

(No Model.)

H. R. BAKER.

MATCH BOX.

No. 245,116.

Patented Aug. 2, 1881.

Fig. 1.



Fig. 2.

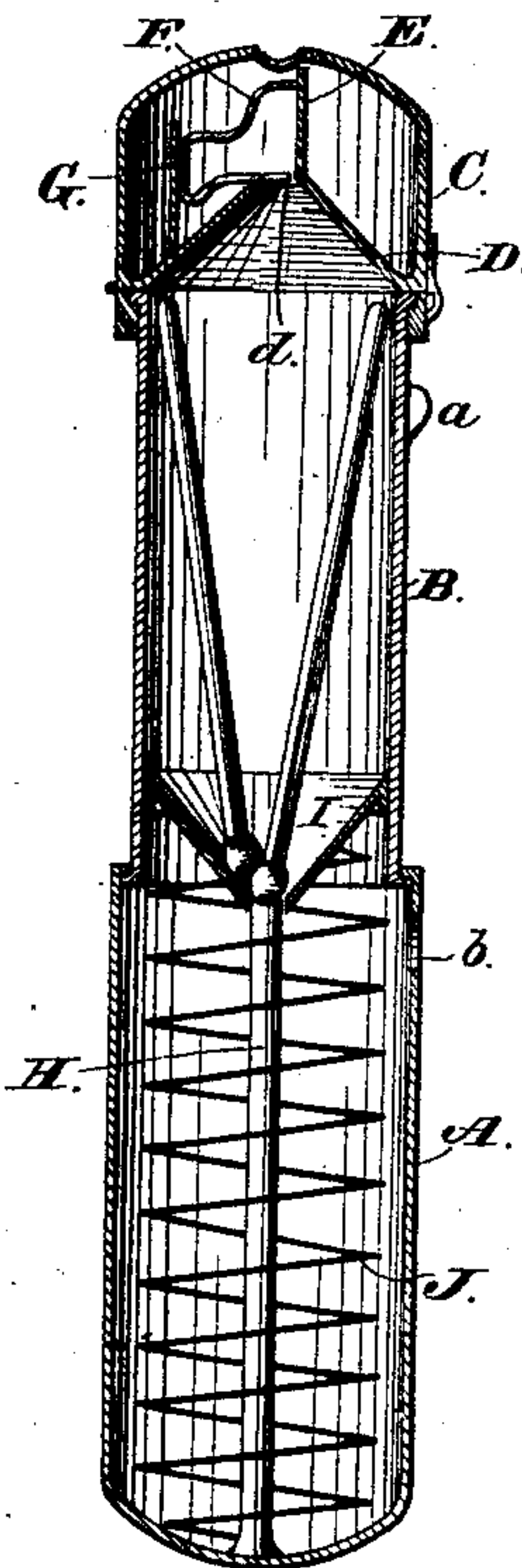


Fig. 3.

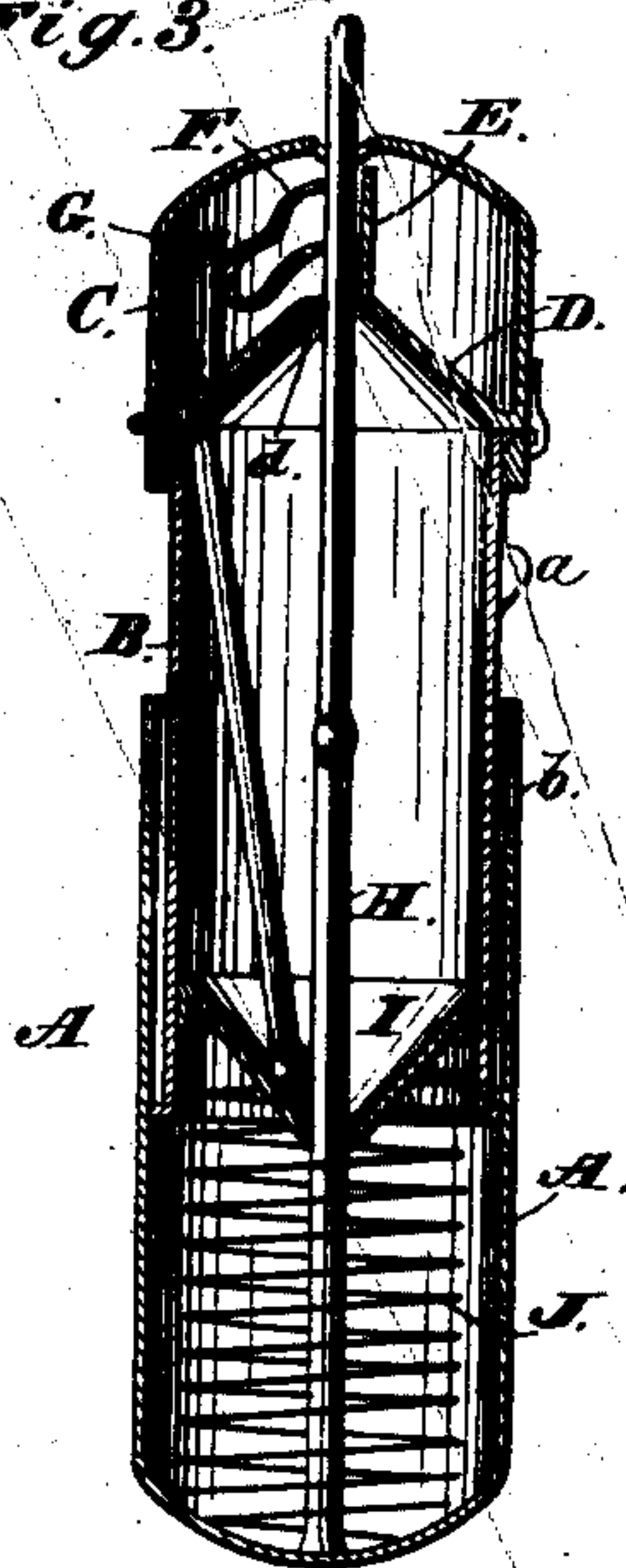
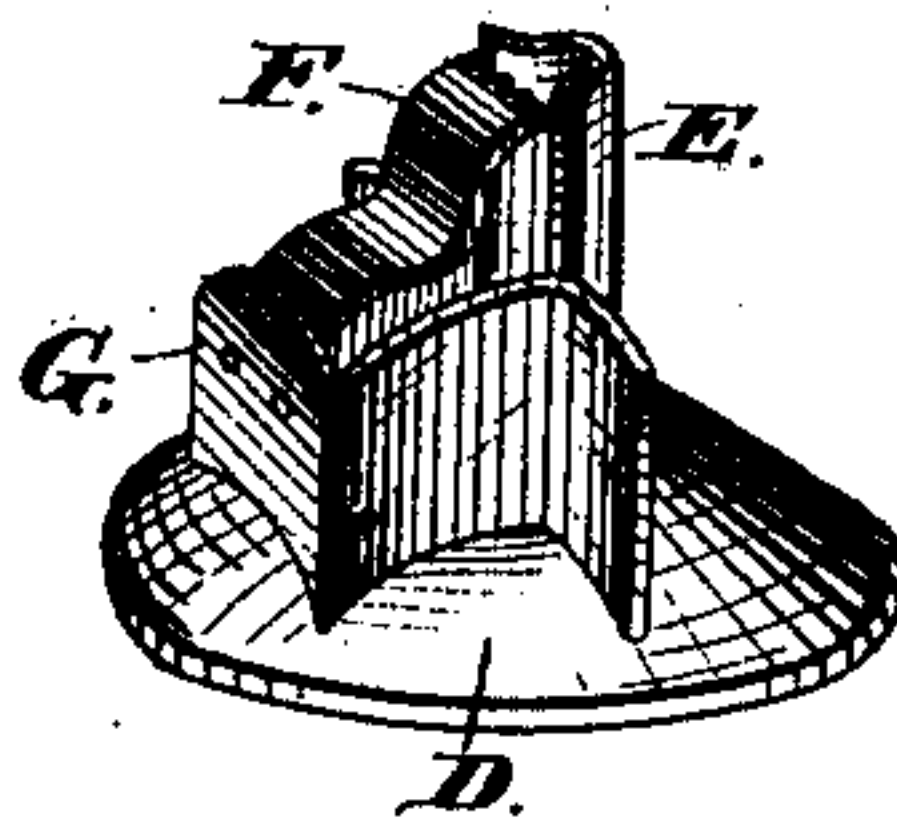


Fig. 4.



Attest.

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# UNITED STATES PATENT OFFICE.

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## MATCH-BOX.

SPECIFICATION forming part of Letters Patent No. 245,116, dated August 2, 1881.

Application filed January 3, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY R. BAKER, a British subject, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Match-Boxes, of which the following is a specification.

The present invention relates to that class of match-boxes or receptacles for friction-matches which are provided with devices for projecting the matches through an apertured cover and igniting the same upon withdrawal from the box.

My invention is fully illustrated in the accompanying drawings, in which—

Figure 1 is an external view of a match-box constructed according to my invention. Fig. 2 is a vertical sectional view, showing the inner shell in a projected state and a match in position for being pushed out from the box. Fig. 3 is a similar view, showing a match projected through the cover of the box ready to be ignited. Fig. 4 is a detail view of the igniting device applied to the cover of the box.

The letter A designates an outer shell or casing, and B is a smaller shell, which serves as the receptacle proper for the matches, and is fitted into the outer shell so as to slide in and out of the same. Suitable flanges formed on the lower end of the inner shell and top of the outer shell serve to define or limit the movement of said inner shell. A cap or cover, C, hinged to the top of the inner shell, closes the match receptacle or chamber, and is held in a closed state by a suitable catch.

The cap is provided with a cone-shaped or flaring bottom plate, D, which has a central aperture or hole, *d*, made sufficiently large for the passage of a single match. At one side of said opening, on the upper side of the plate D, is located a grooved or channeled guide rib or flange, E, which receives the match after it has been projected through said opening. The object of said rib or flange is to properly present the match or the friction tip or head thereof to an igniting device, F, located opposite said rib or flange. This igniting device is made in the form of a U or bow shaped spring-plate, which is attached at its bend to a housing or angular plate, G, rising from the plate D. The lower end of said igniting device por-

jects over the delivery-opening in the plate D and serves to close the same, and the upper portion thereof has its edge serrated or corrugated, as is clearly shown in Fig. 4.

It will be evident that when a match is pressed against the igniting and cut-off device the pressure thereof will be overcome, so as to permit the match to be projected through a suitable opening in the top plate of the cover. As soon as the match can be seized by the fingers it is drawn out of the box, causing its tipped head to come in contact with the serrated igniting device, and consequently it is in a lighted state upon its withdrawal from the box.

It will be self-evident that the matches are placed in the box with the tipped or igniting ends resting on the bottom thereof.

The matches are properly projected from the box individually, or one at a time, by means of a push-rod or stem, H, which is carried by the outer shell or casing, A, and projects through a central opening made in the cone-shaped or dished bottom plate, I, of the inner shell or match-receptacle, B. The object of said bottom plate is to cause one match to always rest opposite the opening therein, so that when the push-rod is passed through said plate the match is forced in an upward direction and guided through the cover by the flaring bottom plate thereof, as has already been stated. When the parts of the box are in the position shown in Fig. 1 a locking device consisting of a spring-catch, *a*, applied to the inner shell or match-receptacle, engages with an opening, *b*, made in the outer shell. When a match is to be withdrawn for use this spring-catch is pressed upon, thus disengaging the two shells from each other and bringing into action a spiral spring, J, which is arranged in a space or chamber formed between the cone-shaped bottom plate of the inner shell and the bottom of the outer shell. The tendency of this spring is to project the inner shell or match-receptacle from the outer casing, as is shown in Fig. 2. This having been effected, the inner shell is again pushed into the outer shell, causing the push-rod or stem carried by the latter to project the match from the box, as is shown in Fig. 3. The spring-catch thereupon again engages with the outer shell for holding the parts



a retracted state, ready for the next operation.

I have illustrated a pocket match-box in the present instance; but it will be obvious that larger boxes for table and wall use may be constructed in the same general manner.

Heretofore match-boxes have been composed of an outer casing provided with a central vertical push-rod and inclosing a spiral spring, a sliding match-receptacle being arranged to slide within the outer case, and provided with conical perforated ends, the outer conical end being provided with an igniting device. Such construction, however, is not broadly claimed by me.

What I claim is—

1. The combination, with the inner and outer cases, the push-rod, spiral spring, and movable cover containing a match-igniting device, of a locking device for retaining the sliding case and spiral spring in a retracted position within the outer case, substantially as and for the purpose described.

2. The combination, with the outer stationary case provided with the central push-rod and spiral spring, and the sliding case having the conical inner end, of the movable cover arranged upon the outer end of the sliding case, and provided on its interior with a conical plate, a vertical guide rib or flange, and a match-igniting device arranged above the ap-

erture in the conical plate, substantially as described.

3. The combination, with the outer stationary case provided with the central push-rod and spiral spring, and the sliding case having the conical inner end, of the cover hinged at one side to the sliding case and provided on its interior with the conical plate, the vertical guide rib or flange, and an igniting device arranged opposite and adjacent to said guide rib or flange and above the aperture in the conical plate, said hinged cover being provided with means for retaining it in a closed position, substantially as described.

4. The combination, with the outer and inner cases, the push-rod, and spiral spring, of a hinged cover, C, provided on its interior with the perforated conical plate D, the guide rib or flange E, the housing or angular plate G, and the igniting-spring F, attached to the angular plate and having its free ends arranged opposite and adjacent to the guide rib or flange above the perforation in the conical plate, all substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

HARRY R. BAKER. [L. s.]

Witnesses:

HY. IRWIN,

J. D. IRWIN.