Aug. 8, 1939. A. DUBSKY 2,168,732

FRICTION-WHEEL PYROPHORIC LIGHTER

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Fig.1

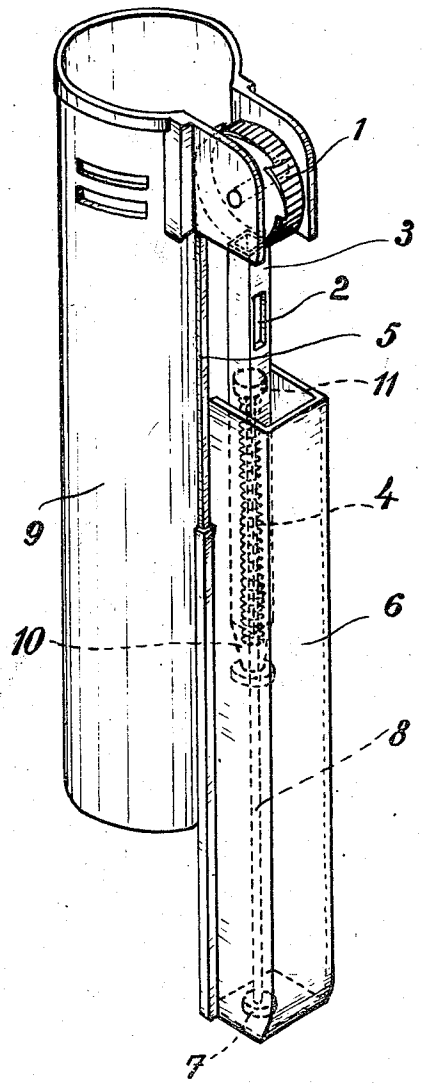
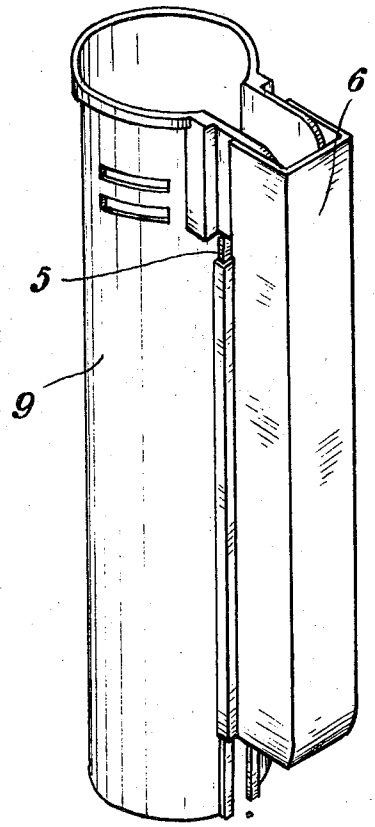


Fig.2



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FRICTION-WHEEL PYROPHORIC LIGHTER

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4 Claims. (Cl. 67—7.1)

This invention relates to friction-wheel pyrophoric lighters of the type in which, for the purpose of changing or replacing the piece of sparking composition or "flint", the pressing-up spring in the tubular flint holder is adapted to be retracted from the flint, with compression of this spring, by the movement of a pin passed through the spring in the direction of its length. For this purpose, for example, the end of the pin furthest removed from the flint is firmly attached, in a known form of construction, to a ferrule which fits over the tubular flint holder for a small portion of its length, and which is slidingly guided on this latter. In the known forms of construction of this description the said ferrule is relatively short and constitutes a kind of knob which, for the purpose of taking the pressure of the spring off the flint, can be grasped between finger and thumb and displaced with compression of the spring.

In order to provide a larger total gripping surface for the user of the lighter in carrying out the said displacing movement, in accordance with the present invention, the ferrule fitted over the tubular flint holder is extended to form an enveloping shell of such length that in its normal position it covers up the aperture in the tubular holder through which the flint is inserted and partly encases the friction wheel. In this manner the lighter is at the same time given a neat and closed exterior.

A further advantageous feature of the invention is that the shell does not fit closely over the tubular flint holder and is not slidable directly thereon, but encloses the tubular holder with ample clearance and travels on guides provided on the holder or on the casing of the lighter. Consequently the shell can be more generously dimensioned which makes it easier to grasp and to manipulate, while in the second place in spite of long and therefore more reliable guidance the frictional resistance to displacement of the shell is reduced.

A form of construction embodying the invention is shown, by way of example, in the accompanying drawing, in which:

Fig. 1 shows a pyrophoric lighter according to the invention, in perspective view, with the sliding shell displaced to take the pressure of the pressing-up spring off the flint, and to disclose the flint inserting aperture in the tubular flint holder and the friction wheel with its supporting means.

Fig. 2 shows the same lighter with the sliding shell in the normal position, likewise in perspective view. In both figures the cap of the lighter is omitted for the sake of clarity.

Referring to the drawing, the tubular flint holder 3 is provided with a charging aperture 2 and contains the usual coiled spring 4. This spring bears against the lower end of the tubular holder which is narrowed or shouldered as at 10 or closed by a screw plug, and presses the flint up against the friction wheel 1. Through the coiled spring there is passed the pin 8 which is provided at both ends with enlargements in the form of knobs or discs 7, 11. A shell 6 which in the normal position covers up the charging aperture 2 and shields the friction wheels at the side, is slidable in guides 5 pertaining to or attached to the casing 9 of the lighter. Since the lower end of the pin 8 is secured to the shell 6 by means of the enlargement 7 when this shell is drawn downwards the coiled spring 4 is compressed and retracted from the flint while at the same time the charging aperture 2 in the tubular holder 3 is exposed for the insertion of a fresh flint. When the shell 6 is moved up into its normal position again the charging aperture 2 is covered over and the friction wheel shielded again, as shown in Fig. 2.

I claim:

1. In a friction-wheel pyrophoric lighter, a casing, a friction wheel on the casing, a tubular flint holder fixed to the casing beneath the friction wheel and having a charging aperture in one side for the insertion of fresh flints, a coiled spring in said holder supported against the lower end of said holder and adapted to press a flint at the upper end of said holder against said friction-wheel, a shell slidably mounted on the casing and embracing said holder and of such longitudinal dimension as to cover up said charging aperture and partly to encase said friction-wheel when in the normal position, a pin extending through the said spring from one end to the other thereof with its upper end coupled with the upper end of said spring and its lower end secured to said shell, whereby when the shell is slid downwardly the spring is compressed and the aperture exposed to permit of the ready insertion of a fresh flint.

2. A friction-wheel pyrophoric lighter as claimed in claim 1, in which the said shell embraces the said tubular holder with clearance.

3. A friction-wheel pyrophoric lighter as claimed in claim 1, in which the slidable connection consists of guiding ribs on the casing and guiding channels on the shell.

4. In a pyrophoric lighter of the type having

a main casing, a friction wheel mounted to one side and adjacent the top of the main casing, a secondary flint receiving casing fixed longitudinally to the main casing beneath the friction wheel and provided in one wall with an aperture to permit of the insertion of a fresh flint, fixed guide ribs positioned longitudinally of the main casing on opposite sides of the secondary casing, a shell having longitudinal guideways slidably engaging the ribs and surrounding the secondary casing with clearance and when in normal position partly enclosing the friction wheel, and a resilient connection between the secondary casing and the shell for yieldingly holding the parts in normal position and permitting of the separation of the parts to expose the flint aperture when it is desired to insert a fresh flint, said resilient connection acting as a follower to yieldingly hold the flint in yielding engagement with the wheel.

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