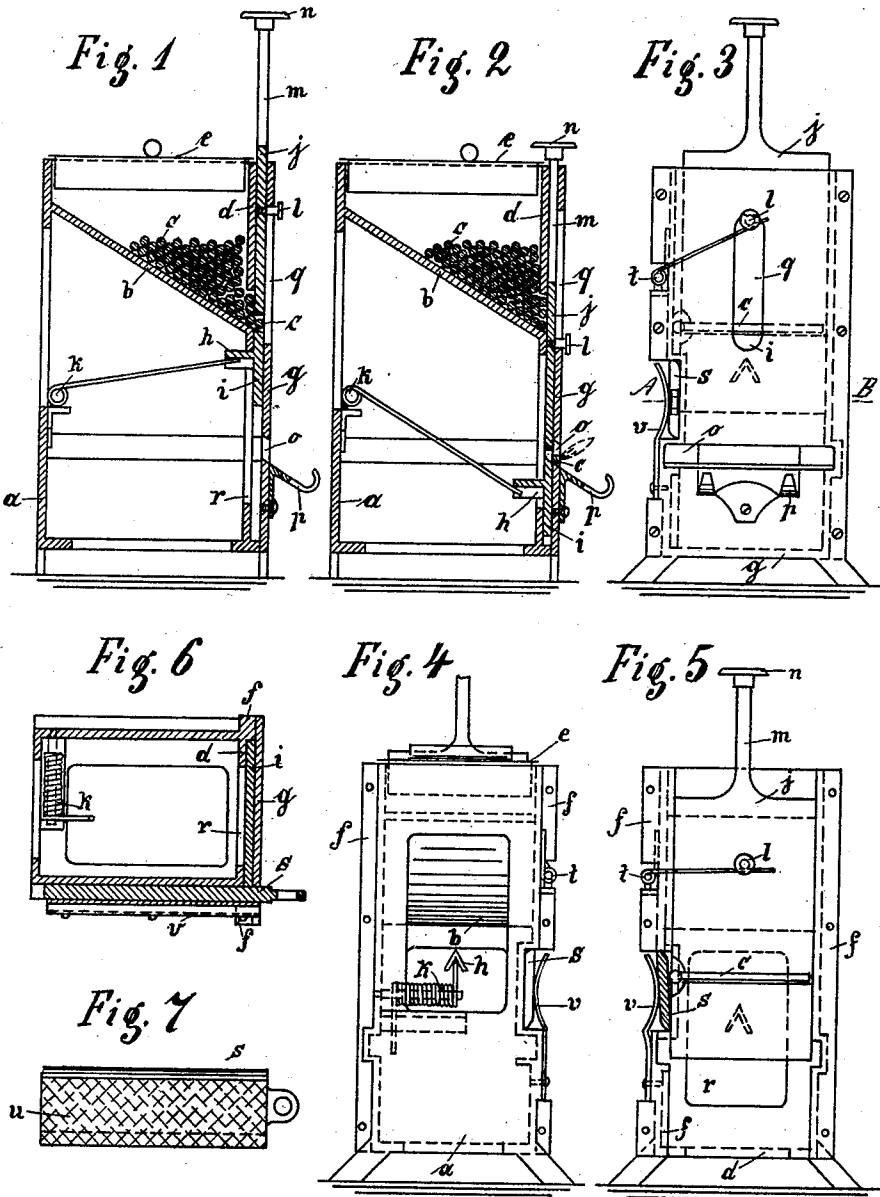


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DEVICE FOR AUTOMATICALLY IGNITING AND DELIVERING MATCHES.

(Application filed Feb. 23, 1901.)

(No Model.)



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

EMANUEL KOTTUSCH, OF ZURICH, SWITZERLAND.

DEVICE FOR AUTOMATICALLY IGNITING AND DELIVERING MATCHES.

SPECIFICATION forming part of Letters Patent No. 683,053, dated September 24, 1901.

Application filed February 23, 1901. Serial No. 48,423. (No model.)

*To all whom it may concern:*

Be it known that I, EMANUEL KOTTUSCH, builder, a citizen of the Republic of Switzerland, residing at 45 Zeughausstrasse, Zurich, Switzerland, have invented a new and useful Device for Automatically Igniting and Delivering Matches, of which the following is a specification.

The object of my invention is a device by means of which, on pressing a button, a single match from a store contained therein is ignited by friction and delivered. For this purpose the device is so constructed that a single match from the stock is caused to lie in a slot between two spring-operated slides, so that on said slides being pressed down the match is rubbed against a resilient striking-surface and ignited and then delivered through a slot onto a receiver.

A form of construction of the invention is shown in the annexed drawings, in which—

Figure 1 is a central vertical section through the device. Fig. 2 is a similar view with the slides shown in another position. Fig. 3 is a front view showing the slides in the same position as in Fig. 1. Fig. 4 is a back view also showing the slides in the same position as in Fig. 1. Fig. 5 is a front view with the front plate removed, showing the slides in a position between those which they occupy in Figs. 1 and 2. Fig. 6 is a cross-section on the line A B of Fig. 3. Fig. 7 is a side view of one of the slides carrying the friction-surface.

In the box *a* an inclined intermediate partition *b* is arranged, on which the matches *c* lie with their heads all in one direction, the inclination of said partition being sufficient to cause the matches to roll downward automatically toward the front wall *d*. The box can be closed above by means of a lid *e*. The front wall *d* is provided with ledges *f*, to which the front plate *g* is secured, so that a slot in which the slides *i* and *j* have movement is produced between the wall *d* and plate *g*. The lower slide *i* carries an inverted Y-shaped projection *h*, beneath which the free end of a spring *k*, secured to the back of the box *a*, engages, so that the slide *i* is normally pressed upward. The upper slide *j* is likewise pressed upward by a similar spring *l* in the slide of the box, the free end of the said spring engaging beneath a stud *l*, fixed

to the said slide. The rod *m*, which projects upward from the latter, is provided with a button *n*. The lower slide *i* is shaped or beveled at its upper edge, while the upper slide *j* is sloped at its lower edge, as shown in Figs. 1 and 2.

The object of the lower slide is to simultaneously press a match held between the two slides against the front plate *g*, while the sloping of the upper slide allows of pressing back the match following on the first one. The front plate *g* is provided with a horizontal slot *o*, in front of which is a receiver *p*, grooved in the center. The said front plate *g* is further provided with a perpendicular slot *q*, in which the before-mentioned stud *l*, on the upper slide *j*, may travel, and the front wall *d* is provided with a slot *r* in order to allow of the perpendicular movement of the projection *h* on the slide *i*. Above the slot *o* the slot between the wall *d* and plate *g* is not inclosed by the lateral ledges *f*, but by a lateral slide *s*, which is operated by a bent spring *v*. This slide, which is of a symmetrical cross-section, as shown in Figs. 3, 4, and 5, and rounded off at its upper and lower edges, is provided on each side below said rounded portions with a striking-surface *u*, as shown in Fig. 7. The slide is adapted to be taken out at the front of the box by hand and after one striking-surface has been used may be reversed and reinserted.

The operation is as follows: As shown in Figs. 1 and 3, the slides *i* and *j* are normally held in the upper portion by the springs *k* and *l*, respectively, a space being formed between said slides, which exactly allows of a match entering from the inclined partition *b*. When a match is to be ignited, the button *n* is depressed, as shown in Fig. 5. The match held between the slides *i* and *j* then comes into contact with the upper rounded edges of the slide *s*, provided with the striking-surface, which slide yields slightly to the pressure of the spring *v* and is pressed with its striking-surface against the head of the match, so that the latter on passing the slide *s* is ignited. On arriving at the slot *o*, as shown in Fig. 2, the match is no longer supported by the front plate *g*, and consequently falls onto the receiver *p*, where it lies burning and ready for use. On releasing the button *n* the two

slides *i* and *j* return to their original positions under action of their respective springs, and in consequence of the slight shock thus produced another match is brought into the space between the two slides. The device is then ready to be used again. In the event of the striking-surface being worn the slide *s* is moved for a short distance toward the front of the box, so that a part which has not yet been used is brought in front of the slot in which the slides *i* and *j* move. When one side is entirely worn out, the slide is removed, reversed, and reinserted, as mentioned above. When both surfaces have been used up, a new striking-surface must be provided.

The whole device may be provided with a covering or casing in which an opening is left in front of the slot *o*, and ash-trays or other suitable devices may be provided where convenient.

What I claim is—

1. In a device for automatically igniting and delivering matches, the combination of a box having an inclined partition and a horizontally-slotted front wall, between which and a front plate is provided a vertical space or

slot, with two movably-arranged slides pressed upward by spring action and a horizontal slot arranged in the said front plate, in front of which is fixed a receiver, grooved in the center and with a slide pressed laterally against the said space or slot between the front wall and the front plate vertical of the box, by means of a spring, substantially as set forth.

2. In a device for automatically igniting and delivering matches the combination of a box having a horizontally-slotted front wall between which and a front plate is provided a vertical space or slot in which are movably arranged two slides pressed upward by spring action, with a movably-arranged lateral slide of symmetrical cross-section pressed laterally against the said space or slot by means of a spring and being provided on each side below rounded portions with a striking-surface, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EMANUEL KOTTUSCH.

Witnesses:

A. LIEBERKNECHT,  
EMIL REGLINGER.