R. W. WILKES.

MATCH BOX.

APPLICATION FILED MAY 4, 1915.

1,207,112. Patented Dec. 5, 1916.

Fig. 1.

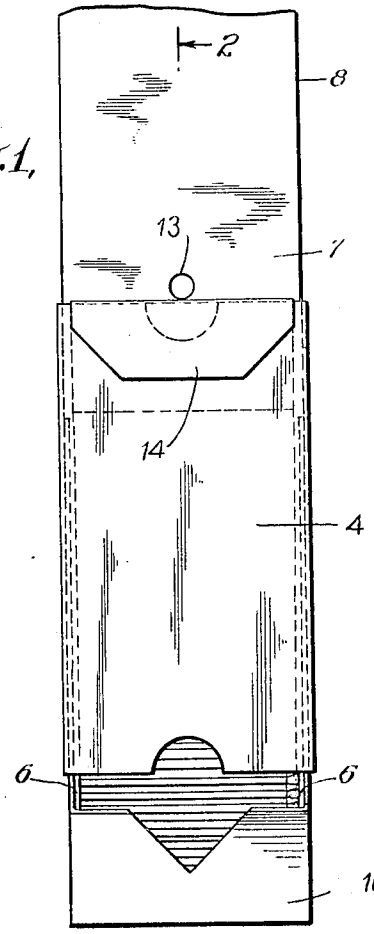
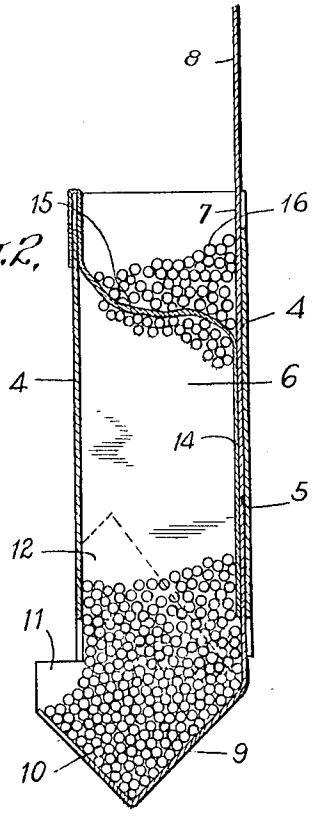


Fig. 2.



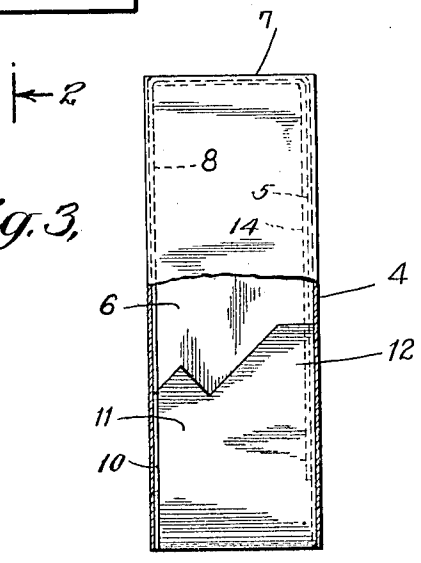


Fig. 3.

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MATCH-BOX.

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Application filed May 4, 1915. Serial No. 25,672.

To all whom it may concern:

Be it known that I, ROBERT W. WILKES, a citizen of the United States, residing at Yonkers, county of Westchester, and State of New York, have invented certain new and useful Improvements in Match-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to match-boxes of the type consisting of a box, an open-ended cover within which the box is slidable, and a foldable tray at one end of the box held in the closed position when the box is wholly within the cover, and, when the box has been moved partially out of the cover, adapted to be turned to an open inclined position so that the matches may be readily taken from the tray.

One of the features of the present invention involves the provision of a match-box of this character having an improved form of receptacle for the used matches. In the use of boxes of the type above referred to, it has been the common practice to utilize as a receptacle for the used matches the space above the upper end of the box and within the upper end of the cover when the box and cover are in an upright position and the box moved to the position for opening the tray. The receptacle for the used matches thus formed is of small capacity as compared to the capacity of the box for unused matches and when boxes of this character are in use, the receptacle for the used matches usually becomes filled long before the supply of matches in the box is exhausted. This objectionable characteristic of boxes of this type as heretofore made is eliminated in a construction embodying the present invention, wherein the receptacle for the used matches is so formed that it increases in size as the supply of matches in the box decreases. This is accomplished by utilizing a flexible strip as the closure for the upper end of the box when the box is mounted in the usual upright position. This flexible strip forms the sole partition between the interior of the box and the receptacle for the used matches, so that as the supply of matches within the box diminishes and the upper level thereof falls, this flexible strip bends so as to lower the level of the bottom of the receptacle and thus increase the capacity of the receptacle. In this way, the space available for used matches increases as the matches in the box are used until it reaches a size sufficient to hold the used sticks of all of the matches originally in the box.

Another feature of the present invention involves the provision of certain improvements in the construction of the foldable tray. In these boxes as heretofore made, the tray has been connected to the front edge of the end of the box and as a result, when the box is in the upright open position, this end wall, which then constitutes the bottom of the receptacle for the matches, is horizontal. By reason of this construction, the matches do not move from the receptacle proper out into the tray as freely as is desirable. Furthermore, when the supply of matches in the box is neary exhausted, the last ones lie close to the bottom of the receptacle at the rear edge of the end wall of the receptacle and are therefore not easily reached. In accordance with the present invention, the tray is pivotally connected, not to the front edge of the end wall of the box, but to the end of the bottom of the box so that the piece which constitutes the end wall of the box when the box is closed forms one of the walls of the tray. As a result, movement of the tray to the open position causes this wall, which then forms the bottom of the tray, to move to an inclined position. This inclination of the piece which forms the support for the matches causes the matches to move freely out into the tray when the box is being placed in the open position and also the last matches remaining in the box move to the front of the box where they can be readily grasped.

The construction which I prefer to employ is illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the box showing the parts thereof in the open position; Fig. 2 is a central section on line 2—2 of Fig. 1; and Fig. 3 is a side view of the box showing the cover partially broken away in order to disclose the tray.

Referring to these drawings, the cover is

shown at 4 and consists of a tube of rectangular cross section, open at its ends, formed by folding a piece of stiff paper or cardboard to a rectangular shape. This open-ended cover is adapted to receive a rectangular box consisting of a bottom 5 and sides 6. The bottom 5 is extended so as to provide a flap which may be bent to form the end 7 and the top piece 8. At its lower end, the bottom 5 is extended to form a tray consisting of a bottom 9, front 10 and sides 11. The blank from which the box is formed is cut out to such a shape that the sides 11 and front 10 are integral with the bottom 9 of the tray, and the bottom 9 is integral with the bottom 5 of the box. With the blank so cut, the sides 11 and front 10 are bent so that they lie at a right angle to each other and to the bottom 9 of the tray and the lower edges of the sides 11 are then secured to the bottom 9 by paste. The tray thus formed is integrally connected to the bottom 5 of the box and may be turned relatively thereto so that the bottom 9 of the tray lies at a right angle to the bottom 5 of the box and forms the end of the box, the parts being then in the position shown in Fig. 3. Also, the tray may be turned to the inclined position in which it is shown in Fig. 2, the connection of the rear edge of the bottom 9 of the tray to the lower edge of the bottom 5 of the box then forming a pivot about which the tray turns. When the box lies wholly within the cover 4, such turning movement of the tray is precluded by the cover 4, as is shown in Fig. 3, but by moving the box slightly out of the cover 4 to the position shown in Fig. 2, the tray may be turned on its pivotal connection as above described. This turning movement is arrested when the extensions 12 of the tray engage the front wall of the cover 4, as is shown in Fig. 2.

When the box is in the closed position, the fold 7 closes one end of the box and is held in its proper position by the front 8 which extends within the cover 4. In opening the box, the folds 7 and 8 are turned to an upright position as shown in Figs. 1 and 2, and a tack by which the box is hung upon the wall is driven through the hole 13 in flap 7. A flexible strip 14 has its lower end secured by paste to the inner surface of the bottom 5 of the box and extends along the bottom 5 and flaps 7 and 8 when the box is in the closed position. On opening the box to the position shown in Figs. 1 and 2, the upper end of this flap 14 is carried forward over the front wall of the cover 4 and is folded so as to catch upon the upper edge of that wall. If desired, this end of the flap 14 may be provided with paste so that it may be secured to the front wall of the cover 4. The intermediate portion of the flap 14 then forms a partition, as shown at 15 in Fig. 2, closing the upper end of the receptacle for the matches and forming the bottom of a receptacle at the upper end of the cover 4 for the used matches as shown at 16 in Fig. 2.

By this construction it will be seen that the portion 15 of the flexible strip 14 is supported by the matches within the box and therefore as the supply of matches decreases, this portion 15 will assume a lower position within the box. In other words, as the supply of matches in the box decreases, the capacity of the receptacle above the strip 15 increases until finally this receptacle is of a size approximating the size of the box itself. The capacity of the receptacle for the used matches therefore increases as the matches are used, so that finally it is large enough to hold the used sticks of all of the matches originally in the box. Furthermore, it will be noted that the foldable tray from which the matches are withdrawn for use, is connected to the bottom 5 of the box so that when the tray is in the open position its bottom 9 is inclined to the horizontal. By reason of this inclination of the bottom 9 when the tray is moved to open position and the box is held in an upright position, the matches in the box move readily out into the tray where they can be easily grasped. Moreover, when the supply of matches is nearly exhausted, there is no danger of the last few matches settling in the corner at the lower end of the bottom 5 of the box, where they would be relatively inaccessible, since the inclination of the bottom 9 of the tray causes these last matches to move downwardly and outwardly where they can be readily reached.

What I claim is:

1. The combination of a match-box, an open-ended cover adapted to receive the box therein, a tray at one end of the box adapted to be moved to the open position when the box is moved partially from within the cover, and a receptacle for used matches at the other end of the box, which receptacle includes a flexible member adapted to be supported upon the unused matches in the box; substantially as described.

2. The combination of a match-box, a cover therefor, a foldable tray consisting of a bottom and sides, the bottom of the tray having one of its edges connected to one end of the bottom of the box, and a receptacle for used matches at the other end of the box, which receptacle includes a flexible member adapted to be supported upon the unused matches in the box; substantially as described.

3. The combination of a match-box, a cover therefor, a foldable tray at one end of the box, and a flexible strip constituting the other end of the box when the box is in an upright open position, and forming a re-

ceptacle for used matches above it and within the upper end of the cover of the box; substantially as described.

4. The combination of a match-box, a cover therefor, a foldable tray at one end of the box, and a flexible strip secured at one end to the bottom of the box and adapted to have its other end secured to the cover of the box; substantially as described.

5. The combination of a match-box, a cover therefor, a foldable tray consisting of a bottom and sides, the bottom of the tray having one of its edges connected to one end of the bottom of the box, and a flexible strip secured at one end to the inner surface of the bottom of the box and adapted to have its other end secured to the cover; substantially as described.

In testimony wherof I affix my signature.

ROBERT W. WILKES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."