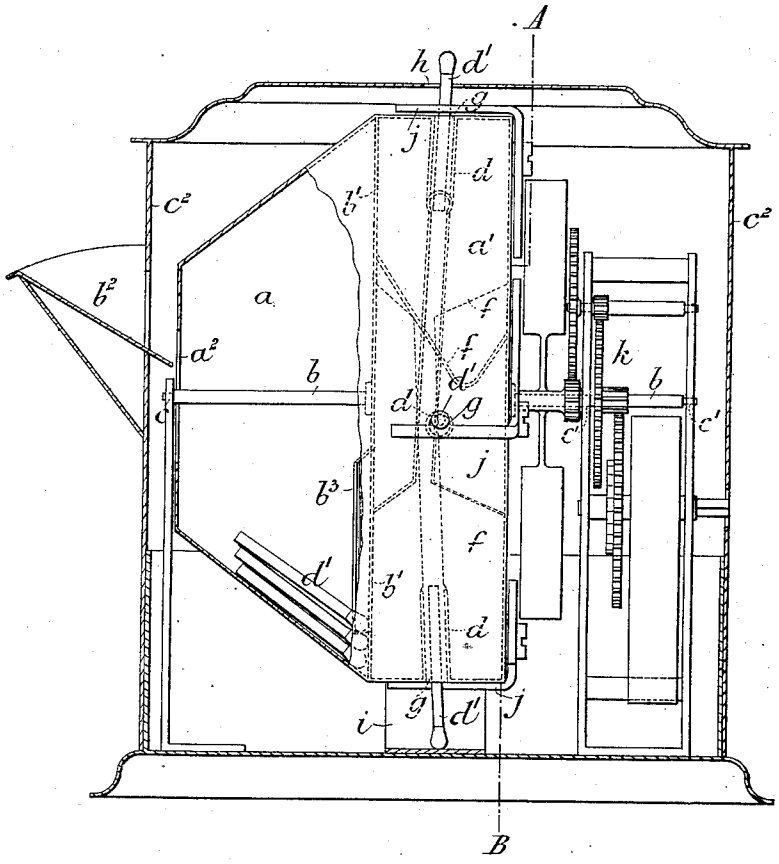
(No Model.) 2 Sheets—Sheet 1.

W. E. RICHARDSON.

RECEPTACLE FOR CONTAINING MATCHES OR SIMILAR ARTICLES.

No. 371,278. Patented Oct. 11, 1887.

Fig. 1.



Witnesses:
Will L. Norton
Frank D. Mattingly.

Inventor:
Wm. E. Richardson
by John J. Halsted & Son.
his Attys.

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

2 Sheets—Sheet 2.

W. E. RICHARDSON.

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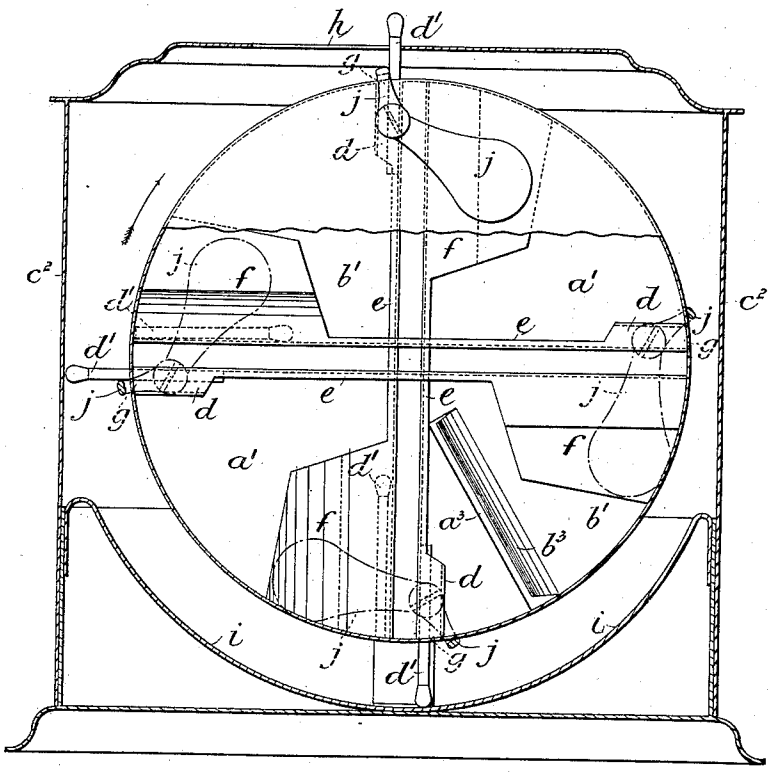
No. 371,278. Patented Oct. 11, 1887.

Fig. 2.



Witnesses:
Will L. Norton
Frank H. Scattergood

Inventor:
Wm. E. Richardson
by John J. Halsted Son
his Attys.

N. PETERS. Photo-Lithographer. Washington. D. C.

UNITED STATES PATENT OFFICE.

WILLIAM ERNEST RICHARDSON, OF HARTFIELD, COUNTY OF SUSSEX, ENGLAND.

RECEPTACLE FOR CONTAINING MATCHES OR SIMILAR ARTICLES.

SPECIFICATION forming part of Letters Patent No. 371,278, dated October 11, 1887.

Application filed March 21, 1887. Serial No. 231,709. (No model.) Patented in New Zealand April 5, 1884, No. 1,064.

To all whom it may concern:

Be it known that I, WILLIAM ERNEST RICHARDSON, a subject of the Queen of Great Britain, residing at Hartfield, in the county of Sussex, England, have invented a new and useful Improved Receptacle for Containing Matches or Similar Articles, of which the following is a specification.

This invention consists of a box or casing containing special mechanism, hereinafter described, by which matches or similar articles are passed through an opening in such box or casing, one at a time, so that on the one which is exposed outside the casing being removed another is placed there ready for use. The mechanism by which this is accomplished consists, in part, of a round box mounted on a spindle on or with which it is free to revolve, and inside of which the matches or similar articles are to be placed. Inside of this box are one or more tubes arranged radially round the axis of the box, so that as the box revolves the matches or similar articles will enter the tube or tubes one by one in such a manner as to project through openings in the revolving box, and as this box revolves the projecting match or similar article will be carried round until it is passed through an opening in an outside casing in which the above-mentioned box is contained, and the inside box will thereby be prevented from revolving until that match or similar article be removed, when it will again revolve as before. The inside box may be caused to revolve by means of a coiled spring, weight, or by clock-work or by hand or any convenient means suitable for furnishing the required power.

In order to enable my invention to be fully understood, I will proceed to describe a suitable means whereby it can advantageously be carried into practical effect by reference to the accompanying drawings, in which—

Figure 1 represents a section, partly in elevation, of a receptacle for containing matches or similar articles, constructed according to my invention, the view being taken lengthwise of the axis of the revolving box. Fig. 2 is a transverse section taken on the crooked line A B of Fig. 1.

Similar letters in both the figures represent similar parts.

a a' represent the round box inside which the matches or other similar articles are to be placed, and *b b* represent the spindle with which the box *a a'* is free to revolve.

c c' c' are the bearings of the spindle *b b*.

The box is divided into two compartments, *a* and *a'*, by a partition, *b'*, and the matches or other articles are introduced into the conical shaped compartment *a* through a circular opening, a^2, therein, opposite a spout and opening, b^2, in the outer casing, c^2. The partition *b'* is formed with a slit or opening, a^3, having a guiding strip or stop, b^3, against which the articles are caused to fall by means of the conical shape of the compartment *a* as the box revolves, and whereby they are caused to enter the compartment *a'*.

d d are the tubes arranged radially round the axis of the box in the compartment *a'*, the said tubes communicating, by means of channels or semi-tubes *e e*, with V-shaped receptacles *f f*, which serve to receive or take up the matches or other articles which are in the compartment *a'* as the box *a a'* revolves, the channels *e* being of such a size that they will allow only one of such articles passing to and entering the tubes *d* at one time.

g g are the openings in the periphery of the compartment *a'* of the revolving box, through which openings the matches or other articles project in the manner shown in the drawings.

h is the opening in the outer casing, into which the projecting articles pass as the box *a a'* revolves, the edge of the opening *h* then forming a stop whereby the box is prevented from revolving until the match *d'* (or other article) be removed.

i is a gage or guide against which the ends of the matches bear to limit the extent to which they shall project, and to prevent them falling within the outer casing, c^2.

j j are counterweighted pivoted arms, which I find it advantageous to employ to press the matches against the edges of the openings *g* after they have passed into the same, thereby preventing the matches from falling back into the box *a a'* when nearing the top of the appa-

ratus; or a spring-arm attached to a suitable part of the apparatus can be employed for this purpose.

k represents a clock-work movement for effecting the rotation of the box *a a'*.

The operation of the apparatus is as follows: The matches *d'* (or other articles) being introduced into the conical compartment *a* through the spout b^2 and opening a^2, and the clock-work *k* being set in motion, the box *a a'* will be revolved in the direction indicated by the arrow in Fig. 2, and a few of the matches will be caused by the guiding strip or stop b^3 to enter the compartment *a'*, through the slit or opening a^3, at each revolution of the box. Several of the matches will then be taken up by each of the V-shaped receptacles *f;* but only one of such matches will slide into each of the tubes *d* at a time, because the channels *e e* are only wide enough to allow a single match to lie therein. The said match, projecting from its tube *d*, will be held by the counterweighted arm *j*, provided for that purpose, so as to prevent it falling back into the box, and the match *d'* will finally pass into and project through the opening *h* and stop the box from revolving until the match be removed. The box will then continue to revolve, and the next match *d'* will thereby be presented through the opening *h*, and so on.

It will be obvious that if the opening *h* be placed in a horizontal line (or thereabout) with the axis of the box *a a'*, so that the matches or other articles shall be presented in a horizontal position, instead of in a vertical position, as shown in the drawings, the pivoted counterweighted arms *j j* would not be required; but I prefer that the articles should be presented in the manner indicated in the drawings; also, it will be obvious that any suitable means—such as a weight or spring or manual or other power that can be conveniently applied—may be used for giving the box *a a'* its required rotary motion, instead of using clock-work, though, as a rule, I find clock-work may be used with the greatest advantage.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In combination, an outer stationary casing having an opening for the projection through it of a match, an inner rotary match-box provided with tubes and adapted for projecting matches, one by one, through the opening in the casing, and mechanism for automatically revolving the box, substantially as and for the purposes set forth.

2. In combination, a case having a spout for introducing the matches and an opening for projecting one match at a time, an automatically-rotated box within said case, having a match-receiving opening opposite said spout and having a partition dividing the box into two compartments, as set forth, guides for directing the matches to their proper positions, means, substantially as described, for holding the matches in position until delivered, and passages to allow the matches to pass severally from the box and project, one by one, through the case.

3. In combination, an outer case, an inner revolving match-box, clock-work, or its described equivalent, for revolving such box, tubes or channels adapted for receiving a single match, a gage for limiting the protrusion of the match through the case, and a counterweight to hold the match temporarily.

4. In a match-delivering apparatus, the revolving case *a a'*, having a receiving opening, a^2, partition *b'*, with a slit and guiding-strip therein, tubes *d*, semi-tubes *e e*, receptacles *f f*, and openings *g*, substantially as set forth.

WILLIAM ERNEST RICHARDSON.

Witnesses:
EDGAR WOOD,
Grand Stand, Doncaster,
ARTHUR BOWMAN BROWN,
42 *High Street, Doncaster, Clerks to Messrs. Parkin & Co., Solicitors, Doncaster.*