No. 896,390. PATENTED AUG. 18, 1908.

M. JOYCE.

MATCH RECEPTACLE.

APPLICATION FILED APR. 30, 1907.

3 SHEETS—SHEET 1.

FIG. I

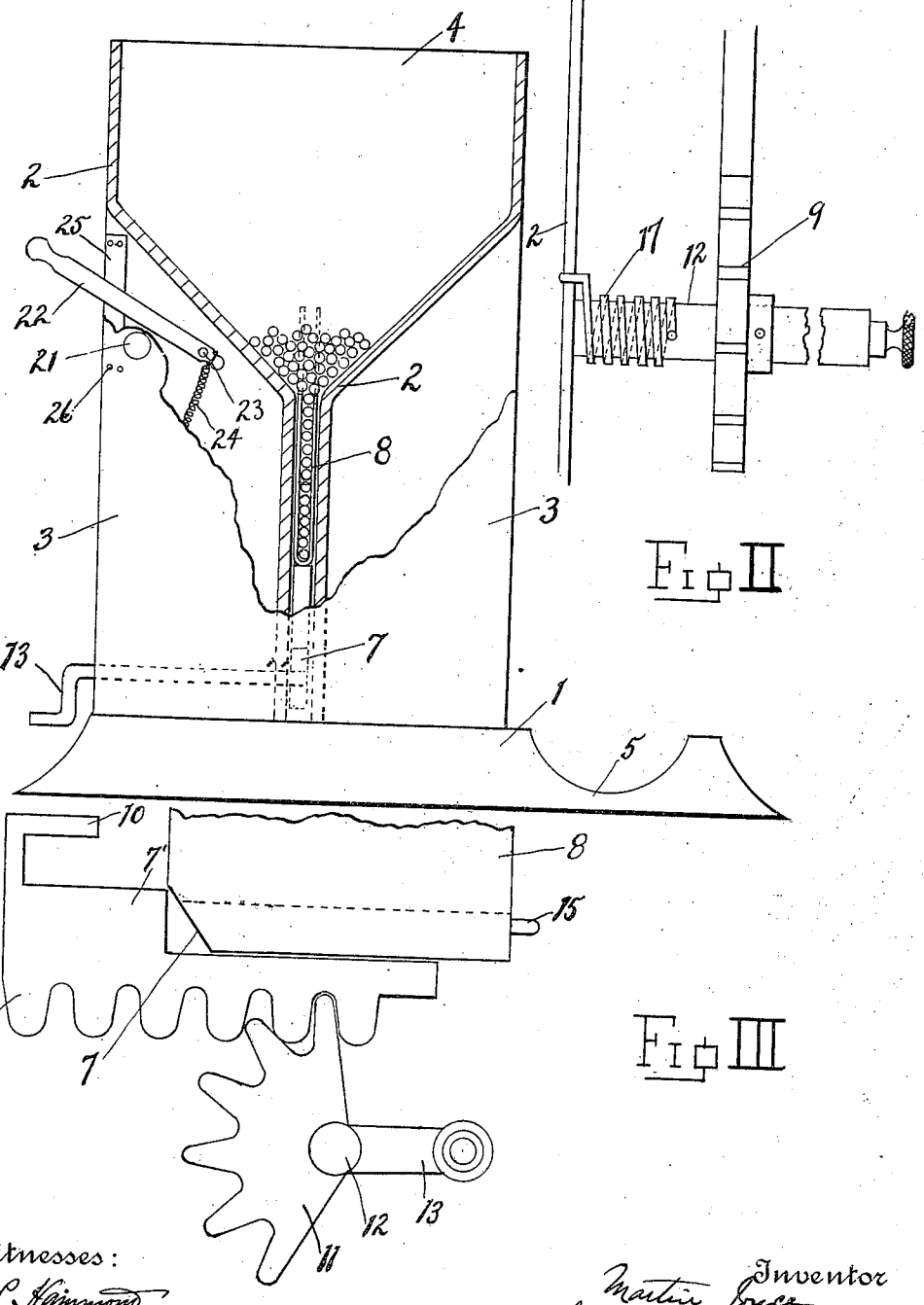


FIG. II

FIG. III

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3 SHEETS—SHEET 2.

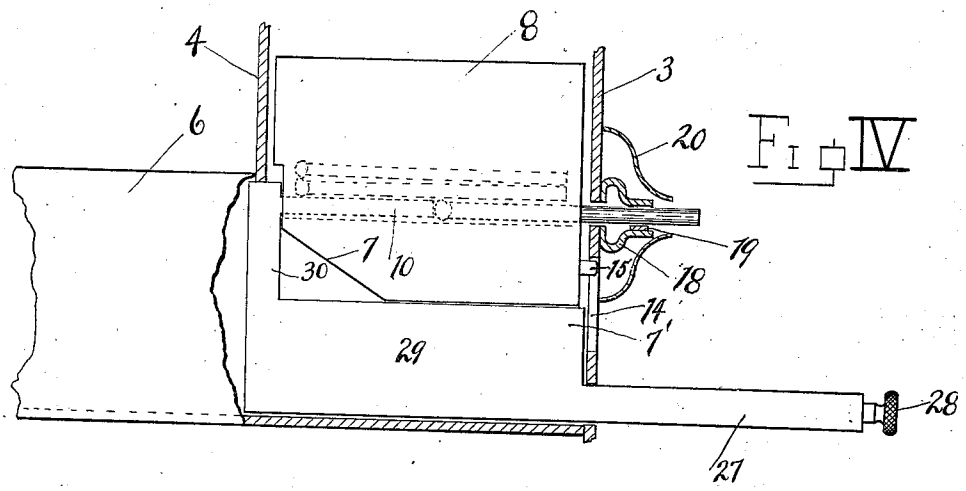


FIG. IV

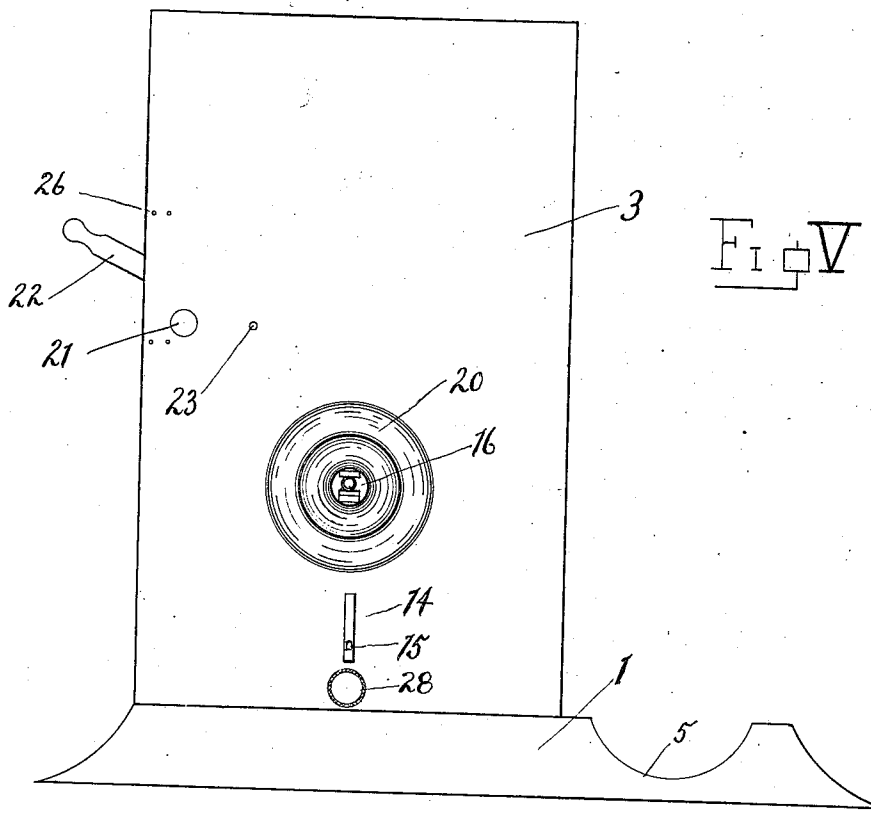


FIG. V

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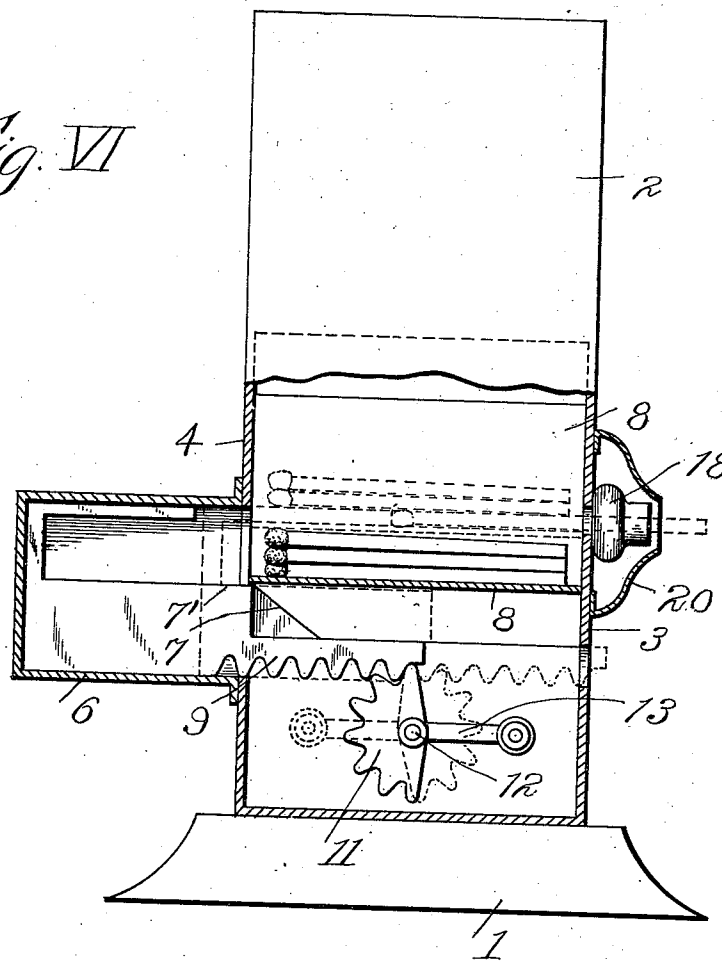
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3 SHEETS—SHEET 3.

Fig. VI



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UNITED STATES PATENT OFFICE.

MARTIN JOYCE, OF ELIZABETH, NEW JERSEY, ASSIGNOR OF ONE-HALF TO THOMAS F. LONG AND EMIL KLEE, OF ELIZABETH, NEW JERSEY.

MATCH-RECEPTACLE.

No. 896,390. Specification of Letters Patent. Patented Aug. 18, 1908.

Application filed April 30, 1907. Serial No. 371,127.

To all whom it may concern:

Be it known that I, MARTIN JOYCE, a citizen of the United States, residing at Elizabeth, in the county of Union, in the State of New Jersey, have invented certain new and useful Improvements in Match-Receptacles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

In the drawings: Figure 1 represents an embodiment of my invention, partly in section; Fig. 2 a detail of a portion of the match ejecting mechanism; Fig. 3 a further detail thereof; Fig. 4 is a detail in side elevation partly in section showing a modified form of match ejector in operation. Fig. 5 is a front elevation of the modification shown in Fig. 4. Fig. 6 is a side elevation partly in section of the device shown in Figs. 1, 2, and 3 with the parts in ejecting position shown in dotted lines.

In the drawings like letters of reference, indicate corresponding parts throughout.

Referring in detail to Fig. 1, my invention comprises a suitable supporting or base portion 1 on which is mounted a hopper 2 for the reception of matches. Arranged at one side of the base portion is a trough 5 for receiving burned matches, 3 and 4 are front and rear plates secured to the hopper and base portion, respectively. To the rear and in a line with the lower portion of the hopper is arranged a rearwardly projecting housing 6 for receiving the match ejector when not in operation.

Mounted within the hopper and arranged to move vertically therein is a U-shaped match receiver 8, the bottom of which is provided with a slanting or cam like surface 7 adapted to be engaged by a cam 7′ on a rack 9 for the purpose of elevating the match receiver 8, and present the ejector 10 in match ejecting position. The mechanism for operating the ejector 10 comprises a toothed segment 11, meshing with the rack 9. The toothed segment 11 is rigidly connected to the shaft 12, which is suitably journaled in the hopper 2 or its housing, and which terminates in a crank arm or handle 13.

For operating the ejecting mechanism the front plate 3 is provided with a slot 14 through which a pin 15 on the match receiver 8 projects, for the purpose of maintaining the match receiver in alinement with the match ejecting aperture 16 in the plate 3. A spring 17 connected to shaft 12 at one end and to the hopper 2 at the other end, is provided for the purpose of returning the match ejector to retracted position, after a match has been ejected. Within the aperture is arranged a match guide 18, the lower member of which is provided with a striking surface 19.

20 indicates an ornamental plate covering the match striker for giving the device a finished appearance.

On one side of the receptacle, I have provided a cigar cutter which comprises the perforation 21 in the front plate 3, a cutting knife 22 pivoted in the front plate at 23, with a spring 24, connected at one end to normally hold the cutter in retracted position. A guide strip 25 is connected to the front plate 3 by suitable rivets 26.

In the modification illustrated in Figs. 4 and 5 for the purpose of ejecting the matches, I employ a rod 27, one end of which projects out side of front plate 3 and is provided with a suitable knob or handle 28. The inner end of the rod is provided with a plate 29, having an upwardly extending member 30 to which is secured the ejector 10. It will be observed that the construction of the plate 29 is such that when the rod 27 is drawn out by means of the handle or knob 28, the plate 29 engages the cut away portion 7 of the match receptacle and raises the match receptacle to bring the lowermost match in alinement with the match guide 18. Simultaneously the ejector 10 engages the match and forces the same a predetermined distance beyond the jaws of the guide 18. After the match has been ejected the rod 27 is returned to normal position, carrying with it the plate 29 which is normally located within the housing 6.

The operation of my invention is as follows: The hopper having been supplied with matches, the crank 13 is turned, causing the toothed segment 11 to engage the rack 9. The cam 7′ of the rack engages the cam surface 7 of the match receiver 8, causing it to rise vertically until the lower portion of the match receiver has passed upon the upper surface of the cam. This position presents the match ejector 10 in line with the lower portion of the U-shaped trough of the match receiver. Upon further actuation of the crank 13, the ejecting pin will enter and slide along the trough of the U-shaped match

receptacle and engage the lowermost match therein, pushing the end thereof through the opening 16 as shown in Fig. 4. The match is then withdrawn by the user, and in withdrawing it, it is caused to be ignited by passing over the striking surface provided. The imparting of a vertical movement to the match receiver causes it to act as an agitator, thus insuring at all times a full supply of matches therein. As soon as the match ejector has been returned under the action of the spring 17, the match immediately above will fall to the bottom of the trough and be in line with the ejector for further operation.

I do not limit myself to the precise form of construction herein shown and described, such as the means employed for raising and lowering the match retaining hopper or the means for operating the ejecting lever. The construction of these may be varied to perform the function hereindescribed without departing from the spirit and scope of my invention.

1. In a match receptacle of the character described, a hopper, a U-shaped match receiver, vertically movable within said hopper, an ejecting mechanism comprising a longitudinally movable rack engaging and adapted to elevate said match receiver, and an ejecting pin on said movable rack.

2. In a device of the character described, the combination of a hopper, a U-shaped match receptacle mounted therein, a longitudinally movable rack provided with an ejecting member mounted beneath said receptacle, a toothed segment journaled in the frame of the device and adapted to actuate said rack for the purposes described.

3. In a device of the character described, the combination of a supporting frame, a hopper located therein, a U-shaped match receptacle mounted within said hopper and provided with a cut away portion, a longitudinally movable rack mounted beneath and adapted to engage said receptacle, an ejecting member on said rack, a toothed segment journaled in said frame and meshing with said rack and means for actuating said segment.

4. In a device of the character described, the combination of a base portion, a frame mounted thereon, a hopper located within said frame, a U-shaped receptacle movably mounted within said hopper and having a cut away portion at one end thereof, a horizontally movable rack located beneath and adapted to engage said receptacle, an ejecting member formed on said rack, a toothed segment journaled in said frame and meshing with said rack, and a crank for actuating said segment.

5. In a device of the character described, the combination of a base, a supporting frame work mounted thereon, a hopper mounted within said supporting frame, a U-shaped receptacle movably mounted within said hopper and provided with a cut away portion at one end thereof, a rack located directly beneath said receptacle and capable of longitudinal movement adapted to engage and raise same, an ejecting member formed on said rack and a toothed segment journaled in said frame meshing with said rack for the purposes described.

6. In a device of the character described, the combination of a base, a frame work mounted thereon and provided with an aperture in the front portion thereof, a hopper arranged within said frame, a match receptacle movably mounted within said hopper and provided with a cut away portion at one end thereof, a rack mounted beneath said receptacle and adapted to engage and raise the receptacle to bring the lowermost match therein on a level with said aperture, an ejecting member on said rack, a toothed segment journaled in said frame and meshing with said rack and a crank for actuating said rack to cause said ejector to engage and force the lowermost match in said receptacle, a predetermined distance through said aperture, and a striking surface on said aperture for the purpose of igniting the match when withdrawn therefrom.

7. In a device of the character described, the combination of a base portion, a frame work mounted thereon and having an ejecting aperture in its front portion, a hopper located within said frame work having a downwardly converging bottom terminating in a contracted vertical well, a U-shaped match receptacle vertically movable within the said well and adapted to contain a plurality of matches superimposed one on another, means for raising said match receptacle to a determined height to bring the lowermost match therein on a level with the ejecting aperture and an ejecting device guided in line with the lowermost match and ejecting aperture to eject said match as described.

8. In a device of the character described, the combination of a base portion, a frame work mounted thereon and having an ejecting aperture in its front portion, a hopper located within said frame work having a downwardly converging bottom terminating in a contracted vertical well, a U-shaped match receptacle vertically movable within the said well and adapted to contain a plurality of matches superimposed one on another, means for raising said match receptacle to a determined height to bring the lowermost match therein on a level with the ejecting aperture and a horizontal slide carrying means for lifting said match receptacle and means for engaging and ejecting the lowermost match therein, as described.

9. In a device of the character described, the combination of a suitable base, a frame

mounted thereon having a match ejecting aperture in front, a hopper located in said frame having a downwardly converging bottom terminating in a vertical well, a U-shaped match receptacle adapted to contain a superimposed pile of matches and movable vertically within said hopper well, a horizontal slide elevating said match receptacle to a fixed height to present the lowermost match therein in line with the ejecting aperture, means carried by said slide to engage and eject the lowermost match and a housing in rear of the frame in which said lifting and ejecting slide is received when in retracted position.

10. In a device of the character described, the combination of a base portion, a frame mounted thereon, a hopper in said frame having a downwardly converging bottom, a U-shaped match receptacle formed to receive and contain a plurality of matches superimposed one on another and having a cam-shaped surface in its rear, a slide mounted beneath said receptacle having a cam surface engaging the cam surface on the match receptacle to lift the same and an ejecting device carried by said slide in position to engage the lowermost match in the receptacle when the latter is raised, substantially as described.

11. In a device of the character described, the combination of a base portion, a housing mounted thereon, a hopper located therein, a U-shaped match receptacle movably mounted in said hopper, a horizontally movable rack mounted beneath said hopper and adapted to engage and elevate said hopper, a shaft, a segment mounted on said shaft and adapted to engage said rack, means for rotating said shaft and spring means for returning said shaft to normal position.

12. In a device of the character described, the combination with a base portion, a housing mounted thereon, a hopper located within said housing, a vertically movable U-shaped match receptacle mounted within said housing, a horizontally movable rack mounted beneath said receptacle, a shaft journaled in said housing, means for rotating said shaft, a segment mounted on said shaft and adapted to engage said rack, and a spring for returning said segment to normal position.

13. In a device of the character described, the combination of a base, a housing mounted thereon and provided with an aperture in the front portion thereof, a hopper located within said housing, a U-shaped match receptacle vertically movable within said hopper, a horizontally movable rack mounted beneath said receptacle and adapted to engage and elevate said receptacle to bring the lowermost match therein in alinement with a suitable discharging aperture, a toothed segment journaled in said housing and adapted to engage with said ratchet, means for rotating said segment and spring operated means for returning said receptacle to normal position.

14. In a device of the character described, the combination of a base portion, a housing mounted thereon and provided with an aperture in the front portion thereof, a hopper located within said housing, a U-shaped match receptacle mounted within said hopper and capable of vertical movement, a ratchet mounted beneath said receptacle and adapted to engage therewith to elevate said hopper, a toothed segment journaled in said housing and adapted to engage with said ratchet, means for rotating said segment a predetermined distance and spring actuated means for returning said receptacle to normal position.

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