Nov. 14, 1950 E. S. CONWAY ET AL 2,530,291

FINGER RING LIGHTER

Filed Sept. 17, 1949

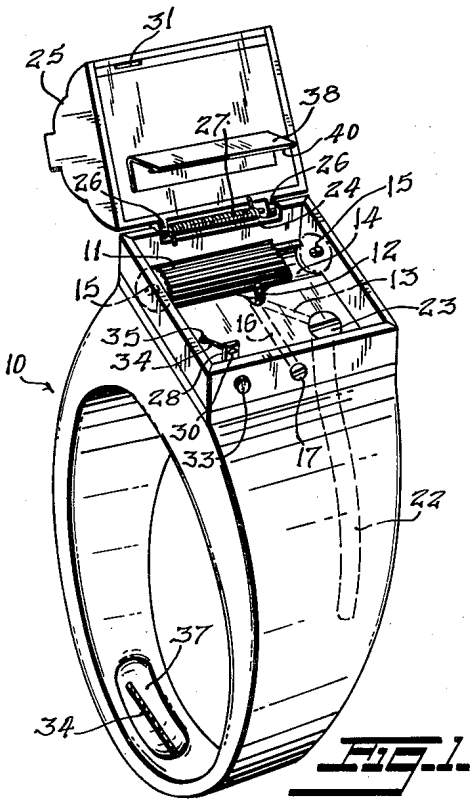

FIG. 1.

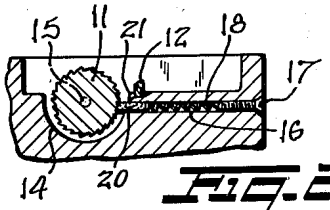

FIG. 2.

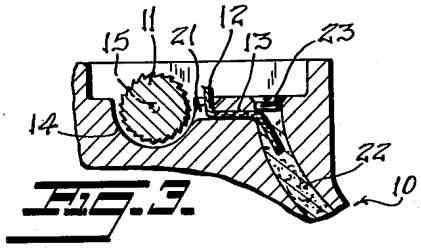

FIG. 3.

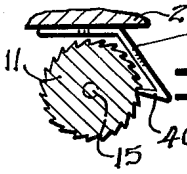

FIG. 4.

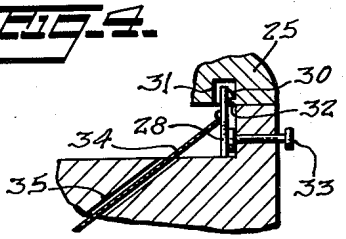

FIG. 7.

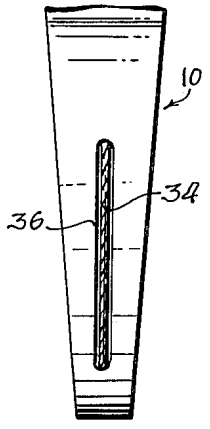

FIG. 5.

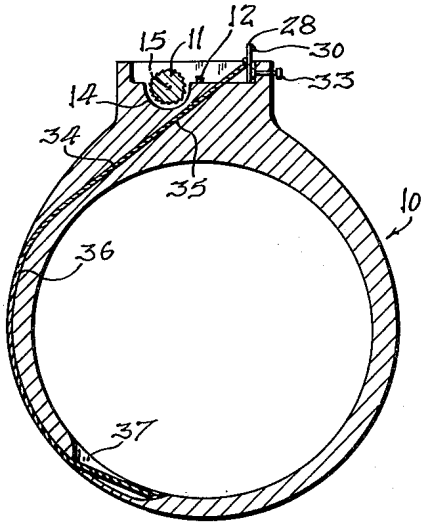

FIG. 6.

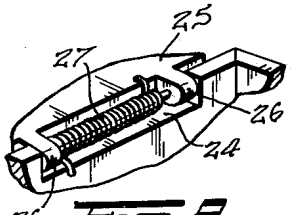

FIG. 8.

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FINGER RING LIGHTER

Edward S. Conway, New York, and Vito Amendolara, Brooklyn, N. Y., assignors, by direct and mesne assignments, of one-half to said Conway and one-half to Sidney B. Good, Brooklyn, N. Y.

Application September 17, 1949, Serial No. 116,236

3 Claims. (Cl. 67—4.1)

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This invention relates to a combined finger ring and cigarette lighter.

The principal object of the invention is to mount a friction type lighter within the setting portion of a finger ring, said setting portion being hinged to provide access to the lighter.

Another object of the invention is to provide means whereby the lighter is fired automatically when said hinged portion is swung open to reveal the same.

Still another object of the invention is to provide dual opening means for said lighter, one of which means is operable by the thumb of the same hand on which the ring is worn, the other hand then being free to steady and guide the cigar or cigarette which is to be lighted, to the flame, or to manipulate the steering wheel of a moving automobile while lighting a cigar or cigarette.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is an isometric view of the ring lighter with the setting portion or cover swung back to reveal the lighter.

Fig. 2 is a fragmentary sectional view illustrating the manner in which the flint is pressed against the sparking cylinder.

Fig. 3 is a fragmentary sectional view depicting the wick bore with a wick therein.

Fig. 4 is a fragmentary detail view partly in section of the means for automatically spinning the sparking cylinder.

Fig. 5 is a fragmentary side view of the ring loop and serves to illustrate a certain groove therein.

Fig. 6 is a sectional view of the ring lighter with the cover removed.

Fig. 7 is a fragmentary sectional view showing the means for latching the cover closed and also the trips for said latch.

Fig. 8 is a fragmentary isometric view of the hinge for said cover.

The ring consists of a loop or finger band 10 of suitable material, said loop being thickened considerably in its upper portion (Figs. 1 and 6) where it is hollowed out as shown to provide space for a sparking cylinder 11 and for that portion of the wick 12 which projects from its bore 13.

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As shown in Figs. 2 and 3 the hollowed out space includes a substantially half round depression 14 within which the sparking cylinder is pivotally mounted on studs 15 in the side walls. In the floor of said hollowed out space are two bores, the wick bore 13 and the flint bore 16 (Figs. 1, 2, and 3). The flint bore 16 (Fig. 2) is threaded at its outer end to receive a screw 17 which acts on a spring 18 to vary the tension thereof on a flint stick 20, said flint stick projecting from the inner end of said bore against the serrated periphery of the sparking cylinder. Immediately above said flint the floor of the hollowed out space is cut away to form a spark gap 21 through which sparks from the flint can travel to wick 12 which projects from the bore 13 into said gap.

A comparison of Figs. 2 and 3, the latter of which is a diagonal section along the center of of the wick bore, will show that the wick bore 13 is somewhat closer to the surface than is the flint bore 16 in order to prevent conflict as they converge together at their inner ends.

At its outer end the wick bore 13 joins with a fluid well 22 capped with a screw 23, said fluid well extending downward into the loop of the ring and containing a quantity of cotton or other absorbent material saturated with lighter fluid.

The rearward wall of the hollowed out lighter space is notched as at 24 (Fig. 6) to receive a pin on which the cover or setting portion 25 is pivoted through lugs 26 thereon, said pin acting also as an axis for a strong coil spring 27 whose ends bear one on the cover and the other on said rear wall of the lighter space.

The construction is such that spring 27 exerts tension on the cover 25 tending to swing the latter open, and, unless said cover is latched closed, it is swung open by spring 27.

In order to maintain the cover closed there is provided a cover latch, the one illustrated in the drawings consisting of a small leaf spring 28 (Figs. 1 and 7) suitably secured in the hollowed out lighter space and having near its upper end an extrusion 30 with an abrupt lower edge and an inclined upper portion. The cover is provided with a slot 31 aligned with said latch and having a shoulder or shelf 32 for cooperation with the abrupt lower edge of said extrusion 30.

The construction is such that as the cover is closed the inclined upper portion of the extrusion 30 enters slot 31 and is cammed to the left in Fig. 7 until the shelf 32 moves below the abrupt lower edge thereof, at which time said extrusion

snaps over said shelf to latch the cover closed.

The invention provides dual means for tripping latch **28**. One means comprises an ordinary push button **33** projecting through the forward wall of the lighter space and having on its outer end an enlarged head for manipulation by a finger, and on its inner end a second enlarged head in contact with latch **28**. It will be seen that if the button be pressed, its inner enlarged head will tilt the latch **28** to the left in Fig. 7 causing extrusion **30** to be freed from the shelf **32**, whereupon the spring **27** (Fig. 1) will swing cover **25** open.

The second latch tripping means is designed to permit of tripping the latch by the thumb of the hand on which the ring is worn, leaving the other hand free to perform some other duty, for example, to manipulate the steering wheel of a moving automobile.

This means comprises a thin metal strap or wire **34** welded or otherwise secured to the rear face of latch **28** (Figs. 1, 6 and 7) and extending downward and rearward into a hole **35** which may terminate in a groove **36** in the outer periphery of the ring loop (see also Fig. 5) or may be continued downward in said loop to take the place of said groove. Near the bottom of the loop the strap extends from groove **36** through a second hole **37** and across the space interior of said loop to a point on the inner periphery of the opposite side thereof, where said strap is secured in any suitable manner.

The construction is such that when the ring is in place on a finger, the strap **34** rather than the bottom of the loop is in contact with said finger, and, if the tip of the thumb of the same hand be placed against the outer, bottom edge of said loop and pressure applied, the strap **34** will be pulled downward to conform with the inner periphery of said loop, and, in turn, will pull the latch **28** to the left (Fig. 7) allowing the cover **25** to swing open.

In order to fire the wick **12** automatically while the cover **25** is swinging open, said cover has secured thereto a light sheet metal piece **38**. Piece **38** is bent, as shown in Fig. 4, to form a sort of pawl whose pointed edge **40** engages the serrated periphery of sparking cylinder **11**. When the cover is swung open by the spring **27**, edge **40** of the pawl **38** causes cylinder **11** to rotate, which rotation produces sparks from the flint **20**, and the wick is fired in the usual manner.

While we have illustrated and described the preferred embodiment of our invention, it is to be understood that we do not limit ourselves to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described our invention, what we claim as new, and desire to secure by United States Letters Patent is:

1. A ring lighter comprising a finger band having an enlarged hollowed out portion, a setting portion hinged to said enlarged portion and acting as a cover therefor, a sparking cylinder pivotally mounted in said hollowed out portion, a flint stick yieldingly urged into engagement with said cylinder and a wick situated adjacent said flint stick and adapted to be fired by sparks therefrom, and a pawl secured to said hinged portion, said pawl engaging said sparking cylinder when said hinged portion is closed and being adapted to rotate said cylinder while said hinged portion is being swung open, and a spring to swing said hinged portion open, a latch to maintain said hinged portion closed and a plurality of latch trips, said latch comprising a leaf spring mounted in said hollowed out portion and having at its upper end an extrusion with an abrupt lower edge, and a slot in said hinged portion having a shoulder for engagement by the abrupt lower edge of said extrusion; and one of said trips comprising a band connected to said leaf spring and extending through holes and a groove in one branch of the finger band, across the aperture interior of said finger band to the other branch of the latter, where the two bands are connected together, said trip band forming with said finger band a smaller loop within the one formed by said finger band alone and said smaller loop being the one into which a finger is inserted and acting when pulled to move said extrusion free of said shoulder.

2. A ring lighter comprising a finger band having an enlarged hollowed out portion, a setting portion hinged to said enlarged portion and acting as a cover therefor, a sparking cylinder pivotally mounted in said hollowed out portion, a flint stick yieldingly urged into engagement with said cylinder and a wick situated adjacent said flint stick and adapted to be fired by sparks therefrom, and a pawl secured to said hinged portion, said pawl engaging said sparking cylinder when said hinged portion is closed and being adapted to rotate said cylinder while said hinged portion is being swung open, and a spring to swing said hinged portion open, a latch to maintain said hinged portion closed and a plurality of latch trips, said latch comprising a leaf spring mounted in said hollowed out portion and having at its upper end an extrusion with an abrupt lower edge, and a slot in said hinged portion having a shoulder for engagement by the abrupt lower edge of said extrusion; one of said trips comprising a push button to free said extrusion from said shoulder, and the other trip comprising a band connected to said leaf spring and extending through holes and a groove in one branch of the finger band, across the aperture interior of said finger band to the other branch of the latter, where the two bands are connected together, said trip band forming with said finger band a smaller loop within the one formed by said finger band alone and said smaller loop being the one into which a finger is inserted and acting when pulled to free said extrusion from said shoulder.

3. In a ring lighter having a finger band formed with an enlarged hollowed out portion having an open top and within which a lighter is mounted, a setting portion hingedly connected to the finger band for closing the open top of the hollowed out portion, resilient means urging said setting portion into an open position, latch means including a latch spring mounted within the hollowed out portion and engaging said setting portion holding said setting portion in its closed position against the action of said resilient means, and a latch trip for moving said latch to free said setting portion to be opened, said latch trip comprising a trip band connected at one end to said latch spring and having its other end extending through holes and a groove in one side of the finger band, across an aperture on the inside of the finger band to the other side of the finger band where the free end of said trip band is secured to the finger band, said trip band with the said other side of the finger band forming a

smaller finger loop within the finger band and through which a finger is inserted so that said trip band will act when pulled to move said latch spring to face said setting portion.

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