

PATENT SPECIFICATION



Application Date: Sept. 7, 1925. No. 22,269 / 25.

257,411

„ „ March 3, 1926. No. 5925/26.

„ „ March 10, 1926. No. 6728/26.

One Complete Left : March 30, 1926.

Complete Accepted : Sept. 2, 1926.

PROVISIONAL SPECIFICATION.

No. 22,269, A.D. 1925.

Improved Flint Lighter.

We, CHARLES HENRY COOK, 81, Southfield Road, Bedford Park, Chiswick, W. 4 (English), JOHN REGINALD BARTLE, 17, Compton Crescent, Chiswick, W. 4 (English), do hereby declare the nature of this invention to be as follows:—

The lighter is of box-like construction consisting of a fuel container, fitted with hinged lid, and provided with a filling opening in its base, sealed with a screw.

Formed integrally with the top of said container is a wick holder, also an upright, with two crosspieces, one above the other. The upper crosspiece carries the wheel and flint, the lower being a

bearing for a sliding piece, which carries a screw for adjusting the flint. The before mentioned sliding piece is acted upon by a compression spring retained in position by a pillar.

Inside lid is fixed a spring plunger which supports lid when open at an angle, also a cap which covers wick when lid is closed.

The flint may be renewed without removing any part of apparatus by withdrawing adjusting screw and swinging it away from the hole for the flint.

Dated the 3rd day of September, 1925.

C. H. COOK.
J. R. BARTLE.

PROVISIONAL SPECIFICATION.

No. 5925, A.D. 1926.

Improved Flint Lighter.

We, CHARLES HENRY COOK, 81, Southfield Road, Bedford Park, London, W. 4, English, JOHN REGINALD BARTLE, 17, Compton Crescent, Chiswick, London, W. 4, English, do hereby declare the nature of this invention to be as follows:—

The lighter consists of a container for the purpose of retaining suitable inflammable matter, being filled through an opening in its base which is adapted to be closed by a sealing screw. The opening is placed at one end for convenience when filling, and for manipulating the sealing screw.

Mounted on top of the container is fixed a vertical pillar, carrying two members one above the other at an angle to the top of the container. The upper

member carries a serrated wheel and flint, the lower being a bearing for a sliding piece.

The sliding piece consists of a tube sealed at one end, at the other end is fixed an extension piece which carries an adjusting screw parallel to said tube the distance between the centres of the sliding piece and the screw being identical to the distance between the centres of the before mentioned two members which are fixed to vertical pillar.

In the sliding piece is placed a spring which is retained in position therein by an arm fixed to top of container.

This arrangement allows adjustable pressure to be brought to bear on the flint, and when it is required to renew the same, the screw is withdrawn clear

[Price 1/-]

of cavity for the flint, and the sliding piece being free to be rotated round its tubular part, can be swung out of line allowing access for the placing of new
5 flint. A groove formed on the adjusting screw indicates the amount of flint in the chamber.

Fixed also to the top of container is a wick holder which has a cap fixed to a
10 lever, the fulcrum of which is arranged on a projection on the wick holder. Formed integrally with said cap is a cover which protects the serrated wheel when not in use. To expose the wick
15 and the wheel ready for use the cap and cover are raised by pressure on the

opposite end of the lever, which is retained in position both when down or raised, by a spring which actuates on a
heel formed on the lever beneath and on one side of the fulcrum. 20

The wheel is arranged at an angle relative to the position of the wick holder, so that the spark given off by rotating the wheel against flint is directed down on the wick and ignites
25 same.

Dated the 1st day of March, 1926.

C. H. COOK.

J. R. BARTLE. 30

PROVISIONAL SPECIFICATION.

No. 6728, A.D. 1926.

Improved Flint Lighter.

We, CHARLES HENRY COOK, of 81, Southfield Road, Bedford Park, in the County of London, W. 4, and JOHN
REGINALD BARTLE, of 17, Compton
35 Crescent, Ghiswick, in the County of London, W. 4, both British subjects, do hereby declare the nature of this invention to be as follows:—

This invention relates to flint lighters
40 and particularly to improvements in flint lighters of the kind described in our co-pending Applications No. 22,269 dated 7th September, 1925, and No. 5925, dated 3rd March, 1926.

In our said co-pending applications,
45 we described an improved form of flint lighter comprising a container or the like fitted with a carrier for a serrated wheel, said carrier being arranged to carry a flint which is pressed on to the
50 serrated wheel by a spring pressed adjustable member, the arrangement of the spring pressed adjustable member being such that it may be moved out
55 and away from the carrier to enable a new flint to be readily placed in position when desired.

The object of the present invention is to provide a container of improved
60 shape and to arrange in the base of the container a filling opening which is adapted to be closed by a sealing cap shaped to conform to part of the base of the container and so arranged that it
65 can be readily manipulated when it is desired to refill the container with suitable inflammable material.

A further object is to arrange on the upper side of the improved container
70 improved means for pressing the flint on to the serrated wheel, the said means being arranged so that they may be

positioned to permit the flint to be readily renewed. Further, the arrangement is such that the cover for the wick
75 is shaped to cover the wick and serrated wheel and hinged in such a manner that it may be maintained in its open or closed position. 80

With these and other objects in view, the invention consists in providing a threaded aperture adjacent to one end of the base of the container and in closing the said aperture
85 by a flanged screw member adapted to screw into the threaded aperture, said flange being of such diameter that it may be readily manipulated and so positioned in the base of
90 the container that it will conform to the shape thereof.

The invention still further consists in mounting on the top plate of the casing a spring pressed slidable telescopic
95 member carrying an adjusting screw adapted to be positioned within a flint carrier in which is rotatably mounted a serrated wheel angularly positioned in relation to a wick tube, the arrange-
100 ment being such that the spring pressed member may be withdrawn from the carrier and turned at such an angle as to permit the flint to be readily renewed. 105

The invention still further consists in providing on the wick tube an extension in which is pivotally mounted a cap or cover shaped to cover the wick and serrated wheel, means being provided to
110 co-operate with the arm of the cover so that the said cover may be maintained in its open or closed position.

According to one form of this invention, the petrol or like container is of 115

substantially rectangular shape, but the side walls are curved so that the container will be of flat elliptical shape in cross section. The top and bottom plates of the container are beaded over or otherwise flanged and a portion of the bottom cover is cut away at one end and drilled to provide a filling opening. This filling opening is screw-threaded to receive a threaded sealing member. This threaded sealing member is formed with an enlarged flanged head of a thickness substantially equal to the flange of the bottom cover. The diameter of this enlarged flanged head is substantially the width of the bottom plate, consequently it extends for a considerable part of its circumference slightly beyond the body portion of the container. The bottom plate adjacent to the opening therein is curved and cut away so that the head of the closing screw when in position will conform with the other portion of the base. Thus it will be seen that the head of the closing screw may be readily manipulated by the fingers and unscrewed when it is desired to withdraw the same to refill the container. On the top cover or plate is formed or secured a vertical pillar carrying a pair of angularly arranged tubular members one above the other. The upper tubular member which carries the flint is forked and adapted to carry a serrated wheel or the like which is slightly inclined in relation to the top of the cover so that the sparks from the flint will be projected downwardly on to the wick upon the operation of the serrated wheel. The wick tube is arranged in the upper cover plate and to one side of the said vertical pillar. Within the lower tubular member is adapted to slide another tubular member which is closed at one end and in this latter member is mounted a coil spring or the like which is adapted to abut against a plunger or the like formed on an arm which is secured by any convenient means, such as by a screw, to the top cover plate of the container. The second mentioned tubular member which is slidably mounted on the fixed plunger is formed or provided with a bracket or extension and this extension is threaded for the reception of an adjusting screw which is adapted to project into the upper tubular member carried by the top cover plate. This adjusting screw which is arranged parallel to the tubular members is formed with a milled head so that it may be rotated to project into the upper tubular member according to the length of the flint therein. A groove or the like is formed on the adjusting screw so as to indicate the length of flint in the flint carrier. It will be seen that the spring pressure on the flint may be adjusted as desired. On the wick tube is formed or provided a forked bracket in which is pivoted the arm of the closing cap. This closing cap is shaped to cover the top of the wick and also the serrated wheel. The arm is formed with an extension or finger piece so that it may be manipulated against the action of a spring disposed in the carrying bracket. This arm is formed with a heel which is shaped to co-operate with the spring so that the closing cap will be maintained in either its closed or open position. When the closing cap is in the latter or raised position, the serrated wheel may be rotated with the finger in the usual manner to act on the flint and project the sparks angularly and downwardly on to the wick projecting through the wick tube. When it is desired to renew the flint, the adjusting screw is slightly unscrewed and pulled against the action of the spring until the end of the said adjusting screw is withdrawn from the upper tubular member. The adjusting screw carrier may now be turned or rotated so that the end of the flint carrier will be exposed to view. The flint may now be readily withdrawn and a new flint inserted. The carrier may again be angularly moved until the adjusting screw is positioned within the upper tubular member and upon the rotation of the said adjusting screw the pressure on the flint may be adjusted as desired.

In a modified construction, the closing cap may conform to the shape of the casing. In this case, the closing cap is hinged to the side of the casing in the usual manner and formed with a projection adjacent to the hinge to co-operate with a spring secured on the top plate of the casing and so arranged that the closing cap will spring back into its closed position. The closing cap is preferably formed or provided with a cover to project over the wick tube and suitable means, such as a projection or embossment on the casing engaging with a recess in the cover may be provided to maintain the cover in closed position.

Dated this 10th day of March, 1926.

J. S. WITHERS & SPOONER,
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Agents for the Applicants.

COMPLETE SPECIFICATION.

Improved Flint Lighter.

We, CHARLES HENRY COOK, of 81, Southfield Road, Bedford Park, in the County of London, W. 4, and JOHN REGINALD BARTLE, of 17, Compton Crescent, Chiswick, in the County of London, W. 4, both British subjects, 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 improvements in flint lighters.

According to this invention the flint lighter comprises a petrol or like container, a wick tube, a pair of tubular members, arranged in substantial parallel relationship, one of said members constituting a flint holder and carrying a rotatably mounted serrated wheel, a spring pressed member mounted slidably in the other tubular member and an adjusting screw carried by the spring pressed member and adapted to be positioned within the flint holder to hold the flint therein against the said serrated wheel, the said adjusting screw being capable of being withdrawn from the flint holder and turned to an angle. The rotatably mounted serrated wheel may be angularly arranged in relation to an adjacent wick tube or the like. The wick tube, or the container adjacent to the wick tube, may be provided with an extension in which is pivotally mounted a cover, or the like, adapted to close the upper end of the wick tube, the said cover being formed or provided with an arm having an extension or finger piece, means being also provided to normally retain the cover in its open or closed position. The adjusting element may be formed with a groove, or the like, to indicate the length of flint within the flint carrier. The invention also contemplates a flint lighter comprising a casing having top and bottom plates or covers, a vertical pillar mounted on the top plate, or casing, and carrying a pair of angularly arranged tubular members, one above the other, the upper tubular member shaped to carry a flint and formed with a fork for the reception of a rotatably mounted serrated wheel, an arm member secured at one end to the top plate of the container and adapted to project into the lower tubular member, another tubular

member carrying a bracket or extension and slidably mounted in the lower tubular member, a coiled spring within the sliding tubular member and adapted to abut at one end against a closed end of the said member and at its other end against a plunger or the like formed on the arm member mounted within the lower tubular member, an adjusting screw threaded in the bracket or extension and adapted to project into the upper tubular member and engage the flint therein, a wick tube arranged adjacent to the serrated wheel, said serrated wheel being inclined downwardly toward the wick tube and a wick tube cover hinged to the casing or to a projection on the wick tube. The petrol, or like container, may be formed at one corner thereof with a filling opening adapted to be closed by a member provided with a flange having a diameter slightly larger than the width of the body portion of the container. Other features are hereinafter set forth.

It may be here stated that in connection with a combined watch and pyrophoric lighter it has previously been proposed to arrange a spring pressed sleeve in the annular space between the winding stem and the foot of the crown wheel plate of the watch, the sleeve having a stud projecting therefrom to which is fixed, by means of a screw, a finger which engages within a hole in the crown wheel plate to hold a flint therein, through the medium of the spring pressed sleeve, in engagement with a serrated wheel loosely mounted on the winding stem, the said stud projecting through a slot having a vertical and a horizontal branch formed in the said foot, so that the stud can be moved into the latter branch to hold the finger out of engagement with the hole for the flint, and that in connection with a pocket lamp it has been proposed to employ a wire bent to provide two parallel portions, one of said portions being adapted to hold an ignition alloy in engagement with a grooved wheel, the said wire being drawn downwardly by an adjustable spring on the other portion thereof. It has also been proposed to provide a flint lighter comprising a saddle piece mounted on the petrol or like container, and an arm pivoted at one end thereof to the saddle piece, the

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free end of the arm being provided with a cap and hood to cover the wick and abrasive wheel when the said arm is in horizontal position, the said container being provided at the bottom thereof with a screw cap for filling purposes, the said cap extending slightly beyond the face of the container centrally thereof.

10 In order that the said invention may be clearly understood and readily carried into effect the same will now be described more fully, by way of example, with reference to the accompanying drawings, in which:—

15 Figure 1 is a front elevation of one form of flint lighter constructed according to this invention showing the cover in its open position;

20 Figure 2 is a side elevation thereof;

Figure 3 is a part sectional perspective view;

Figure 4 is a plan of the lighter shown in Figure 1;

25 Figure 5 is a side elevation from the side opposite to that shown in Figure 2, but showing the flint adjusting screw turned to permit of the flint to be renewed and the cover in its closed position;

30 Figure 6 is a plan of the lighter shown in Figure 5;

Figure 7 is a part sectional front view of a slightly modified form of lighter;

35 Figure 8 is a part sectional front elevation of the lower portion of the container; and

Figure 9 is a plan thereof.

40 As shown more particularly in Figures 1 to 6 the petrol or like container 1 is of substantially rectangular shape, but the side walls 2 are curved so that the container is of substantially flat elliptical shape in cross section, the top and bottom plates 3 and 4 of the container 1 are beaded over or otherwise flanged at 5. On the top cover or plate 3 is formed or secured a vertical pillar 6 carrying a pair of angularly arranged tubular members 7 and 8, one above the other. The upper tubular member 7 which carries the flint 9, indicated by dotted lines, see Figure 4, is forked at 10 and adapted to carry the serrated wheel or the like 11 which is slightly inclined in relation to the top 3 of the container 1 so that the sparks from the flint 9 will be projected downwardly upon the wick 12 upon the operation of the serrated wheel 11. The wick tube 13 carrying the wick 12 is arranged in the upper cover plate 3 and to one side of the said vertical pillar 6. Within the lower tubular member 8 is adapted to slide another tubular member 14 which is closed at one end. In the member 14 is mounted a coil spring or the like 15 which is adapted to abut against a plunger or the like 16 formed on an arm 17 which is secured by any convenient means, such as by a screw 18, to the top cover plate 3 of the container 1. The tubular member 14 which is slidably mounted on the fixed plunger 16 is provided with a bracket or extension 19 and this extension 19 is threaded for the reception of an adjusting screw 20 which is adapted to project into the upper tubular member 7 carried by the pillar 6 mounted on the top cover plate 3. This adjusting screw 20 which is arranged parallel to the tubular members 7 and 8 is formed with a milled head 21 so that it may be rotated to project freely into the upper tubular member 7 according to the length of the flint 9 therein. A groove or the like 22 is formed on the adjusting screw 20 so as to indicate the length of flint 9 in the flint carrier 7. It will be seen that the spring pressure on the flint 9 may be adjusted as desired. On the top cover plate or on the wick tube 13 is formed or provided a forked bracket 23 in which is pivoted the arm 24 of the closing cap 25. This closing cap 25 is shaped to cover the top of the wick 12 and also the serrated wheel 11. The arm 24 is formed with an extension or finger piece 26 so that it may be manipulated against the action of a spring 27 disposed in the carrying bracket 23. This arm 24 is formed with a heel 28 which is shaped to co-operate with the spring 27 so that the closing cap 25 will be maintained in either its closed or open position. When the closing cap 25 is in the latter or raised position, the serrated wheel 11 may be rotated with the finger in the usual manner to act on the flint 9 and project the sparks angularly and downwardly on to the wick 12 projecting through the wick tube 13. When it is desired to renew the flint 9, the adjusting screw 20 is pulled against the action of the spring 15 until the end of the said adjusting screw 20 is withdrawn from the upper tubular member 7, or it may be necessary, should the end portion of screw 20 not be completely withdrawn from the member 7, due to the bracket 19 engaging the fixing point 18 of the rod 17, to slightly unscrew the adjusting screw 20 to permit of complete withdrawal thereof. The adjusting screw carrier 19 may now be turned or rotated as shown in Figures 5 and 6 so that the end of the flint carrier 7 will be exposed to view. The flint 9 may now

be readily withdrawn and a new flint inserted. The carrier may again be angularly moved until the adjusting screw 20 is positioned within the upper tubular member 7 and upon the rotation of the said adjusting screw 20 the pressure on the flint 9 may be adjusted as desired.

In a modified construction as shown in Figure 7, the casing 1 is provided in the known manner with a closing cap to conform to the shape of the casing 1. In this case, the closing cap 29 is hinged at 30 to the side of the casing in the usual manner and formed with a projection 31 adjacent to the hinge 30 to co-operate with a spring 32 secured on the top plate 3 of the casing 1 and so arranged that the closing cap 29 will spring back into its closed position after it has been moved to a partially closed position. The closing cap 29 is preferably formed or provided with an auxiliary cover 33, similar to what has previously been proposed, to project over the wick tube 13 and suitable means, such as a projection or embossment 34 on the casing engaging with a recess 35 in the cover 29 may be provided to maintain the said cover in closed position.

As shown more particularly in Figures 8 and 9, the bottom plate 4 of the container 1 is cut away at one end as shown at 36 and formed with an inwardly projecting embossment 37 which is drilled to provide a filling opening 38. This filling opening 38 is screw-threaded to receive a threaded sealing member 39. This threaded sealing member 39 is formed with an enlarged flanged head 40 of a thickness substantially equal to the thickness of the bottom plate 4. The diameter of this enlarged flanged head 40 is substantially the width of the bottom plate 4; consequently it extends for a considerable part of its circumference slightly beyond the body portion of the container 1. The bottom plate 4 adjacent to the opening therein is curved and cut away as shown in Figure 9 so that the head 40 of the closing screw or sealing member 39 when in position will conform with the other portion of the base 4. Thus the head 40 of the closing screw 39 can be readily manipulated by the fingers and unscrewed when it is desired to withdraw the same to fill the container 1. The periphery of the flange 40 of the sealing screw 39 is preferably milled and it will be seen that more than half of the circumference of the flange 40 will be exposed so that it may be manipulated by the fingers.

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 flint lighter comprising a petrol or like container, a wick tube, a pair of tubular members, arranged in substantial parallel relationship, one of said members constituting a flint holder and carrying a rotatably mounted serrated wheel, a spring pressed member mounted slidably in the other tubular member and an adjusting screw carried by the spring pressed member and adapted to be positioned within the flint holder to hold the flint therein against the said serrated wheel, the said adjusting screw being capable of being withdrawn from the flint holder and turned to an angle, for the purpose specified.

2. A flint lighter, as claimed in Claim 1, wherein the rotatably mounted serrated wheel is angularly arranged in relation to an adjacent wick tube or the like, for the purposes described.

3. A flint lighter, as claimed in Claim 1 or 2, wherein the wick tube, or the container, adjacent to the wick tube, is provided with an extension in which is pivotally mounted a cover, or the like, adapted to close the upper end of the wick tube, the said cover being formed or provided with an arm having an extension or finger piece, means being also provided to normally retain the cover in its open or closed position, for the purposes described.

4. A flint lighter, as claimed in Claim 3, wherein the means for normally retaining the cover in its open or closed position, comprises a heel on the arm or extension adapted to co-operate with a spring disposed in the extension provided on the wick tube, or the container.

5. A flint lighter, as claimed in Claim 3 or 4 wherein the wick tube cover is shaped to cover the serrated wheel arranged adjacent to the said wick tube, for the purposes described.

6. A flint lighter, as claimed in any of the preceding claims, wherein the adjusting element is formed with a groove, or the like, to indicate the length of flint within the flint carrier.

7. A flint lighter, comprising a casing having top and bottom plates or covers, a vertical pillar mounted on the top plate, or casing, and carrying a pair of angularly arranged tubular members, one above the other, the upper tubular member shaped to carry a flint and formed with a fork for the reception of a rotatably mounted serrated wheel, an

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arm member secured at one end to the top plate of the container and adapted to project into the lower tubular member, another tubular member carrying a bracket or extension and slidably mounted in the lower tubular member, a coiled spring within the sliding tubular member and adapted to abut at one end against a closed end of the said member and at its other end against a plunger or the like, formed on the arm member mounted within the lower tubular member, an adjusting screw threaded in the bracket or extension and adapted to project into the upper tubular member and engage the flint therein, a wick tube arranged adjacent to the serrated wheel, said serrated wheel being inclined downwardly toward the wick tube and a wick tube cover hinged to the casing or to a projection on the wick tube.

8. A flint lighter, as claimed in Claim 1, 2, or 7, wherein a cover is hinged to one side of the container or casing and is adapted to close the whole of the flint operating mechanism, the said cover being formed with an auxiliary cover to project over the wick tube, there being provided means to maintain the cover in its closed position.

9. A flint lighter, as claimed in any of the preceding claims, in which the petrol or like container is formed at one corner thereof with a filling opening adapted to be closed by a member provided with a flange having a diameter slightly larger than the width of the body portion of the container.

10. A flint lighter, as claimed in any of the preceding claims, wherein the container is of substantially flat elliptical shape in cross section and formed with top and bottom plates, the bottom plate being cut away at one end and formed with an inwardly projecting embossment apertured to provide a filling opening and threaded to receive a sealing member formed with an enlarged flange head of a diameter slightly larger than the width of the body portion of the container.

11. A flint lighter, as claimed in Claim 10, wherein the enlarged flange is of a thickness substantially equal to the thickness of the bottom plate which is cut away and curved to receive the said flange.

12. A flint lighter, as claimed in Claim 10 or 11, wherein the diameter of the enlarged flanged head is substantially equal to the width of the bottom plate and wherein the said head is milled, for the purposes described.

13. The improved flint lighter having the parts thereof constructed, arranged and adapted to operate, substantially as hereinbefore described, with reference to either of the examples illustrated in the accompanying drawings.

Dated this 30th day of March, 1926.

J. S. WITHERS & SPOONER,
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Agents for the Applicants.

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

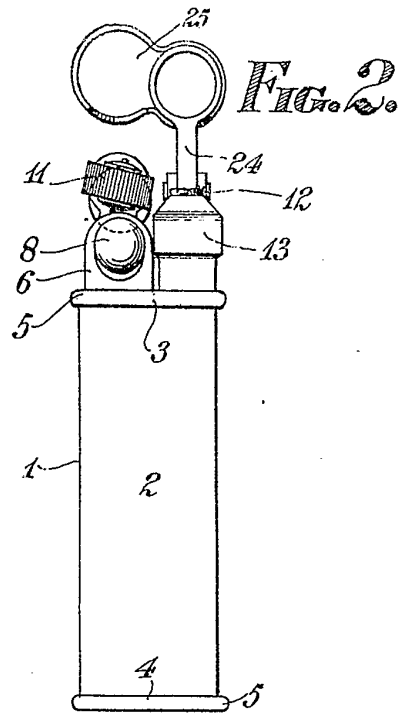
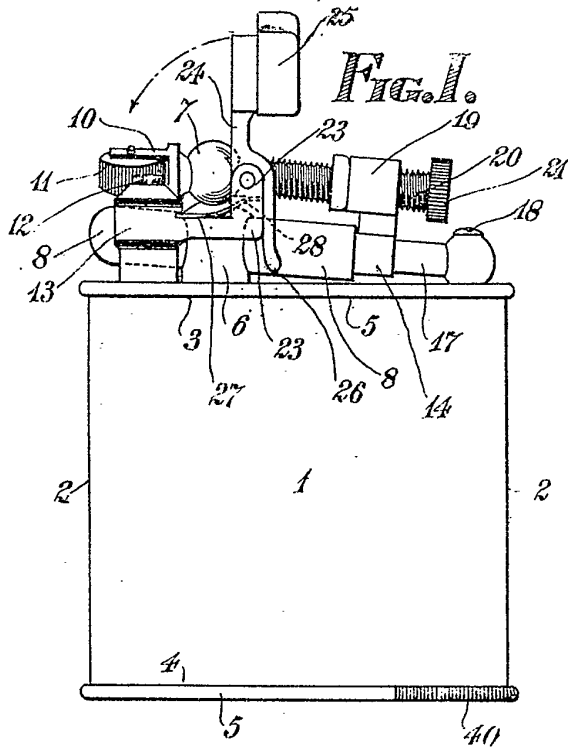


FIG. 4.

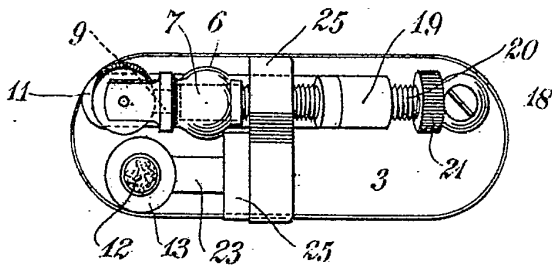


FIG. 5.

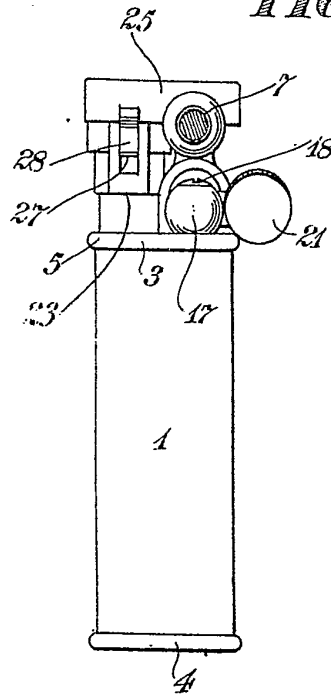
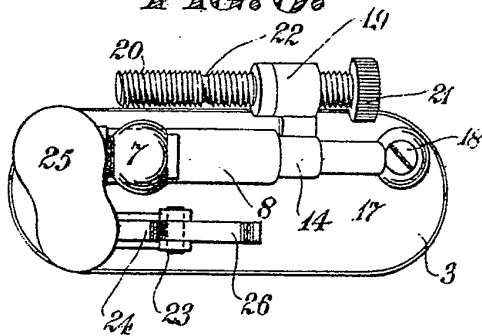


FIG. 6.



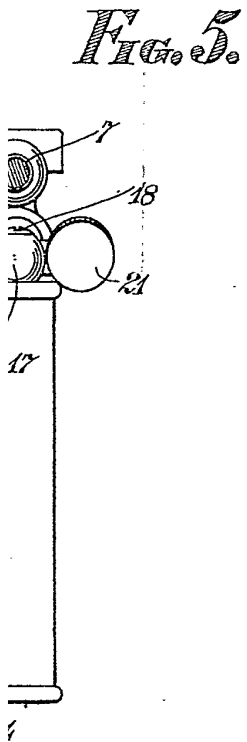
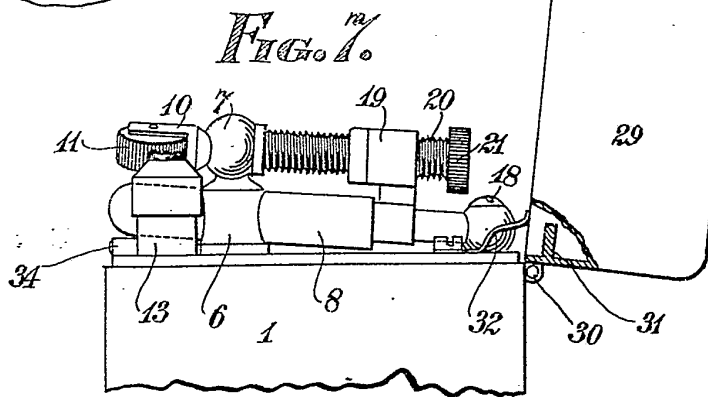
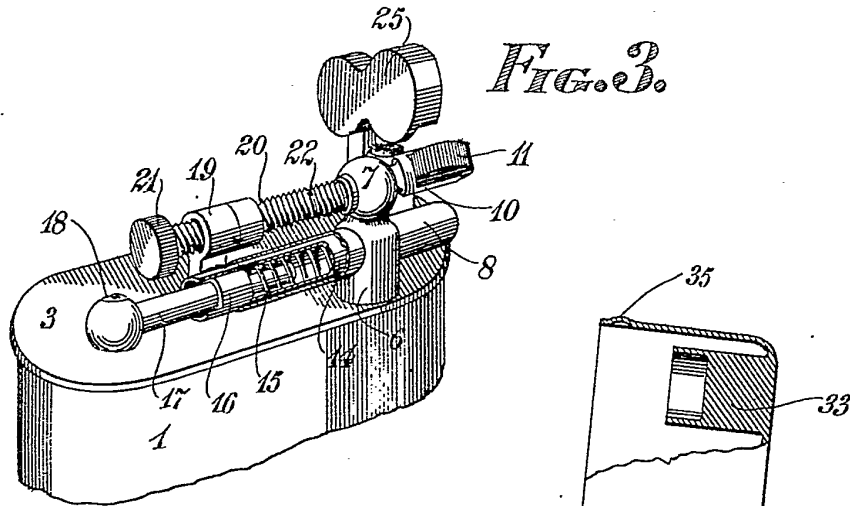
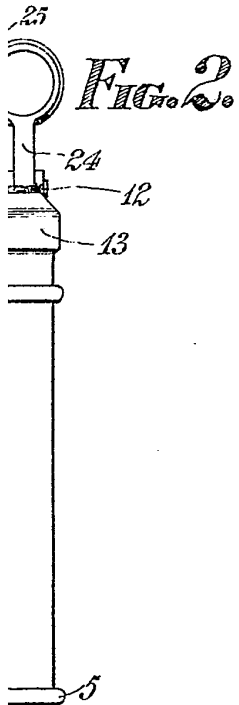


FIG. 8.

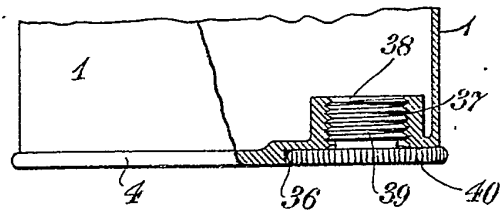
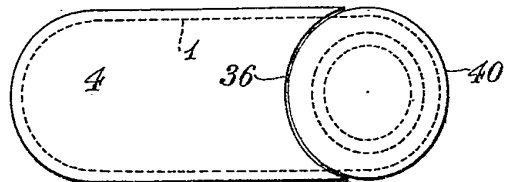
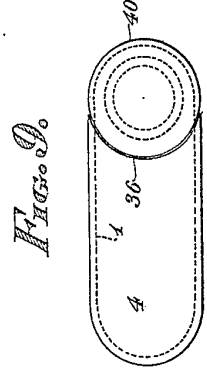
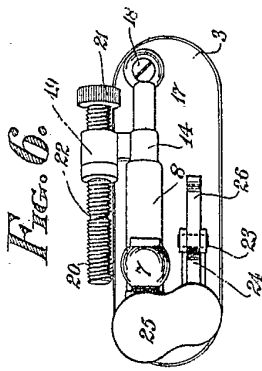
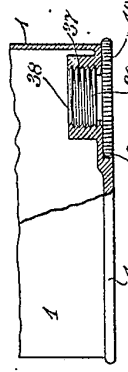
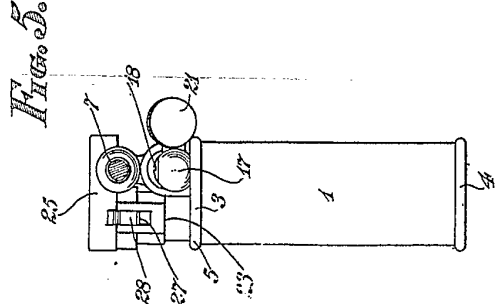
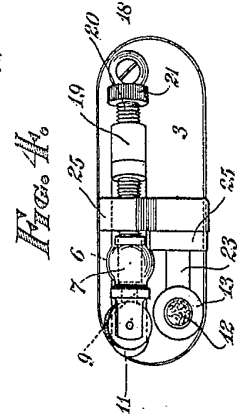
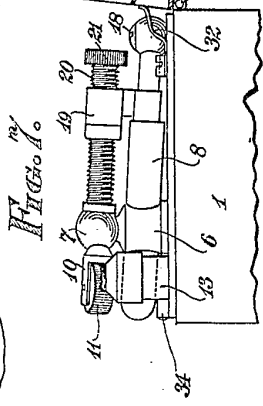
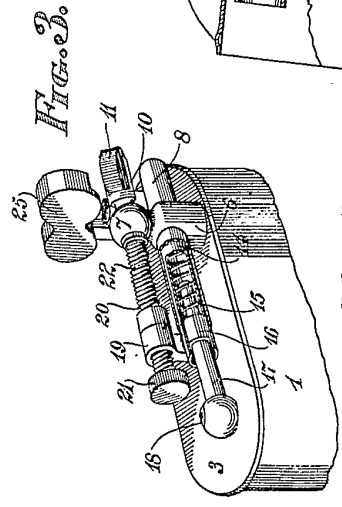
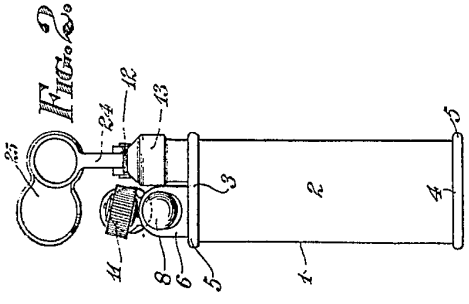
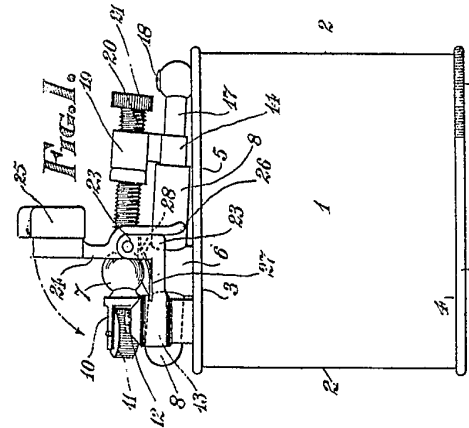


FIG. 9.





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