

J. G. HANNA.  
 AUTOMATIC MATCH BOX.  
 APPLICATION FILED APR. 10, 1909.

939,252.

Patented Nov. 9, 1909.  
 2 SHEETS—SHEET 1.

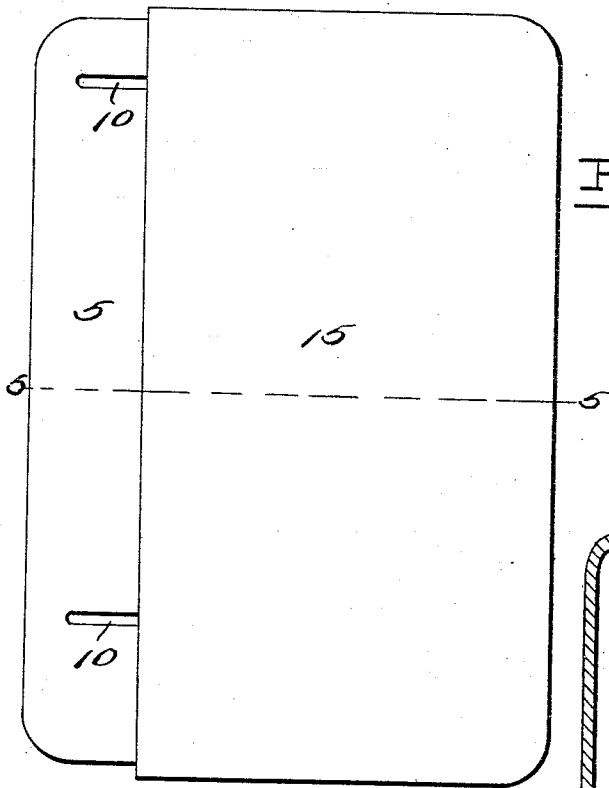


Fig. 1.

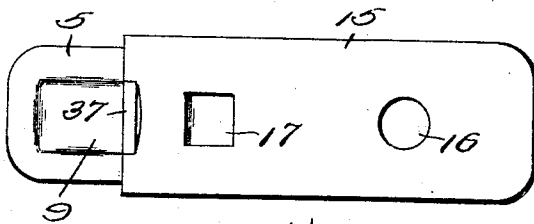


Fig. 4.

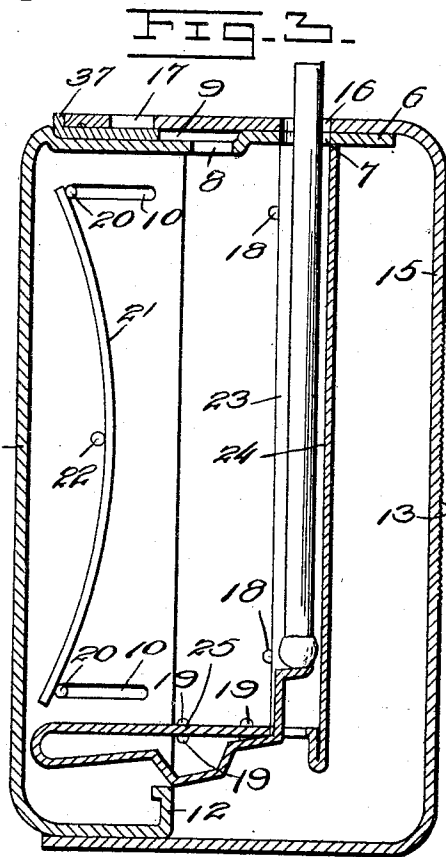


Fig. 2.

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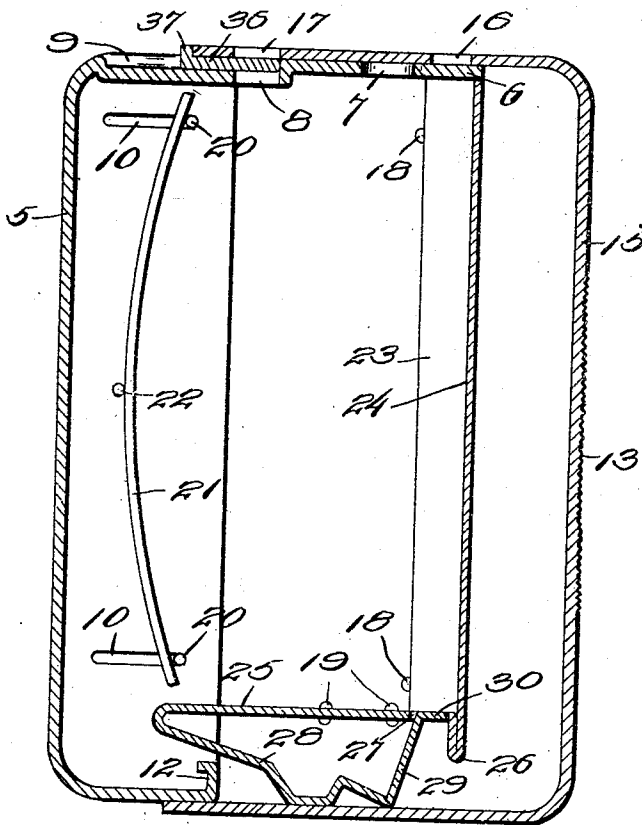


FIG. 2.

FIG. 6.

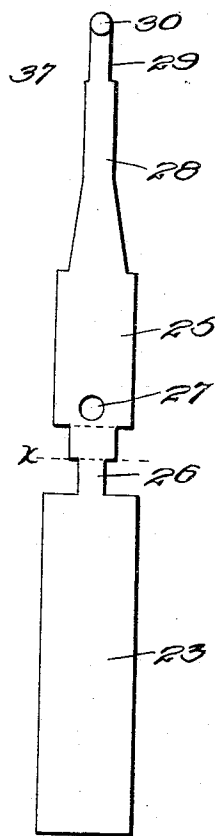
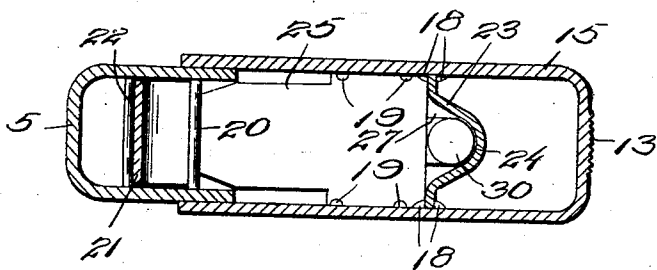


FIG. 5.



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# UNITED STATES PATENT OFFICE.

JOHN GRIFFIN HANNA, OF AUSTIN, TEXAS.

## AUTOMATIC MATCH-BOX.

939,252.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed April 10, 1909. Serial No. 489,048.

To all whom it may concern:

Be it known that I, JOHN GRIFFIN HANNA, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Automatic Match-Boxes, of which the following is a specification.

This invention relates to certain new and useful improvements in pocket match boxes.

The object of my invention is to provide a neat, simply constructed, positively operating match box arranged so that a single match may be ejected a suitable distance, in telescoping the box, so that the match may be grasped, and be finally removed from the box.

With these and other objects in view the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described and particularly pointed out in the appended claims it being understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a part of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevational view of a match box embodying my invention. Fig. 2 shows a vertical sectional view, the ejector being in its normal position. Fig. 3 discloses the shell forming members as telescoped, a match being shown as partly ejected. Fig. 4 is a top view of the box. Fig. 5 is a transverse sectional view on lines 5-5 of Fig. 1. Fig. 6 shows a top view of the blank forming the ejector.

In the accompanying drawings the numeral 5 designates one of the shells, forming the match case. This shell is provided with the projecting end-forming plate 6, having the escape opening 7 near its end and being further provided with a groove or channel 9, which also has an opening as shown at 8, through which the box is charged. Each side of this shell 5 is further provided with a pin opening 10 there being four such openings. Near its lower end this shell 5 is provided with the upstanding lip 12, forming an integral part of this case forming shell. This member is formed of suitable sheet metal, and is provided with the roughened

surface 13, upon which the match head is struck.

In connection with the shell 5, I use a second shell 15, into which the shell 5 telescopes. This shell 15 is provided with the escape opening 16 and the charging opening 17, while the sides are provided at opposite points with the inwardly directed lugs 18, 18, disposed lengthwise of the box, while the sides at the end opposite the escape opening 17 are provided with the inwardly directed lugs 19. At suitable points near opposite ends this shell is provided with the transversely extending pins 20, normally held within the slots 10, the case forming shells being connected by means of these pins.

As shown in Fig. 5 the member 5 telescopes into the shell 15, and in order to hold these two telescoping members in a protracted position, I provide the bow spring 21 which is held between the pins 20 carried by the shell 15 and the pin 22 carried by the shell 5. The action of telescoping the case forming shells is against the tension of this bow spring 21.

Held between the lugs 18, is the channel plate 23 which is provided with a corrugation 24 forming the channel within which the match to be delivered is held. This channel is of a depth and width to hold one match. This channel forming plate is so positioned that the opening 7 registers with the channel 24 within the plate.

The shells in their connected position form a match receiving receptacle having a bottom formed by means of the supporting plate 25, which is held between the lugs 19. In Fig. 6, I have shown a top view of the blank forming the supporting bottom, as well as the ejector as employed in my invention. The channel plate 23 forms an integral part of the bottom 25, the plate and bottom being connected by means of the neck portion 26 which is bent on the line  $x$  and doubled upon itself so that the escape opening 27 within the bottom 25 comes squarely within the channel 24 of the plate 23. Extending from the bottom 25 and forming an integral part thereof is the spring arm 28 which is recurved and bent to form the stop shoulder 31, from which extends approximately at right angles the stem 29 ending in the head 30 which head is bent substantially at right angles to the stem 29 as dis-

closed. The head 30 is normally held within the opening 27.

Held within the channel 9 is a slide 36 having the operating shoulder 37. In order to charge the receptacle, the slide 36 is carried outward to expose the openings 8 and 17 through which the match box is filled.

As shown in Fig. 2, the opening 16 within the shell 15 is normally closed by means of the cap forming projection 6 of the shell 5.

The match box having been properly charged, the operation of ejecting a match is very simple. The box is so tilted that the channel 24 forms the bottom and is held in a horizontal plane. The telescopically connected members are then carried toward one another which results in the escape opening 16 first being uncovered. The upstanding lip 12 then advances and engages the obliquely positioned arm 28 of the ejector, and tilts this arm upward against its spring tension resulting, in the stem 29 being carried upward, so that the head will engage the match and slide the same along the channel 24 through the escape opening within the shell 15. The movement of the head 30 is of a distance sufficient to assure the match being projected a suitable distance so that the same may be conveniently grasped, in finally withdrawing the same from the case. The device is arranged so that the matches may be ejected with ease, accuracy and despatch, and the device is further light, neat and simple of construction.

Having thus described my said invention, what I claim as new and desire to obtain by United States Letters Patent is:

1. The combination with an outer shell having an escape opening and a channel extending from said opening, of a spring held

ejector carried by said shell having a lifting head within said channel, an inner shell telescoping into said first mentioned shell having an upstanding lip arranged to contact with said ejector, two pins carried by said outer shell and held within slots of said inner shell, a pin carried by said inner shell, and a spring held between said pins, to normally hold said shells apart.

2. A match box having in combination, an outer shell provided with an escape opening, a plate having a match-receiving channel registering with said opening, a bottom extending from said channel having an opening and being continued in a spring arm having an extending stem ending in a head held within said bottom opening, an inner shell telescoping within said first mentioned shell and having an upstanding lip arranged at times to contact with said spring arm, and means to hold said shells in a protracted spring held position.

3. A match box having in combination, an outer shell provided with an escape opening, a plate having a match receiving channel registering with said opening, a bottom extending from said channel having an opening and being continued in a spring arm having an extending stem ending in a head held within said bottom opening, and an inner shell telescoping within said first mentioned shell with an upstanding lip to contact with said spring arm, all arranged substantially as and for the purpose set forth.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN GRIFFIN HANNA.

Witnesses:

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