This invention relates to dispensing devices and has particular relation to that class of dispensing devices wherein articles are removed singly from a container through the operation of a member mounted upon the container, the invention being especially adapted for dispensing cigarettes.

To this end, the invention includes a container having a compartment or magazine for the storage of cigarettes or other articles which are singly fed to the elevating device, together with a member movable pivotally upon the container and capable of gripping and removing the elevated article.

Another object of the invention is the provision of novel means for operating the mechanisms above referred to, which is simple in construction, reliable in use, and which may be actuated through the operation of a single controlling member.

With the above and other objects in view, the invention further includes the following novel features and details of construction, as will hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:

Figure 1 is a side elevation of the invention with the parts in position prior to the removal of a cigarette.

Figure 2 shows the cigarette removed.

Figure 3 is a front view with the parts in the position shown in Figure 2.

Figure 4 is a top-plan view with the parts in the position shown in Figure 1.

Figure 5 is a section on the line 5—5 of Figure 3 showing the parts in normal position.

Figure 6 is a section on the line 6—6 of Figure 5 with parts broken away.

Figure 7 is a view similar to Figure 5 but showing the position of the parts just prior to the removal of a cigarette.

Figure 8 is a section on the line 8—8 of Figure 6.

Figure 9 is a detail perspective view of the elevating yoke.

Figure 10 is a like view of the rock shaft.

Figure 11 is a detail perspective view of the transfer member.

Figure 12 is a similar view of the jaw actuating rod.

Figure 13 is a detail perspective view of the article feeding member.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 15 indicates a housing which may be of any desirable size or configuration and which encloses a compartment or magazine 16. The magazine includes end walls 17 and a front wall 18, together with a curved bottom wall 19. The wall 18 terminates short of the bottom wall 19 so as to provide an opening 20 whereby the magazine 16 may communicate with a dispensing compartment 21 also arranged within the housing 15. The front wall of the compartment 21 is provided with a door 22 which is hingedly mounted as at 23 and which is normally held in closed position by means of a resilient latch 24. The top of the compartment is provided with a door 25 which is pivotally mounted as shown at 26.

Movable in bearings provided in the end walls 17 is a rock shaft 27 and the shaft 27 extends beyond the walls 17 and has rigidly secured thereto the side arms 28 of a yoke 29, the side arms being connected by a cross arm 30 which carries spaced article receiving members 30. The members 30 are adapted to receive singly, articles transferred from the magazine 16 to the dispensing compartment 21, the said articles passing through the opening 20. Normally, this opening is closed by means of a transversely angularly member 31 which is normally arranged as shown in Figure 5 of the drawings to close the opening. The member 31 is rigid with a rock shaft 32 and this shaft carries an arm 33.
which is provided with a cam slot 34, the latter receiving a finger or lateral extension 35 which is carried by one of the side arms 28 of the yoke.

Mounted for rocking movement in the end walls 17 below the bottom 19 is a shaft 36. This shaft is illustrated in Figure 13 of the drawings and includes offset fingers 37 which are adapted to be projected through openings 38 provided in the wall 19, and which are connected by a rod 39. The shaft 36 carries a crank arm 40 at one end and this arm has connected thereto one end of a link 41 which receives an offset portion 42 provided in one of the arms 28 of the yoke. A bumper strip 43 is provided in the bottom of the dispensing compartment 21 for engagement by the cross bar 29 of the yoke, and a spring 44 attached to the crank arm 40 yieldingly resists rocking movement of the shaft 36.

Pivotaly mounted upon the top of the housing 15 in bearing brackets 45 is a member 46. This member may be of any suitable shape or configuration and preferably represents an animal or bird. The member shown simulates an alligator in upright position and includes a rigid jaw 47 and a movable jaw 48 which is pivotally mounted as shown at 49. A spring 50 yieldingly holds the jaws in closed position. The body of the alligator is pivotally mounted as shown at 51 in the bearing brackets 45, while a rod 52 has one end pivotally mounted as shown at 53 eccentric to the pivot 51 and movable with respect to said pivot 51. The opposite end of the rod is provided with a notch 54 which is adapted to receive a projection 55 at the inner end of the jaw 49, while the end 56 of the rod 52 is adapted to engage an inclined surface 57 provided in the head of the alligator. A spring 58 acts to yieldingly force the rod into engagement with the projection 55 of the jaw 48.

Pivotally secured to the alligator as shown at 59 is one end of a rod 60. This rod has its other end pivotally secured to an arm 61 which is carried by the rock shaft 27.

Extending from one of the arms 28 of the yoke is an arm 62, and pivotally secured to the end of this arm is a rod 63 which is movable through an opening 64 provided in the top of the housing 15. A finger piece 65 is mounted upon the upper end of this rod.

The top of the housing is provided with a removable plate 66 for the purpose of filling the magazine, the said plate carrying a finger piece 67.

The rock shaft 27 is surrounded by a coiled spring 68 and one end 69 of this spring bears against the under side of the bottom wall 19, while the opposite end is engaged around the arm 61 of the rock shaft 27 and acts to yieldingly resist rocking movement of the shaft in one direction.

A spring arm 70 connects the arm 33 with a door 25 so that when the arm 33 is moved the door will be opened and closed.

In the operation of the invention, depression of the finger piece 65 will move the article elevator or yoke upward, but as the holders 30 do not contain an article, none will be delivered. However, this depression of the finger piece 65 will, through the engagement of the arm 33 with the side arm of the yoke, move said arm 33 upward in an anticlockwise direction so that the angular closure member 31 will move inward, whereupon the vertical portion of this closure member will assume a horizontal position, and the horizontal portion will assume a vertical position so that the opening 20 will still be closed. When the arm 29 of the yoke moves upward, the offset portion 42 of said arm will engage the end of the link 41 just prior to the limit of upward movement of the arm 28.

Further movement will rock the shaft 36 and cause the spaced arms 57 to be projected inward through the openings 38 in the bottom 19 and will force a cigarette into the closure or transfer member 31 as shown in Figure 7 of the drawings. When pressure upon the finger piece 65 is relieved, the yoke will move downward under the tension of the spring 68 and the arm 33 will move in a reverse clockwise direction to transfer the cigarette from the position shown in Figure 7 into the holders 30 which will then occupy the position shown in Figure 5.

As the elevator has been loaded, another downward pressure upon the finger piece 65 will raise the elevator upward, and as the arm 33 moves in an anti-clockwise direction as previously described, the door 25 will be opened due to its connection with the arm 33 through the spring arm 70. During upward movement of the elevator, the shaft 27 will be rocked to move its arm 61 downward, and this movement will pull the rod 60 and will swing the alligator upon its pivot 51 so that its jaws 47 and 48 will enter the upper end of the dispensing compartment 21. During this downward movement of the alligator, the rod 52 due to its eccentric pivotal connection, will move outward so that the extension 55 at the inner end of the jaw 48 will engage within the notch 54 so that the jaws will be opened. The jaws will be fully opened when they enter the upper end of the compartment 21 and will be positioned upon opposite sides of the article within the holders 30. Continued movement of the rod 52 will cause the end 56 of the said rod to engage the inclined surface 57 within the head of the alligator, so that the rod will be disengaged from the extension 55 of the jaw and the latter will be released to tightly grip the article. When pressure is released on the finger piece 65, the parts will return to normal position with the article between the jaws of the alligator as shown in Figures 2 and 3.
of the drawings. After the elevator has once been loaded, each operation of the device will deliver an article, for example, a cigarette.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is—

1. In an article dispensing device, a housing having an opening therein, a partition dividing the housing into a magazine adapted to contain articles to be delivered and a dispensing compartment, said partition terminating short of the bottom of the magazine to provide an opening, a rock shaft, a closure carried by the rock shaft and normally arranged to prevent the passage of articles through said opening, means included in the closure to transfer articles singly from the magazine to the dispensing compartment when the closure is operated, a pivotally mounted yoke normally disposed at the bottom of the dispensing compartment, an article container carried by the yoke, means including an operating rod to move the yoke pivotally and elevate the article container, a member mounted for pivotal movement upon the outside of the housing and having its free end movable into and out of the housing opening, movable gripping means at the free end of said member to grip an elevated article and remove the same from the dispensing compartment, a slotted bottom of the magazine by the movement of the yoke to feed the article to the article transferring means.

2. In an article dispensing device, a housing having an opening therein, a partition dividing the housing into a magazine adapted to contain articles to be delivered and a dispensing compartment, said partition terminating short of the bottom of the magazine to provide an opening, a rock shaft, transversely angular closure rigid with the rock shaft and normally arranged to prevent the passage of articles through said opening and adapted to transfer articles singly from the magazine to the dispensing compartment when the closure is operated, an elevator movable within the dispensing compartment to receive a single article and elevate the same, a member mounted for pivotal movement upon the outside of the housing and having its free end movable into and out of the housing opening, movable gripping means at the free end of said member to grip an elevated article and remove the same from the dispensing compartment, a slotted bottom of the magazine by the movement of the yoke to feed the article to the article transferring means.

3. In an article dispensing device, a housing having an opening therein, a partition dividing the housing into a magazine adapted to contain articles to be delivered and a dispensing compartment said magazine having a slotted bottom wall, said partition terminating short of the bottom of the magazine to provide an opening, a movable closure normally arranged to prevent the passage of articles through said opening, means included in the closure to transfer articles singly from the magazine to the dispensing compartment when the closure is operated, a pivotally mounted yoke normally disposed at the bottom of the dispensing compartment, an article container carried by the yoke, means including an operating rod to move the yoke pivotally and elevate the article container, a member mounted for pivotal movement upon the outside of the housing and having its free end movable into and out of the housing opening, means actuated by movement of the yoke to move said member pivotally, means at the outer end of said member to grip an article carried by the elevated container and remove said article, means to operate the gripping means, and means actuated through the slotted bottom of the magazine by the movement of the yoke to feed the article to the article transferring means.

4. In an article dispensing device, a housing having an opening therein, a partition dividing the housing into a magazine adapted to contain articles to be delivered and a dispensing compartment, said partition terminating short of the bottom of the magazine to provide an opening, a movable closure normally arranged to prevent the passage of articles through said opening, means included in the closure to transfer articles singly from the magazine to the dispensing compartment when the closure is operated, a pivotally mounted spring pressed yoke normally disposed at the bottom of the dispensing compartment, means in the dispensing compartment and with which the yoke engages for absorbing the shock of the latter, an article container carried by the yoke, means including an operating rod to move the yoke pivotally and elevate the article container, a member mounted for pivotal movement upon the outside of the housing and having its free end movable into and out of the housing opening, means actuated by movement of the yoke to move said member pivotally, means at the outer end of said member to grip an article carried by the elevated container and remove said article, and means actuated by movement of the pivotally mounted member to actuate the article gripping means.

5. In an article dispensing device, a housing having an opening therein, a partition dividing the housing into a magazine adapted to contain articles to be delivered and a dispensing compartment, said partition termi-
nating short of the bottom of the magazine to provide an opening, a movable closure normally arranged to prevent the passage of articles through said opening, means included in the closure to transfer articles singly from the magazine to the dispensing compartment when the closure is operated, a rock shaft mounted below the magazine, spaced arms carried by said shaft and adapted to be projected into the magazine to feed articles to the article transferring means, an elevator movable within the dispensing compartment to receive a single article and elevate the same, means to remove an elevated article, and means to operate the rock shaft to feed an article to the transfer means when the elevator reaches its limit of upward movement.

6. In an article dispensing device, a housing having an opening therein, a partition dividing the housing into a magazine and a dispensing compartment, means to transfer articles singly from the magazine to the dispensing compartment, means to elevate the transferred article, a member pivotally mounted upon the housing, normally closed gripping jaws carried by said member and adapted to be lowered into the dispensing compartment and grip an elevated article, an operating rod, means operatively associated with said rod to move said member pivotally, a spring pressed rod having one end pivoted eccentric to the pivotal point of said pivotally movable member, and means at the other end of the last referred to rod to engage one of the gripping jaws and move the latter to open position, and means formed on the other of said gripping jaws to retain the latter in closed position.

In testimony whereof I affix my signature.

ERI F. ADAMS.