No. 748,360. PATENTED DEC. 29, 1903.

W. GARDNER.

IGNITING DEVICE.

APPLICATION FILED SEPT. 27, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

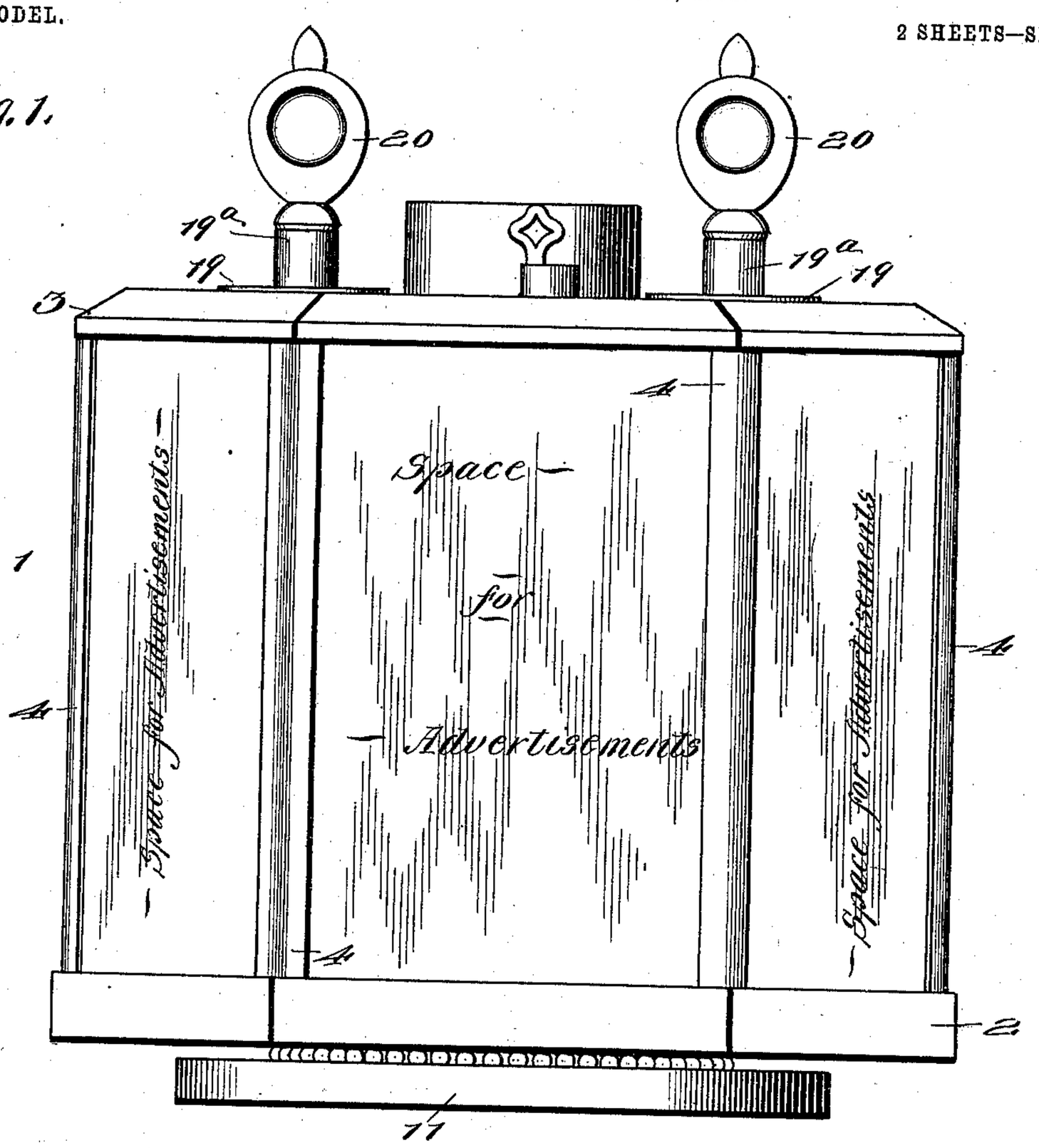


Fig. 5.

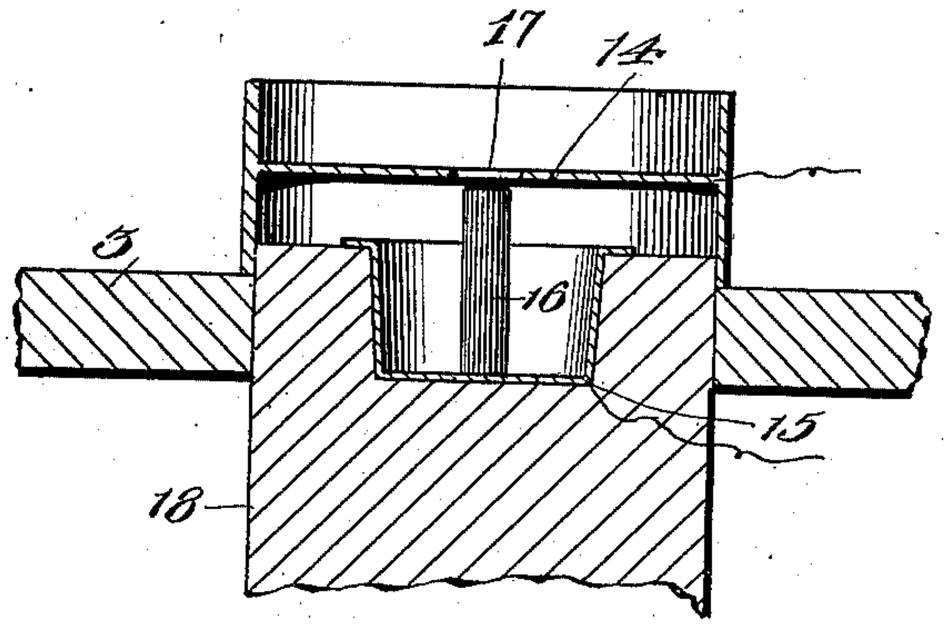
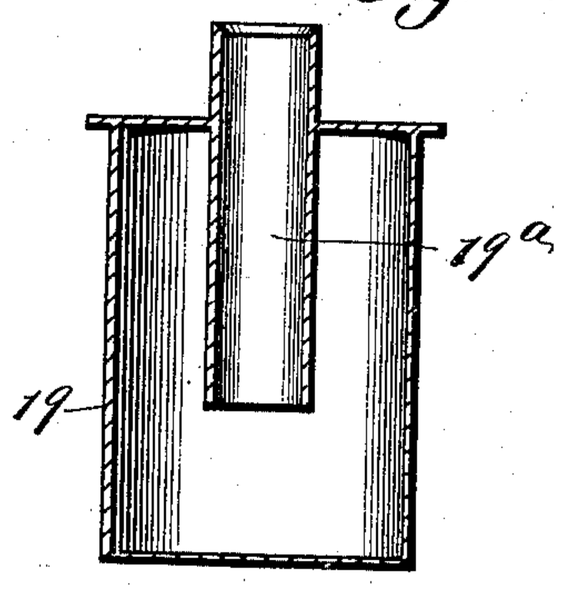


Fig. 4.



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APPLICATION FILED SEPT. 27, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

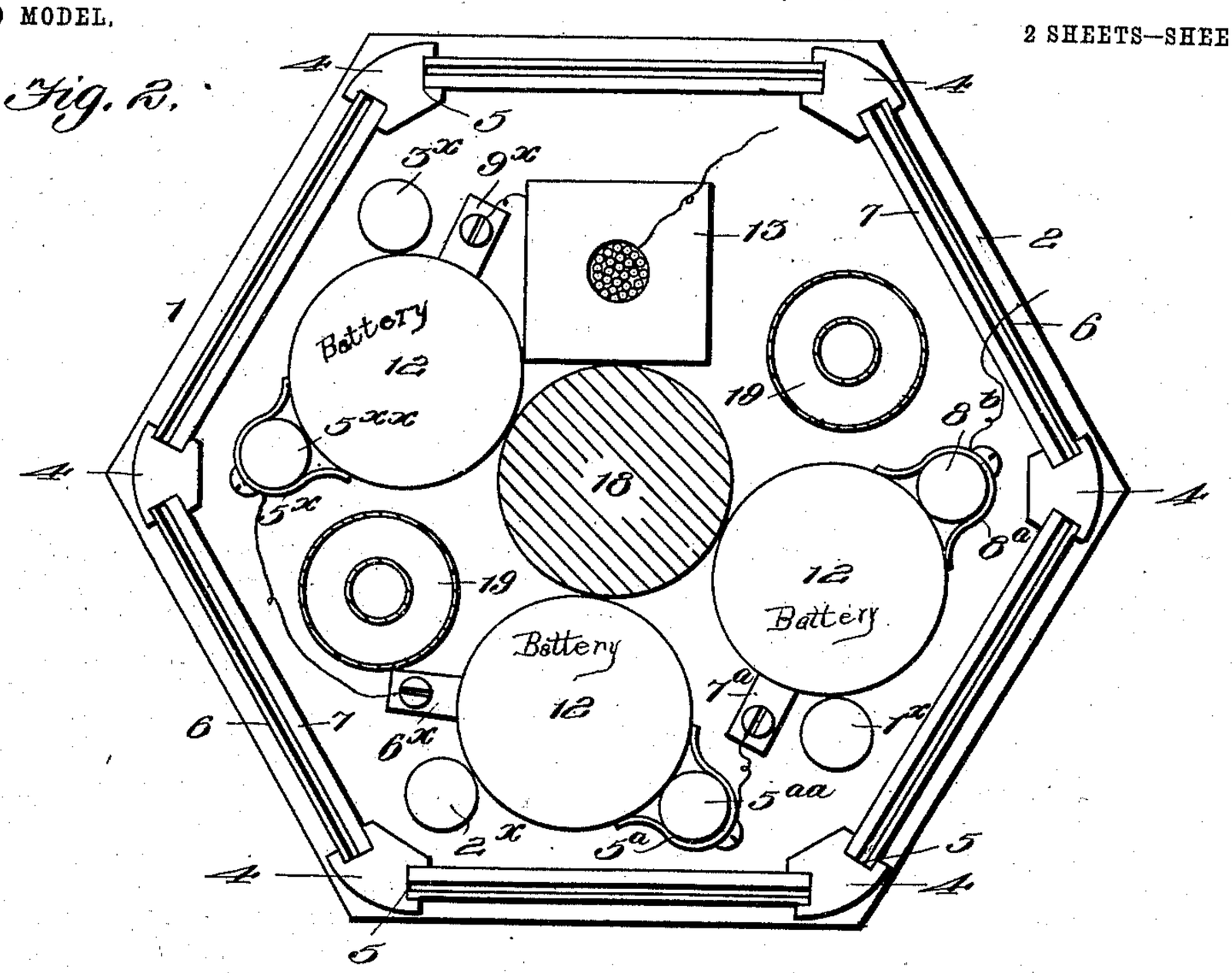


Fig. 5.

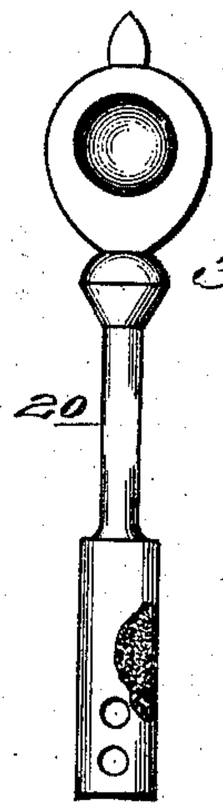
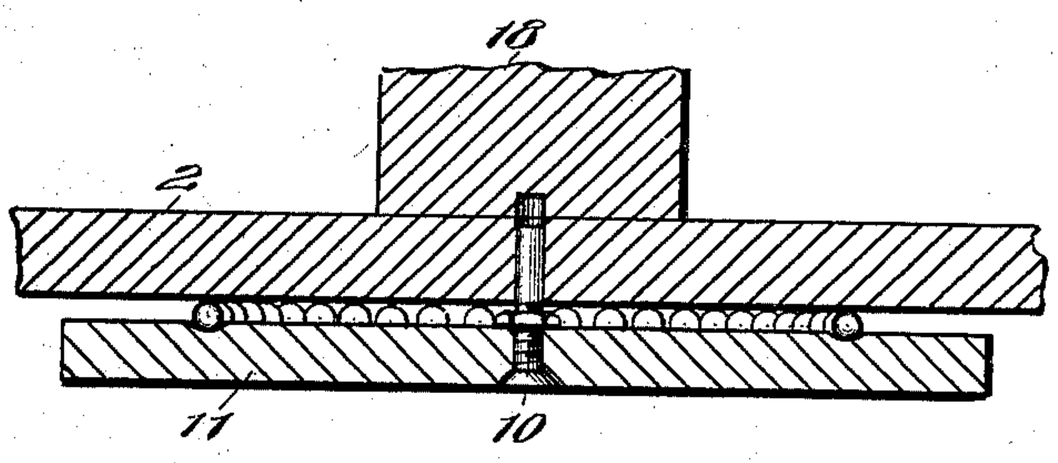


Fig. 6.



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No. 748,360. Patented December 29, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM GARDNER, OF BROOKLYN, NEW YORK.

IGNITING DEVICE.

SPECIFICATION forming part of Letters Patent No. 748,360, dated December 29, 1903.

Application filed September 27, 1902. Serial No. 125,111. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GARDNER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Igniting Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in what may be termed "cigar and gas lighters." It is more especially designed for use in connection with advertising media which may be adapted to display or exhibit to attract trade, &c.

It consists of the combination and arrangement of parts, including their construction, all substantially as hereinafter more fully disclosed, and specifically pointed out by the claims concluding the specification.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a view in elevation. Fig. 2 is a view in horizontal section or plan taken below the top plate or surface. Fig. 3 is a broken section thereof. Fig. 4 is a detailed sectional view of an alcohol-cup of the lighting device. Fig. 5 is a detached view of a "torch" or lighter proper. Fig. 6 is a broken sectional view showing groove or race in smaller base or stand and bearing or antifriction-balls traveling therein.

It will be understood that latitude is allowed herein as to details, as they may be changed according to circumstances without departing from the spirit of my invention and said invention remain intact and be protected.

In putting into practice my invention I employ a closure or case 1 of any desired construction, that shown being preferably six-sided or hexagonal and comprising a bottom and top 2 and 3, respectively, and connecting corner-posts or stiles 4, arranged at the angles thereof. Said posts or stiles have in their longitudinal edges or surfaces vertical grooves or gains 5, into which may be slid or inserted from the top cards, pictures, &c., containing advertisements or other like printed or inscribed matter to attract business. Said gains or grooves are of sufficient depth or cross-sectional area to permit the slipping or placing therein in front of said advertisement matter plates of glass 6 and in rear thereof suitable backing of, preferably, wood or other veneer 7 to bodily sustain or support said matter in proper position or shape. Said case or closure is preferably rotatably supported for displaying its matter by means of, say, a stout cylindric axial or pivot-bolt 10, connected to or bearing in its bottom and secured to a base or stand 11, preferably smaller or of less dimension than said bottom. Arranged or carried within said case or closure interiorly of said advertisement matter is a number of (preferably dry) electric batteries 12—three, more or less. Also within said case or closure is an electric sparking or induction "coil" 13, wired up with said batteries, with one pole or terminal formed by a slotted plate 14 and the other pole or terminal formed by a metal cup 15, as hereinafter explained, with a plurality or "bundle" of fine brass wires 16 arranged therein in the line of and contiguous to the slot 17 in said plate. Said plate and cup are suitably secured to and in a preferably cylindric support or post 18, centrally held in the closure or case 1 and projecting upwardly through and a short distance beyond the top or cover of said case, which cover or top is removable to permit ready access to and removal of the dry batteries when required to be replaced by others. This is a desideratum, it not requiring skilled persons or electricians for such purpose, as heretofore. The various parts 12 13 18, assembled, preferably, as shown, are held in stable relation and firmly in place by the posts $1^{\times}$ $2^{\times}$ $3^{\times}$ and $5^{\times\times}$ 5^{aa} 8^{b}.

The connecting of the induction or sparking coil and batteries is effected as follows: One of the copper wires of the sparking-coil is connected to the slotted plate 14, constituting one pole. The second wire of the sparking-coil is connected to a brass plate $9^{\times}$, upon which the carbon end of the battery rests. A bent or curved (preferably brass) plate $5^{\times}$ embraces one of the battery-holding posts $5^{\times\times}$, the ends of said plate contacting with the outside of a battery. A straight (preferably brass) plate $6^{\times}$ has resting thereon a second battery and is suitably wired or connected to said plate $5^{\times}$. A second bent

(preferably brass) plate 5^a embraces a second battery touching the outside holding-post 5^{aa}, with its ends engaging a second battery, a connection being suitably effected from that plate to a second straight (preferably brass) plate 7^a, upon which rests a third battery. Finally connection is suitably effected from a third bent (preferably brass) plate 8^a, embracing the third battery-holding post 8^b, to the metal cup containing the small bundle of brass wires engaged by the torch or brush when used.

In the top or cover portion 3 of the case 1 are preferably secured or sunken alcohol wells or holders 19, preferably of the construction shown, having an inner central air-tight cylinder or closure 19^a, adapted to form, with the brush or torch when placed therein or out of use, an air-tight joint to prevent the evaporation or waste of the alcohol.

The "torches" or brushes 20, preferably of the construction disclosed, have their "brush" portions each produced of a perforated metal tube filled with abestos or the like, which as the user draws the same over the slot 17 in the plate 14 is adapted to just touch or engage the fine-wire bundle 16, and thus generate the electric spark, igniting the alcohol in the torch. The abrasion or wear of the parts is by reason of the very slight surface or contact therebetween reduced to the minimum, thus providing for greater length of use of the same than would otherwise be the case. Also the brush or torch as herein produced is adapted to provide for the lighting of the gas-jets usually required for use throughout an ordinary house before becoming extinguished and will practically last for a lifetime.

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

1. In a device of the character described, a combination of a casing, a brush or torch, an electrode arranged in said casing and a second electrode arranged above the first-mentioned electrode and protecting the same from accidental contact.

2. A device of the character described comprising an ignitible fluid well or holder, an electric torch or brush, a slotted plate arranged in a metallic receptacle connected to a source of energy and a second electrode arranged in said receptacle, said plate having its aperture or slot arranged contiguously to said electrode whereby, when said brush is applied and forms a connection between them, the current or sparks will pass therethrough and ignite the same.

3. A device of the character described comprising an ignitible fluid well or holder, an electrode torch or brush, a slotted plate arranged in a metallic receptacle connected to a source of energy and a wire bundle also connected to a source of energy arranged in the line of, and contiguous to, the slot of said plate, said brush adapted by the contact thereof with said wire bundle through said slot to cause the current or sparks to pass therethrough and ignite the same.

4. A device of the character described, embracing electric batteries and sparking or induction coil connected up thereto, an ignitible fluid well or holder, an electric torch or brush and a slotted plate arranged in a metallic receptacle connected to said induction-coil and a fine-wire bundle arranged in a metallic cup in line with and close to the slot of said plate, said wire bundle being also connected through said metallic cup to the induction-coil, said brush adapted to engage the wire bundle and said plate, causing the current or sparks to pass therethrough and ignite the same.

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

WILLIAM GARDNER.

Witnesses:
J. M. GARDNER,
M. P. BEECHER.