April 13, 1965 D. W. COATS 3,178,016

COMBINATION CIGARETTE PACKAGE AND LIGHTER

Filed Sept. 30, 1963

Fig. 1.

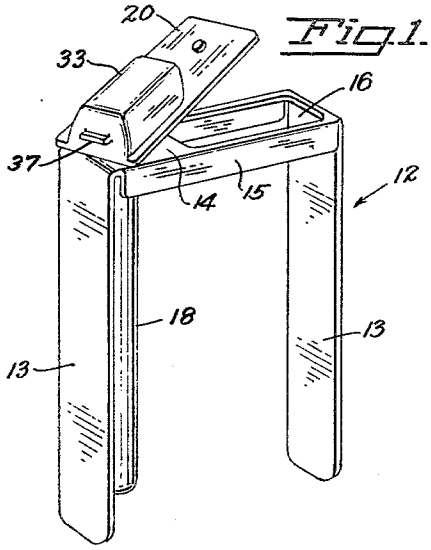


Fig. 3.

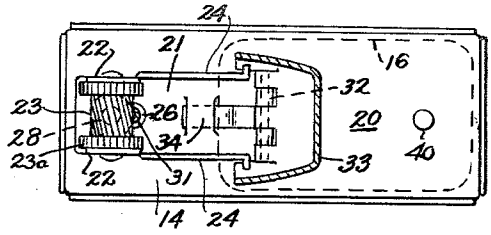


Fig. 4.

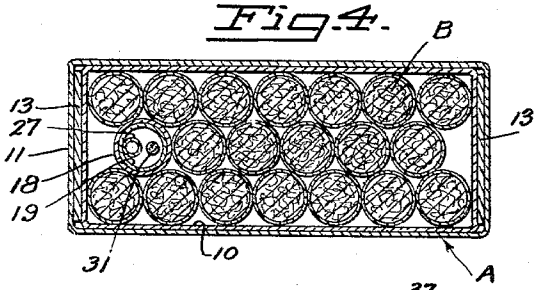


Fig. 5.

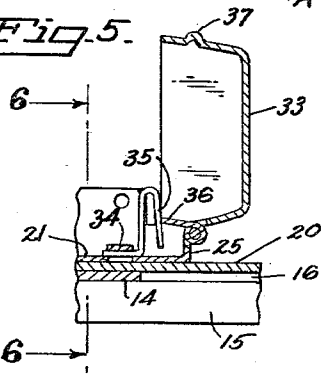


Fig. 2.

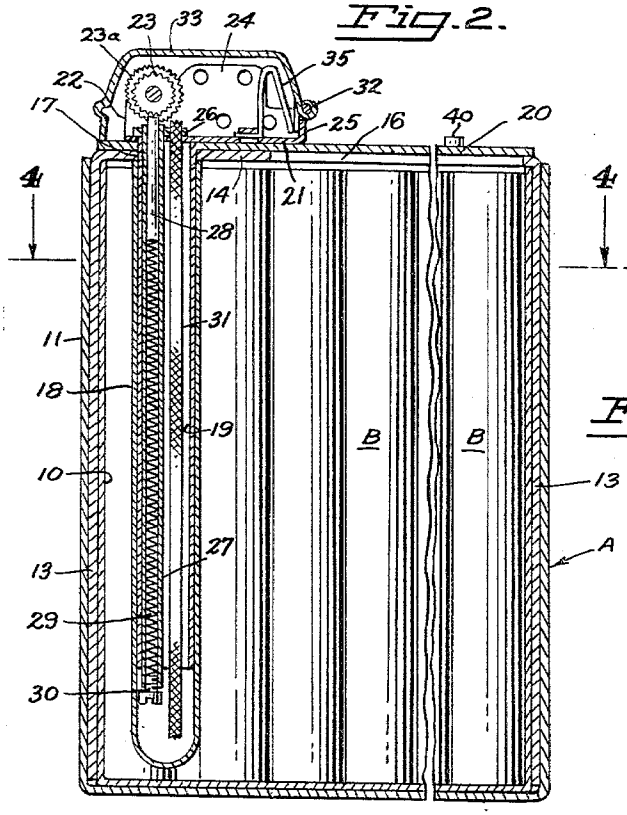
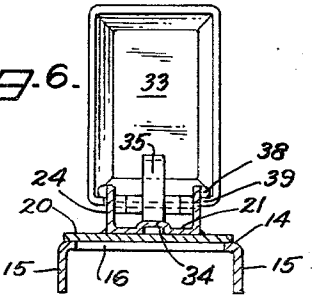


Fig. 6.



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COMBINATION CIGARETTE PACKAGE AND LIGHTER

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This invention relates to a combination cigarette package and lighter.

The present invention provides a compact combination comprising a cigarette package and lighter. The lighter is supported on a rigid inverted U-shaped frame having depending stiff legs which are adapted to extend downwardly into a cigarette package to provide means for preventing damage to the cigarettes therein. The lighter embodies a novel construction wherein its friction wheel, wick, tube and closure cap are mounted on and disposed above the frame, and its fluid container, in the form of an elongated cylinder embodying the general shape and size of a cigarette, extends downwardly into the cigarette package. An opening in the top portion of the frame for the withdrawal of cigarettes from the package is normally closed by a laterally swinging cover which may be conveniently adjusted to open or closed positions. The combination comprising the rigid frame with the lighter mounted thereon and the elongated fluid container arranged in a concealed position extending into the cigarette package, provides a compact smoker's accessory adapted to be conveniently carried in one's pocket.

An object of my invention is to provide a novel combination cigarette package and lighter of the kind characterized, embodying a rigid inverted U-shaped frame adapted to support a lighter in a convenient position wherein its friction wheel and associated parts are supported above the package on a pivoted cover plate which normally closes registering openings in the upper side of the frame and in the top of the package for the withdrawal of cigarettes, but which may be easily swung to an open position and then closed.

Another object of my invention is to provide a combination cigarette package and lighter including a U-shaped frame having stiffening members adapted to extend lengthwise along opposed sides of the package to prevent damage to the cigarettes therein.

In the accompanying drawing:

FIG. 1 is a perspective view of the inverted U-shaped frame and the lighter supported thereon;

FIG. 2 is a sectional view, on an enlarged scale, taken vertically through a combination cigarette package and lighter embodying my invention;

FIG. 3 is a top plan view of the frame and lighter, showing the closing cap in an open position and partly broken away and in section;

FIG. 4 is a sectional view taken along the line 4—4 of FIG. 2;

FIG. 5 is an enlarged sectional view taken vertically through the closing cap and a portion of the supporting frame, showing the cap in an open position; and

FIG. 6 is a sectional view taken along the line 6—6 of FIG. 5.

The present invention is intended for use with a conventional cigarette package A of the type usually having an inner paper container **10** normally holding twenty (20) cigarettes, B, and an outer covering **11** of paper or other suitable material. Although not shown, the outer covering **11** is sometimes enclosed in cellophane or the like to prevent the cigarettes from losing their normal moisture content.

A rigid lighter supporting frame **12** embodying the present invention comprises opposed parallel legs **13, 13** adapted to extend from the top to approximately the

bottom of the package A along the narrower sides thereof and preferably between the inner container **10** and the outer covering **11**. The legs are approximately the width of the inner container, and the upper ends of such legs are connected to an intermediate portion or member **14** formed with narrow opposed depending side flanges **15, 15** which extend downwardly alongside opposite sides of the outer covering **11**. The width of the side flanges may be increased to permit suitable advertising matter to be inscribed thereon, if so desired. The intermediate member **14** is provided with an opening **16** of suitable shape and size through which the cigarettes B may be withdrawn from the package, it being desirable to tear away partially or entirely the upper sides of the inner container **10** and the outer covering **11** before the frame is mounted on the package.

The intermediate member **14** is also provided adjacent an end thereof with a substantially circular opening **17** within which the upper end of a depending cylindrical fuel container **18** is positioned, the said container being attached to the intermediate member and having an opening at its upper end and a closed lower end. The diameter and general shape of the cylindrical fluid container **18** is approximately the same as a cigarette B, thereby making it possible by withdrawing a certain cigarette from the package and replacing it with the cylindrical container, to attach the combination frame and lighter to the package.

Snugly fitting inside the cylindrical fluid container **18**, but adapted to rotate therein and to be removed therefrom, is an elongated cylindrical tube **19** which is secured at its upper end to one end of a cover plate **20**, the said cover plate being of suitable size and shape to close the opening **16** in the intermediate member **14** of the inverted U-shaped frame.

Securely mounted on the cover plate **20** is a supporting structure comprising a bottom plate member **21** overlying and secured to the said cover plate and having upwardly extending opposed flanges **22** for supporting a serrated friction wheel **23**, upstanding perforated flame shielding members **24** and an upstanding hinge supporting flange **25**.

The upper end of the tube **19** extends through the plate member **21** and is secured to a small metal disc **26** which overlies and is securely attached to the plate member **21**. Extending downwardly through the tube **19** is a flint tube **27**, which has its upper portion extending upwardly through openings in the cover plate **20**, the plate member **21** and the disc **26**. The upper end of the flint tube **27** is secured to the disc **26**, and its lower end extends approximately to the lower open end of the tube **19**. Slidably supported inside and projecting above the flint tube **27** and arranged in frictional engagement with the serrated periphery of the friction wheel **23** is a flint element **28** which is adapted to produce a spark when the friction wheel is suitably rotated. Urging the flint element upwardly against the friction wheel **23** is an elongated coil compression spring **29**, the lower end of which is secured to a screw **30** that adjustably engages with internal threads on the lower end of the flint tube. The friction wheel **23** is formed at its ends with peripheral serrations **23***a* which make possible the convenient rotation of the wheel by a suitable finger pressure applied in the usual manner.

An elongated wick **31** extending into the tube **19** and arranged with its upper exposed end positioned adjacent the friction wheel is adapted to supply combustible fuel from the fluid container **18** to support a flame. The lower end of the tube **19** is open so as to allow the combustible fluid to enter from the fluid container and saturate the wick **31**. Although not shown, the interior of the tube **19** is preferably packed with an absorbent material such as

cotton, which, together with the wick, absorbs the fluid supplied as required to the fluid container.

Pivotally supported at its rear side on a substantially horizontal pivot pin **32** mounted on the upstanding flange **25** is a closing cap **33** which is adapted to overlie and enclose the lighter assembly comprising the friction wheel **23**, the perforated shield members **24** and the upper end of the wick **31**. The closing cap is adapted to be held in either a closed or an open position by the means now to be described. Secured to the bottom plate member **21** as by means of a punched out strip **34** on the said plate member is an upstanding spring **35** of somewhat inverted V-shape. Engaging with the spring **35** is the free end of a tongue **36**, which is secured to the rear side of the closing cap at a point adjacent the hinge means. The tongue **36** and the engaged spring **35** are so arranged that when the closing cap is swung upwardly and rearwardly toward an open position, the tongue will ride on the spring to a dead center position and thereafter slide upwardly on the spring to a position wherein the cap is automatically fully opened and there held until it is swung downwardly and forwardly in the opposite direction toward its closed position. As the cap is swung toward its closed position, the tongue **36** rides downwardly on the spring **35** toward and then past its dead center position to snap the cap downwardly to its fully closed position with its lower edges resting against the cover plate **20**. The forward end of the closing cap **33** is formed with a punched-out proturberance **37** for use as a finger-engaging means in opening such cap. The closing cap is prevented from swinging rearwardly beyond a certain position by means of cooperating stop members or proturberances **38** extending outwardly from the rear edges of the upstanding flange shielding members **24**, the said stop members being arranged to intercept and restrain opposed, inwardly protruding flanges **39** on the rear side of the closing cap as the latter swings rearwardly to a fully open position.

The cover plate **20** is provided with an upwardly extending protuberance **40** adjacent its rear end for use in swinging the cover plate to an open or closed position with respect to the opening **16**. It is to be noted that although the tube **19** fits snugly inside the cylindrical fuel container **18**, such tube is adapted to turn within the container when the cover plate **20** is swung laterally in either direction to a closed or open position.

The lighter assembly may utilize either a gaseous or liquid fuel to produce a flame.

When charging the lighter with a supply of combustible fluid, it is usually desirable to saturate the wick and the absorbent material in the tube **19** with the fluid, although the fluid, if first supplied to the container **18**, will be readily absorbed by the wick and absorbent material when the tube is inserted in the container.

What I claim is:

A flint lighter assembly mounted on a cigaret package of the type having an outer container enclosing a number of cigarettes, said assembly comprising an inverted substantially U-shaped frame having laterally spaced depending parallel legs extending into the cigarette package adjacent opposite sides of the container and an intermediate member connected to the upper ends of the legs and overlying the cigarette package, the intermediate member having an opening for the withdrawal of cigarettes from the package, an adjustable cover mounted on the intermediate member to close the opening in the intermediate member, a depending, elongated cylindrical fuel container secured to the intermediate member and extending into the cigarette package, a depending tube secured at its upper end to the cover and fitting snugly in the fuel container and being rotatable therein to swing the cover laterally to uncover the opening in the intermediate member to permit the withdrawal of cigarettes positioned within the package, the tube having an opening in its lower end communicating with the fuel container, spark producing means mounted on the cover, and a wick extending through the tube.

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