April 10, 1945. E. KING 2,373,476

CIGARETTE DISPENSING APPARATUS

Filed Aug. 28, 1944

Fig 5

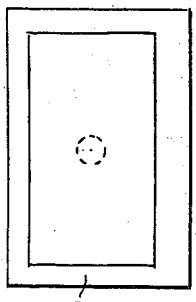


Fig 1

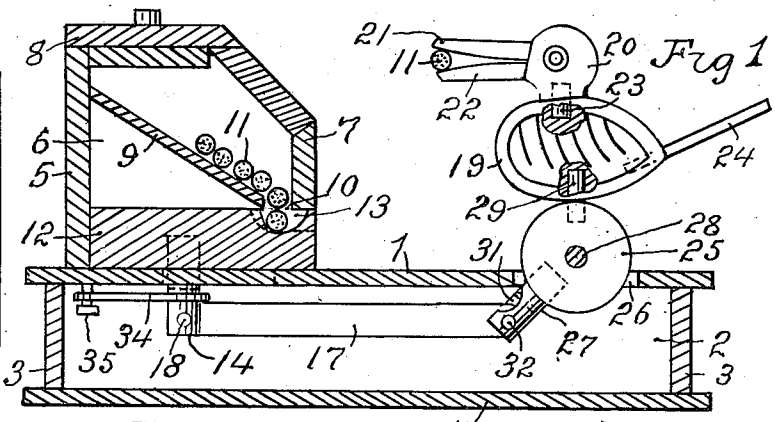


Fig 2

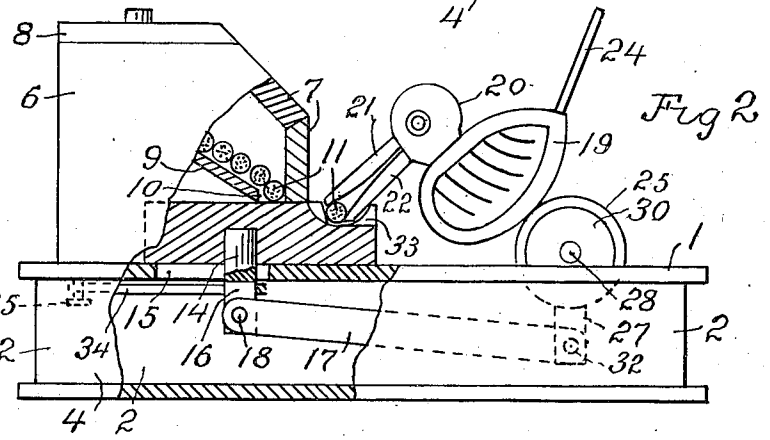


Fig 6

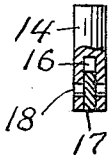


Fig 3

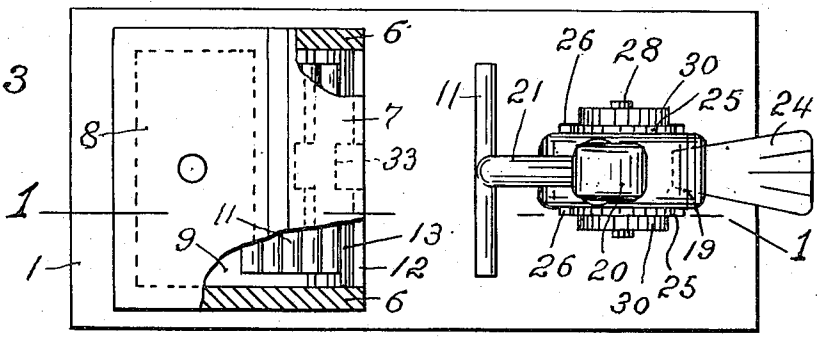
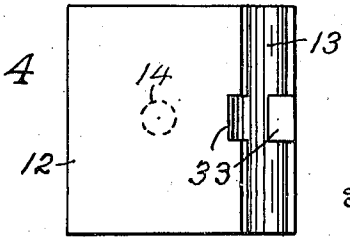


Fig 4



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CIGARETTE DISPENSING APPARATUS

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Application August 28, 1944, Serial No. 551,464

1 Claim. (Cl. 312—76)

My invention relates to improvements in cigarette dispensing apparatus.

It relates particularly to an apparatus by which cigarettes contained in a casing may be removed therefrom one at a time and held in an easily accessible dispensing position.

One of the objects of my invention is the provision of novel means of very simplified construction for removing the cigarettes from the casing and elevating them, one at a time, to the dispensing position.

A further object of my invention is the provision of a novel apparatus of the kind described, which is simple, cheap to make, strong, durable, not likely to get out of order, and which is efficient in its operation.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawing, illustrative of a preferred form of my invention,

Fig. 1 is a vertical sectional view of my improved apparatus taken on the plane of the line 1—1 of Fig. 3, showing the pickup device in the cigarette dispensing position, and the removing member fully retracted to the receiving position.

Fig. 2 is a side view of the apparatus partly in vertical section and partly in elevation, showing the pickup device in the pickup position, and the removing member in the delivery position.

Fig. 3 is a plan view of the apparatus, with the casing partly broken away, and showing the pickup device in the dispensing position, and the removing member in the receiving position.

Fig. 4 is a top view of the removing member.

Fig. 5 is an under view of the casing cover.

Fig. 6 is a view of the operating arm of the removing member, shown partly in elevation and partly in vertical section, and showing in cross section the link pivoted to the arm.

Similar characters of reference designate similar parts in the different views.

A supporting means is provided comprising a boxlike base having a top 1, sides 2, ends 3, and a bottom 4.

On the top 1 of the base is a rectangular casing having a back wall 5 and sides 6 fastened at their lower ends to the upper side of the top 1 of the base, and having a front wall 7 spaced at its lower end from the top 1 to provide a rectangular opening.

The upper end of the casing has a filling opening normally closed by a removable cover 8.

Within the casing is mounted an inclined floorlike member 9 which extends to and against the inner sides of the side walls 6, and which slopes downwardly from the back wall 5 to the horizontal plane of the top of the opening in the front wall 7. The front end of the inclined member 9 is spaced from the front wall 7, thus providing a passage 10 for the discharge, one at a time, downwardly of cigarettes 11 adapted to be supported by the member 9, as shown.

A removing member 12 of rectangular flat form is horizontally slidably reciprocative on the base top 1 in the opening under the front wall 7 of the casing, its cross sectional dimensions being such that it will close said opening, and its upper side being substantially in the horizontal plane of the lower end of the inclined member 9.

The upper side of the removing member 12 next adjacent to its front end is provided with a transverse channel 13, so disposed that, when the removing member 12 is in its rearmost cigarette receiving position, shown in Fig. 1, the channel 13 will be just below and in vertical alinement with the discharge passage 10 between the front wall 7 and the inclined member 9, whereby when a cigarette is discharged downwardly through said passage, it will fall and rest longitudinally in the channel 13.

When the removing member 12 is moved outwardly and forwardly to the position shown in Fig. 2, the cigarette 11 in the channel 13 will be removed to the exterior delivery position shown in Fig. 2.

For moving the removing member 12 horizontally reciprocatively between the cigarette receiving position, shown in Fig. 1, to the delivery position, shown in Fig. 2, said removing member is provided in its lower side with a vertical opening in which is tightly fitted and held a vertical arm comprising a pin 14, which extends downwardly through a slot 15 in the top 1 of the base, the lower end of which pin 14 has in it a vertical slot 16 in which is pivoted the rear end of a link comprising a longitudinal flat plate 17, by a pin 18. The function of the link 17 will be later explained.

For engaging and lifting the delivered cigarette from the delivery position to an elevated easily accessible dispensing position, cigarette pickup means are provided, which may be of different forms and construction, but which in the form shown comprises a pickup device consisting of the following described parts.

A structure simulating in appearance that of a bird consisting of a body portion 19 having mounted on it a head portion 20 provided with a beak consisting of an upper bill 21 and a lower bill 22, the bills diverging outwardly from the

head portion 20, and so spaced at their outer ends as to receive and frictionally hold between them a cigarette 11, as shown in Figs. 1 and 3.

Connecting the body portion 19 and the head portion 20 is a pin 23 having its ends tightly fitted in two registering holes provided respectively in the upper side of the body portion 19 and in the under side of the head portion 20. Extending upwardly and rearwardly from the body portion 19 is a portion 24 simulating a tail of the bird.

The under side of the body portion 19 rests on the upper side of a horizontal cylindrical member 25, which extends into an opening 26 in the top 1 of the base and has projecting from its lower side, under the top 1, an arm 27, similar in construction to the arm or pin 14, having its upper end tightly fitted in a radial hole in the under side of the cylindrical member 25.

The member 25 has extending through it centrally and lengthwise a supporting axial rod 28, which with the member 25, body portion 19, head portion 20, beak 21—22, tail portion 24, arm or pin 27, pin 23 and a pin 29, mounted in two registering holes in the underside of the body portion 19 and in the upper side of the member 25, constitute a pickup means or device.

For oscillatively supporting the said pickup device on the top 1 of the base outside the casing, the ends of the rod 28 are respectively pivoted in two bearing members 30 fastened on the top 1 of the base at opposite sides respectively of the opening 26 in the top 1.

As before stated one end of the link 17 is pivoted to the arm or pin 14, the other end of the link 17 is pivoted in the slot 31 in the lower end of the arm or pin 27 by a pin 32.

In operation, when the pickup device is swung, as by manually grasping the tail portion 24, from the dispensing position, shown in Fig. 1 to the pickup position, shown in Fig. 2, the radial arm or pin 27 will operate to draw the link 17 to the right, thus through the arm or pin 14 forcing the removing member 12 from the receiving position, shown in Fig. 1 to the delivery position, shown in Fig. 2.

When the pickup device is so swung the delivered cigarette 11 in the channel 13 will be forced between the bills 21 and 22 of the beak, so that it will be firmly held in the transverse position by the beak.

By then manually retracting the pickup device to the dispensing position, shown in Fig. 1, as by manually moving the tail portion 24 to the right, the beak will carry the cigarette upwardly to the delivery position, shown in Fig. 1.

At the same time that the pickup device is so retracted to the dispensing position, the link 17, through the arm or pin 14, will fully retract the removing member 12 to its inner receiving position, shown in Fig. 1, in which another cigarette will automatically fall into the channel 13, thus completing a cycle.

There is no lost motion in the link mechanism connecting the removing member 12 with the pickup device, so that they always move simultaneously in passing to and from the pickup position, shown in Fig. 2. To eliminate unnecessary exactness of construction of the parts, and to avoid possible interference of the beak members 21 and 22 with the removing member, when the beak is moving into and retracting from the pickup position, a notch 33, wide enough to receive the beak, is provided in the upper side and front end of the member 12 transversely across both sides of the channel 13.

The lower bill or beak member 22 striking the bottom of the channel 13 limits the downward movement of the pickup device and the outward movement of the removing member 12. The rear or inner end of the removing member striking the back wall 5 limits the rearward movement of the removing member 12 and the upward movement of the pickup device to the dispensing position, shown in Fig. 1.

Releasable means for yieldingly holding the pickup device in the dispensing position, and the removing member 12 in the retracted position, shown in Fig. 1, is provided. Such form of said yielding means, as is shown in the drawing, comprises a rubber elastic loop 34 having its front end embracing the arm or pin 14 and its rear end embracing a nail or brad 35 fastened in the under side of the top 1 at the rear of the slot 15.

The rubber loop 34 can be used to retract the pickup device to the upright dispensing position, shown in Fig. 1, but it is preferred to manually oscillate the pickup device by grasping the tail portion 24 thereof, and avoid possible accidental dropping of the cigarette from the dispensing position, as might occur by a too rapid upward movement and sudden stoppage, as could occur with the use alone of the rubber loop 24 for effecting such upward movement.

The complete operation may be briefly described, as follows, the parts being in the positions shown in Fig. 1; when cigarettes 11 are placed in the casing on the inclined member 9, the foremost cigarette will drop into the channel 13. By grasping the tail portion 24, the pickup device is swung counter-clockwise to the pickup position shown in Fig. 2, the removing member 12 being moved at the same time forwardly to the delivery position.

The beak 21—22 entering the channel 13 will engage opposite sides of the delivered cigarette, which will be forced into the beak in which it will be frictionally held. The hand of the operator then, by means of the tail portion 24, will retract the pickup device clockwise to the dispensing position, shown in Fig. 1, in which position, it will be stopped by the removing member 12 striking the back wall 5, when another cigarette will fall into the channel 13. The elevated cigarette is then removed from the beak, after which the rubber loop 34 will retain the pickup device and the removing member 12 in their positions, as shown in Fig. 1.

Many modifications of my invention, within the scope of the appended claim, may be made without departing from the spirit of my invention.

What I claim is:

In a cigarette dispensing apparatus, in combination, a base box having a perforated top, a casing on said top having means for supporting cigarettes and for delivering them downwardly one at a time, and provided with a lateral opening, a removing member closing and reciprocative in said opening on said base and having an arm extending downwardly through said base by which said removing member can be oscillated between a cigarette receiving position in said casing to a cigarette delivery position exterior of said casing, said removing member having means for catching a cigarette delivered from said casing and conveying it to the delivery position exterior of said casing, a pickup device having a supporting member extending downwardly through said base top and having a downwardly extending arm below said top, said pickup device having mounted on said supporting member ciga-

rette pickup means and means whereby it may be manually oscillated between a lowered pickup position and a raised dispensing position, means on the top of said base outside said casing for pivoting said supporting member on a horizontal axis, a link below said top, and means connecting said link with said arms by which, when said pickup device is swung to the pickup position, said link will operate to move said removing member to the exterior delivery position, and when said pickup device is swung to the dispensing position, said link will operate to fully retract said removing member to its inner receiving position.

ELDON KING.