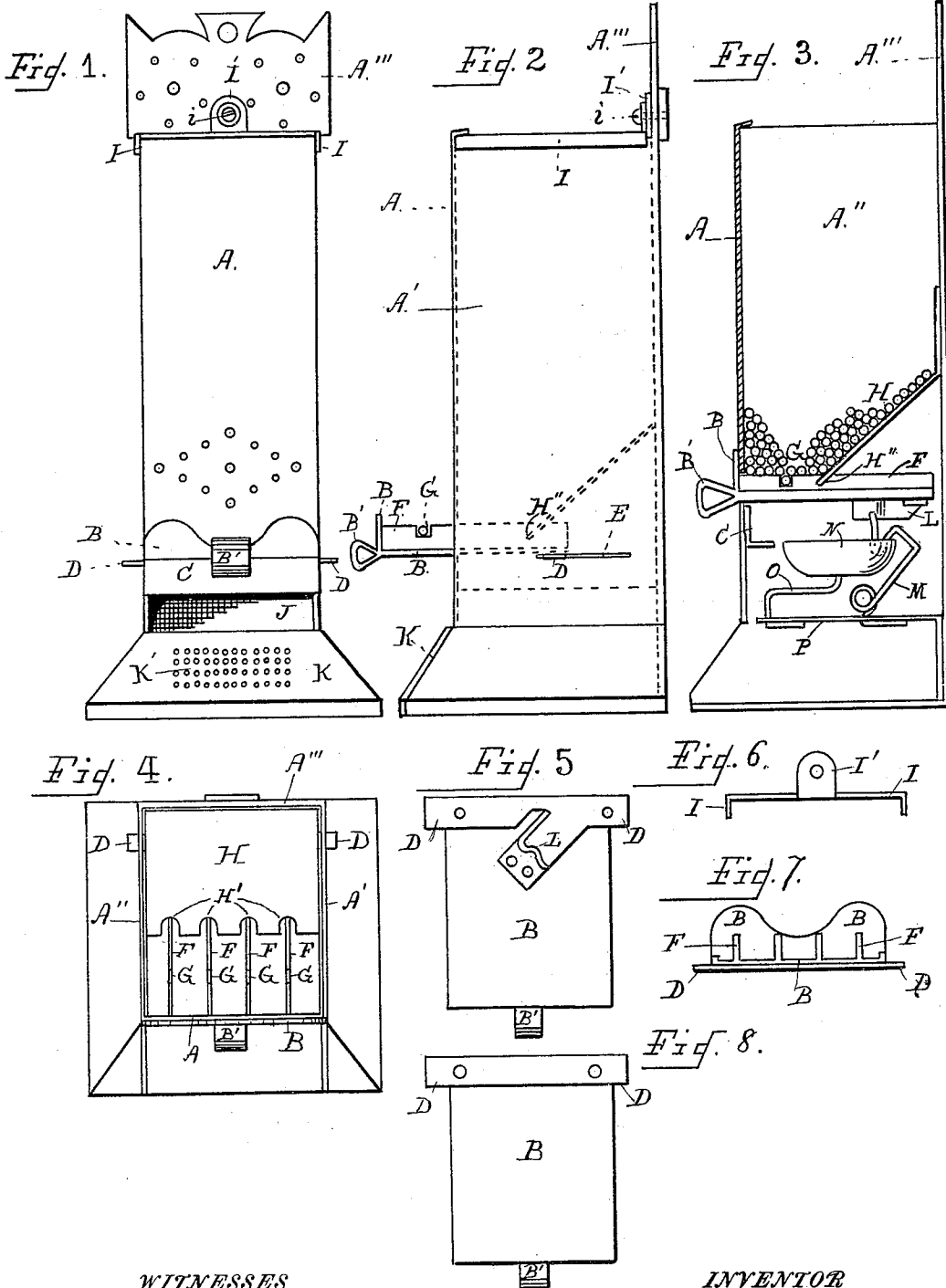


G. W. HEFFNER.
AUTOMATIC MATCH SAFE.

No. 481,696.

Patented Aug. 30, 1892.



WITNESSES
R. Jay M. Carty
E. R. Wagon

INVENTOR
George W. Heffner
By *Toulmin & Toulmin*
His Attorneys

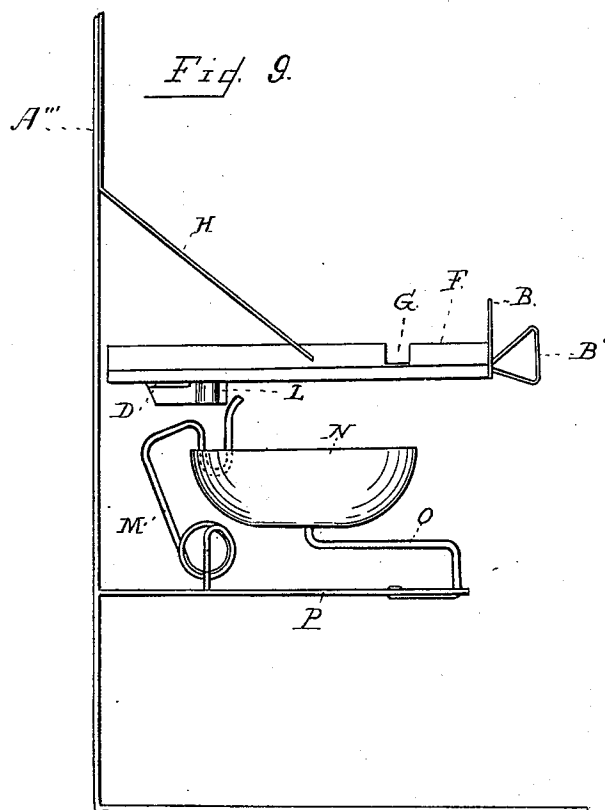
(No Model.)

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UNITED STATES PATENT OFFICE.

GEORGE W. HEFFNER, OF MONTGOMERY COUNTY, OHIO.

AUTOMATIC MATCH-SAFE.

SPECIFICATION forming part of Letters Patent No. 481,696, dated August 30, 1892.

Application filed January 11, 1892. Serial No. 417,763. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HEFFNER, a citizen of the United States, residing in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Automatic Match-Safes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in automatic match-safes.

The object of my invention is to provide a simple and improved device for holding matches, which will hereinafter be fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation. Fig. 2 is a side elevation. Fig. 3 is a sectional view showing the internal construction and an alarm-bell. Fig. 4 is a plan with the top of the safe removed. Fig. 5 is a detached view of the bottom of the drawer with the device to operate an alarm-bell; Fig. 6, a detached view of the top of the safe, taken from the rear. Fig. 7 is a view of the rear end of the drawer removed from the safe. Fig. 8 is a view of the bottom of the drawer without the device for operating an alarm-bell. Fig. 9 is a detailed view of full size of a portion of the back of the box, the slide attached thereto, the drawer, and a bell. The sides of the box are removed.

The letter A indicates the front of the receptacle or box to receive the matches, which may be made of any suitable material.

B is a drawer, and B' a handle by means of which the drawer may be withdrawn far enough from the box to remove a match. The bottom of the drawer rests upon the plate C and slides back and forth thereon. The rear of the drawer is supported by lugs D, which project from the opposite sides of the bottom of the drawer and extend through narrow slits E, which are cut in the opposite sides A' of the box.

The drawer is provided with a series of ribs F, attached to the bottom and extending upwardly, each rib having a notch G of the proper size to permit a single match to drop therein, as hereinafter described. The backward and forward motion of the drawer B is limited by the lugs D and slits E. The

matches when placed in the box rest and slide down an inclined plane H, which is attached to the rear side of the box and is provided with openings H' at the bottom of the incline, which straddle the ribs F and permit the intervening points of the incline to sink below the top of the ribs F, as indicated in the broken lines of Fig. 2 and the full lines in Fig. 3. This construction prevents the matches from getting under and in the rear of the inclined plane and thereby prevent the free movement of the drawer.

I is the top or cover of the box, and may be fastened thereto in any convenient manner. In Fig. 2 it is shown as secured by bending backward the upper edge of the front A, so that a part of the top I may extend under it, the lug I' being attached to the back A''' of the box by means of the screw i.

J is an opening to receive burnt matches, which when placed therein drop into the drawer K. The front part of the drawer is roughened to enable the matches to be struck thereon to light them. Any other convenient part of the box may be roughened and used for this purpose. The box may be suspended by being hung up against a wall, or, as the base of the box is enlarged, as shown in Fig. 4, it may be stood upon a shelf or counter.

In Figs. 3 and 9 I have shown a bell N, which is supported by a wire O, attached to a shelf P. This bell is made to ring by a lug L, secured to the bottom of the drawer B, which engages with the upper end of a bent wire M, secured to shelf P, which acts like a hammer to strike the bell. When released by the lug L, the drawer is pulled out to take a match.

I have shown in Fig. 3 the ends of some matches in the box, one of which is in the notch G. When the drawer is pulled out, only one match can come with it, as the size of the notches is such as will permit but one match to be retained therein, and the front of the box A prevents any other matches from coming out of the box when the drawer is withdrawn therefrom. The notches in the upwardly-projecting ribs, it will be seen, extend about half-way through the said ribs. This prevents the match from flatly resting upon the bottom of the floor of the drawer,

and an easy means is thus afforded of picking the match up with the fingers. Considerable difficulty would be experienced in removing the match were it withdrawn in a drawer with a longitudinal groove or channel only large enough to hold one match at a time. It will also be seen that in the movement of the drawer back and forth the head of the match is entirely free from frictional contact with any of the parts of the safe, and danger of ignition is thus avoided.

In practice it was found that an inclined plane constructed without the teeth or protruding points extending downward between the ribs, but, on the contrary, with a straight edge adapted to come in close proximity to or rest upon the said ribs, would be objectionable in this that it would afford a chance in either event for splinters to work their way between the said inclined plane and ribs of the drawer and therein become wedged and to this extent interfere with the free movement of the drawer. It was also found that by the constant friction of these parts the openings would become greater and the trouble become greatly augmented. It is easily seen that modifications can be made in the arrangement of the different parts of the box without departing from my invention.

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

1. In an automatic match-safe, a drawer having two or more longitudinal ribs extending upwardly and secured to the bottom thereof, each rib having a notch adapted to receive a single match.

2. In an automatic match-safe, a box having an inclined plane provided with two or more notches at its lower end, secured to the back of said box, in combination with a sliding drawer having the bottom thereof provided with a series of ribs extending up-

wardly from the bottom, each rib having a notch adapted to receive a single match, substantially as described.

3. In an automatic match-safe, a drawer having a series of ribs extending upwardly from the bottom thereof, each rib having a single notch adapted to receive a single match, the said drawer provided with lugs (attached to the bottom thereof) projecting from its opposite sides and extending through slits made in the opposite sides of the box, whereby the rear of the drawer is supported and its motion in an inward and outward direction may be limited, (by the length of said slits,) as herein shown and described.

4. In an automatic match-safe, the combination of a box having an inclined plane attached to the back thereof, said plane having notches at its lower extremity, with a drawer having a series of longitudinal ribs secured to the bottom thereof, extending upwardly, each rib having a transverse notch adapted to receive a single match when placed in a position at right angles to the ribs.

5. In an automatic match-safe, a box having attached to the back thereof an inclined plane provided with notches and intermediate points at its lower extremity, each notch adapted to straddle each one of the series of ribs of a drawer, each of the said ribs having a notch to receive a single match, said drawer constructed to slide back and forth below said inclined plane and limited in its motion by lugs at the bottom thereof, which extend through slits in the opposite sides of said box, as herein described.

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

GEORGE W. HEFFNER.

Witnesses:

MORTON TOULMIN,
R. J. McCARTY.