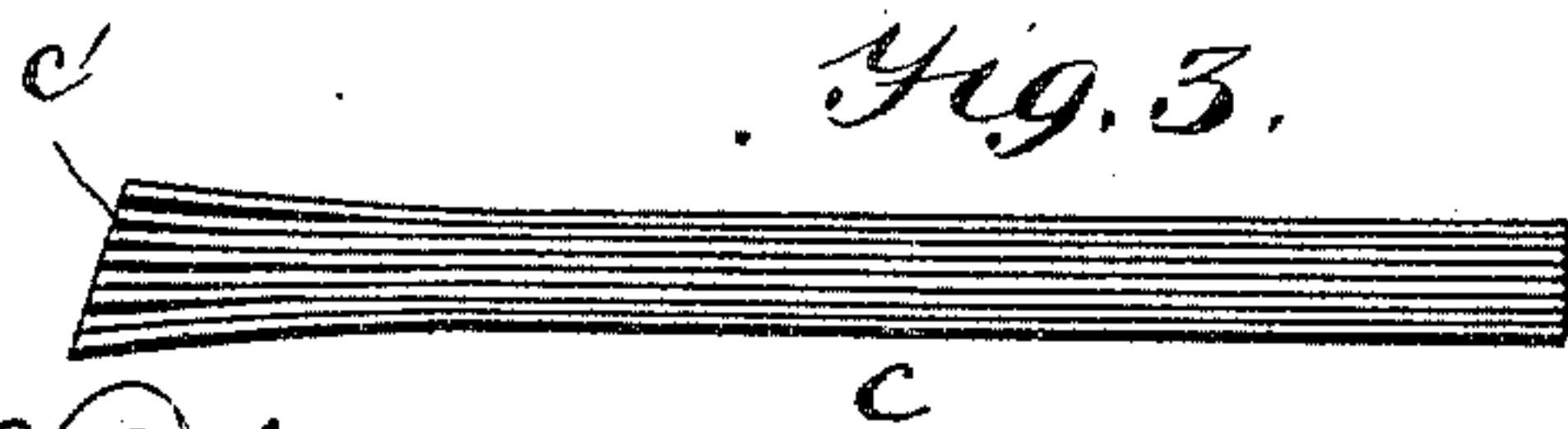
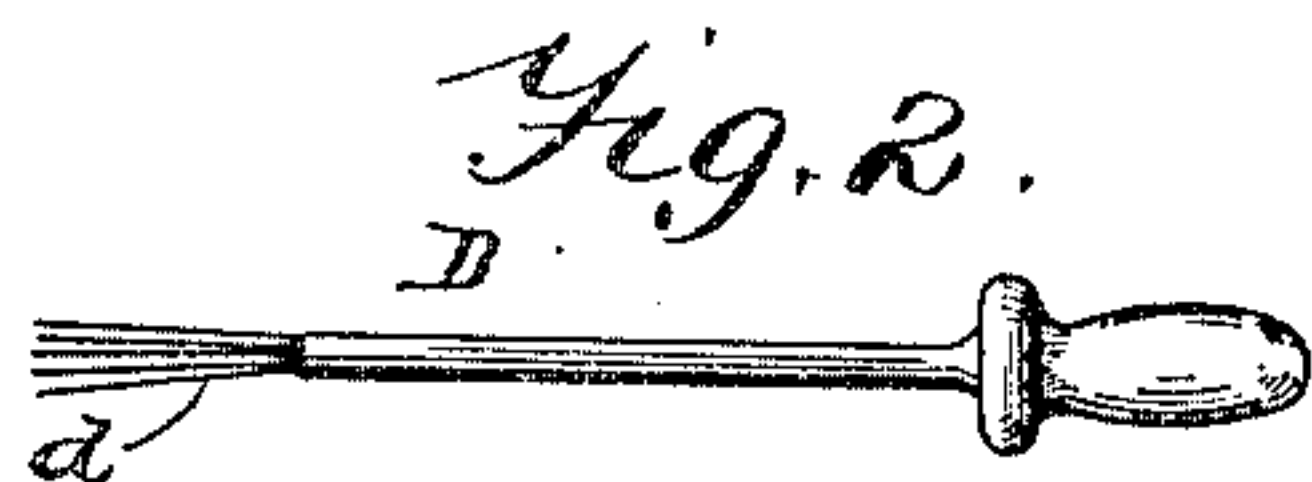


(No Model.)

M. M. HAYDEN.  
ELECTRIC CIGAR LIGHTER.

No. 436,354.

Patented Sept. 16, 1890.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

MORTIMER M. HAYDEN, OF NEW YORK, N. Y.

## ELECTRIC CIGAR-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 436,354, dated September 16, 1890.

Application filed April 29, 1890. Serial No. 349,915. (No model.)

*To all whom it may concern:*

Be it known that I, MORTIMER M. HAYDEN, a citizen of the United States, residing in New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in the Method of and Apparatus for Lighting Cigars or Cigarettes, of which the following is a specification.

My invention relates to an improved method of and apparatus for igniting an inflammable substance—such as alcohol—carried on a metallic brush for the purpose of lighting cigars or cigarettes.

Heretofore in electric cigar-lighters it has been common to interpose in an electric circuit some material of high resistance permanently connected with the circuit and to so heat such resistance by a current of electricity that a cigar or cigarette can be lighted therefrom. It has also been very common to ignite an inflammable substance—such as alcohol—carried by a bunch of some incombustible material—such as a knot of wire or asbestos—by inserting said bunch in the flame of a lamp. Among the objections to the latter and most common method and device is that the lamp-flame is liable to be extinguished by a gust of air or by lack of oil or gas in the lamp, and objections to the former method are that a very strong current is required to heat the resistance to incandescence, and when so heated an undue time was required to light a cigar pressed against it. An electrical cigar-lighter consisting of an alcohol-torch connected to one pole of a battery and adapted to be brought against a contact-surface connected to the other pole has also been produced; but among other objections to this form may be mentioned the limitation and restriction of free movement of the torch owing to its connections with the source of electrical supply.

The object of my invention is to produce an apparatus and a method of lighting a torch which will avoid all of the objections above mentioned, and this object I accomplish in the manner and by the means hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view illustrating my invention in a pictorial or fancy device.

Fig. 2 is a detail view of the disconnected metallic contact or alcohol-torch, and Fig. 3 is an enlarged detail of one of the circuit-terminals.

A indicates the base, consisting of two parts  $a$  and  $a'$ , insulated from each other, and  $a^2$  is a reservoir for alcohol, having one or more cups to receive one or more alcohol-torches.

On the two parts of the base are two uprights B and C, one of which carries a fixed terminal  $b$  and the other carries a terminal  $c$ , which is fixed in its relation to terminal  $b$  at a short distance therefrom. One of these terminals, as  $c$ , is preferably composed of a brush of straight wires gathered and held in a cylindrical form, having a beveled outer end  $c'$ , the outer ends of the wires being disconnected from each other to form a metallic brush-terminal.

D is the disconnected contact-brush or alcohol-torch, consisting, preferably, of a handle carrying at its ends a brush-shaped series of straight wires  $d$ , which will hold or carry a small quantity of inflammable material, as alcohol.

E is the battery or other source of electrical energy, and F is a spark-coil or resistance in the circuit between the battery and one of the terminals.

When the separate or disconnected contact D is drawn or passed between the two terminals  $b$  and  $c$ , a spark will be produced, which, when the contact carries inflammable material, as alcohol, will ignite said material and produce a flame, which can then be removed to any distance for such purposes as lighting a cigar or cigarette.

The circuit being normally broken at  $b$  and  $c$ , there will be no waste of electrical energy, and the use of the current will be but momentary during the passage of the separate contact between the terminals.

As shown in Fig. 1, the terminal  $c$  may represent a cigarette in the hand of a figure supposed to be lighting it from the other terminal representing a pipe in the hand of another figure, said figures constituting the uprights B and C, and said terminal  $c$  is preferably composed, as above stated, of a bunch of straight wires, the bunch having a beveled

end. This is to facilitate the passage of the brush *d* and the production of one or more sparks.

Having thus described my invention, I  
5 claim—

1. The method of igniting an inflammable substance, which consists in passing a piece of conducting material bearing such substance between the terminals of an electric circuit,  
10 substantially as described.

2. The method of igniting an inflammable substance, which consists in passing said substance on a metallic brush between the terminals of an electric circuit.

15 3. The combination, with two separated ter-

minals, of a source of electrical energy, and a detached circuit-maker consisting of a bunch of straight wire, substantially as described.

4. The combination, with two separated terminals, of a source of electrical energy, one 20 of which terminals consists of a bunch of straight wires, and a detached circuit-maker, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing 25 witnesses.

MORTIMER M. HAYDEN.

Witnesses:

WM. A. ROSENBAUM,

THOMAS K. TRENCHARD.