No. 666,966.

T. W. MABEE.

Patented Jan. 29, 1901.

MATCH BOX.

(Application filed Oct. 19, 1900.)

(No Model.)

Fig. 1.

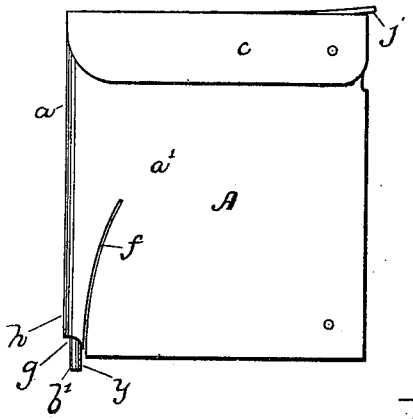


Fig. 2.

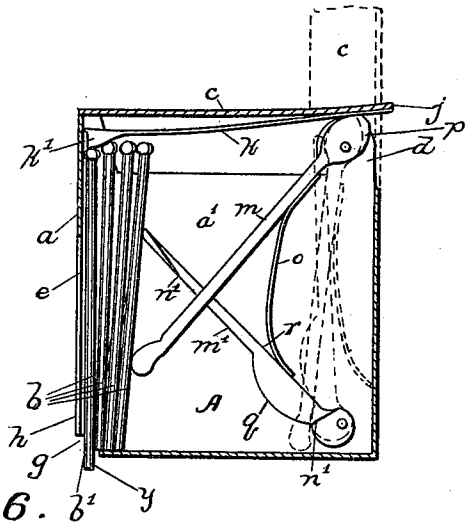


Fig. 6.

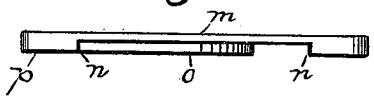


Fig. 7.

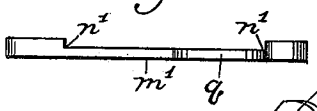


Fig. 3.

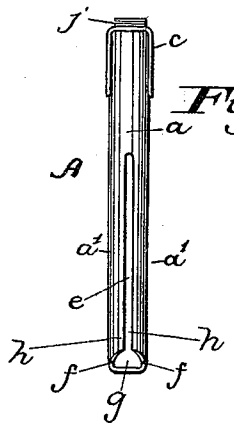


Fig. 4.

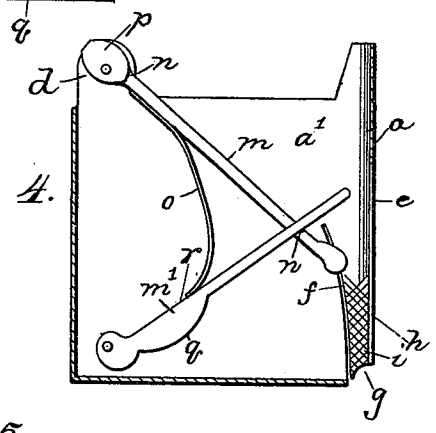
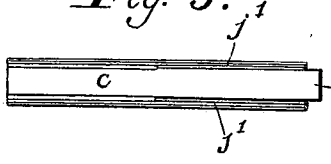


Fig. 5.



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UNITED STATES PATENT OFFICE.

THADDEUS W. MABEE, OF BALTIMORE, MARYLAND.

MATCH-BOX.

SPECIFICATION forming part of Letters Patent No. 666,966, dated January 29, 1901.

Application filed October 19, 1900. Serial No. 33,579. (No model.)

To all whom it may concern:

Be it known that I, THADDEUS W. MABEE, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Match-Boxes, of which the following is a specification.

My invention relates to improvements in match-boxes of that class known as "single-delivery" match-boxes.

The present box is especially designed to be carried in the pocket. The chamber of the box is constructed to accommodate one row of matches at a time and is provided with means to advance the entire row of matches, so that one match at a time will be presented at the discharge-outlet.

The invention consists of certain combinations, details of construction, and arrangement of parts, as are hereinafter set forth.

In the drawings, Figure 1 is a side elevation of my improved match-box. Fig. 2 is a vertical longitudinal section through the match-box and illustrates how the matches are advanced by showing the parts in dotted lines in the position they take when the lid is raised to fill the box with matches. Fig. 3 is a front edge view of the box and shows the edge slit and the discharge-opening. Fig. 4 is a vertical longitudinal section through the box, the lid not being shown, and illustrates the side of the spring advancing-arms reverse from the side shown in Fig. 2. Fig. 5 is a top plan view of the lid and illustrates the lid-spring. Figs. 6 and 7 are edge views of the two spring advancing-arms.

In the drawings, A designates the box, which is preferably formed from a sheet-metal blank and whose chamber or receptacle is preferably of a width or thickness to accommodate only one row of matches *b*, and said receptacle is provided with a lid or cover *c*, which is hinged to a projecting ear *d*, formed integral with the box-blank. The front edge wall *a* of the box is provided with a vertical slit *e*, and the two side walls *a'*, near said front edge, are each provided with a slit *f*, all three of said slits terminating at the bottom discharge-opening *g* in the lower corner of the box opposite the lid. The slits *f* in the side walls and the vertical slit *e* in the front edge together form spring fingers or grippers *h*, which on the interior of the box are provided with serrations *i*, which form a scratch-surface or friction-surface against which the match-head may be rubbed and ignited, if desired, when a match is drawn through the discharge-opening *g*.

The lid or cover *c* at its rear end or pivoted end is provided with a spring-finger *j*, formed by two longitudinal slots *j'* along the top of the lid. The function of this spring will presently be pointed out. The lid or cover *c* is also provided on the interior with a spring-arm *k*, which at its free end has a head *k'* adjacent the free end of the lid. This spring-head *k'* is adapted to press on the head of the first match *b'* only of the row of matches and serves to force said first match down through the discharge-opening *g*, so that the exposed end *y* of said first match may be grasped by the fingers and pulled from the interior of the box.

The top edge of the side walls at the rear of the box are provided with vertically-projecting ears *d* and one end of one of the advancing-arms *m* is pivoted freely between said ears, while the other end of said arm is free to move in an arc of a circle from said pivot-point and press against the last one of the matches in the row. The advancing-arm *m* on one side is mortised or halved, as at *n*, so as to lap over the other arm, and on its rear side said arm carries a flat spring *o*. The arm *m* is also provided at its pivot end with a cam-head *p*, which contacts with the spring-finger *j* on the cover *c*. By the opening and closing of said cover the said cam-head swings the arm *m*. When the cover *c* is raised or opened, the spring-finger *j* rides over the surface of the cam-head *p* above the pivot-point until it gets on the rear side of said cam-head, and thereupon the spring forces said head forward, and thereby causes the free end of the arm *m* to assume a substantially vertical position, as seen in dotted lines in Fig. 2. The other advancing-arm *m'* is pivoted between the side walls on the interior of the box and at the bottom of the latter, with its free end pointing upward. This arm *m'* is provided on its front edge near its pivot-point with a cam-surface *q* and on one side is mortised or halved, as at *n'*, to correspond with the mortise *n* on the arm *m*, so that the two

arms m m' will overlap. It will be seen by referring to Figs. 2 and 4 that the two advancing-arms m m' have their pivots in substantially a vertical line and that the flat spring o, carried by the upper arm m, contacts with the rear edge r of the lower advancing-arm m' when the lid or cover c is down or closed. This action is produced by the spring-finger j on the cover pressing against the cam-head p, which tends to throw the free end of the arm m upward against the row of matches, and at the same time the flat spring o, pressing on the rear edge r of the lower arm m', tends to force the free end of said arm m' downward against the said row of matches. Thus it will be seen that when the cover c of the box is down the free ends of both arms m m' are pressing against the row of matches and forcing said row of matches forward toward the discharge-opening g. When a match has been drawn from the box through said opening g, the two advancing-arms will move the entire row of matches forward, and the spring-head k' by pressing on the head of the first match in the row will cause the lower end of said first match to be projected through the opening g, as seen in Figs. 1 and 2. If it is desired to pull the first match out of the box without igniting it, the spring fingers or grippers h will not be compressed by the hand of the operator, and upon drawing the match out the head of the match will not contact with the scratch-surface or serrations i on the interior of the box, and accordingly the match will not be ignited.

From the above description it will be seen that when the cover or lid of the box is raised the two advancing-arms will both be automatically pressed to one side in substantially a vertical position, as in dotted lines, and thereby make room in the chamber or receptacle for the matches to be inserted, and when the lid or cover is closed the entire row of matches will be automatically pressed forward toward the discharge-opening.

It is obvious that a box of this kind might be used as cigar or cigarette box and for other purposes than as a match-box.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A box of the character described, provided with a hinged cover and a discharge-opening leading out through the bottom opposite said cover; and a spring-arm carried by said cover and adapted to press upon the article presented at said discharge-opening to discharge the same, as set forth.

2. The combination of a box provided with a discharge-opening; a cover hinged on the top of the box at one side thereof; two overlapping arms pivoted one at the top and the other at the bottom of that side of the box to which the cover is hinged; and means whereby the opening and closing of said cover will alternately advance and return both of said arms, as set forth.

3. The combination of a box having a discharge-opening; a cover hinged on said box; two arms pivoted in said box and extending toward each other; and means whereby the opening and closing of said cover will alternately advance and return both of said arms.

4. The combination of a match-box having a discharge-opening; a hinged cover having a spring-top; two arms pivoted within the box and operated by said spring-top of the cover to advance the matches in the box toward said discharge-opening; and a spring-arm carried by said cover and adapted to press only on the match which is presented at said discharge-opening and project said match through said opening.

5. The combination of a match-box having a discharge-opening and a hinged cover; two spring fingers or grippers in close proximity to said discharge-opening and provided with a friction or scratch surface; means within the box coacting with the hinged cover for advancing the matches toward said discharge-opening; and automatic means for projecting the matches one at a time through said opening.

6. The combination of a box provided with a discharge-opening; a cover hinged on said box; two overlapping arms pivoted in said box and one of which is arranged to be advanced and returned by the opening and closing of said cover; and a connection between said arms whereby the cover-operated arm will advance and return the other arm, as set forth.

7. The combination of a box provided with a discharge-opening; a cover hinged on said box; and two overlapping arms pivoted in said box, one of which arms is pressed upon by said cover to advance and return said arm, and is also provided with a spring bearing upon the rear side of the other arm to advance the latter, and is also provided at its free end with a head adapted to engage and return the other arm, as set forth.

8. The combination of a box provided with a discharge-opening; a cover hinged on said box and provided with a spring-finger; and two overlapping arms pivoted in said box, one of said arms being provided with a cam-surface, and the other arm having a spring adapted to bear against the rear side of the first-named arm, a head adapted to engage and ride upon said cam-surface, and a cam-head, p, engaged by the spring-finger of the cover, as set forth.

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

THADDEUS W. MABEE.

Witnesses:
CHARLES B. MANN, Jr.,
THOS. C. BAILEY.