

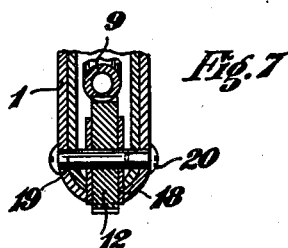
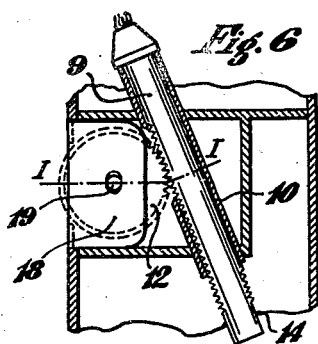
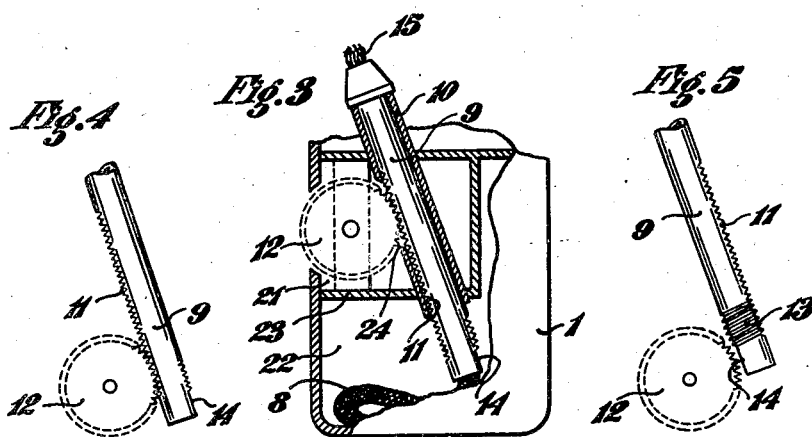
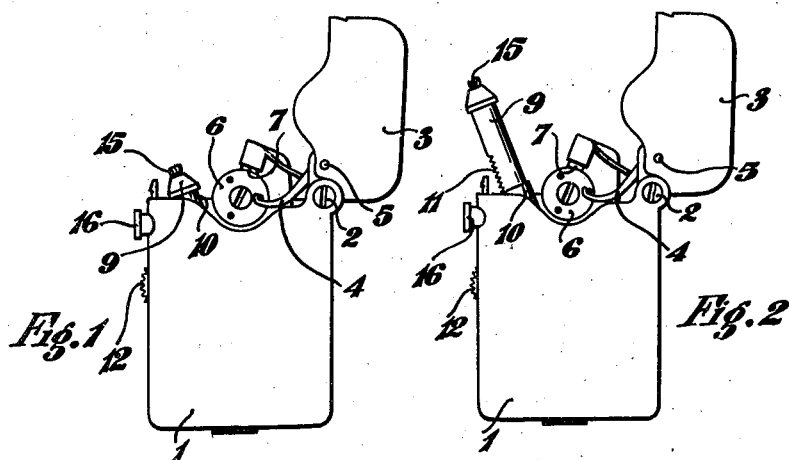
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PYROPHORIC LIGHTER

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UNITED STATES PATENT OFFICE

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PYROPHORIC LIGHTER

Application filed March 16, 1931, Serial No. 523,097, and in Germany April 14, 1930.

This invention relates to pyrophoric lighters and more particularly to lighters of the pocket type in which a fuel supplied wick is ignited by means of cooperating friction wheel and pyrophoric element. While lighters of this class are very convenient to light cigars and cigarettes, it is difficult to light pipes because the flame on the end of the wick which ordinarily is situated in proximity of the lighter body cannot be introduced into the interior of the pipe bowl.

The object of the invention is the provision of a pyrophoric lighter having a movable wick holder so that after ignition of the wick the holder can be displaced to bring the end of the wick into a position where it projects a considerable distance beyond the lighter body and the flame can be conveniently introduced into the interior of the pipe bowl.

In the accompanying drawing, Figure 1 shows a lighter according to the invention with the wick in igniting position.

Figure 2 shows the lighter with the wick holder projecting beyond the lighter body.

Figures 3, 4 and 5 illustrate the wick holder displacing means with the holder in different positions.

Figure 6 is a sectional elevation of a modification.

Figure 7 is a section along the line I—I of Fig. 6.

The lighter according to Figures 1 to 5 comprises a casing 1 upon which is rotatably mounted, by means of a hinge 2, a cover 3. When this cover is opened it actuates in well known manner the friction wheel 6 by means of a hook 4 which is rotatably mounted on the cover at 5. 7 is the pyrophorus stone. The wick 8 is contained in a tube 9 which can slide within a tubular guide 10 provided in the casing 1 and which guide is inclined from the lower rear side of the casing towards the upper front side. The tube 9 is provided with a rack 11 which meshes with a pinion 12 of which a portion projects through the wall of the casing, so that the pinion can be turned by means of a finger of the hand in which the lighter is held. The tube 9 is also provided with several circular

grooves 13 situated below the rack 11 and with a flattened portion 14 at the end of the tube on the side opposite the rack. The wheel 12 is mounted within a compartment 21 which is separated from the reservoir portion 22 of the casing 1 by means of a partition 23. The guide 10 traverses the compartment 21 and is provided with a slot 24 to permit engagement of the wheel 12 with the rack 11.

Normally the tube 9 is at the end of its stroke in the interior of the casing and the free end 15 of the wick is adjacent to the friction wheel 6 as shown in Figure 1. When a pressure is exerted on the push button 16 the cover 3 is freed and opened under the action of a spring which is not shown. Opening of the cover actuates the friction wheel and sparks are produced which ignite the end 15 of the wick.

If one desires now to light a pipe, the wheel 12 is turned by a finger of the hand in which the lighter is held, so as to raise the tube 9 as far as the rack 11 permits. The end 15 of the wick takes then the position shown in Figure 2 in which it projects laterally beyond the edge of the casing, and can be easily introduced into the bowl of the pipe to light the tobacco.

The tube 9 is adapted to be completely removed from the lighter body 1 for changing the wick for instance, and for this purpose the tube 9 is turned for half a revolution while one of the circular grooves 13 meshes with a tooth of the wheel 12, so that the flattened portion 14 arrives on the side of the wheel 12 (Fig. 5) whereupon the tube 9 can be pulled out of the guide 10. To put the tube back in place one will proceed in analogous manner.

In the modification shown in Figures 6 and 7, the toothed wheel 12 is yieldingly held in a cap 18 engaged between the side walls of the casing 1. A shaft 19 traverses the walls of the casing, the cap 18 and the wheel 12 and is provided at one of its ends with a screw threaded hole into which screws the screw 20. By means of this construction the wheel 12 and the tube 9 can be easily removed from the lighter body. After the screw 20

has been loosened and the shaft 19 removed, the cap 18 and the wheel 12 can be pulled out from their recess in the lighter body.

I claim:

1. In a pyrophoric pocket lighter comprising a casing forming a fuel reservoir, wick igniting means mounted on the casing, a longitudinally movable wick tube slidably mounted in the casing, manually operated means for raising or lowering said wick tube relative to the casing, and means for operating said wick ignition means when the wick tube is in its lowered position.

2. In a pyrophoric pocket lighter having a casing forming a fuel reservoir, wick igniting means mounted on the casing, a tubular guide member extending from the upper end of the lighter casing into the interior thereof, a longitudinally movable wick tube removably fitted in said tubular guide member, manually operable means for raising said wick tube along said guide member into a position in which the upper end of the wick tube overhangs one edge of the casing and means for operating said wick igniting means when the wick tube is in its lowermost position.

3. In a pyrophoric pocket lighter having a casing forming a fuel reservoir, wick igniting means mounted on top of the casing, a longitudinally movable wick tube slidably mounted in the casing and projecting through the top thereof, a cover hingedly mounted on the casing and adapted to close over the top thereof, said cover being operatively connected to said wick igniting means whereby opening of the cover will actuate said igniting means, and manually operable means for raising said wick tube into a position in which the upper end of the wick tube projects beyond the periphery of the casing when the cover is in open position.

4. In a pyrophoric pocket lighter having a casing forming a fuel reservoir, wick igniting means mounted on top of the casing, a tubular guide member extending from top of the casing into the interior thereof, said guide member being inclined relative to the vertical axis of the casing, a longitudinally movable wick tube removably positioned in said tubular guide member, a cover hingedly mounted on the casing and adapted to close over the top thereof, said cover being operatively connected to said wick igniting means whereby opening of the cover will actuate said igniting means, a rack formed along said wick tube, a pinion rotatably mounted in the casing and penetrating an opening in said guide member to mesh with said rack, said pinion projecting out of the casing to be manually operated for raising and lowering said wick tube when said cover is in open position, and means coacting with said pinion to yieldingly maintain said wick tube in raised or lowered position.

5. In a pyrophoric pocket lighter, the combination, with a casing, of an obliquely disposed tube slidably mounted in the casing, a wick carried by said tube, and means for manually operating said tube to raise it into an elevated position in which the lighted end of the wick projects beyond the periphery of the casing.

6. A pyrophoric pocket lighter comprising a casing, a tubular guide member obliquely disposed in said casing, a tube slidably mounted in said tubular guide member, a wick carried by said tube, a rack formed along said tube, said guide member being provided with a slot, and a pinion rotatably mounted in the casing and meshing with said rack through the slot in the guide member, said pinion projecting through the wall of the casing to be manually operated for raising said tube along the guide member into a position in which the lighted end of the wick overhangs one edge of the casing.

In testimony whereof I affix my signature.

ADOLF WEISSENBURGER.