

(No Model.)

2 Sheets—Sheet 1.

C. HAUPTMANN & J. SCHWARZ.
AUTOMATIC MATCH SCRATCHER AND DELIVERER.

No. 535,201.

Patented Mar. 5, 1895.

Fig. 1.

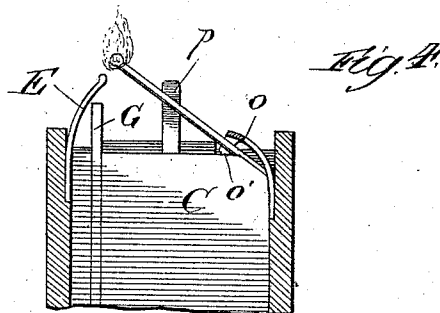
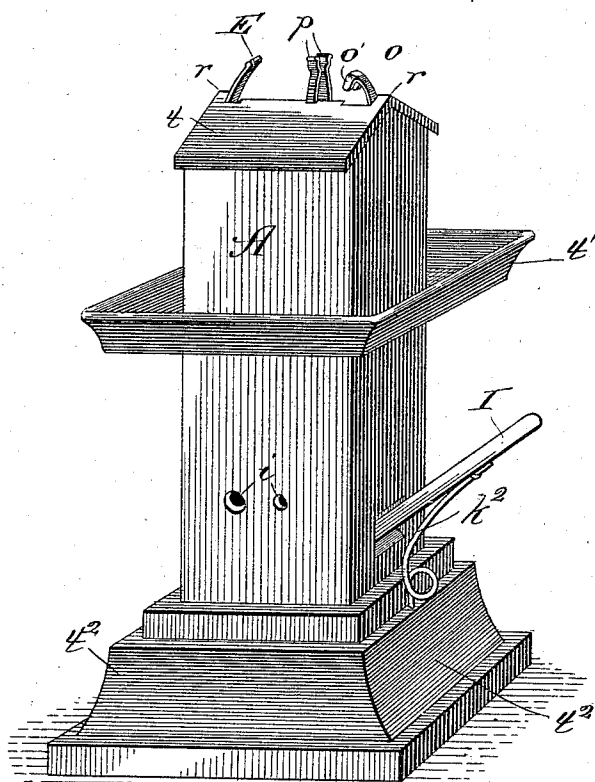
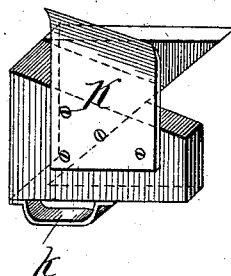


Fig. 5.



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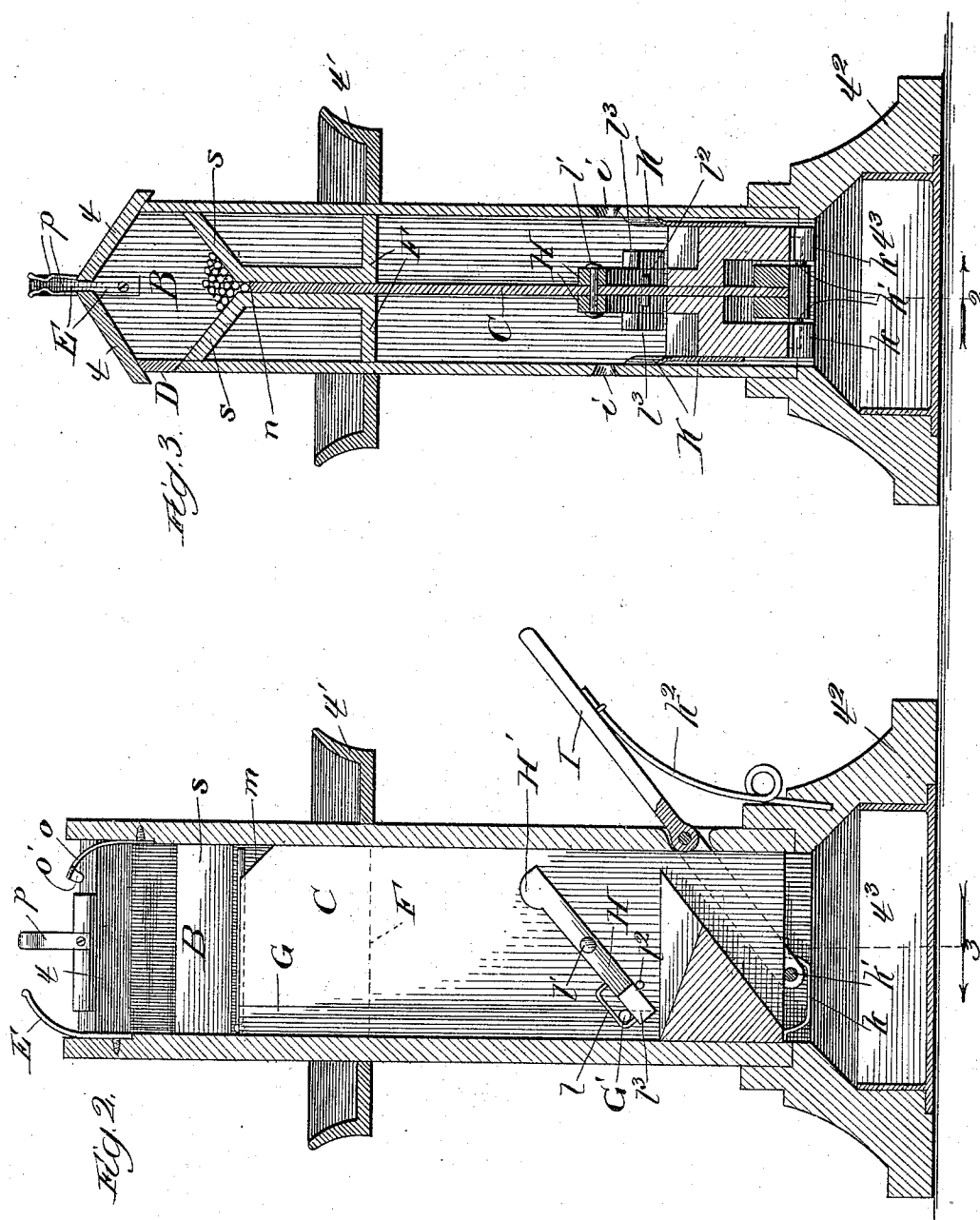
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2 Sheets—Sheet 2.

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AUTOMATIC MATCH SCRATCHER AND DELIVERER.

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UNITED STATES PATENT OFFICE.

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AUTOMATIC MATCH SCRATCHER AND DELIVERER.

SPECIFICATION forming part of Letters Patent No. 535,201, dated March 5, 1895.

Application filed November 21, 1892. Serial No. 452,623. (No model.)

To all whom it may concern:

Be it known that we, CHARLES HAUPTMANN, a citizen of the United States, and JOSEF SCHWARZ, a subject of the Emperor of Germany, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Automatic Match Scratchers and Deliverers, of which the following is a specification.

The object of our invention is to produce a device which shall cause a single match to be delivered from a case containing a number of matches and in the course of its delivery to be ignited by scratching, and incidentally to effect the delivery and scratching in such a manner as to reduce the danger of breaking of the match to a minimum.

It is a further object of our invention to cause the delivery and scratching of the match to take place automatically when the cigar tip is removed by the cutting mechanism; and further to provide for holding the ignited match in position for ready delivery, and to hold the ignited match against return to the case after being ignited.

In the drawings: Figure 1 is a perspective view of the apparatus comprising a cigar-cutter and match delivery and igniting mechanism constructed in accordance with our invention. Fig. 2 is a vertical central section on the line 2 of Fig. 3 showing the arrangement of the interior mechanism. Fig. 3 is a vertical central section taken at right angles to the view in Fig. 2 on the line 3 of that figure. Fig. 4 is a sectional view detached of the upper end of the device showing the match in position for delivery; and Fig. 5 is a detailed view of the cutter.

While no particular form or shape of external case A is necessary with our invention, we have shown in Fig. 1 in perspective view the device arranged somewhat after the design of a house having a peaked roof *t*, a ledge *t'* and a base *t''*. The roof *t* serves as a lid of the match-safe B, the ledge *t'* may serve as the receptacle for cigar-ashes or burned matches, and the base *t''* may serve to inclose a receptacle *t'''* for the removed tips of cigars.

The match-safe B is provided with lower inward converging sides *s*, between the lower

adjacent edges of which is a space, shown in Fig. 3, to receive the ejector C. At one side the safe B is provided with a door D, shown as a sliding-door, through which a supply of matches may be admitted.

The top of the safe B is composed of upward converging sides which correspond with the roof *t*, said sides being joined at each end at their converging edges, as shown at *r*, and present in the intermediate part the opening *r'*, Fig. 3, through which the match passes while being ejected.

Secured to the wall of the safe B, in such manner as to project on a curve inclined longitudinally of the slot *r'* is a spring E, the face of which is serrated or otherwise provided with a scratching surface. Extending upward on opposite sides of the slot *r'* in such manner as to afford a clamp between them are the springs *p*. A spring *o* projects forward from the end of the slot *r'* opposite to that carrying the scratcher, said spring *o* being provided with ears *o'*, the distance between which is about the thickness of a match. The function of the springs *o* and *p* will be presently described.

Across the case at a point some distance below the sides or ledges *s* is introduced a partition F, provided at a central point with a slot to correspond with the slot at the lower end of the match-safe B. A convenient way of producing the partition F and ledges *s* is to make both after the manner of opposite sides of a box, the bases of which boxes thereupon constitute the opposite walls of the slot last referred to. This slot is the guide for the ejecting-device C. The ejector C is preferably in the form of a plate of a width to extend from side to side of the case A, and of a thickness to permit at its upper end a groove *n* to be formed sufficiently large to receive and retain a single match. At one side the upper end of the plate C is cut away, as shown at *m*. The plate C near one edge is provided with a longitudinal slot, in which is placed an arm G, which is thereby capable of vertical movement independent of the movement of the plate C but normally moves therewith. The arm G is provided toward its lower extremity with a pin G', which enters a loop *l* formed on the pivoted bar H, the pivot of which is upon a

pin l' in the face of the plate C. The pivot of the bar H is such as to permit its ready rise and fall, downward movement at the forward end being stopped by the pin or stop l^2 , and vertical movement resisted by the weight l^3 secured to the forward end of the bar. At the rear end the bar H is provided with a curved or cam projection H' , the function of which will presently appear. At its lower end the plate C is provided with a guide, such as the loop k , to receive a pin k' at the end of a pivoted lever I, which projects outward from the case A in which it has its pivot, the downward movement of the lever I being opposed by the springs k^2 . Near its base the plate C carries the knife-edge cutter K, which, as usual in cigar-cutters, moves in contact with the face of the wall of the case across the tip-receiving aperture i . It must be understood that two sets of apertures i may be provided, one on each side of the case A, and in this event two knives K are also provided.

The operation of the device is as follows: The match-safe B being supplied with matches, downward pressure on the lever I causes first the lifting of the plate C which lifts a single match to a point about opposite the lower edge of the inclined top t . At this moment one end of the match is engaged by the ears o' on the spring o and the cam or rounded end of the bar H' comes in contact with the partition F. Further elevation of the plate C causes an independent rise of the arm G which engages the match at its forward end and advances it across the face of the spring E, which being serrated or otherwise caused to produce a scratching surface, causes the ignition of the match. The rise of the plate C causes the match to extend in an inclined direction upon the inclined face m at the upper edge, while the movement of the arm G forces the match into the gripping part of the spring-clamp p , by which it is held

against return to the match-safe when the ejector C descends under the action of the spring k^2 . The match thus held in the position indicated in Fig. 4, is accessible to the user. By introducing the cutter K it is quite apparent that its use, which of course is performed by manipulating the lever I, causes the presentation to the user of a match ready lighted.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a match-safe and an ejector operating to deliver a match therefrom, of a scratcher, E, spring-clamps, p and catch, o , arranged and operating substantially as described.

2. The combination with a match safe having an opening in its base and top, as described, of an ejector operating to eject a match from the match-safe, an arm G movable with and independent of the ejector to engage and advance one end of the match, and a catch o to restrain the movement of the other end of the match substantially as described.

3. The combination with a match-safe of an ejector C, arm G, bar H carrying said arm, and a stop such as the partition F to engage the bar and thereby produce independent motion of the arm G, substantially as described.

4. The combination with a match-safe having in its upper part and base, respectively, slots, as shown, of an ejector comprising a plate movable through said slots, having the match receiving groove in the upper edge and cut-away part m , a scratcher E, clamp p and arm G, movable with and independent of the ejector all arranged to operate substantially as described.

CHARLES HAUPTMANN.
JOSEF SCHWARZ.

In presence of—
J. N. HANSON,
M. J. FROST.