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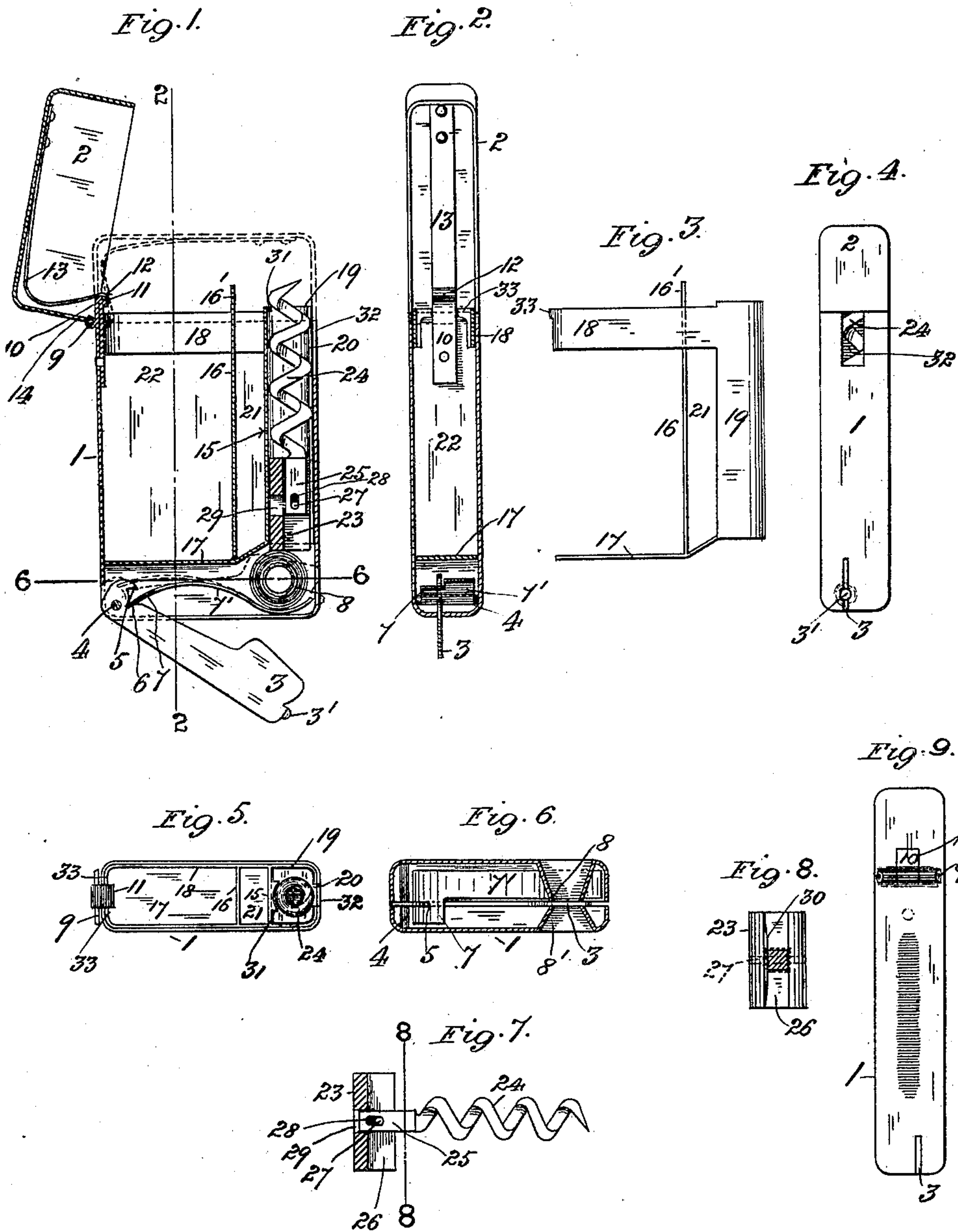
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H. C. PAUL & F. HILBIG.

MATCH BOX.

(Application filed Mar. 3, 1900.)

(No Model.)



WITNESSES
Edward W. Furell
G. L. Ruffey.

INVENTORS
Henry C. Paul
Frank Hilbig
by
Emil Storer, atty

UNITED STATES PATENT OFFICE.

HENRY C. PAUL AND FRANK HILBIG, OF ST. LOUIS, MISSOURI.

MATCH-BOX.

SPECIFICATION forming part of Letters Patent No. 672,456, dated April 23, 1901.

Application filed March 3, 1900. Serial No. 7,185. (No model.)

To all whom it may concern:

Be it known that we, HENRY C. PAUL and FRANK HILBIG, citizens of the United States, residing at St. Louis, State of Missouri, have
5 invented certain new and useful Improvements in Match-Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

10 Our invention has relation to improvements in match-boxes; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

15 In the drawings, Figure 1 is a vertical section of the box, taken in the plane passing through the slit by which the knife-blade of the cutter is received, the lid being thrown open. Fig. 2 is a transverse longitudinal
20 section on line 2 2 of Fig. 1. Fig. 3 is a side elevation of the compartment-frame contained in the box. Fig. 4 is an elevation looking toward the edge wall through which the corkscrew is swung outwardly. Fig. 5 is a
25 top plan view with the lid removed. Fig. 6 is a cross-section on line 6 6 of Fig. 1. Fig. 7 is a detail of the block carrying the corkscrew, with the latter swung outwardly into position for use, the block being shown in
30 longitudinal middle section. Fig. 8 is a front view of the block to which the corkscrew is mounted, the latter being shown in section, taken through the base thereof on line 8 8 of Fig. 7; and Fig. 9 is an elevation looking
35 toward the edge wall, to the upper end of which the lid is pivoted—that is to say, the back of the box.

The object of our invention is to construct a device which while primarily subserving
40 the purpose of a match-box can be converted into a corkscrew and cigar-cutter, respectively, subserving at the same time the function of a toothpick-holder, if desired. The article therefore is a combination-tool in its
45 nature, any feature of the combination being capable of being brought into service at a moment's notice, the several mechanical elements entering into the general combination being all confined within the main match-
50 box receptacle.

In detail the invention may be described as follows:

Referring to the drawings, 1 represents the receptacle of the box provided with the usual lid 2. Pivoted at one corner on the end opposite the lid 2, between the front and rear walls of the receptacle, is a knife-blade 3, the same being adapted to be fully concealed from view between the walls of the receptacle when in its closed position. Formed along the inner edge
60 of the blade, to one side of the pivotal pin 4 thereof, is a terminal toe or finger 5, from the base of which the edge of the blade curves, forming a reëntrant-recess 6 on the opposite side of the pivotal pin, the base of the recess
65 being engaged by the terminal edge of the lateral head 7 of a bent spring 7' for the open position of the blade and the base of the finger being engaged by the head 7 for the closed position of the blade. The opposite
70 or fixed end of the spring is inserted between the end wall of the receptacle and the walls of one of the inwardly-formed burs 8 8', punched from the front and rear walls of the receptacle at the corner, it being understood
75 that the adjacent inner edges of the burs serve as the shearing edges for the cutting edge of the blade for clipping the tips of cigars inserted into the depression formed by the larger bur 8, the fixed end of the spring 7'
80 being inserted between this bur and the receptacle-wall in order that the blade may descend freely into the space between the shearing edges of the two burs. When the knife is swung to its open position, the finger 5 will
85 gradually compress the spring 7', causing the free end thereof to slip along the curved edge beyond the finger, finally forcing the edge of the head 7 of the spring to enter the recess 6
90 on the opposite side of the pivotal pin, in which position the parts will remain until the blade is started to close, when the resilience of the spring will cause it to snap back against the finger and forcibly close the blade against the cigar inserted, as already stated, and cut
95 off the tip thereof, the tip thus cut dropping out from the opposite bur 8'. The blade is provided with a small knob 3', by which it may be seized and operated.

The hinge-pin of the lid 2 is carried by an arm or tongue 10, which is formed integrally with the receptacle-wall, of which it forms a part, out of a strip of the wall metal, which is subsequently folded inwardly back on itself,

as seen in section on Fig. 1, and riveted, the metal at the fold being formed into an inwardly-projecting shoulder 11, which engages the terminal hook 12 of the spring 13, by which the lid is automatically closed when once started in that direction, the fixed end of the said lid-actuating spring being secured to the inside of the lid, as clearly seen in the drawings. The purpose of the tongue 10, therefore, is to limit the swing of the lid outwardly by the hook 12 engaging the shoulder 11 of said tongue. That the lid may close over the tongue 10 the adjacent wall thereof is provided with a recess 14, the walls of which snugly embrace the tongue when the lid is closed, thereby in no wise detracting from the finish of the article when completed.

The receptacle 1 is designed to receive a frame (which may subsequently be soldered in place) which consists of an outer division-wall 15, an inner division-wall 16, both disposed in the direction of the length of the box, a base-wall 17, inclined at one end to clear the blade, the upper parallel side walls 18 18, disposed in the planes of or parallel to the broad sides (front and rear walls) of the box, and the wings 19 19, having inwardly-turned edges which form a longitudinal slit or passage 20 between them. The wall 16 has an extension 16', by which the frame may be seized should the same be withdrawn from the receptacle. The walls 15 16 form between them a compartment 21 for toothpicks, and the wall 16 and the walls of the receptacle form a compartment 22 for matches. The wings 19 19 form a receptacle for the sliding block 23 of the corkscrew 24, the base 25 of the latter being pivoted between the lateral walls of the longitudinal groove 26, formed in said block, the pivotal pin 27 of said corkscrew passing transversely through said walls 26 and base 25, the slot 28 in the base through which the pin passes being elongated, so as to allow the base to be shoved back into an opening or socket 29, formed in the block opposite the groove, and hold the corkscrew rigid after the same has been swung outwardly into position for withdrawing a cork. That the corkscrew may not work too loosely on its pivot the latter is passed through a spring-plate 30, inserted between one of the faces of the base 25 and the adjacent face of one of the lateral walls of the groove. The block 23, with its corkscrew, is inserted into the compartment formed by the wings from the bottom, with the point of the screw turned up, and when the lower edge of the block is in its lowest position (resting as it does directly over the burs 8 8') the point of the screw projects slightly above the frame referred to. To use the corkscrew, the operator pulls the same and the block to which it is pivoted until the top of the block strikes the limiting prongs or teeth 31, formed at the upper edge of the wall 15, (the lid 2 of course having previously been swung open.) The screw is then

swung outwardly at right angles to the adjacent edge or wall of the receptacle, the base 25 is forced into the socket or opening 29, the lid is closed, and the screw is ready for use. It is to be understood that the edge wall of the box over which the free end of the lid closes (being the wall opposite the one to which the lid is hinged) is provided with a recess 32 at its upper end to allow the corkscrew to be swung outwardly, as already indicated. The upper edges of the walls 18 18 of the frame are continued in the shape of inwardly-turned lips 33 33, which snugly embrace the base of the tongue 10 below the shoulder 11. The upper edge of the frame when inserted fully into the box projects a slight distance beyond the adjacent edge of the box, the lid 2 closing over the parts and making for the whole a compact finish.

It is to be understood that we do not limit ourselves to the details here shown and described. For example, the wings 19 19 might be omitted, leaving the sliding block 23 to be guided between the wall 15 and the walls of the receptacle. Other changes might be resorted to in the hands of a skilled mechanic without departing from the spirit of our invention.

Having described our invention, what we claim is—

1. A box comprising a receptacle having a series of compartments, a lid at one end of the box, a corkscrew confined in one of the compartments and adapted to be withdrawn in the direction toward the lid, the latter being adapted to close after the screw is swung outwardly, substantially as set forth.

2. A box comprising a receptacle having a series of compartments, a lid at one end of the box, a corkscrew confined in one of the outer compartments, and adapted to be withdrawn therefrom in the direction of the lid, the outer wall of the compartment having a recess formed therein along the edge over which the lid closes through which the corkscrew may be swung outwardly, substantially as set forth.

3. A box comprising a receptacle having a series of compartments, a lid at one end of the box, a corkscrew confined in one of the compartments and adapted to be withdrawn in the direction toward the lid, means for limiting the movement of the screw in the aforesaid direction, and means for locking the screw when swung outward into position for use, substantially as set forth.

4. A suitable receptacle having a series of compartments, a lid hinged at one end and adapted to close said compartments, a knife-blade pivoted at the opposite end of the receptacle, a spring for actuating the blade in one direction, suitable tubes or burs between the edges of which the blade is adapted to pass and thus serve as a cutter, the fixed end of the spring being inserted between one of the burs and the end wall of the receptacle,

and means for keeping the contents of the compartments out of contact with the knife, substantially as set forth.

5 A suitable receptacle, a compartment in the same for confining a corkscrew, a grooved block movable in said compartment, the base of the screw being pivoted between the walls of the groove of said block, and having an elongated slot through which the
10 pivotal pin of the screw passes, and a socket or opening formed in the bottom wall of the groove for receiving the base of the screw after the latter has been swung outwardly at right angles to the direction of the groove,
15 substantially as set forth.

6. A suitable receptacle, a compartment in the same for confining a corkscrew, a grooved block movable in said compartment, the base of the screw being pivoted between the walls
20 of the groove of said block, and having an elongated slot in the base of the screw for the passage of the pivotal pin of the screw, a socket in the basal wall of the groove for receiving the base of the screw, and limiting
25 prongs or walls for preventing the withdrawal of the block from the compartment, substantially as set forth.

7. A suitable receptacle having a series of compartments, a lid at one end closing the
30 several compartments, a knife pivoted at the opposite end, burs or tubes carried by the opposite front and rear walls, the adjacent edges of which serve as shearing edges for the blade passing between them, a block in one
35 of said compartments adapted to rest against the burs when in its lowest position, a corkscrew secured to said block and normally pointing toward the end carrying the lid, and a wall separating the bases of the remaining
40 compartments from the blade, substantially as set forth.

8. In a match-box, a suitable receptacle, a lid hinged at one end thereof, a spring having one end secured along the inner surface
45 of the upper wall or roof of the lid, and a tongue or arm carried by the walls of the receptacle against which the free end of the spring is adapted to bear during the swinging of the lid in either direction, substantially as
50 set forth.

9. In a match-box, a suitable receptacle, a lid hinged at one end thereof, a spring having one end secured along the inner surface of the roof of the lid, a terminal hook at the free end of the spring, a tongue or arm carried by the receptacle-wall in the path of the
55 spring and adapted to bear against the spring, a terminal shoulder forming a part of the tongue for engaging the hook of the spring and limiting the outward swing of the lid,
60 substantially as set forth.

10. In a match-box, a suitable receptacle, a lid hinged at one end thereof, a spring having one end secured along the inner surface of the roof of the lid, a terminal hook at the
65 free end of the spring, a tongue formed integrally with the wall of the receptacle and engaging the surface of the spring, a shoulder at the end of the tongue for engaging the hook of the spring, a pivotal pin of the lid
70 being carried at the base of the tongue, the adjacent wall of the lid having a recess formed therein for spanning the tongue when the lid returns to its closed position, substantially as set forth.

11. In a match-box, a suitable receptacle, a frame forming a series of compartments in the same, the said frame comprising an outer and an inner division-wall running lengthwise of the receptacle, wings deflected outwardly from the outer division-wall, a basal wall extending in the opposite direction to the wings, and two parallel upper walls disposed in the plane of the broad sides of the
80 receptacle, substantially as set forth.

12. In a box, a spring having a fixed end, a head extending laterally beyond the body of the spring located at the free end, a blade pivoted at one end, and having a toe or finger on one side of the pivotal point, and a recess on the other side of the pivot, adapted to be engaged by the head of the spring
85 aforesaid, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

HENRY C. PAUL.
FRANK HILBIG.

Witnesses:

EMIL STAREK,
G. L. BELFRY.