Jan. 10, 1928.

1,656,060

P. GLAVEY, JR

COMBINATION MATCH CASE AND IGNITER

Filed Dec. 29, 1926

2 Sheets-Sheet 1

Fig. 1.

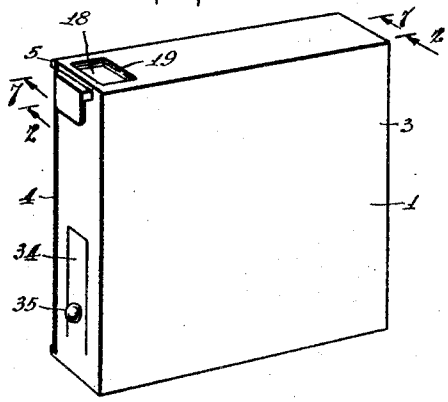


Fig. 2.

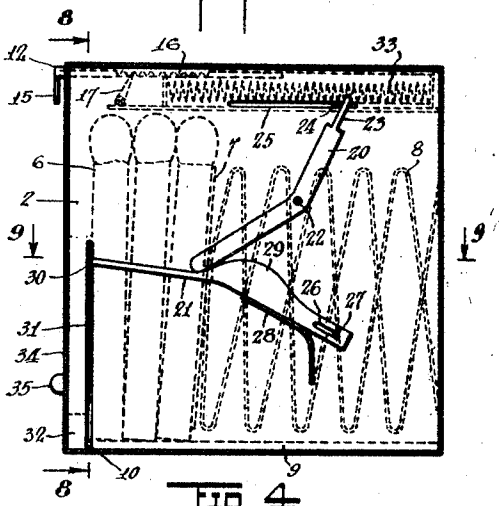


Fig. 3.

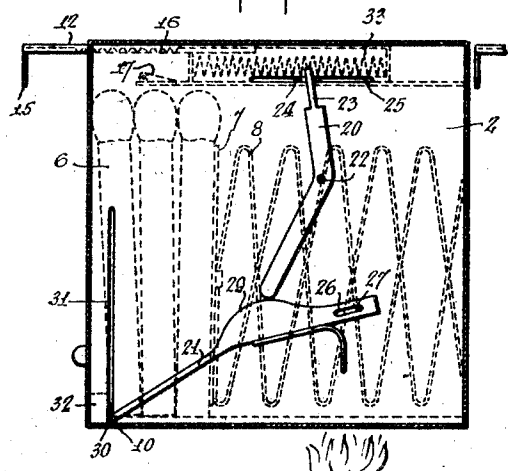


Fig. 4.

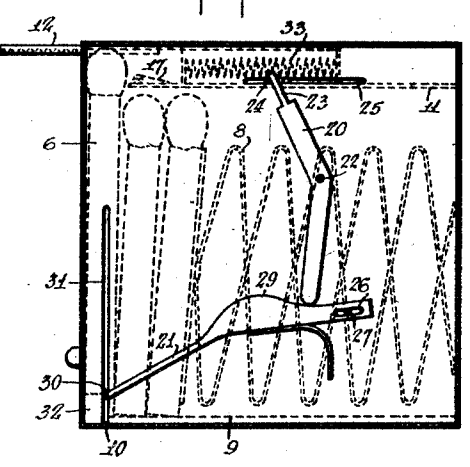
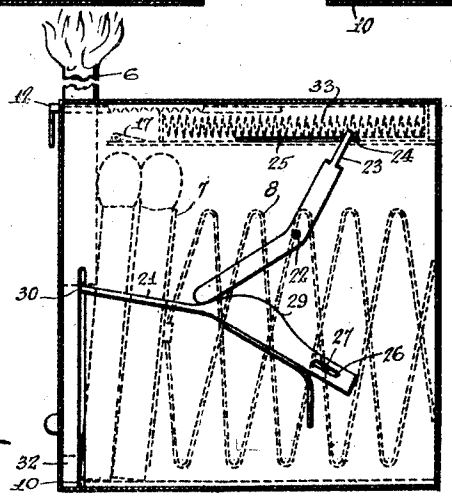


Fig. 5.



WITNESSES

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FIG. 6.

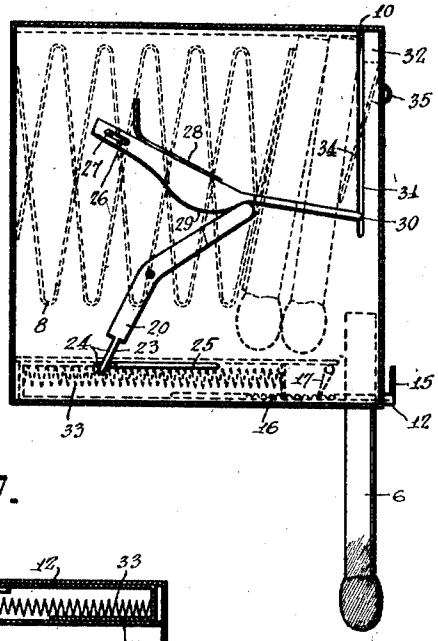


FIG. 8.

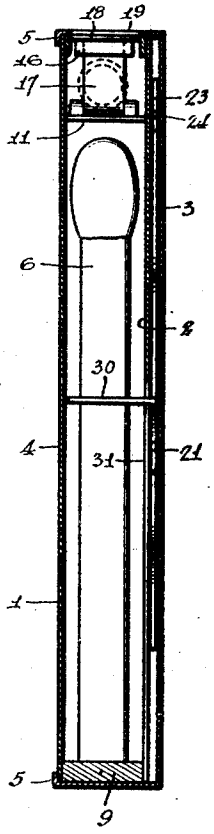


FIG. 7.

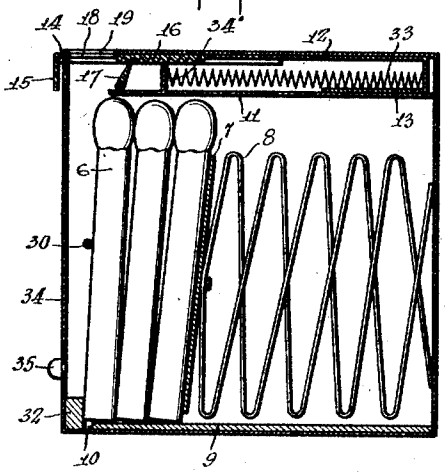


FIG. 9.

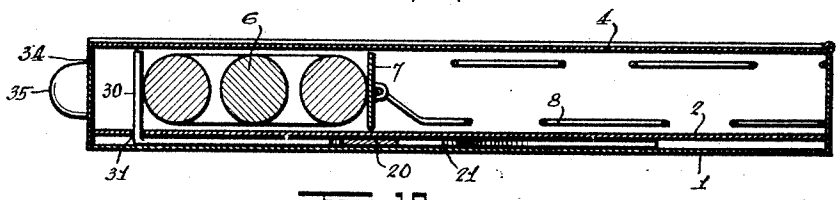
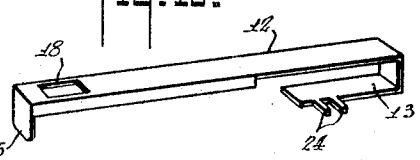


FIG. 10.



WITNESSES

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UNITED STATES PATENT OFFICE.

PATRICK GLAVEY, JR., OF NEW YORK, N. Y.

COMBINATION MATCH CASE AND IGNITER.

Application filed December 29, 1926. Serial No. 157,753.

This invention relates to combination match cases and igniters, the object of the invention being to provide a case which can be conveniently carried in the pocket of the user and which will contain a number of matches and can be easily and quickly operated partially or completely to eject a match and ignite the same during the ejecting process, so that the match is projected from the case after being ignited, and held by a mechanism, forming a part of the device, during the lighting operation of a cigar, cigarette, or the like, and then the device is further operated to eject completely the match after the latter has been blown out.

A further object is to provide a device of this character which will occupy a relatively small space, which will be neat and attractive in appearance, and which will most efficiently perform the functions for which it is intended.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a perspective view of my improved device;

Figures 2, 3, 4, 5 and 6 are views in longitudinal section on the same section line, illustrating various steps of the operation of the device, the sections being taken on the line 2—2 of Figure 1;

Figure 7 is a view in longitudinal section on the line 7—7 of Figure 1;

Figure 8 is an enlarged view in transverse section on the line 8—8 of Figure 2;

Figure 9 is a view in longitudinal transverse section on the line 9—9 of Figure 2;

Figure 10 is a perspective view of my improved slide member.

1 represents a box or casing which is preferably rectangular in form and of sufficient width for the purpose intended. This box or casing 1 has a longitudinal partition 2 therein adjacent what may be termed the back wall 3 of the box or casing, and in the space between the walls 2 and 3 my improved operating levers are located, as will hereinafter appear.

A door or slide 4 constitutes what may be termed the front of the box or casing, and this door slides in grooves 5 at the top and bottom of the casing, and is adapted when removed to permit a line of matches 6 to be inserted in the box or casing in front of a presser bar 7 which is connected to an expansible spring 8 located in the casing.

It is of course to be understood that this spring is manually contracted to allow the matches to be placed in alinement in the casing, with the lower ends of the matches resting upon the floor or platform 9, which terminates short of the end of the casing so that a small recess 10 is provided at the front end of said floor or platform 9.

In the casing 1 and parallel with the top thereof I provide a fixed bar 11, which terminates short of the ejecting end of the casing, and between this bar 11 and the top of the casing is located my improved slide 12. This slide 12 is in the form of a bar bent into angular form at its rear end so that an extension 13 thereof is located parallel to the upper or main portion of the slide and moves on the bar 11.

This slide 12 extends through a slot 14 in the end of the casing, and has a downwardly projecting operating finger 15 thereon to manually move the same. A ratchet rack bar 16 is fixed to or made integral with the slide 12 adjacent its forward or outer end, and located on the under portion of the slide in position to receive a gravity pawl 17, pivotally connected to the bar 11.

The rack bar 16 also constitutes a scratching surface for the matches, and an opening 18 is formed in the slide 12, which is adapted to register or aline with an opening 19 in the top of the casing, which is the normal position of the parts.

I would call particular attention to Figure 7, which shows the slide 12 in its normal position, indicating in this view that the slide is slightly spaced at its inner end from an end wall of the casing, so that the slide is permitted a slight inward movement to release the pawl 17 and allow it to fall.

The space between the slide and the end of the casing is not sufficient to allow the pawl to engage another tooth of the rack, so that even if it is pushed inwardly the pawl cannot ride from one tooth to another, as the distance is not sufficient.

In the space between the walls 2 and 3 I locate a pair of levers 20, 21. The lever 20 is pivotally connected to the casing between its ends, as shown at 22, and is of slightly angular form, and the upper end

of this lever 20 has a finger 23 thereon which engages in a bifurcated lug 24 on the slide 12, said lug 24 movable in a slot 25 in partition wall 2.

The lever 21 has a longitudinal slot 26 in one end receiving a fixed pin 27 which permits the lever to pivot and also have a slight longitudinal movement. A spring 28 exerts upward pressure on the lever 21, and the lower end of the lever 20 normally engages this lever 21.

The spring 28 constitutes a thin spring wire, bowed intermediate its ends, one end soldered or otherwise secured to the wall of casing 1 and partition 2, and the other end free and engaging under the lever 21 and exerting an upward pressure on said lever.

The lever 21 is provided on its upper face with a cam 29, and at its free extremity is provided with an ejector finger 30, projected at right angles thereto and movable in a slot 31 in partition 2. This finger 30 extends into the match compartment of the casing and normally lies in front of the line of matches, as shown clearly in Figure 7. When the lever 21 is forced downwardly this finger 30 will move into the small recess 10 above referred to, in position to allow the end match to be forced forwardly by the spring 8 and come to a stop above the finger 30. A block or bar 32 is located in a corner of the casing 1 so as to limit the movement of the matches and permit the finger 30 to be actively positioned for ejecting a match.

The slide 12 above referred to is held in its normal inward position by a coil spring 33 which is positioned between the inner end of the slide and an upwardly projecting arm 34′ on bar 11, and this spring functions to hold the slide in normal position.

In one end of the casing 1 I provide a tongue 34 which is made by slitting the end of the casing on three sides of the tongue, leaving the fourth side connected to the casing, and on this tongue I locate a button 35 which may be engaged with the thumb or finger to force the tongue inwardly against the line of matches and press said line of matches backward against the action of the spring 8 to allow a used match to be dropped from the casing, as will be explained.

The operation of the device is as follows: Figures 1, 2, 7 and 8 show the parts in normal position. The operator first pushes the slide 12 inwardly far enough to allow the pawl 17 to fall by gravity away from the rack 16. The slide is then forced outwardly by the spring 33 and this movement of the slide causes the lever 20 to swing on its pivot and its lower end to engage the cam 29, depressing the forward end of the lever 21 to move the ejector finger to its set position, as indicated in Figure 3 of the drawings. A continued outward pull of the slide 12 moves the lower end of lever 21 past cam 29, and the spring 28 is permitted to move the lever 21 slightly on its pivot to elevate the finger 30 and carry with it a match 6 to bring the head of the match against the under face of the slide 12, as indicated in Figure 4. The operator then pushes the slide inwardly and this inward movement of the slide causes the ratchet rack 16 to scrape across the head of the match and ignite the same. At the same time the lever 21 is swung to the position shown in Figure 5 and the spring 28 forces the free end of lever 21 upwardly so that when the openings 18 and 19 in the slide and casing, respectively, are in register the ignited match may be forced through said openings and approximately half of the match will be projected outside of the casing, as indicated in Figure 5.

In order that the match may be fully ignited the case is at this time turned upside down, and when the match is ignited it is used and is then blown out although it may be dropped while burning, if desired. This operation of dropping the match is illustrated in Figure 6. The tongue 34 is forced inwardly to force back the line of matches so as to prevent their frictional engagement with the ignited match, and the slide 12 may be moved by the thumb if it engages the match so that the latter is free to fall, as indicated in Figure 6. While the match is in this reversed position the gravity pawl 17 will swing into engagement with the ratchet rack 16, and when the device is reversed the parts will be in normal position as before, ready for a repetition of the operation.

Various changes and alterations might be made in the general form of the parts described without departing from the invention and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. A device of the character described, including a casing, a spring in the casing adapted to exert pressure on a line of matches, a manually operated slide in the casing having a match striking surface on its under face, said slide and casing having registering openings, and means operated by the movement of the slide to present a match to the match striking surface to ignite the match and then force said match through said openings.

2. A device of the character described including a casing, a spring in the casing adapted to exert pressure on a line of matches, a manually operated slide in the casing having a match striking surface on its under face, said slide and casing having registering openings, means operated by the movement of the slide to present a match to the match striking surface to ignite the

match and then force said match through said openings, said match striking surface constituting a ratchet rack, and a gravity pawl in the casing adapted to engage said rack.

3. A device of the character described, including a casing, a spring in the casing adapted to exert pressure on a line of matches, a manually operated slide in the casing having a match striking surface on its under face, said slide and casing having registering openings, means operated by the movement of the slide to present a match to the match striking surface to ignite the match and then force said match through said openings, a spring in the casing exerting pressure on the slide to force the latter inwardly, and means on the end of the slide to permit the latter to be moved manually.

4. A device of the character described, including a casing, a spring in the casing adapted to exert pressure on a line of matches, a manually operated slide in the casing having a match striking surface on its under face, said slide and casing having registering openings, means operated by the movement of the slide to present a match to the match striking surface to ignite the match and then force said match through said openings, and a member on the casing adapted to be moved inwardly to hold back the unburnt matches and allow a burnt match to be dropped out of said openings.

5. A device of the character described, including a casing adapted to receive a line of matches, a spring exerting pressure on the line of matches to move them toward one end of the casing, a lever connected to the casing and having a finger adapted to move under a match to be ejected, said lever having a cam thereon, a second lever adapted to engage the cam and control the operation and depress the first-mentioned lever, a slide controlling the operation of said last-mentioned lever, and a spring exerting pressure on the first-mentioned lever to project a match from the casing when permitted by the said slide and second-mentioned lever.

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