

R. E. JONES.

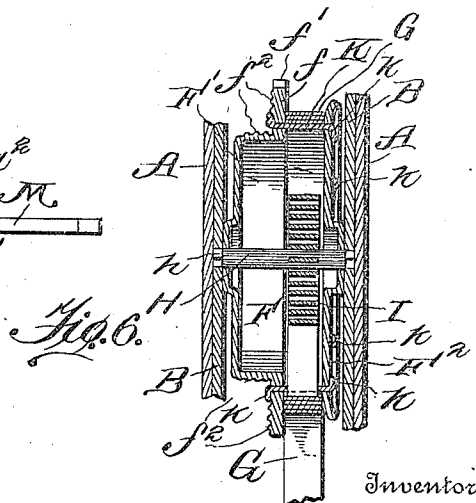
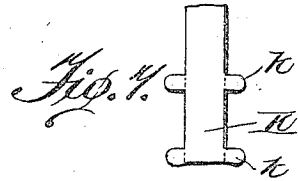
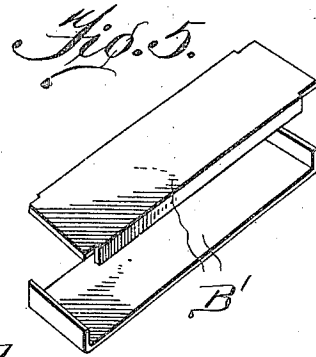
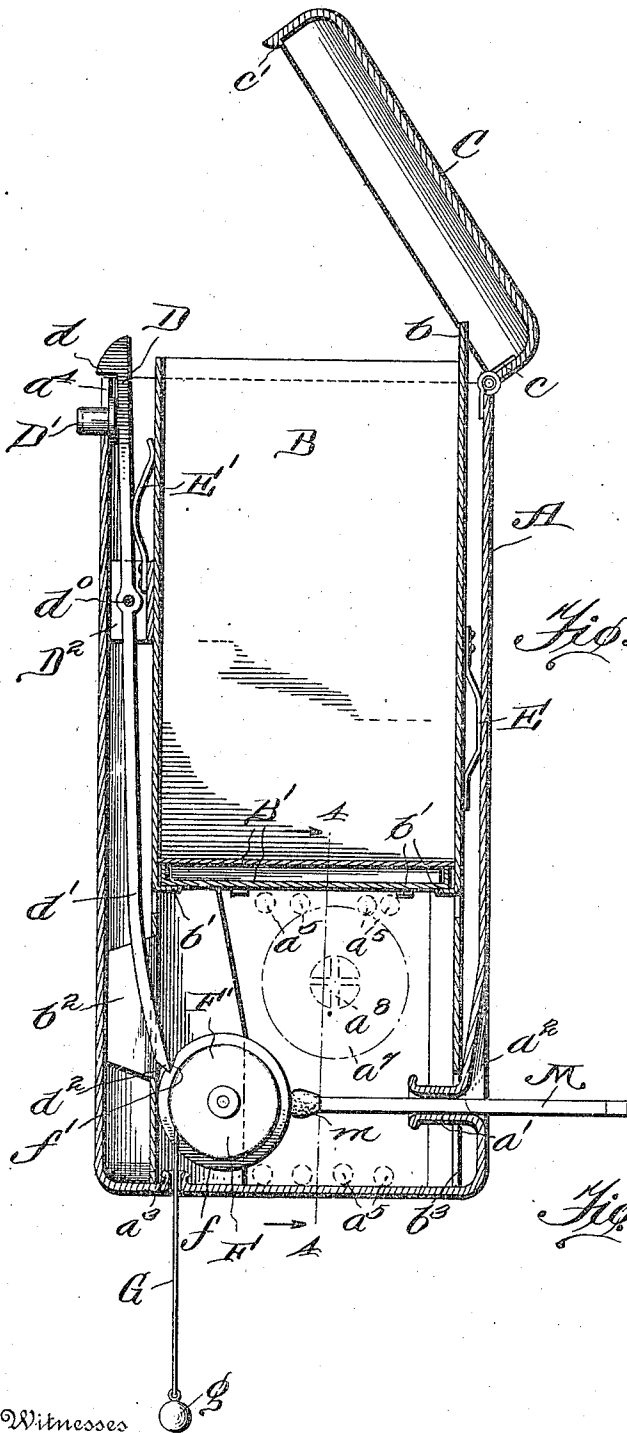
MATCH BOX.

APPLICATION FILED AUG. 27, 1909.

948,884.

Patented Feb. 8, 1910.

2 SHEETS—SHEET 1.



Witnesses

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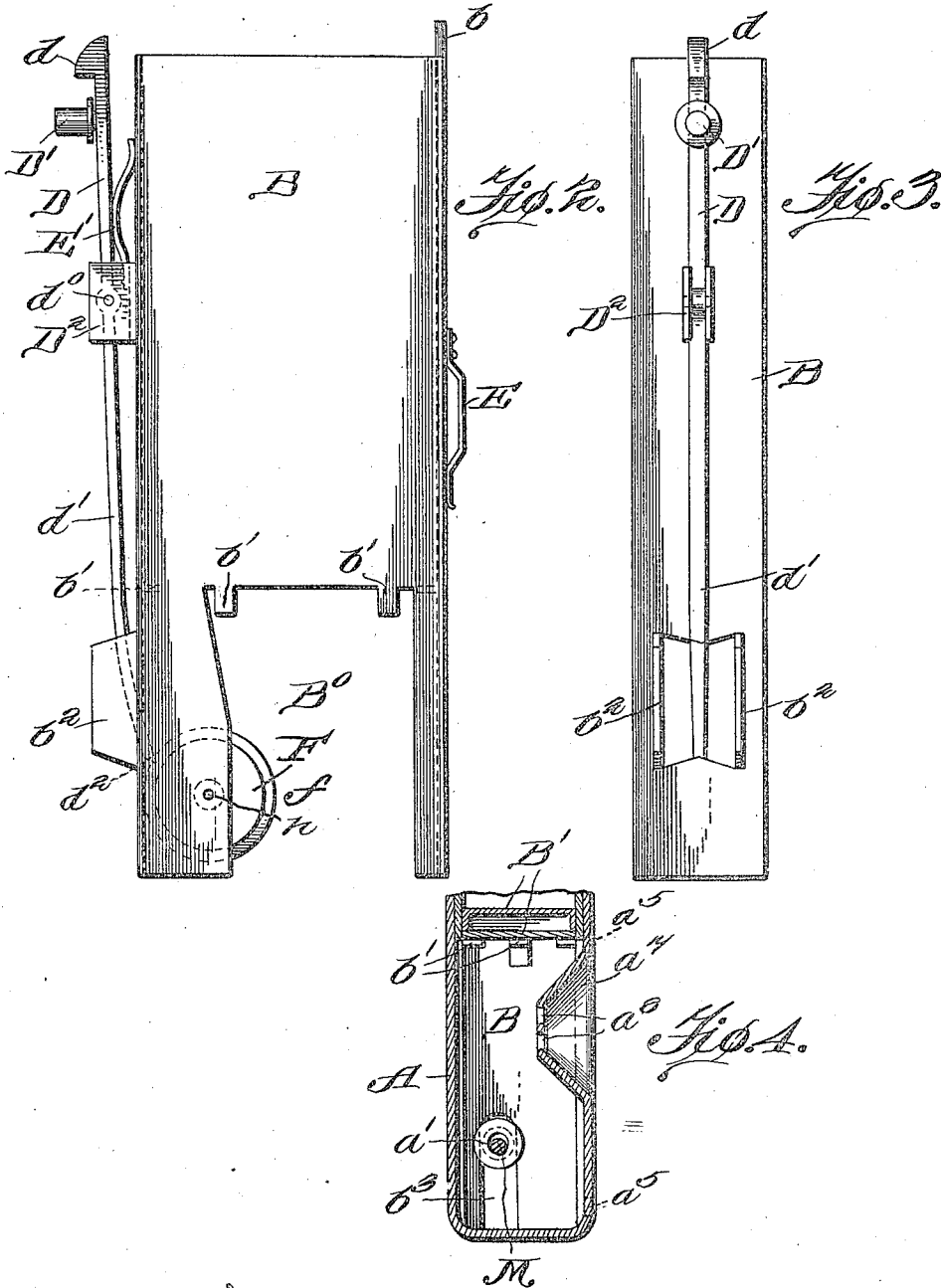
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2 SHEETS—SHEET 2.



Inventor

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UNITED STATES PATENT OFFICE.

RALPH E. JONES, OF THE UNITED STATES ARMY.

MATCH-BOX.

948,884.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed August 27, 1909. Serial No. 514,899.

To all whom it may concern:

Be it known that I, RALPH E. JONES, a citizen of the United States, and second lieutenant in the United States Infantry, 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.

My invention relates to improvements in match boxes, and it is intended to provide a convenient pocket receptacle for matches, so arranged that the matches may be lighted out of doors, or anywhere else in a draft of air.

It is a notable fact that most smoking, especially cigarette smoking, is done in tropical climates, and among smokers generally, difficulty is frequently had in lighting the cigar or cigarette before the wind blows the match out, and it is to provide for this difficulty that my invention is in a large measure intended.

My invention will be understood by reference to the accompanying drawings, in which the same parts are indicated by the same letters throughout the several views.

Figure 1 shows a central vertical section through the box, with the cover lifted, and the matches removed. Fig. 2 shows a side view of the match holder inclosed within the box. Fig. 3 is a side elevation of the device shown in Fig. 2, as seen from the left of said figure. Fig. 4 shows a section along the line 4—4 of Fig. 1, and looking in the direction of the arrows. Fig. 5 is a detail showing in perspective the double inner bottom. Fig. 6 is a cross section through the center of the drum. Fig. 7 is a detail showing the band which forms the winding surface of the drum and also serves to connect the two disks of the drum together.

A represents the outer casing, in which the box B and other parts are mounted, and which casing is provided with a cover C, preferably spring opened, as by the spring *c*, provided with a catch *c'*, adapted to engage the hook *d* of the latch D. This outer casing is provided with a funnel-shaped inlet *a'*, for the insertion of an individual match, the head of which match may be conveniently guided into the inlet by means of the sloping faces *a''*. Another guide opening *a'''* is provided in the bottom of the box for the steel tape G. The upper portion of

the casing A is slotted, as at *a⁴*, to permit the passage therethrough of the lug or button *D'*, projecting from the latch D. Openings *a⁵* are also provided in the bottom portion of the casing as shown in Fig. 1, to permit the entrance of air, and one side of the casing is bent inward, as at *a⁷*, to form a funnel shaped guide for the end of the cigar or cigarette, which is lighted from the flame of the match drawn through the openings *a⁸*, as shown in Figs. 1 and 4.

The receptacle B, for the matches, is preferably provided with a double bottom *B'*, having an air space within the double bottom, as shown in Figs. 1 and 5. The air space thus provided forms an insulator for preventing heat from the burning match in the lower part of the casing from setting fire to the matches in the receptacle B. This double bottom is preferably detachable and rests on lips *b'*, stamped out of the shell of the receptacle B. This receptacle B is slotted, as at *B⁰*, shown in Fig. 2, and has two ribs *b²*, stamped out of it to permit the entrance of the lower end *d'* of the latch D, and also to bear against the outer casing, as shown in Figs. 1, 2, and 3. The receptacle B is also slotted at *b'*, to pass over the inlet portion *a'* of the outer casing. The upper end of the receptacle B is preferably provided with an upwardly-projecting lug *b*, which almost touches the cover C, when the latter is in the closed position. It will be obvious that if the box be violently upset, this lug *b* will strike the cover and stop the further movement of the receptacle B and the parts carried thereby. It will also serve as a thumb lug for removing the part B. The latch D is preferably made of a resilient rod or bar, pivoted as at *d⁰*, in the lugs *D²*, secured to the box B. The upper end of the latch is provided with a hook *d*, to engage the catch *c'*, on the cover, and the lower end *d'* of the latch is provided with a pawl *d²* to engage a notch *f'* on the rim *f* of the drum F, as shown in Fig. 1. The hook *d* of the latch is normally pressed outward by the spring *E'*, and a spring *E* on the opposite side of the box B serves to steady the same in the outer case, and yet to permit the same to be readily withdrawn, when desired. It will be noted that the lugs *D²* and the ribs *b²* bear against the outer casing on one side of the receptacle B, while the spring *E* provides a third bearing surface, between the two but on the opposite side of the receptacle

B, and thus the latter is held firmly in the case A.

The lower portion of the case is provided with a drum F, as shown in Figs. 1 and 6.

- 5 This drum is preferably composed of two disks F' and F², connected together by a band K, having lugs $\frac{1}{2}$ extending through the two disks, and binding the same together, as shown in Fig. 6. A plan view of a portion of said band is shown in Fig. 7. This band
10 forms the outer surface of the drum, on which the steel tape G is wound, which tape is preferably provided with a suitable knob or ring g , see Fig. 1. The disk F' of the
15 drum is provided with an annular flange f , having a notch f' to engage the pawl d^2 on the end of the latch D, and this disk is hollowed out and provided with roughened surfaces f^2 to engage the head of the
20 match M.

The shaft H on which the drum is journaled, is fixed, as at h , in the box B, and the drum is connected to said shaft by means of a coil spring I.

- 25 M represents a match, and m the head thereof.

- The operation of the device is as follows: The coil spring I normally tends to wind up the tape G on the band K of the drum F.
30 Now, suppose the tape to be wound up, as described, with the knob g close to the bottom of the box, and suppose the cover to be down, by pressing on the button D', the hook d will be disengaged from the catch c' , and
35 the cover C will fly open. The button D' being released, and a match being removed from the interior of the box B, pull down on the tape G until the pawl d^2 snaps into the notch f ; then let go the tape, and the
40 spring E' will hold the pawl in engagement with the notch. Insert the match M into the inlet a' , until the head m bears against the rough surfaces f^2 of the drum F and then press on the button D', or close the
45 cover which will accomplish the same result of moving back the upper end of the latch D. This will release the pawl d^2 from the notch, and the spring I will rapidly rotate the drum F, causing the roughened surface
50 f^2 to ignite the head m of the friction match, and this will burn in the air protected chamber below the box B, and flames may be drawn from the openings a^s to light the cigar or cigarette, the end of which is held
55 in the guide funnel a' .

It will be noted that the burning match will be supplied with sufficient air to support combustion, and yet will be effectively screened from drafts of air.

- 60 When desired to clean out the casing A, as may be necessary occasionally, simply slide out the box B, with the parts carried thereby, and convenient access may be had to the interior of the casing A, the tape G
65 being of ample length to permit this opera-

tion. It will be obvious that instead of using a tape G for the purpose of rotating the drum by hand, other well known and suitable means may be provided if desired.

It will also be noted that the apparatus 70 may be used solely for lighting matches, omitting the receptacle for the same; and in this modification, the casing might be shortened, the inclosed box omitted and only the perforated portion of the casing with the 75 drum retained. I consider that my invention includes this modification also.

It will be obvious that various other modifications might be made in the herein-described apparatus, which could be used with- 80 out departing from the spirit of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:

- 85 1. As an article of manufacture, a match box comprising an outer case perforated in its lower portion, an inner receptacle for matches slidably held therein and provided with a bottom located above the perforated 90 portion of said outer case, and with slots beneath said bottom to permit the passage of air through said perforations, and a spring rotated drum for igniting a match provided in the perforated portion of said 95 outer case.

2. In an article of manufacture, a match box comprising an outer case perforated in its lower portion and having a tapered inlet for inserting a match, and a funnel shaped 100 guide perforated at its apex for guiding the article to be lighted, an inner receptacle for matches slidably held therein and provided with a heat insulating bottom located above the perforated portion of said outer 105 case, and with slots beneath said bottom to permit the passage of air through said perforations, and a spring rotated drum for igniting a match provided in said perforated portion of said outer case. 110

3. As an article of manufacture, a match box comprising an outer case perforated in its lower portion, an inner receptacle for matches removably held therein and provided with a bottom located above the per- 115 forated portion of said outer case, a spring rotated drum for igniting a match provided in the perforated portion of said outer case, and a spring actuated pawl normally holding said drum against the action of its 120 spring.

4. As an article of manufacture, a match box comprising an outer case perforated in its lower portion, an inner receptacle for 125 matches removably held therein and provided with a bottom located above the perforated portion of said outer case, a spring rotated drum for igniting a match provided in the perforated portion of said outer case, a tape wound on said drum and having its 130

end projecting therefrom, and a spring actuated pawl normally holding said drum against the action of its spring.

5. As an article of manufacture, a match box comprising an outer case perforated in its lower portion and having a tapered inlet for inserting a match, a funnel shaped guide perforated at its apex for guiding the article to be lighted, a spring operated cover for said casing, a latch normally holding said cover closed, an inner receptacle for matches removably held therein and provided with a double bottom located above the perforated portion of said outer case, and a spring rotated drum for igniting a match provided in said perforated portion of said outer case.

6. As an article of manufacture, a match box comprising an outer case perforated in its lower portion, a spring opened cover hinged thereto and provided with a catch, an inner receptacle for matches held therein and provided with a bottom located above the perforated portion of said outer case, a spring rotated drum for igniting a match provided in said perforated portion of said outer case, said drum being provided with a holding notch, means operable by hand for winding up said drum, a latch hinged to said inner receptacle and having a hook at its upper end to engage the catch on the cover and terminating at its lower end in a

pawl to engage said notch on the drum, with means for pressing on said latch, substantially as described.

7. As an article of manufacture, a match box comprising an outer case perforated in its lower portion, an inner receptacle for matches slidably held therein and provided with a bottom located above the perforated portion of said outer case, a spring rotated drum for igniting a match provided in said perforated portion of said outer case, and means operable by hand for winding up said drum against its spring and for releasing same, when desired.

8. An apparatus for lighting cigars or cigarettes, comprising a case provided with a series of perforations on one side thereof, and a match inlet in said case, a perforated depression in one side of said case to receive the end of the cigar or cigarette, and a spring rotated drum located in said case for igniting the match when inserted with means for winding up and releasing said drum when desired, substantially as described.

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

RALPH E. JONES.

Witnesses:

F. R. FITTON,
E. ST. JOHN OERTEL.