

## PATENT SPECIFICATION

Application Date: Oct. 24, 1935. No. 29356/35.

461,579

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Complete Specification Accepted: Feb. 19, 1937.



### PROVISIONAL SPECIFICATION

#### Improvements relating to Cigar or Cigarette Lighters

We, S. SMITH & SONS (MOTOR ACCESSORIES) LIMITED, a Company duly incorporated under the Laws of Great Britain, of Cricklewood Works, Edgware Road, 5 Cricklewood, London, N.W.2, VICTOR JAMES SAMUEL RUSSELL and ALAN GORDON SMITH, British Subjects, of the Company's address, do hereby declare the nature of this invention to be as follows:—

10 This invention relates to cigar or cigarette lighters of the kind adapted for use on a table, mantelpiece or other like support and which are heated by current from the electricity service mains, and has 15 for its object to provide an improved lighter of the said kind which involves a minimum of risk to the user.

20 The invention comprises the combination with a hollow base part adapted to support a removable part carrying the heating element, of a pair of contacts which can be connected to the mains, the said contacts being arranged in a recess 25 or recesses within the base part so as to render them difficult of access to the fingers when the said removable part is detached.

30 In one manner of carrying the invention into effect, the base part which is made of insulating material comprises a base of circular or other shape from which extends a hollow cylindrical vertical portion within which the contacts are contained. These contacts may 35 be carried on an insulating piece removably secured in the interior of the cylindrical portion and they may be in the form of pins which extend through the insulating piece and which are supported at their 40 lower ends on resilient metal strips secured to the under side of the insulating piece. The upper ends of the pins are arranged to lie in, and on diametrically opposite sides of, an annular recess formed in the 45 upper surface of the insulating piece, the arrangement being such that normally the contact pins are not readily accessible to the fingers of the user. Also there is provided within the base part a pair of 50 terminals which can be connected to the mains by a length of flexible conductor attached to a plug or like connecting piece, and which are adapted to be engaged

by the resilient metal strips when the latter are moved by depression of the pins. 55

The removable part of the apparatus which carries the heating element, is in the form of a cap of insulating material having a cylindrical portion which is adapted to fit freely over the cylindrical 60 portion on the base part. Extending inside the cap from the upper end thereof is a cylindrical or other shaped recess the lower end of which is closed by an insulating plate and on the underside of this 65 plate is mounted a pair of annular shaped contacts which, when the cap is positioned on the body part, are adapted to enter the annular recess in which the pins are provided and to rest on the latter. Each 70 of the annular contacts is connected to a pin or socket extending from the upper side of the insulating plate and these pins or sockets are adapted to interengage with sockets or pins provided on a removable 75 insulating piece carrying the heating element. The latter may comprise a number of small tubes of refractory material through which the resistance wire passes, these tubes being arranged parallel 80 with each other on their insulating piece and being secured to the latter by wires or in any other convenient manner. The resistance element is adapted to lie in the recess in the cap and a removable apertured cover piece may be provided for 85 fitting over the element when the latter is positioned in the cap.

Normally the cap rests on the base part with the annular contacts engaging the 90 upper end of the pins but the weight of the cap is insufficient to depress the resilient strips into contact with the terminals in the base part. When required for use, the cap is depressed by hand to effect 95 such contact and is kept in the depressed position until the heating element has been sufficiently heated, when the cap is removed and the heating element applied to the end of the cigar or cigarette. Owing 100 to the disposition of the pin contacts in the annular recess they are not accessible to the fingers of the user when the cap has been removed from the base part and thus risk of injury to the user is avoided. 105

Also we may provide at the lower end

[Price 1/-]

Price 4s 6d

of the base part a heavy metal piece for increasing the stability of the apparatus when it is placed on the table or other support. This piece may be removable and of circular shape and may be provided with an annular spigot adapted to enter an annular recess formed in the underside of the base part. Also we may provide a circular or other recess within the annular recess and in this recess may be mounted the terminal pieces for connection to the ends of the electric conductor, the terminal pieces being permanently connected to or forming part of the above mentioned terminals provided in the interior of the base part.

The invention is not limited to the example above described as subordinate details may be varied. Thus, instead of providing an annular recess for accommodating the contact pins we may arrange the latter in individual recesses, and in this modification, we use stud like contacts on the removable part for co-operating with the pins.

By this invention we are able to provide a cigar or cigarette lighter in a simple and convenient form, which is adapted for connection to the service mains with a minimum of risk to the user.

Dated this 23rd day of October, 1935.  
MARKS & CLERK.

### COMPLETE SPECIFICATION

#### Improvements relating to Cigar or Cigarette Lighters

We, S. SMITH & SONS (MOTOR ACCESSORIES) LIMITED, a Company duly incorporated under the Laws of Great Britain, of Cricklewood Works, Edgware Road, Cricklewood, London, N.W.2, VICTOR JAMES SAMUEL RUSSELL and ALAN GORDON SMITH, British Subjects, of the Company's address, 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 relates to cigar or cigarette lighters of the kind adapted for use on a table, mantelpiece or other like support and which are heated by current from the electricity service mains, and has for its object to provide an improved lighter of the said kind which involves a minimum of risk to the user.

The invention comprises the combination with a hollow base part adapted to support a removable part carrying the heating element, of a pair of contacts which can be connected to the mains, the said contacts being arranged in a recess or recesses within the base part so as to render them difficult of access to the fingers when the said removable part is detached. In the two accompanying sheets of explanatory drawings:—

Figure 1 is a plan and Figure 2 a sectional plan of a lighter constructed in accordance with the invention.

Figures 3 and 4 are sectional elevations taken respectively on the lines 3.3 and 4.4 of Figure 2.

In carrying the invention into effect as shown, the base part which is made of insulating material comprises a hollow cylindrical vertical portion *a* within which the contacts *b* are contained and which is provided at its lower end with a flange *c*.

The contacts *b* are carried by an insulating piece *d* arranged horizontally across the interior of, and formed integrally with, the cylindrical portion *a*, and as shown they may be in the form of pins which extend through the insulating piece *d* and which are urged upwardly by means of springs *f* into positions in which their lower ends are out of contact with the free ends of resilient metal strips *g* secured at their other ends to the under side of the insulating piece *d*. The upper ends of the pins *b* are arranged to lie in, and on diametrically opposite sides of, an annular recess *h* formed in the upper surface of the insulating piece *d*, the arrangement being such that normally the contact pins are not readily accessible to the fingers of the user. Also there is mounted in recesses formed in the underside of the piece *d* a pair of terminals *i* which can be connected to the mains by a length of flexible conductor *j* attached to a plug or like connecting piece (not shown), and which are connected to the fixed ends of the resilient metal strips *g*.

The removable part of the apparatus which carries the heating element, is in the form of a cap *k* of insulating material having a portion *l* which is adapted to fit freely over the cylindrical portion *a* on the base part, the portion *l* having a circular inner periphery and a polygonal outer periphery as shown. Extending inside the cap from the upper end thereof is a hollow cylindrical part *m* between the outer periphery of which and the inner periphery of the portion *l* is an annular recess *n* for accommodating the cylindrical portion *a* of the base part. The cylindrical part *m* is closed at its lower end by an insulating plate *o* formed integrally with it, and on the underside

of the plate *o* is formed an annular projection *p* which carries on its lower edge a pair of substantially semi-circular contacts *q* adapted, when the cap is positioned on the body part, to enter the annular recess *h* into which the pins *b* project and to rest on the latter. Each of the contacts *q* is connected to a pin *r* (or socket) extending from the upper side of the insulating plate *o* and these pins *r* (or sockets) are adapted to interengage with sockets *s* (or pins) provided on a removable insulating piece *t* carrying the heating element. The latter may comprise a number of small tubes *u* of refractory material through which the resistance wire *v* passes, these tubes being arranged parallel with each other on the insulating piece *t* and being secured to the latter by wires or in any other convenient manner. The resistance element and its supporting piece are adapted to lie in the recess formed in the cap *k* by the hollow part *m*, and a removable apertured cover piece *w* provided with a lining of refractory material may be provided for fitting over the element as shown when the latter is positioned in the cap.

Normally the cap is supported on the base part by the segmental contacts *q* resting on the upper ends of the pins *b* but the weight of the cap is insufficient to depress the pins against the action of the springs *f* into contact with the free ends of the resilient strips *g*. When required for use, the cap is depressed by hand to effect such contact and is kept in the depressed position until the heating element has been sufficiently heated, when the cap is removed by hand and the heating element applied to the end of the cigar or cigarette. Owing to the disposition of the pin contacts *b* in the annular recess *h* they are not easily accessible to the fingers of the user when the cap has been removed from the base part and thus risk of injury to the user is avoided.

Also we may provide as shown at the lower end of the base part a heavy annular metal piece *x* for increasing the stability of the apparatus when it is placed on a table or other support. This piece may be removable and of polygonal or circular, and the flange *c* of the base part may be secured between an inwardly directed flange *y* on the metal piece *x* and circular supporting pieces 2 and 3, the undersides of the metal piece *x* and the lowermost supporting piece 3 being covered as at 4 by baize, rubber or the like.

The invention is not limited to the example above described as subordinate details may be varied. Thus, instead of providing an annular recess for accommodating the contact pins we may arrange

the latter in individual recesses, and in this modification, we use stud like contacts on the removable part for co-operating with the pins.

By this invention we are able to provide a cigar or cigarette lighter in a simple and convenient form, which is adapted for connection to the service mains with a minimum of risk to the user.

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

1. A cigar or cigarette lighter of the kind specified and comprising the combination with a hollow base part adapted to support a removable part carrying the heating element, of a pair of contacts which can be connected to the mains, the said contacts being arranged in a recess or recesses within the base part so as to render them difficult of access to the fingers when the said removable part is detached, substantially as described.

2. A lighter as claimed in Claim 1, in which the heating element is in the form of resistance wire protected by refractory material, substantially as described.

3. A lighter as claimed in Claim 2, in which the refractory material is in the form of small tubes through which the resistance wire passes, substantially as described.

4. A lighter as claimed in Claim 1 comprising a hollow base part, a pair of contacts which can be connected to the mains and which project upwardly into a recess within the base part, a cap carrying the heating element and adapted to fit freely over a portion of the hollow base part, and another pair of contacts carried by the cap and adapted to enter the recess into which the first mentioned pair of contacts project, substantially as described.

5. A lighter as claimed in Claim 1, comprising a cap adapted to fit freely over a portion of the hollow base part, and an insulating piece carrying the heating element and removably mounted in the cap, substantially as described.

6. A lighter as claimed in Claim 5, comprising interengageable pins and sockets for interconnecting the cap and the insulating piece, and another pair of contacts carried by the cap and adapted for engagement with the first mentioned contacts, substantially as described.

7. A lighter as claimed in Claim 4, 5, or 6, comprising terminals in the said base part, and spring supported contacts in the said base part and movable into contact with the terminals or parts connected therewith by means of the removable cap, substantially as described.

8. A lighter as claimed in Claim 7, comprising a pair of spring controlled contacts mounted in the base part, a pair of terminals also mounted in the base part and adapted to be connected to the supply mains, and resilient metal strips connected to the terminals and adapted to be engaged by the lower ends of the contacts when the latter are depressed against the

action of their springs, substantially as described.

9. A cigar or cigarette lighter as claimed in Claim 1 and comprising the combination and arrangement of parts substantially as described and as illustrated in the accompanying drawings.

Dated this 16th day of September, 1936.

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

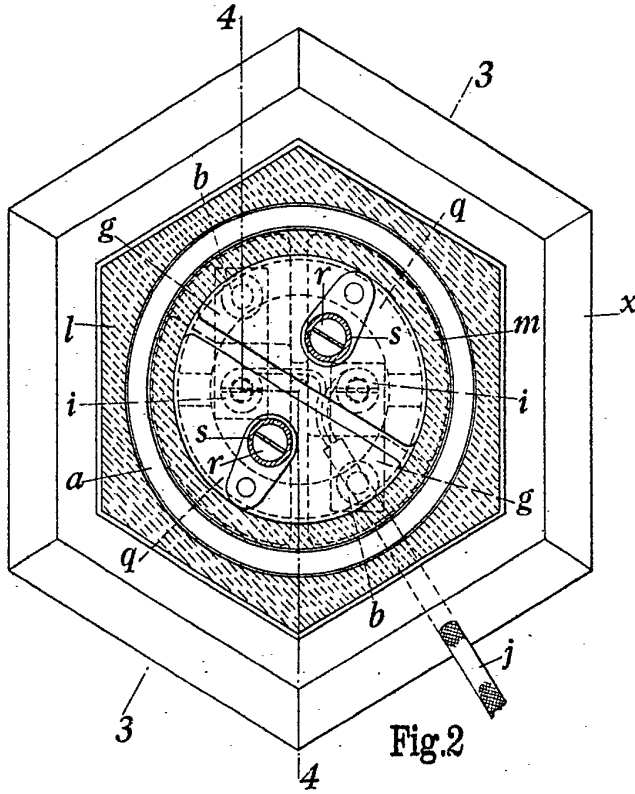


Fig. 2

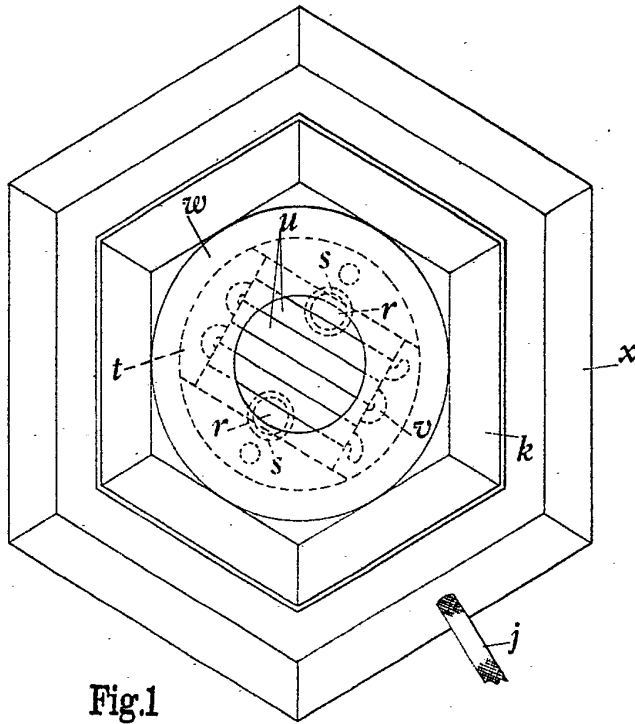


Fig. 1

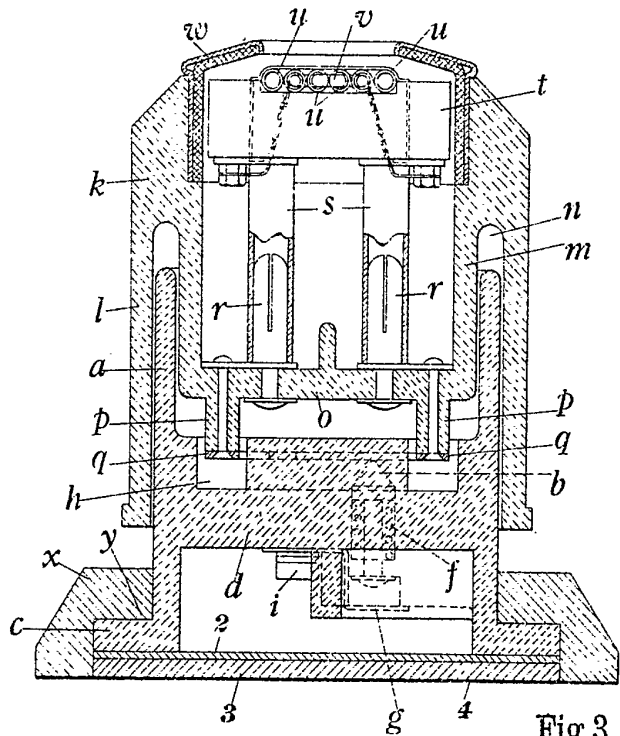


Fig. 3

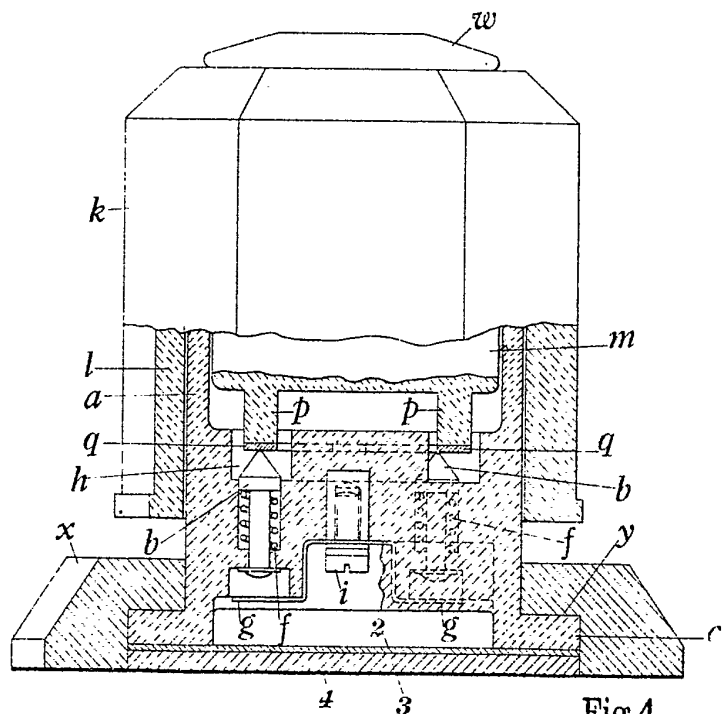


Fig. 4

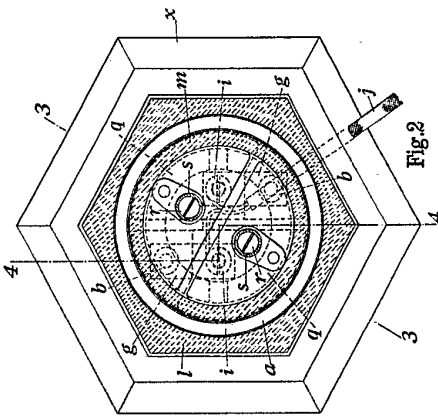


Fig. 1

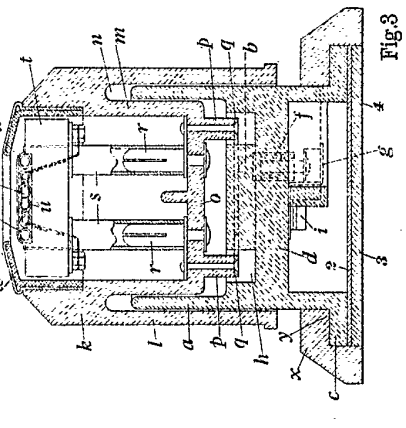


Fig. 2

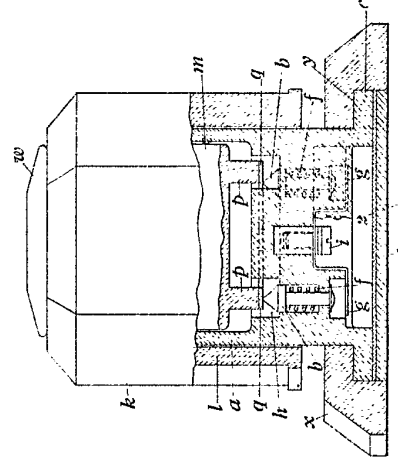


Fig. 3

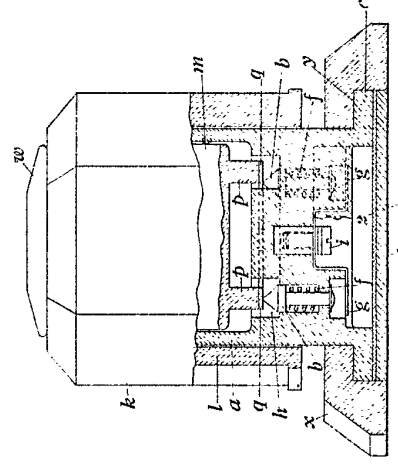


Fig. 4

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