

UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN AUTOMATIC TOBACCO-BOXES.

Specification forming part of Letters Patent No. **178,294**, dated June 6, 1876; application filed August 24, 1875.

To all whom it may concern:

Be it known that I, WILLIAM E. HARRIS, of the city of Brooklyn, in the county of Kings and State of New York, have invented an Improved Automatic Tobacco-Box, of which the following is a specification:

My invention has for its object to provide a tobacco-box for use in restaurants, beer-saloons, liquor-stores, &c., and which shall be so constructed that on dropping a one-cent coin therein it will open automatically and display the tobacco for a brief period of time, sufficiently long to enable the depositor to take out the small quantity desired, and then automatically close again, remaining closed until the deposition of another cent.

The invention consists in the combinations of the various parts of mechanism hereinafter described and claimed, and is operated as follows: A wound-up coiled spring, the effect of which is prolonged by an ordinary clock-work, operates, by cam movement, a sliding box or receptacle for tobacco and its cover, which, when released, close again by their own weight, the cover being locked by a spring-catch in closing. A balanced stop-lever, when in contact with the wing of a fly on the clock-work, stops the motion of the latter until released from contact by the weight of a penny tripping the stop-lever, which is again depressed into contact with the fly, to stop its motion, by a spring-catch on the descending tobacco-receptacle, as will be hereinafter more fully described with reference to the accompanying drawing, in which—

Figure 1 represents a top view of my improved automatic tobacco-box. Fig. 2 is a vertical section of the same, taken mainly through the line *x x* of Fig. 1. Fig. 3 is a cross-section of the same, taken through the line *y y* of Fig. 2, and seen in direction of the arrow 1.

Similar letters of reference indicate like parts.

A is a box, inclosing the tobacco-receptacle, as also the machinery for operating the same. B is the tobacco-receptacle; C, its cover, hinged onto the box A. The box B is provided with an upright central bar, D, attached to its bottom, which slides in guides on a bracket, E, to allow of a reciprocating vertical motion of the box B. To the bar D I attach a lift-arm or toe,

d', so constructed that when raised by a pin attached on the surface of a revolving disk or wheel it will remain in the same position for a brief space of time, until released from contact with the said pin, when it will drop again into its lowest position. The box B and the lid C are each provided with a lug, *b'* *c'*, and are connected together by a link or arm, *c''*, pivoted to one lug at either end.

The lid C being hinged to the stationary box A, and the lug *c'* being attached to the lid C, near to its hinge, the upward movement of the box B will raise the lid C from the box B, turning it on its hinge with a much more rapid motion than that of the box B, thus suddenly exposing to view the contents of the latter. The lid C, in dropping down, is locked by a spring-catch, F, the end of which enters a staple, *c''*, or notch, on the lid C. A V-shaped projection, *b''*, on the box B, engaging with a similar projection, *f'*, on the spring-catch F, releases the latter (in the upward as well as the downward motion of the box B) from the staple *c''*, the tension of the spring bringing the catch back in a locked position when the projection *b''* has passed *f'*.

The power for raising the box B is derived from the tension of a coiled spring, G, wound up by an ordinary clock-key on the square end of a shaft, *g'*, to which one end of the spring G is attached. The effect of the spring is prolonged by an ordinary clock-work gearing, H, on the shaft of one of the pinions, to which is attached a fly, *h'*, in an ordinary manner. On the same shaft as the spring G is secured the above-mentioned wheel or disk I, which thus will revolve with the evolution of the spring G. The pins *i'*, (more or less in number, according to the length of time it is desired to keep the box B open,) attached on the surface of the revolving disk I, engage with the toe *d'* on the bar D, and effect the lifting and opening of the box B, the wheel I and fly *h'* revolving in the direction indicated by arrows in the drawing. In dotted lines are indicated in Fig. 2 the relative positions of parts when the box B is open. J is the stop-lever, pivoted to the bracket E, and weighted at *e'*, so as to keep *in equilibrio* in any position. The rear end of the lever J is bent to form a stop, *j'*, which, engaging with the wing of the fly *h'*,

stops the motion of the clock-work H. K is a vertical spout, attached to the box A so that its lower end will be directly above the forward broad end j^2 of the stop-lever J.

A coin dropped through the guiding-spout K will strike the end j^2 of the lever J and trip the latter, causing the rear end and stop j^1 to rise from contact with the fly h' , which will allow the spring G to expand, the disk I to revolve and, by one of its pins, i' , elevate the toe d' , bar D, box B, and lid C.

b^3 is a spring-catch, attached to the bottom of the box B, and so placed that when the box B drops into its lower locked position the said catch b^3 will push down the rear end of lever J, and bring the stop j^1 in contact with the fly h' , thus instantly stopping the motion of the machinery. In doing this the descending spring will yield to the lateral pressure, allowing the catch b^3 to pass the lever J, and assume the position shown in Fig. 3, so as not to interfere with the subsequent rise of the rear end of the lever, when dropping a penny into the box A through the spout K on the forward end of the lever J.

A few wires may be attached to the box B,

above the tobacco, to prevent the latter from adhering together, so as to be taken out in too large a quantity at once.

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

1. The box B, attached to the sliding bar D, provided with the toe d' , in combination with the pins i' on the disk I of the driving mechanism H, the link e^2 , and cover C, hinged to the stationary box A, substantially as and for the purpose specified.

2. The combination of the spring-catch b^3 with the moving box B and with the stop-lever J, operating on the fly h' of the clock-work H, substantially as specified.

3. The spring-catch F, with the projection f' , in combination with the projection b^2 on the vertically-reciprocating box B, and the staple e^3 on the lid C, for locking and unlocking the box, substantially as specified.

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Witnesses:

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