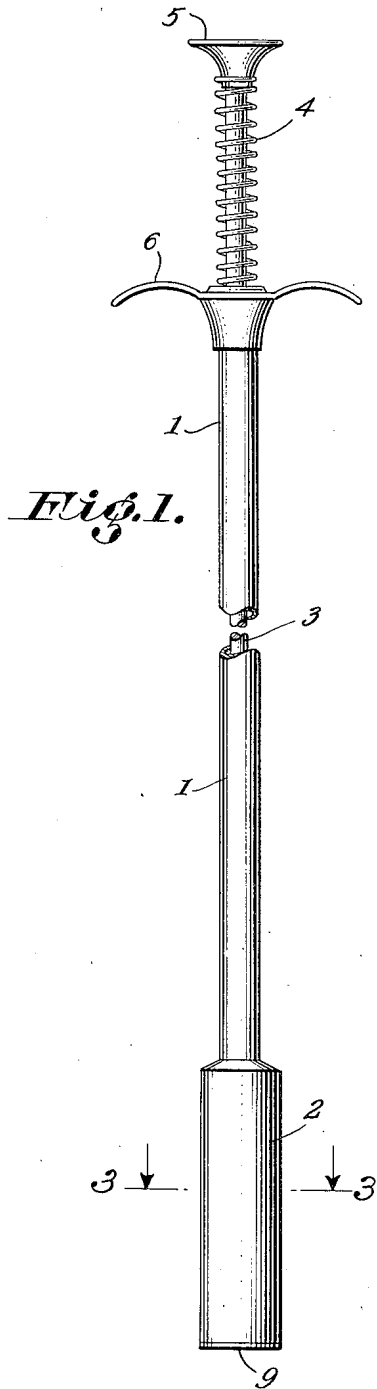


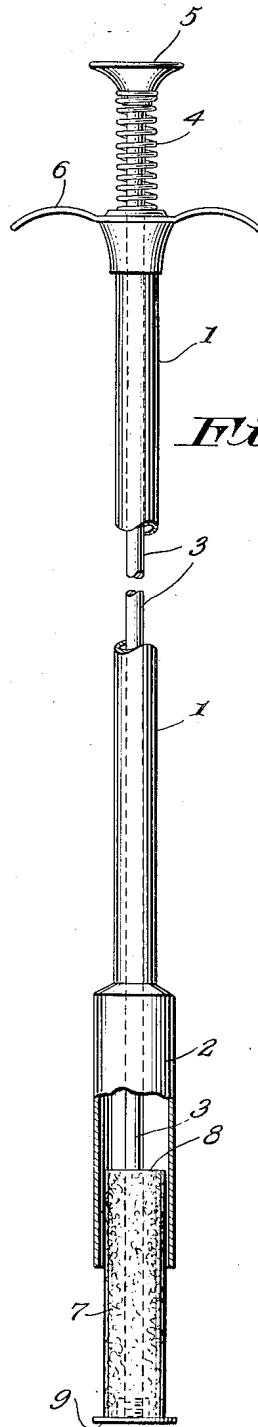
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E. P. RANSELL  
STOVE LIGHTING DEVICE  
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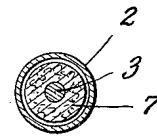
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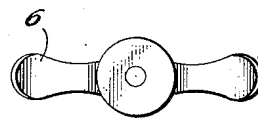
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

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# UNITED STATES PATENT OFFICE

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## STOVE LIGHTING DEVICE

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4 Claims. (Cl. 158-10)

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This invention relates to certain new and useful improvements in mechanical, manually usable fire lighters, torches and kindling devices such as are commonly used to light oil stoves, oil burners, gas jets, fire kindling materials, and the like, and has more particular reference to a lighter which is characterized by an elongated reach tube provided at its outer end with a cylinder enclosing an extensible and retractable fluid-charged wick and provided, at its opposite inner end, with hand-actuated means for controlling the "in" and "out" positions of said wick.

As implied by the opening statement of the invention, fire lighters of the type specified are not broadly new. For example, reference may be had to the torch in Patent 1,496,028, granted to H. M. Scott, June 3, 1924, and, secondly, to a generally similar safety lighter disclosed in Patent 2,393,508, granted to E. R. Anderson of January 22, 1946.

One object of the instant invention is to structurally, functionally and otherwise improve on the stated and any other similar patents by providing a more simple, practical and efficient lighter in which manufacturers, users and others will find their essential requirements and needs fully met, contained and satisfactorily available.

Another object is to provide an easy-to-handle lighter which is so constructed that it does not expose the user to danger. To this end, I employ a novel cylinder on the outer end of the aforementioned reach tube, and this normally houses an extensible and retractable wick which, after having been projected and lit, recedes under the action of a coiled return spring into said cylinder which, functioning as a flame snuffer, automatically and safely extinguishes the flame. Then, too, the wick is normally fitted with requisite nicety into said cylinder in a manner to guard against leakage and dripping, whereby to minimize messiness.

A further object is to provide a plunger whose rod portion has its outer end screw-threaded and screwed into a hole provided therefor in a novel disk, the latter serving to effectively retain a replaceable wick on said rod. The disk, being of a diameter corresponding to the snuffing cylinder, also functions as a check or stop for the plunger rod and, more importantly, as an effective air-tight cover or closure for lidding the cylinder, thus insuring instant and safe extinguishing of the flame.

A still further object of my invention, highly significant indeed, is to provide a lighter which may be operated with a single hand. This is

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amply achieved with a simple and expedient arrangement on the inward end of said reach tube which comprises a fixed cross-member having two finger hooks which may be grasped with either a gloved or bare hand; and a complementary spring-retained push-button on the plunger. Such an arrangement makes it easy and practicable to catch hold of the finger hooks, to press the push-button, force the wick "out," then to "let go," whereby the wick snaps back into the snuffing cylinder to instantly and automatically extinguish the flame. Furthermore, such a construction makes it quite easy and safe to hold the device in one hand and to light the projected wick with a match held in the other hand.

Novelty is also predicated on the aforementioned detachable disk which, when removed, allows the sleeve-wick to come off and the plunger rod to be withdrawn by way of the rod guide means on the inner end of said reach tube.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings:

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a view in section and elevation showing a safety type fire lighter constructed in accordance with the principles of the present invention and illustrating the wick withdrawn and housed in its snuffing cylinder.

Figure 2 is a view based on Figure 1 showing the finger knob pressed toward the finger-gripping means and the wick projected beyond said cylinder.

Figure 3 is a cross-section on the line 3-3 of Fig. 1.

Figure 4 is a bottom plan view of Figure 2, showing the stop disk and threaded connection of the rod therewith.

Referring now to the drawings by reference numerals and lead lines, the aforementioned elongated reach tube is denoted by the numeral 1 and is provided at its outer end with an enlarged cylinder 2 whose inner end is flat and at right angles to the longitudinal axis of the tube. The tube and cylinder serve to accommodate a spring-retained, manually extensible plunger unit. The latter comprises a rod which is mounted for reciprocation centrally in the tube and cylinder, said rod being of a length greater than the combined lengths of said tube and cylinder, as shown in Figure 1. The stated return spring is of a retractile type and is denoted by the numeral 4 and surrounds the projecting inner or

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upper end portion as shown in Figure 1, and bears at its outer end against a knob-like head which constitutes a push-button 5. Spring 4 bears, at its opposite end, against a fitting or cross-member which is rigidly mounted on the inner end of the reach tube and which has a central guide opening through which the rod 3 is slidable. The cross-member is provided with diametrically opposite finger hooks which serve as convenient grips for the hand, with or without a glove, which is used to hold and operate the lighter.

An important feature is the asbestos or equivalent sleeve-wick. This is denoted by the numeral 7 and is removably mounted over the screw-threaded outer end portion of the rod 3 and is of a length approximately corresponding to the cylinder and fits snugly and slidably in the cylinder in its normal position, as shown in Figure 1. The stated lidding and stop disk is denoted by the numeral 9 and is of a diameter equal to or slightly greater than the outer diameter of the cylinder 2 and said disk is provided with a screw-threaded opening at its center into which the screw-threaded end of the rod is screwed. Thus, as stated, the disk may be removed to allow the sleeve-wick to be slid off and also to allow the rod 3 to be withdrawn through the guide means provided in the cross member or fitting 6.

It will be seen that I have evolved and produced a novel and improved safety lighter which may be produced at negligible cost, is always ready for use, is safe and clean to handle and will withstand constant usage. It can be operated by a single hand, will fill a great need, and can be used in otherwise inaccessible places in stoves, furnaces, and the like. It is virtually free from smoking and reduces objectionable fumes to a minimum.

It is believed that the specification, taken in conjunction with the drawings, will enable the reader to obtain a comprehensive understanding of the construction and purposes of the invention.

What is claimed is:

1. A manually operable fire lighting torch which requires the use of but a single hand for operation and use comprising an elongated imperforate tube having guide means at its inner end and an integral enlarged imperforate cylinder at its outer end, said cylinder being adapted to enclose and serve as a flame snuffer for an extensible and retractable wick, the inward end

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of said cylinder having a flat annulus at right angles to the axis of reach tube, finger-gripping means rigidly mounted on the inner end of said tube, a plunger rod reciprocable in said tube and of a length greater than the length of said tube, the inner end of said rod projecting through said guide means and terminating in a push-button, a retractile spring surrounding the projecting end portion of said rod and bearing at one end against said push-button and at its opposite end against said guide means, a sleeve-wick fitted removably on the outer end of said rod and normally enclosed in said cylinder, and a wick retaining disk detachably mounted on the outer end of said rod and serving to hold said wick in its operative position on said rod.

2. The structure defined in claim 1, wherein the outer end of said rod is screw-threaded and said disk has a central screw-threaded hole into which the screw-threaded end of said rod is screwed, whereby to permit said disk and wick to be detached and said rod withdrawn by way of said guide means from said tube.

3. The structure defined in claim 1, wherein the outer end of said rod is screw-threaded and said disk has a central screw-threaded hole into which the screw-threaded end of said rod is screwed, said disk being of a diameter equal to the outside diameter of said cylinder and constituting a stop as well as an air-tight closure for said cylinder.

4. The structure defined in claim 1, wherein said finger-gripping means is a cross-head whose end portions are fashioned into diametrically opposite finger-hooks.

EDWARD PORTER RANDELL.

#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

Number	Name	Date
1,496,028	Scott	June 3, 1924
2,034,785	Wappler	Mar. 24, 1936
2,113,246	Wappler	Apr. 5, 1938
2,204,734	Sarnecky	June 18, 1940
2,212,013	Devareaux	Aug. 20, 1940
2,320,967	Dunkelberger	June 1, 1943
2,393,508	Anderson	Jan. 22, 1946
2,429,829	Lersch	Oct. 28, 1947