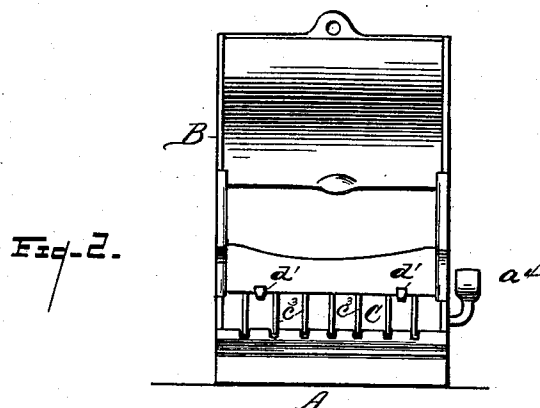
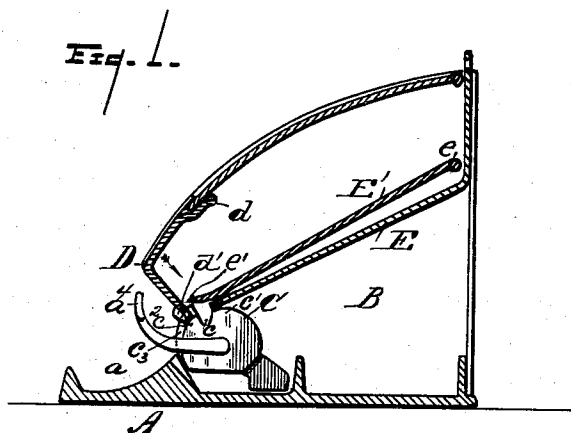


(No Model.)

A. BARNES.
MATCH SAFE.

No. 592,105.

Patented Oct. 19, 1897.



WITNESSES

G. M. Davis.
A. F. Ebeling.

INVENTOR

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UNITED STATES PATENT OFFICE.

AMOS BARNES, OF DETROIT, MICHIGAN, ASSIGNOR TO JAMES GAMBLE AND JOHN M. BREWER, OF SAME PLACE.

MATCH-SAFE.

SPECIFICATION forming part of Letters Patent No. 592,105, dated October 19, 1897.

Application filed August 31, 1896. Serial No. 604,394. (No model.)

To all whom it may concern:

Be it known that I, AMOS BARNES, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Match-Safes; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to match-safes; and it consists in improved means for delivering a single match at each operation of the delivering mechanism of the safe.

My invention is shown in the accompanying drawings, in which—

Figure 1 is a side elevation with the side frame removed to show the operating parts. Fig. 2 is a front elevation.

In the drawings, A is the base, having a concave portion a , on which the match drops when delivered.

B is the side of the frame. (Shown at the back of the drawing of Fig. 1.)

C is a roll mounted in the sides of the frame. This roll is provided with a longitudinal groove c , and the radius of the roll at c' to the rear of the longitudinal groove is less than that forward of the groove at c^2 . The roll is also provided forward of the longitudinal groove with a series of annular ribs $c^3 c^3$, which have their greatest depth above the groove and recede to the body of the roll part way around.

D is the front of the match-safe and is pivoted in the frame at d and allowed a slight swinging movement. It is provided at the lower edge with teeth or fingers which enter between the annular ribs on the roll C, and form a drag over the surface of the roll as it is operated.

d' d' are lugs extending outward from the lower edge of the front having beveled lower surfaces, and which lift the front as the roll is returned to its normal position by striking the beveled lower edges of the lugs on the edge of the longitudinal groove c .

E is the inclined bottom of the match-safe,

rigidly supported in the frame. This bottom comes down a sufficient distance to the front to move over the surface of the roll and prevent any matches from dropping back of the roll. The forward edge preferably coincides with the rear edge of the longitudinal groove in the roll when the roll is returned to its normal position.

E' is a false bottom pivoted at e in the side frames and which lies flat on the bottom E throughout the greater portion of its length. The false bottom is inclined upward slightly at e' , where it extends beyond the lower edge of the bottom E over the roll. The under portion of the lower edge of the false bottom is rounded, so that the annular ribs on the roll will lift it slightly when the roll is returned to its normal position, and also so that a match carried back by the roll will wedge under the lower edge of the false bottom and straighten out over the surface of the roll, moving under the false bottom until the longitudinal groove moves back a sufficient distance to receive the match held under the bottom. I preferably make the lower edge of the true bottom square and of about the thickness of a match to form a stop for a match that is carried back by the roll under the false bottom.

The match-safe may be provided with any suitable cover.

The operation of my device is as follows: When the roll is in its normal position, the longitudinal groove is at the upper extremity of its movement and underneath the lower edge of the false bottom in the position shown in Fig. 1. The teeth of the lower edge of the front D rest between the annular ribs on the roll the width of a couple of matches in front of and below the longitudinal groove c . The matches in the safe that have dropped to the lower extremity of the receptacle lie on top of the roll and the annular ribs. As the roll is rotated the teeth of the lower edge of the front drag the matches over the upper edges of the ribs until one of them reaches the end of the ribs, when, if it be straight and free to move, it will drop into the groove and be carried forward in the groove outside of the front and delivered. When the handle a^4 is down

and the roll moved to the lower extremity of its movement, the teeth of the front will rest on the roll back of the longitudinal groove, holding the matches that are in the lower portion of the safe on the roll below the edge of the false bottom. When the roll is returned and the match is in position to be delivered, or partially so, it is forced back against or under the lower edge of the false bottom and straightened where it is held in position to drop into the groove as the roll is returned. The matches are forced back over the surface of the roll by the teeth of the lower edge of the front acting as a drag.

The false bottom serves a double purpose. It straightens any match that lies crosswise over the roll, and as it is lifted agitates the matches in the box and tends to straighten the whole mass. The movable front also serves the double purpose of holding and agitating the matches and acts as a drag over the surface of the roll.

This is designed as an improvement on the application filed by me June 17, 1896, Serial No. 595,867.

What I claim is—

1. In a match-safe, the combination of the frame and delivery-roll provided with a longitudinal groove, said roll provided with a series of annular ribs, and a movable front adapted to act as a drag over the roll, said front provided with teeth or ribs adapted to

enter between the annular ribs of the roll C, substantially as described.

2. In a match-safe, the combination of the frame, a delivery-roll provided with a longitudinal groove, said roll made thicker in front of the groove and provided with a series of annular ribs on the thickened portion, and a movable front to act as a drag over the roll, substantially as described.

3. In a match-safe, the combination of the frame, a delivery-roll provided with a longitudinal groove mounted in the frame, an inclined bottom forming a stop for the matches back of the roll a false bottom pivoted in the frame and extending beyond the true bottom over the roll, substantially as described.

4. In a match-safe, the combination of the frame, a delivery-roll provided with a longitudinal groove, a series of annular ribs in front of the groove, a movable front having teeth to act as a drag over the roll, said front provided with lugs extending outward from the lower edge of the front and provided with beveled lower surfaces, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

AMOS BARNES.

Witnesses:

CHAS. H. FISK,
G. M. DAVIS.