R. J. ALLISON.

MATCH BOX.

APPLICATION FILED MAY 10, 1910.

993,139. Patented May 23, 1911.

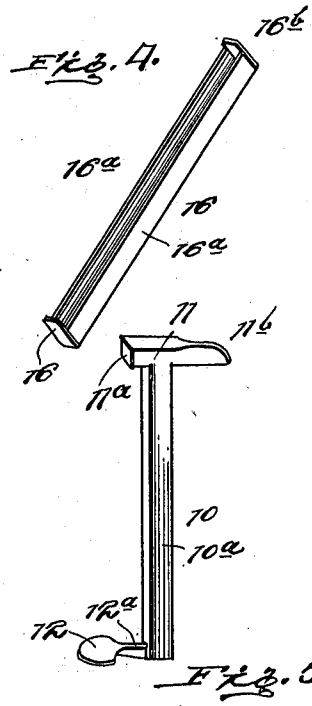

Fig. 4.

Fig. 5.

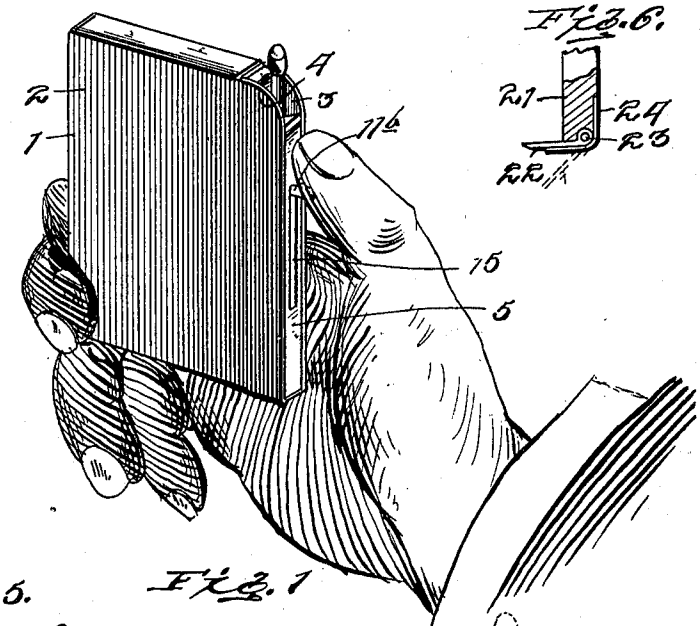

Fig. 1

Fig. 6.

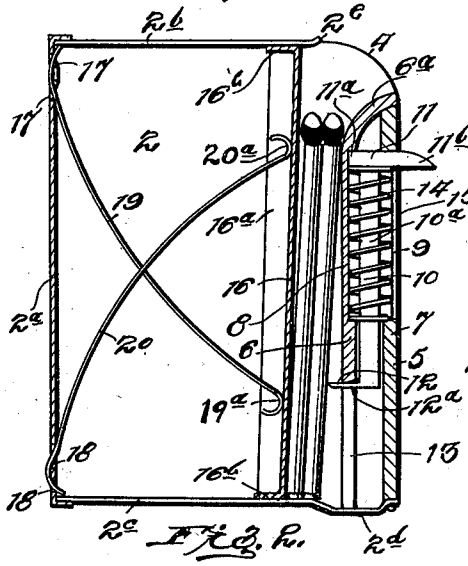

Fig. 2.

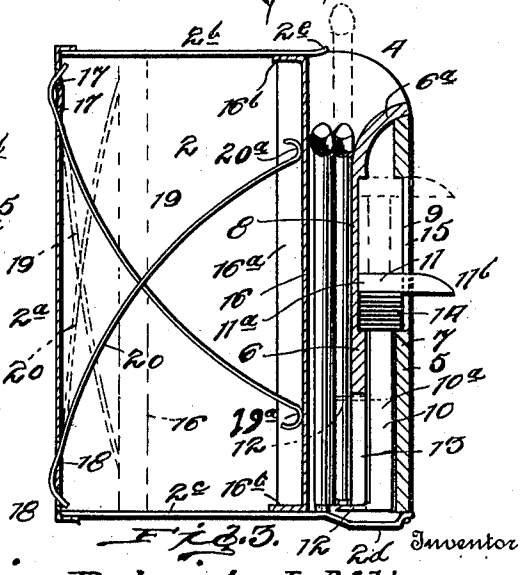

Fig. 3.

Inventor

Robert J Allison.

Witnesses

J. W. Wells

J. Stewart Rice.

By E. E. Wooman, his Attorney.

UNITED STATES PATENT OFFICE.

ROBERT JESSIE ALLISON, OF CRESTON, WASHINGTON, ASSIGNOR OF ONE-THIRD TO L. C. SUMERLIN, OF CRESTON, WASHINGTON.

MATCH-BOX.

993,139. Specification of Letters Patent. Patented May 23, 1911.

Application filed May 10, 1910. Serial No. 560,443.

To all whom it may concern:

Be it known that I, ROBERT J. ALLISON, a citizen of the United States, residing at Creston, in the county of Lincoln and State of Washington, have invented certain new and useful Improvements in Match-Boxes, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in match boxes, and has for its object to provide a match box, which is efficient in use and simple in construction, and one in which the operating parts are so arranged that they will not become deranged.

Other objects and advantages of my invention will appear in the course of the following specification.

In the accompanying drawings: Figure 1 is a perspective view of my improved match box (held in the hand), showing a match positioned therein for removal. Fig. 2 is a side elevation, partly in section, of the inner side of the side of the box in which the operating parts are positioned. Fig. 3 is a view similar to Fig. 2, but showing the operating parts in different positions. Fig. 4 is a perspective view of the follower. Fig. 5 is a perspective view of the ejector. Fig. 6 is a side elevation, partly in section, of the lower portion of a modified form of ejector.

Referring to the drawings, which illustrate the preferred embodiment of my invention, 1 designates the match box, which is flat, thin and approximately rectangular in shape in order that it will be convenient to carry in the pocket and to handle. The box is formed of two correspondingly shaped and constructed sides 2, which are spaced apart and suitably secured together with one side fitting into the other, and as the sides 2 are similar, a description of one will suffice for both. Three edges of each side 2, at the back and opposite ends, are bent inwardly at right angles to form flanges 2^a, 2^b and 2^c, respectively. Each lower flange 2^c, at its forward end, is correspondingly bent down until it lies in a plane below the rest of the flange to form a depression 2^d for a purpose to be hereinafter explained, and each upper flange 2^b is cut away at 2^e, whereby an opening 3 to the box is formed. The corners 4 of the sides 2 about the opening 3 are rounded in order that no sharp points will be presented.

Positioned along the open side or edge of the side 2, which fits into the other side 2, is an open, elongated frame 5 comprising oppositely-disposed spaced arms 6 and 7, which are arranged parallel for the greater portion of their length, the upper portion 6^a of the arm 6 being bent or curved over and suitably pressed down on or secured on top of the arm 7. The arms 6 and 7, at their lower ends, are suitably secured to the bottom of the depression 2^d and also to the side 2. Beginning at a point contiguous the top of the inner sides of the arms 6 and 7, and extending to a point near the center thereof, are oppositely-disposed right angular cut-out portions 8 and 9 respectively.

Positioned between the arms 6 and 7 is an ejector 10 provided with a head 11, which is at right angles to and overhangs each side of the body 10^a of the ejector. As shown, the body 10^a of the ejector is of a width adapted to fit freely within the space between the arms 6 and 7 so as to permit of its easy movement therein. The overhanging end 11^a of the head abuts the side of the cut-out portion 8 to maintain the ejector in a straight and steady position. The lower end of the ejector is provided with an inwardly-extending right angular finger or projection 12, which extends through a longitudinally-extending slot 13 in the lower portion of the arm 6, which slot extends from a point below the lower end of the cut-out portion 8 to and through the bottom of the arm. As shown the finger is provided with a neck 12^a, which fits and slides in the slot 13. Positioned in the space between the cut-out portions 8 and 9 is a coil spring 14, which surrounds the upper portion of the body 10^a of the ejector 10, with its lower end resting on the bottoms of the cut-out portions and its top under the head 11, whereby the ejector is normally held in the raised position shown in Fig. 2. In the arm 7, in the cut-out portion 9 thereof, is arranged a longitudinally-extending slot 15, which extends the entire length of the cut-out portion and through which slot projects the forward, overhanging, reduced portion 11^b of the head 11, which serves as a thumb latch or piece. The top of the slot 15 terminates on a plane with the top of the cut-out portion 8 so that the top of the slot and the top of the cut-out act as stops against which the portions 11^a and 11^b of the head 11

strike to limit the upward movement of the ejector 10.

Positioned longitudinally of the box or parallel with the back thereof is a follower 16, the sides 16^a of which are bent backwardly at right angles or parallel with the sides 2. The ends 16^b of the follower 16 are turned back at right angles to close the ends of the sides 16^a. In the back flange 2^a, of the side 2 in which the frame 5 is mounted, contiguous the top and bottom thereof are a pair of spaced transverse slits or cuts 17 and 18 respectively. The end of a diagonally-extending flat spring 19 is passed from the inside through the lower slit 17 and then through the other slit 17 to hold the spring firmly in position. The other end of the spring 19 is curved back upon itself to form a bearing 19^a, which passes between the sides 16^a of the follower 16, and bears against the inner side thereof below the center. A second diagonally-extending flat spring 20 has one end thereof passed through the inner slit 18 and then through the other slit 18 to hold it in position. The spring 20, which crosses the spring 19, has its other end curved over to form a bearing 20^a, which also enters between the sides 16^a of the follower and bears against the inner side thereof above the center. As illustrated the springs 19 and 20 are of sufficient length to force the follower against the arm 6. The bearings 19^a and 20^a of the springs 19 and 20 are free to move on the inner side of the follower 16 and are prevented from longitudinal disengagement therefrom, when the follower is pressed back toward the back flange 2^a, by the ends 16^b.

In order to fill the box 1, the thumb latch 11^b of the head 11 is depressed by a finger, preferably the thumb, until the bottom of the body 10^a of the ejector 10 contacts with the depression 2^d and the finger 12 also rests in the depression. The finger 12 is of such thickness with respect to the depth of the depression 2^d that when the finger is seated in the depression the top of the finger is flush with or a little below the level of the upper surface of the flange 2^c of the side 2 in which the ejector is positioned. When the box is empty the follower 16 is pressed against the arm 6 of the frame 5, and hence the end of a match can be passed through the opening 3 and readily inserted between the upper curved end 6^a of the arm 6 and the follower 16, one match after the other. Of course after the first match is inserted the next match will be inserted between the first match and the arm 6 and so on until the box is filled. After the box has been filled the pressure on the thumb latch 11^b can be released, when the coil spring 14 will cause the ejector 10 to assume its normal position, as shown in Fig. 2.

In removing the matches, which is accomplished one at a time, the ejector 10 is depressed causing the finger 12 to slide down the side of the adjacent match, the follower 16 giving sufficiently to permit this, until it reaches the depression 2^d into which it fits, as hereinbefore set forth, and then the match is forced on top of the finger by the follower, and then on releasing the pressure on the ejector 10, the spring 14 causes the finger to rise bringing the match with it. The pressure on the ejector 10 can be released suddenly, or it can be allowed to rise slowly under restraint of the thumb, as desired. When released suddenly, the match will be lifted as far up as the finger 12 of the ejector rises, and, of course, the spring 14 will tend to "shoot" the match out of the box, but the match will be prevented from entirely leaving the box by the pressure on it of the follower 16. Of course, where the match is simply lifted by the ejector, it will not project so far above the top of the box, but in both instances the upper portion of the match will be projected through the opening 3 sufficiently far above the top of the box to be readily grasped by the fingers and easily withdrawn.

In Fig. 6 I have shown a modified form of ejector 21. In this modification the finger 22 of the ejector is hinged at 23 and connected to the back of the ejector is one arm of a flat, angular spring 24, the other arm of which extends beneath the finger 22 to normally hold it at right angles to the ejector. When it is desired to fill the box with matches, when this form of ejector 21 is used, it is not necessary to depress the ejector as the matches, which are inserted as previously described, will each in turn depress the finger 22 into the slot 13, against the tension of the spring 24, thereby allowing the matches to be pushed down to the bottom of the box, when the spring 24 of the finger 22, which is of sufficient strength to overcome the spring pressure of the follower 16, will extend itself at right angles to the ejector and against the adjacent match. In removing matches from the box the finger 22 acts in the same manner as the finger 12 of the ejector 10, since the spring is sufficiently strong to prevent the finger from being depressed by the weight of the match and the pressure of the follower 16 on the match when it is lifted. When employing this form of ejector 21, the slot 13 can be made wider than when using the ejector 10 or that portion of the arm 6 in which the slot is located could be removed, if desired.

What I claim is:

A match safe comprising a hollow body portion open at one side and at one corner, and provided with a pair of alined horizontal openings near each corner of its back, a pair of crossed springs within said body,

the end of each of said springs passed out through one of the openings in each pair and in through the other of said openings and having the end against the inner surface, a follower engaged by said springs, a frame closing said open side, said frame comprising a pair of spaced apart strips connected at their upper ends, the inner face of said strips provided with recesses forming a seat, a spring seated within and bearing against the lower end of said seat, the outer of said strips provided with a slot near its upper end, the inner of said strips provided with a slot near its lower end, a plunger passing through said spring and resting upon its upper end and normally contacting with the upper end of said seat, and said plunger provided with a head extending through the slot in said outer strip, a hinged foot extending through the slot in said inner strip, and said body provided with a depression for said foot to rest in when in a lowered position.

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

ROBERT JESSIE ALLISON.

Witnesses:
GEO. H. DODD,
RAY HILLIARD.