Aug. 30, 1966 AL. GORDON 3,269,055

ARTICULATED TOY FOR SPINNING TOPS

Filed July 29, 1963

3 Sheets-Sheet 1

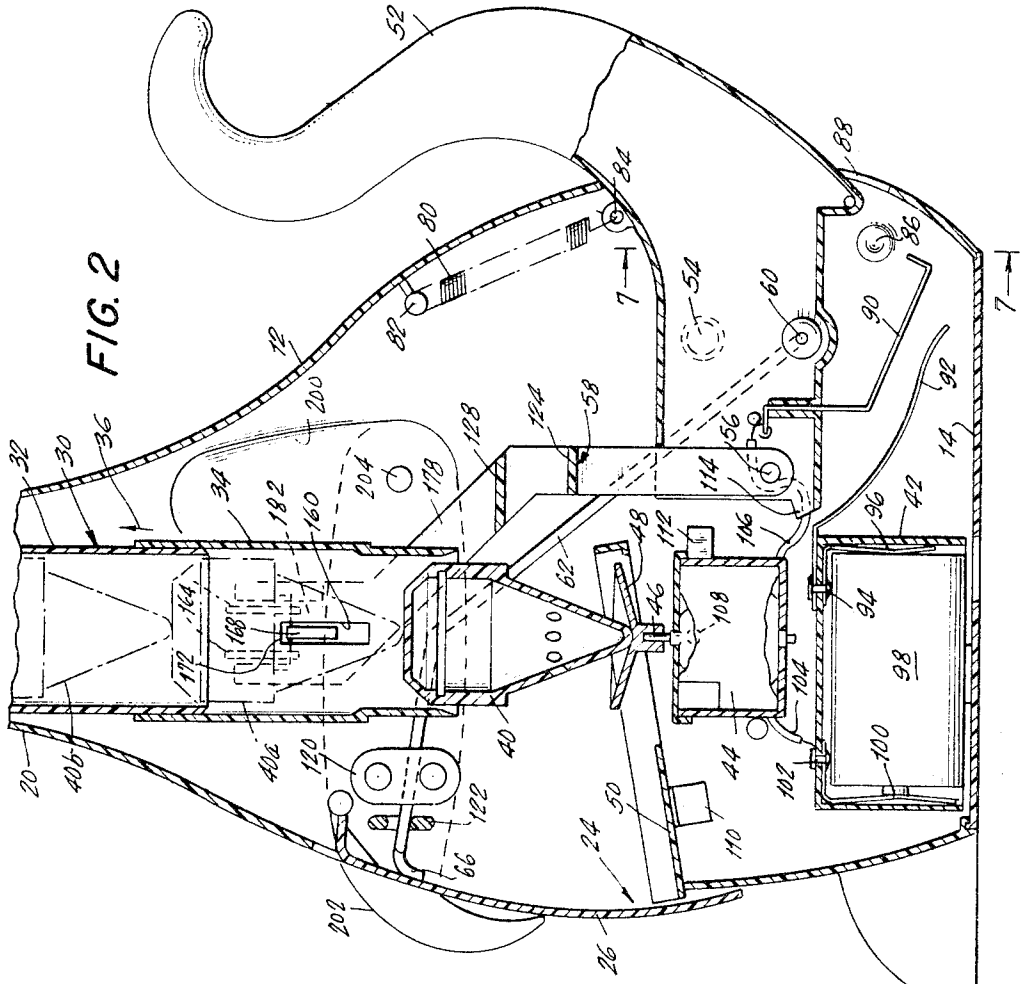


FIG. 2

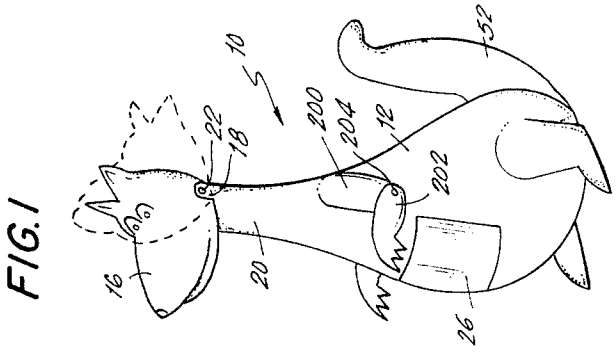


FIG. 1

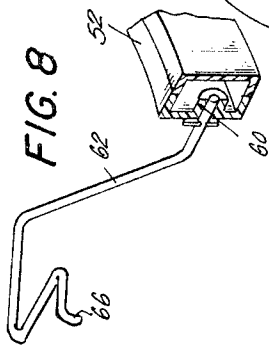


FIG. 8

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FIG. 3

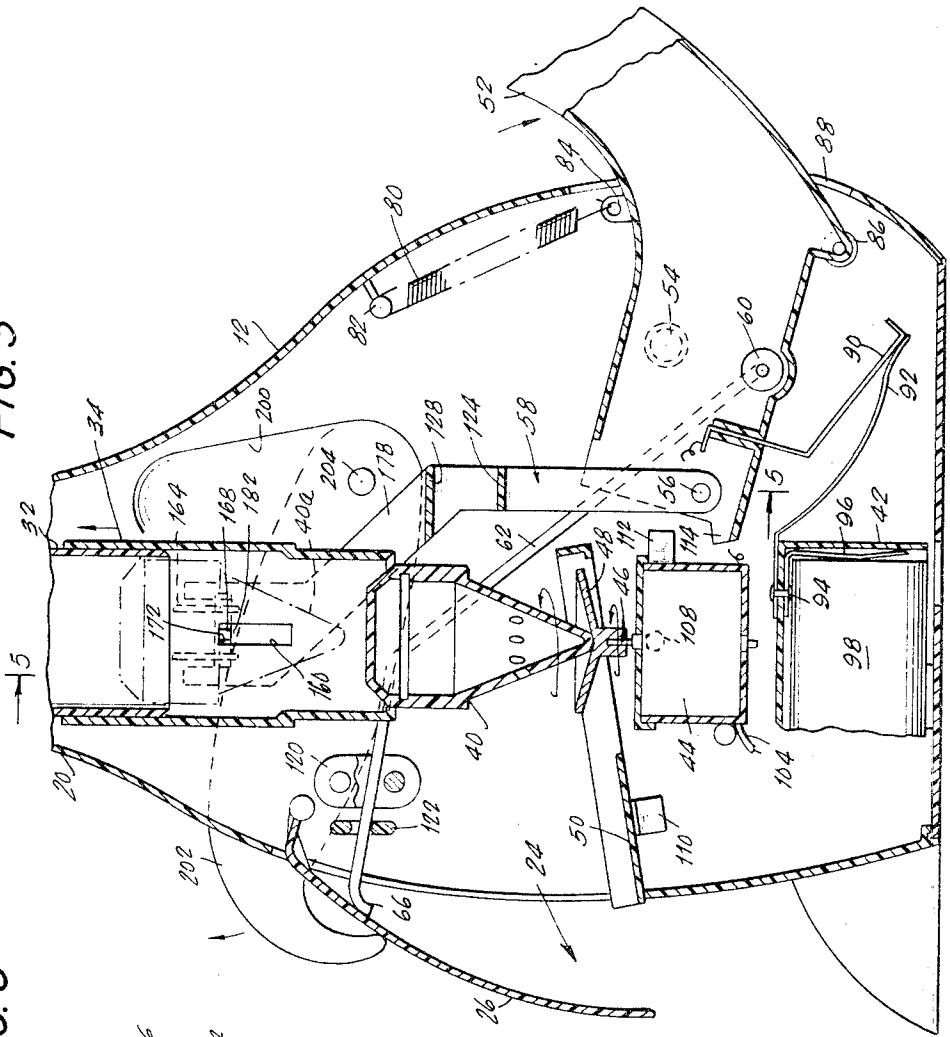
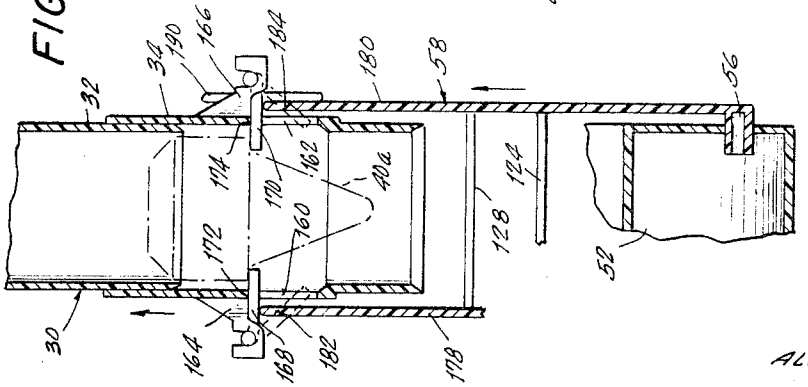


FIG. 5



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FIG. 4

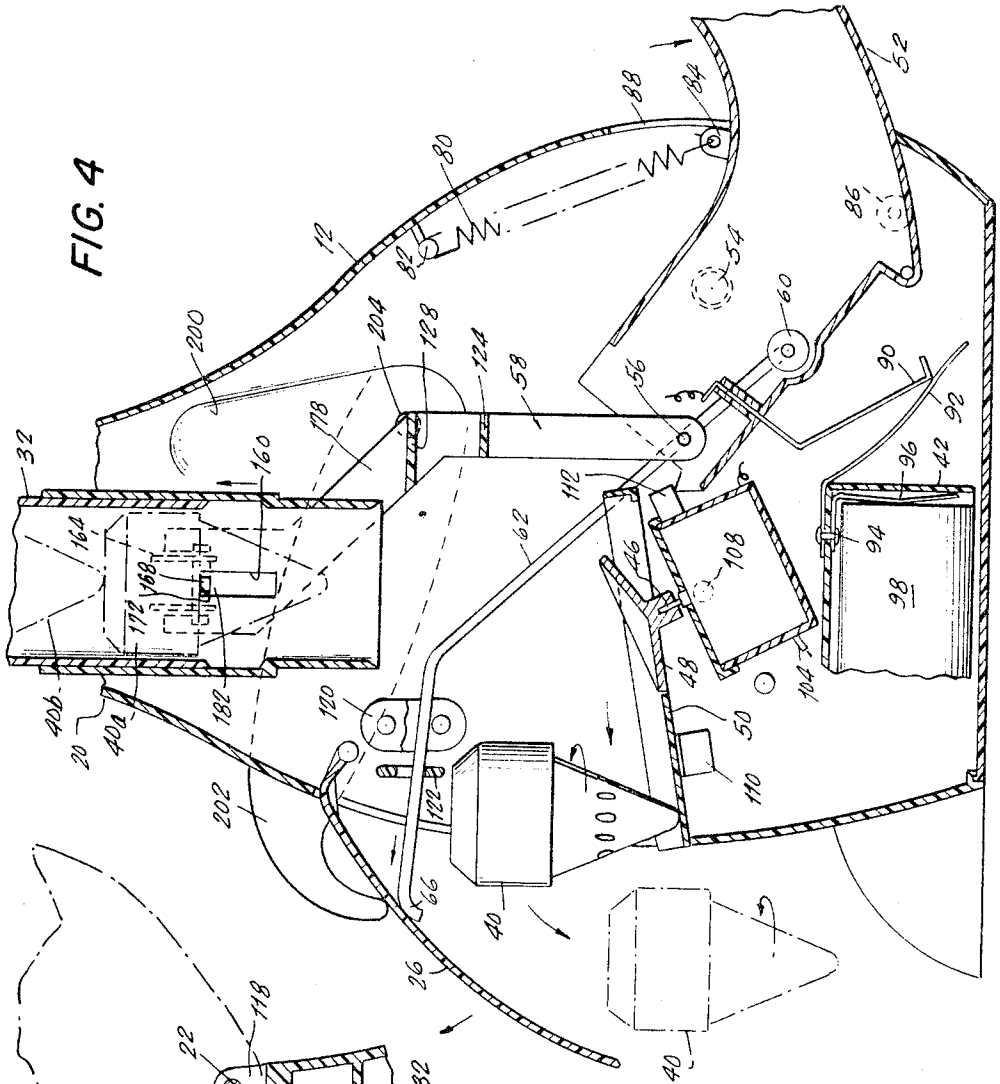


FIG. 6

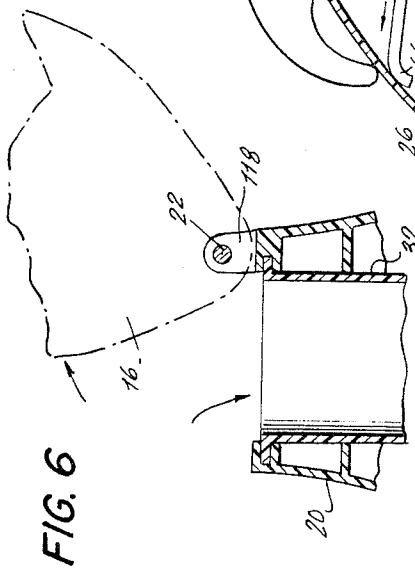
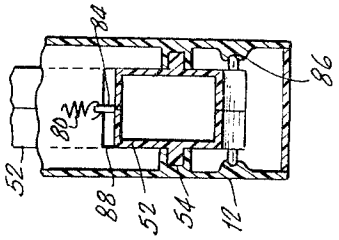


FIG. 7



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ARTICULATED TOY FOR SPINNING TOPS

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15 Claims. (Cl. 46—243)

This invention relates to a novel articulated toy and more particularly to an entertainment device for spinning tops.

An object of the present invention resides in the provision of an articulated toy in the shape of a prehistoric monster, any of the familiar animals of the present era, a cartoon character or even of mechanical objects such as ships, airplanes, space ships, rockets or the like which is adapted to successively deliver a plurality of tops, while also providing suitable spin to the tops so that the tops will operate after ejection from the body of the toy.

Another object of the invention resides in the provision of an entertainment device which may be constructed in kit form so as to allow persons of any age to construct the device and thereafter derive entertainment from its use.

A further object of the present invention resides in the provision of a toy which is designed to provide a high degree of entertainment to a child, while being strong and sturdy, thereby achieving a maximum amount of playtime and life for the toy.

A further object of the invention resides in the provision of an animated toy for spinning tops that is comprised of a minimum number of movable parts, yet which is highly efficient in operation and pleasing in appearance.

One of the features of this invention resides in the provision of a telescopic magazine for successively delivering tops to a spinning tray or rotational member, which in turn is driven by a motor itself pivoted within the body and actuated by an actuation lever, which in turn not only tilts the motor, but actually controls operation of the motor and also raises a lower section of the telescopic magazine, opens a door and actuates means, serving to hold the next to lowest top in the magazine.

In accordance with an operative embodiment of the invention, there is provided a toy having a hollow body provided with an opening therethrough. A swingable door is mounted for closing the opening and for operation and the opening thereof through an actuating lever and suitable connecting means. A battery casing for receiving batteries is provided in the housing, the batteries being electrically operatively connected to a motor for driving the motor. A switch is mounted on the operating lever for controlling the flow of electrical power from the batteries to the motor. The motor drives a concave-shaped tray, which is mounted in alignment with a chute, the outer most end of which is positioned adjacent the opening. A telescopic magazine is mounted in the body and access to the housing is had by tilting the head or other portion of the toy. A plurality of tops can be disposed in the magazine and a lifting bar is connected to the actuating lever for raising the lowermost section of the tubular magazine so that the lowermost top may be freed from the magazine in successive operations upon actuation of the actuating lever. The lever actually engages the motor to tilt the motor to align the tray with the chute and the link mechanism will cause the door to open simultaneously. Thus, upon operation of the actuation mechanism, a top will be rotated and then ejected through the opening along the chute. Because of the provision of a magazine adapted to receive

a plurality of tops therein, the toy will serve to provide continuing attraction by its extended operation to anyone using the toy.

Another object of the invention resides in the provision of a novel telescoping magazine for tops that not only is arranged so as to support a top in a vertical position while it is engaging a rotating tray for inducing spin thereon, but which has a lower section which may be raised so as to permit the tray to tip and the top to slide down a chute and out the door.

A yet further object of the invention resides in the provision of a novel lifting bar, which is not only adapted to raise the lower section of the telescoping magazine but is also adapted to actuate a pawl for holding tops within the magazine.

A still further object of the invention resides in the novel arrangement of drive means for the toy which includes a motor tiltably mounted within the body and carrying in a driving manner a rotating concave tray which is adapted to be tilted from an axially vertical position to an inclined position in alignment with a chute for delivering a spinning top outwardly of the body.

Still further objects and features of this invention reside in the provision of an articulated toy that is highly entertaining, attractive in appearance, capable of being manufactured out of readily available materials, such as molded plastics, including polystyrene, polyethylene, polyvinyl chloride or the like, which employs a minimum number of movable parts so as to reduce not only the cost thereof, but also the possibility of breakage, and which is simple to operate.

These, together with the various ancillary objects and features of the invention, which will become apparent as the following description proceeds, are attained by this articulated toy, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example only, wherein;

FIG. 1 is a perspective view of an embodiment of the toy in the form of a fanciful creature;

FIG. 2 is an enlarged vertical sectional view of the toy illustrating the various component parts in an initial position;

FIG. 3 is a view similar to FIG. 2, but illustrating the toy after the actuating lever has been partially operated and illustrating one top in spinning engagement with the rotatable concave tray and with the door partially open;

FIG. 4 is a view similar to FIGS. 2 and 3, but showing the toy after the actuating lever has been fully operated with the top moving downwardly and out of the opening after the motor and tray have been tilted and with the door in open position and the lower section of the telescopic magazine in a raised position;

FIG. 5 is a vertical sectional view taken along the plane of line 5—5 in FIG. 3 illustrating in particular the construction of the magazine and the means used for holding tops within the magazine;

FIG. 6 is a sectional detail view illustrating in particular the construction of the upper portion of the magazine and the articulated head;

FIG. 7 is a sectional detail view taken along the plane of line 7—7 in FIG. 2 illustrating the construction of the actuating lever; and

FIG. 8 is a perspective view of the connecting means utilized for opening the door which is connected to the actuating lever.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral **10** is used to generally designate an illustrative embodiment of a toy constructed in accordance with the concepts of the present invention. The toy **10** is in the shape of a

fanciful creature in the form of a caricature of a prehistoric monster. Of course, this shape is only exemplary and various configurations may be provided for the toy such as that of any known characters, fanciful

so that when the contacts do there is no

position allowing the motor to straighten out, allowing the lower magazine section 34 to slide downward, stopping the motor, permitting the pawls 168 and 170 to fall free and permitting the top 40*a* to fall down into engagement with the tray 48. The top 40*a* is held against movement out of the vertical position by the lowermost portions of the lower section of the magazine. The tail is then ready for further operation to eject a further top 40*a*.

Of course, the tops may be configurated in a shape so as to simulate cartoon characters, fanciful creatures, or any other being or mechanism as desired.

A latitude of modification, substitution and change is intended in the foregoing disclosure, and in some instances, some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

I claim:

1. A toy comprising a hollow body having an opening, drive means in said body, rotatable means for rotating a top connected to said drive means, means for feeding a top to said rotatable means, and actuating means for moving said rotatable means to direct a top carried thereby through said opening.

2. A toy comprising a hollow body having a swingable door, drive means in said body, rotatable means for rotating a top connected to said drive means, means for supporting a top in said body at a location adjacent said rotatable means, means for causing said top to engage said rotatable means, and actuating means for simultaneously opening said door and tilting said rotatable means to direct said top outwardly of said body.

3. A toy comprising a hollow body having a swingable door, drive means in said body, switch means for controlling operation of said drive means, rotatable means for rotating a top connected to said drive means, means for supporting a top in said body at a location adjacent said rotatable means, means for causing the top to engage said rotatable means, and actuating means for opening said door and for moving said rotatable means to direct the top outwardly of said body.

4. A toy comprising a hollow body having an opening, drive means in said body, a chute in said body communicating with said opening, rotatable means for rotating a top, said rotatable means being adjacent said chute and being connected to said drive means, means for supporting a top in said body at a location adjacent said rotatable means, means for causing the top to engage said rotatable means, and actuating means for opening said door and for tilting said rotatable means into alignment with said chute to direct the top through said opening.

5. A toy comprising a hollow body having a swingable door, drive means pivoted in said body, an actuating lever pivoted to said body, a concave top supporting member for rotating a top, said member being connected to said drive means and rotated thereby, means for feeding a top onto said member, said actuating lever being connected to said door, said feed means and said member for opening said door, for tilting said member to direct the top outwardly of said body, and subsequently operating said feed means to feed another top onto said member.

6. A toy comprising a hollow body, said body having an opening therethrough, a door articulated to said body for closing said opening, a motor within said body, an actuating lever pivoted to said body, drive means including said motor pivoted in said body, a rotatable, tiltable tray driven by said drive means and connected thereto, a chute in said body in alignment with said opening, means for supporting a top in said body at a location adjacent said tray, means for releasing the top to permit the top to engage said tray for rotation thereby, said lever being engageable with said drive means to tilt said drive means and hence said tray so that said tray is in alignment with said chute upon operation of said lever, and actuating means connected to said lever for opening said door upon operation of said lever.

7. A toy comprising a hollow body, said body having an opening therethrough, a door articulated to said body for closing said opening, an actuating lever pivoted to said body, a source of electrical power in said body, a motor arranged to be pivoted by said actuating lever in said body and electrically connected to said source of electrical power, switch means carried by said lever for controlling excitation of said motor by said source of electrical power, a conical top rotating, tiltable tray driven by said motor and connected thereto, a chute in said body in alignment with said opening, means for supporting a top in said body at a location adjacent said tray, means for releasing the top to permit the top to initially engage said tray while the top is supported in an axially upright position, said lever being engageable with said motor to tilt said motor and hence said tray so that said tray is in alignment with said chute upon operation of said lever, and actuating means connected to said lever for opening said door upon operation of said lever.

8. A toy comprising a hollow body, said body having an opening therethrough, a door articulated to said body for closing said opening, an actuating lever pivoted to said body, a source of electrical power in said body, a motor arranged to be pivoted by said actuating lever in said body and electrically connected to said source of electrical power, switch means carried by said lever for controlling operation of said motor by said source of electrical power, a top rotating, tiltable tray driven by said motor and connected thereto, a chute in said body in alignment with said opening, feed means for successively feeding tops onto said tray, said lever being engageable with said motor to tilt said motor and hence said tray so that said tray is in alignment with said chute upon operation of said lever, and actuating link means connected to said lever for opening said door upon operation of said lever.

9. A toy according to claim 8, wherein said feed means includes a tubular magazine for tops arranged substantially vertically in said body.

10. A toy according to claim 9 including a release pawl connected to said actuating lever and operable to engage the next to lowermost top in said body upon each operation of said lever to lower said next to lowermost top into position to be fed by said feed means.

11. A toy according to claim 10 which includes a lifting bar pivoted to said actuating lever, said magazine being telescopic in construction and having a movable lower section, said lifting bar being connected to said lower section to raise said lower section upon operation of said actuating lever to receive said next to lowermost top.

12. A toy according to claim 10 including a closure element at the top of said body, said closure element being movable to permit access to said magazine for refilling said magazine.

13. A toy comprising a hollow body having a swingable door, drive means in said body, top supporting and rotating means connected to said drive means, magazine means for feeding tops in said body, to said top supporting and rotating means, and actuating means connected for opening said door and for tilting said top supporting and rotating means to direct the top through said door and outwardly of said body.

14. A toy comprising a hollow body having a swingable door, drive means in said body, top supporting and rotating means connected to said drive means, magazine means for feeding tops in said body to said top supporting and rotating means, and actuating means connected for opening said door and for tilting said top supporting and rotating means to direct the top through said door and outwardly of said body, said magazine means being of a substantially vertically disposed tubular telescopic construction for holding a plurality of tops therein.

15. A toy comprising a hollow body having a swingable door, drive means in said body, an actuating lever pivoted to said body, top supporting and rotating tiltable means connected to said drive means, magazine means for feeding tops in said body to said top supporting and rotating means, and actuating means operable by said actuating lever for opening said door and for tilting said top supporting means to direct the top through said door and outwardly of said body, said magazine means being of a substantially vertically disposed tubular telescopic construction for holding a plurality of tops therein, a lifting bar pivoted to said actuating lever, said magazine means having a movable lower section, said lifting bar being connected to said lower section to raise said lower section to feed a top subsequently to the tilting of said top supporting means.

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