in its outer end and the other having a recess or cavity in its inner face, a transverse pin arranged in said cavity, a coil-spring upon said pin and having one of its ends projecting out of the cavity and curved to provide an electrical contact, a metal plate secured in said slot in the other of said jaws and projecting beyond said jaw to provide an electrical contact-point adapted to be engaged by the curved, projecting end of said spring when said jaws are opened and closed, binding-posts upon said jaws and electrically connected with said spring and said plate, electric-circuit conductors connected to said binding-posts and arranged upon the exterior of one of said levers, and a covering of non-conducting material surrounding the handle portion of the last-mentioned lever and said conductors to retain the latter upon said lever, substantially as shown and described.

3. In an electric igniter, a pair of crossed, hand-levers of non-conducting material, pivotally connected intermediate their ends and formed at their short ends with opposing jaws, one of the latter having a longitudinal slot or notch in its outer end and the other having a recess or cavity in its inner face, a transverse pin arranged in said cavity, a coil-spring upon said pin and having one of its ends projecting out of the cavity and curved to provide an electrical contact, electric-circuit conductors electrically connected to said spring and said plate, said conductors being arranged upon the exterior of one of said levers, a covering of non-conducting material surrounding the handle portion of the last-mentioned lever and said conductors for retaining the latter upon said lever, a spring for forcing said jaws apart, and an adjustable stop carried by one of said levers and adapted to engage the other for limiting the closing movement of said jaws, substantially as shown and described.

4. In an electric igniter, a pair of crossed, hand-levers of non-conducting material, pivotally connected intermediate their ends and formed at their short ends with opposing jaws, coacting electrical contacts upon said jaws, electric-circuit conductors electrically connected to said contacts, said conductors being arranged upon the exterior of one of said levers, a covering of non-conducting material surrounding the handle portion of the last-mentioned lever and said conductors for retaining the latter upon said lever, a coil-spring arranged between said levers for forcing them apart, and a set-screw carried by one of said levers and adapted to engage the other to provide an adjustable stop for limiting the closing movement of said jaws, substantially as shown and described.

5. In an electric igniter, the combination with an electric battery and a solenoid, of a sparking device comprising a pair of crossed, hand-levers of non-conducting material, pivoted intermediate their ends and formed at their short ends with opposing jaws, one of the latter having a longitudinal slot in its outer end and the other having a recess or cavity in its inner face, a transverse pin extending through said cavity or recess, a coil-spring surrounding said pin and having a curved end projecting out of said cavity to provide an electrical contact, a metal plate secured in said slot in the other of said jaws and formed with a projecting point to provide an electrical contact to coact with the curved end of said spring, binding-posts projecting laterally from the sides of said jaws and electrically connected with said spring and said plate, and electrical connections between said battery, said solenoid, and said binding-posts, substantially as shown and described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOHN DANIEL WILMOT.

Witnesses:
BERT W. LAWS,
J. A. GRAHAM.