

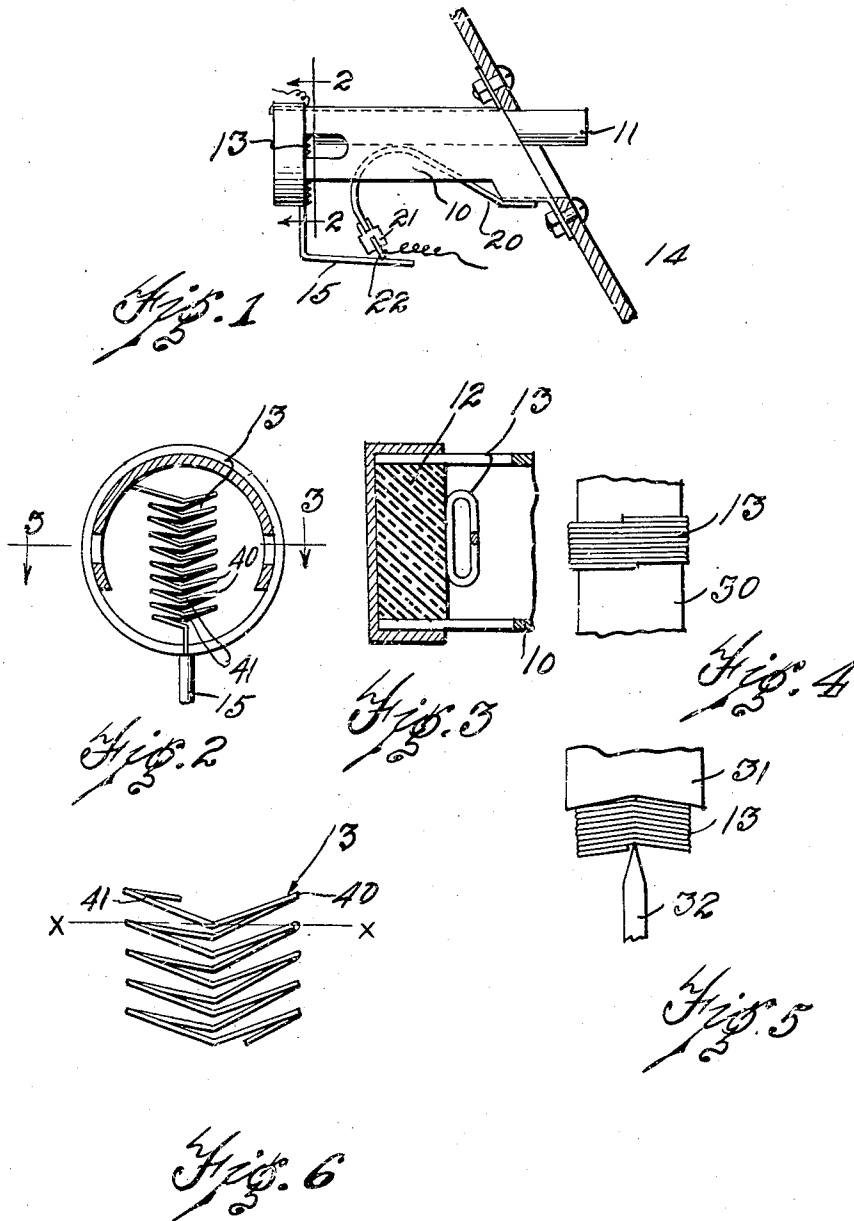
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A. W. DIACK

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IGNITING ELEMENT

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INVENTOR.
Archibald W. Diack
BY Francis D. Hardesty
ATTORNEY.

UNITED STATES PATENT OFFICE

ARCHIBALD W. DIACK, OF ANN ARBOR, MICHIGAN

IGNITING ELEMENT

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The present invention relates to electric resistance heating or igniting elements and particularly to such an element as forming a part of a cigar or cigarette lighter.

5 Among the objects of the invention is an element of the kind mentioned which when supported on a suitable backing will stand out therefrom to allow air circulation and yet support considerable thrust or weight
10 without collapsing.

Other objects will readily appear to those skilled in the art upon reference to the following description and accompanying drawing in which:—

15 Fig. 1 is a side elevation of a cigar or cigarette lighter indicating the preferred use of the invention;

Fig. 2 is a section on line 2—2 of Fig. 1 on an enlarged scale;

20 Fig. 3 is a section on line 3—3 of Fig. 2;

Figs. 4 and 5 illustrate two steps in the operation of making the igniting element; and

Fig. 6 is an elevation of the element itself.

25 In application Serial No. 161,982 filed January 19, 1927, by the present inventor there is described and claimed a cigar or cigarette lighter such as is indicated in Fig. 1 and such lighter consists of a tubular holder 10, open
30 at one end for the reception of the cigarette 11, and closed at its other end by a block of insulating material 12, upon the inner face of which is mounted a coil of resistance wire 13. One end of this wire is connected to the
35 holder 10 and so grounded through the mounting 14, representing in the present instance the instrument board of an automobile. The other end of the coil 13 is connected to a flexible wire or rod 15.

40 Secured to holder 10 is a flexible spring member 20 bent in such fashion as to extend up into holder 10 and be moved by the insertion of cigarette 11. The free end of spring 20 carries a small block of insulating material 21 and this in turn a metal contact
45 piece 22 connected through a wire 23 to the ungrounded pole of an electric battery (not shown). With such an arrangement of parts, when a cigarette is inserted into holder
50 10 and against element 13, the circuit is com-

pleted through the latter which then becomes heated sufficiently to ignite the end of the cigarette, provided the element 13 is of such form that air can get to the ignitable substance.

In order to prevent collapsing of the coil by the thrust of the cigarette end and to insure the circulation of air at this point, the igniting element is preferably of the form shown in Figs. 2 to 6.

In these figures the element is shown as made by winding suitable wire around a flat form 30, then placing the coil on a suitable die 31 and bending the several flights thereof by the use of a suitable tool 32. The coil is then extended as shown in Figs. 2 and 6. This produces a coil which, when looked at from the end, is of the form shown in Fig. 3 but which will resist a considerable pressure without collapsing as the bend is to such an angle that the portions 40 of the flight are prevented from rolling or turning by the underneath angular portions 41 and each outer angular portion 41 is prevented from depression by the portions 40 of the flight next below. In other words, the angle at point 41 and the extension of the coil should be such that a straight line across the coil at right angles to the axis and through a point 41 should intersect the flight next below at the parts 40. See line X—X in Fig. 6.

The present form of igniting element is not limited in its application, to cigar and cigarette lighters of the type mentioned but may be used in any device wherein the element itself is required to withstand a thrust.

Now having described the invention and the preferred form of embodiment thereof it is to be understood that said invention is to be limited not to the specific details herein set forth but only by the scope of the claims which follow.

I claim:—

1. An igniting element comprising a coil of bare wire adapted to be heated by the passage of an electric current therethrough, said coil being flattened with respect to its longitudinal axis and having its flights bent to form angular portions with approximately parallel sides, the apex of each angle lying

between the sides of the one next succeeding.

2. An igniting element comprising an insulating base having mounted thereon a coil of bare wire adapted to be heated by the passage of an electric current therethrough, said
5 coil being flattened with respect to its longitudinal axis and having its flights bent to form angular portions with approximately parallel sides, the apex of each angle lying
10 between the sides of the one next succeeding.

3. An igniting element comprising an insulating base having mounted thereon and in contact with one face of said base only, a coil of bare wire adapted to be heated by the passage of an electric current therethrough, said
15 coil being flattened with respect to its longitudinal axis and having its flights bent to form angular portions with approximately parallel sides, the apex of each angle lying
20 between the sides of the one next succeeding.

ARCHIBALD W. DIACK.

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