Oct. 22, 1963 G. E. BERGER 3,107,452

TOY PLANE CONTROL DEVICE

Filed June 30, 1961

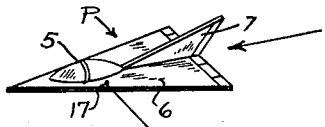


Fig. 1

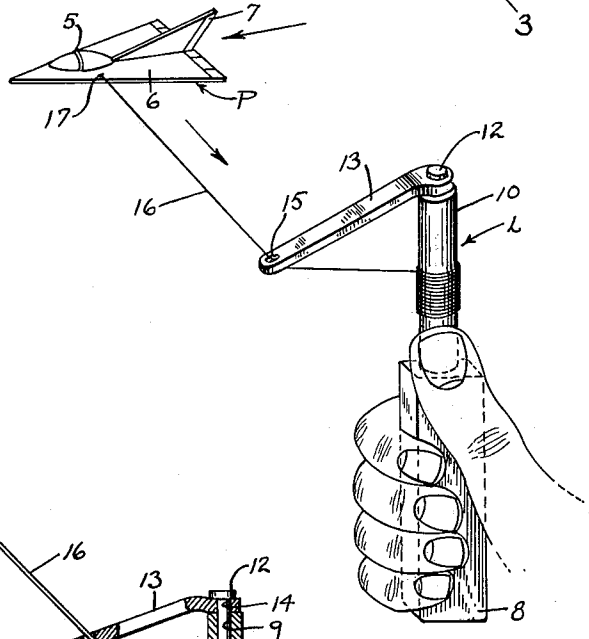


Fig. 2

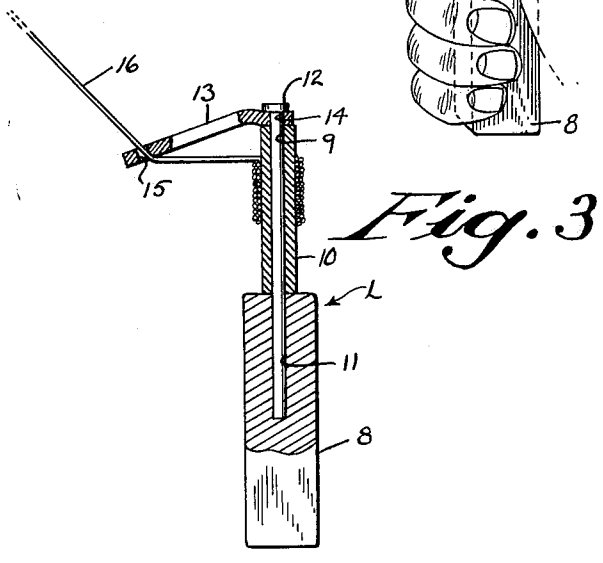
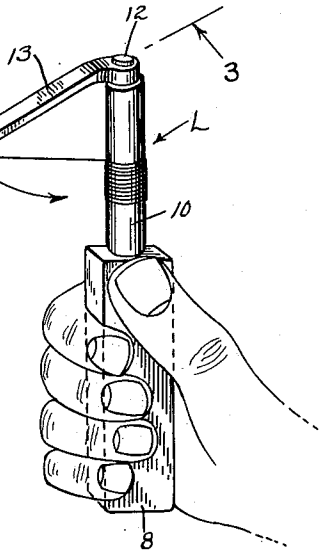


Fig. 3



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TOY PLANE CONTROL DEVICE

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This invention appertains to toys and amusement devices, and more particularly to a novel means for launching and controlling the flight of toy airplanes.

One of the primary objects of my invention is to provide a toy plane launching and controlling device, including a manually operated handle having associated therewith by a flexible cord or line a toy plane, with means upon manipulation of the handle for placing the plane in flight.

Another salient object of the invention is to provide a simple hand operated device for propelling the toy airplane around an operator and in the air, to simulate the flight of a real plane, with means for controlling the radius of the flight circle in a simple and easy manner and for permitting the pulling in of the plane to a position of rest against a manipulating handle.

A further important object of my invention is to provide a toy airplane launcher and retractor which merely embodies an operating handle adapted to be moved in a circle by an operator and a rotatable spool or sleeve carried by the handle having secured thereto a cord or line connected with a toy airplane, the line being adapted to be wound off and on the spool or sleeve to control the flight of the toy airplane around the operator.

A further important object of my invention is the provision of means for controlling the rotation of the spool or sleeve by using the forefinger or thumb for braking or stopping the rotation of the spool to control the flight of the plane and for winding up the cord or line automatically on the spool or sleeve during the flight of the plane around the operator, so that the plane will automatically return to the handle.

It has been found, that there is a tendency for the cord or line to wind off and on the spool unevenly and to become tangled during the manipulation of the handle.

It is, therefore, another further important object of my invention to provide a novel cord guide rotatable relative to the spool or sleeve and handle through which the cord is threaded, which will effectively guide the cord toward and away from the spool and thus effectively prevent the tangling of the cord and uneven winding of the cord on and off of the spool.

A still further important object of my invention is the provision of a simple toy embodying a manipulating handle adapted to be held in the hand, having rigidly secured thereto a shaft on which is rotatably mounted a spool or sleeve for the cord of the airplane which can be controlled by a finger of the operator and a cord guide consisting of a flat arm rotatable on the shaft and disposed at the outer end of the spool or sleeve inclining outwardly and downwardly, having an eye at the outer end thereof through which the cord is threaded, so that the cord can be easily wound on and off the spool or sleeve.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described and claimed, and illustrated in the accompanying drawing, in which drawing,

FIGURE 1 is a perspective view showing my novel airplane launcher and retractor in operation, with the plane in flight and ready for movement further away from the operator;

FIGURE 2 is a view similar to FIGURE 1, but showing the spool held against rotation by a finger of the operator for permitting the winding up of the cord on the spool or sleeve to retract the airplane, and

FIGURE 3 is a longitudinal sectional view through the

plane launcher and retractor, the section being taken substantially on the line 3—3 of FIGURE 1, looking in the direction of the arrows.

Referring to the drawing, in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter L generally indicates my novel launcher and retractor for a toy airplane P.

The toy plane P can be of any desired character and made from any desired material, and as illustrated the same includes a fuselage **5**, wings **6** and empennage **7**.

The launcher and retractor L includes a handle **8** preferably shaped to form a convenient handle and the forward or upper end of the handle has anchored therein an axially disposed shaft **9**. Rotatably mounted upon the shaft **9** is a spool or sleeve **10**. The shaft **9** can be formed in different manners, but as illustrated the same is in the nature of a rod and the inner end of the rod is frictionally fitted and driven into an axial opening **11** formed in the handle **8**. The outer end of the shaft **9** can have formed thereon a head **12**.

The spool **10** can be of any desired shape, but the same is preferably in the nature of a sleeve and the inner end of the spool engages the handle **8** and the outer end of the spool terminates slightly short of the head **12**. Also rotatably mounted on the shaft **9** independent of the spool **10** is a cord guide **13**. This cord guide **13** is in the nature of a flat bar, and the same has formed on its inner end a bearing opening **14** for receiving the shaft **9**. Thus, the arm **13** and spool **10** are rotatably mounted on the shaft and are confined on the shaft between the handle **8** and the head **12**. The arm inclines downwardly and outwardly and the outer end thereof is provided with a guide eye **15**.

Anchored to the spool **10** and wound thereon is a cord or line **16**. The outer end of the cord or line **16** is secured to the airplane P. As illustrated, I have secured the line or cord, as at **17**, to one wing **6** adjacent to the leading edge thereof. The intermediate portion of the cord or line is threaded through the guide eye **15**.

In the initial assembling of the toy, the arm **13** is first placed on the shaft **9** adjacent to the head **12** after which the spool **10** is placed on the shaft and the inner end of the shaft is then secured to the handle.

In operation of the device and considering that the cord **16** is wound on the spool **10**, and it is desired to launch the airplane P, then the operator grasps the handle **8** and holds the same in an elevated position and moves the handle in a circular motion. As centrifugal force operates on the plane P, the same moves outwardly in a circular path around the operator and the spool rotates and the cord is payed off of the spool. The cord guide **13** follows the path of the cord and effectively guides the cord off of the spool and prevents the tangling of the cord. The operator can control the flight of the plane by moving the handle up or down and by controlling the rotation of the spool. This is accomplished by placing the forefinger or thumb against the lower end of the spool **10**. When it is desired to retract the plane, the spool is firmly held against rotation by placing more pressure against the spool by the forefinger or thumb, and as the plane moves around the operator with the free rotation of the guide arm **13**, the line or cord will automatically wind up on the spool and bring the plane inward and finally against the spool. The rotation of the guide arm **13** independent of the spool effectively operates to prevent the tangling of the line and the proper winding up of the cord on the spool.

Great stress is laid on the cord guide **13** having independent rotation of the spool **10**, so that when the spool is held against rotation the guide arm can continue its movement around the shaft and guide the cord onto and around the spool.

Various changes in details may be made without departing from the spirit of the invention or scope of the claims, but what I claim as new is:

1. A toy airplane launcher, flight controller and retractor comprising a handle adapted to be grasped by an operator and moved in a circular path, a shaft having its inner end anchored in the handle and arranged in longitudinal alignment therewith and projecting outwardly from the outer end of said handle, a longitudinally extending spool rotatably carried by the shaft having its inner end disposed adjacent to the forward end of the handle and in a position adapted to be engaged by a finger of the hand of the operator grasping the handle, a cord adapted to be wound on and off the spool for connection with a toy airplane, and a guide for the cord during the winding of the same off and on the spool including an arm rotatably mounted on the shaft and disposed at the

outer end of the spool, said arm having its outer end provided with a guide eye through which the cord is threaded.

2. A toy airplane launcher, flight controller and retractor as defined in claim 1, and said cord guide being rotatably mounted on the shaft independently of the spool, whereby said cord guide can rotate around the spool when the spool is held against rotation by the finger of an operator.

3. A toy airplane launcher, flight controller and retractor as defined in claim 2, and said arm inclining downwardly and outwardly away from said shaft.

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