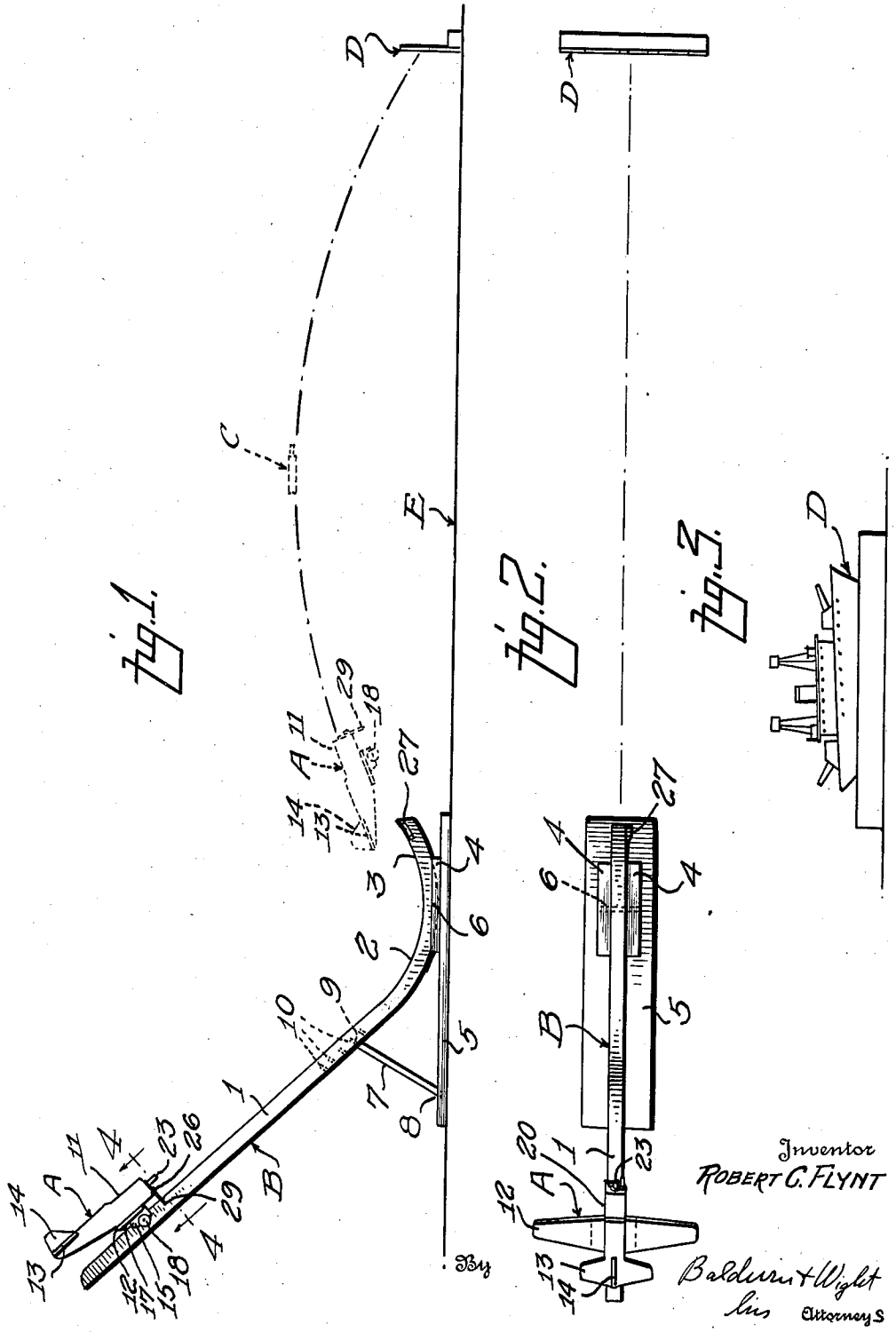
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TOY FOR SIMULATING AIRPLANE ATTACK

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Fig. 4.

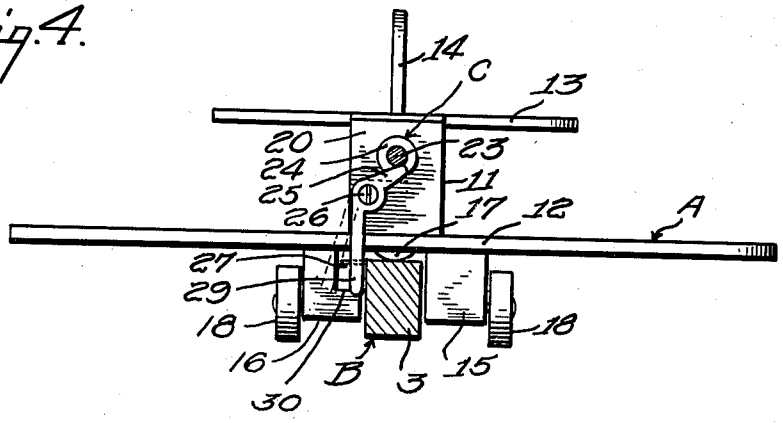



Fig. 5.

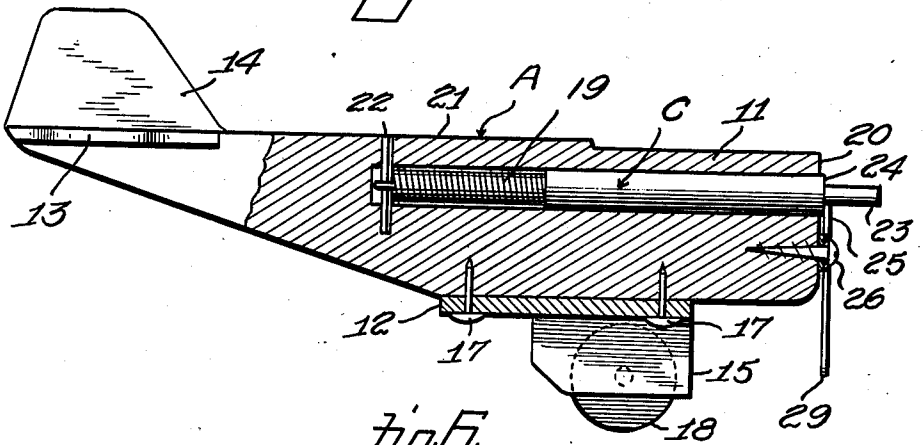
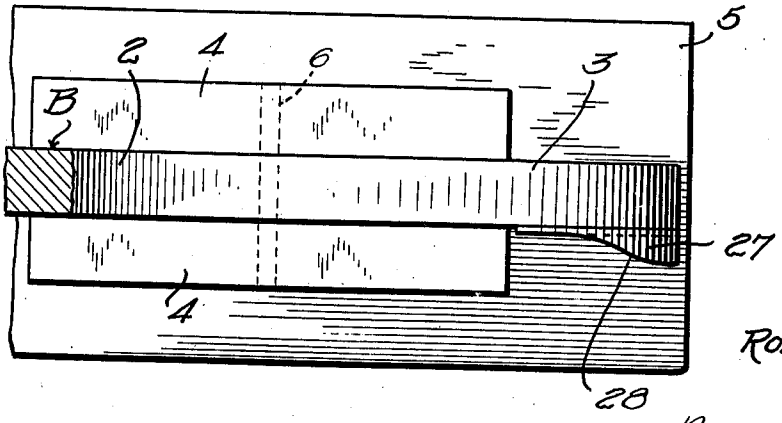



Fig. 6.




Inventor
ROBERT C. FLYNT

By Baldwin & Wight
his Attorneys

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2,327,702

## TOY FOR SIMULATING AIRPLANE ATTACKS

Robert C. Flynt, Winston Salem, N. C., assignor to Brown-Rogers-Dixson Co., Winston Salem, N. C., a corporation of North Carolina

Application March 2, 1943, Serial No. 477,740

6 Claims. (Cl. 46—31)

This invention relates to toys for simulating airplane attacks and more particularly to toys of the character stated which are adapted to "fire" or "release" a projectile which then travels generally away from and in line with the direction of movement of the airplane at the time of "firing" or "releasing" the projectile. Thus dive-bombing" attacks may be simulated, although it is not necessary for the projectile to follow a vertical or downward trajectory.

An object of the invention is to provide a toy of the kind referred to in which an airplane is adapted to move along a predetermined path, preferably inclined, and to carry a projectile which is "released" or "fired" at a predetermined point of the travel and projected forwardly from the airplane.

Another object is to provide such a toy in which the airplane is directed along its predetermined path by an inclined track.

A further object is to provide a toy having a track for the purpose specified above and in which the inclination of the track may be adjusted to enable the trajectory of the projectile to be controlled.

Other objects will become apparent from a reading of the following description, the appended claims, and the accompanying drawings, in which:

Figure 1 is a side elevation of a toy apparatus constructed in accordance with the invention;

Figure 2 is a top plan view thereof;

Figure 3 is an elevation of a target;

Figure 4 is a front elevation of a toy airplane and showing a track in section, drawn on an enlarged scale;

Figure 5 is a central longitudinal vertical section of the toy airplane drawn on the enlarged scale; and

Figure 6 is a fragmentary top plan view of the lower end of the track and a supporting base, drawn on the enlarged scale.

The illustrative embodiment of the invention includes an airplane A, a track B adapted to direct the airplane to move downwardly at an inclination, a projectile C carried by the airplane, and means to be described for causing the projectile to be "fired" or "released" from the nose end of the plane so as to fly toward a target D, both the track A and target D resting on a supporting surface E.

The track B comprises a straight inclined part 1 terminating in a lower end portion 2 which curves toward a reverse inclination at 3. The lower end portion 2 is received between two blocks 4—4 fast on a base 5, a pivot pin 6 extending between the blocks 4—4 and through the track portion 2 for mounting the track B in a manner permitting its being adjusted to vary the inclination of the track part 1. A prop 7 having its lower end seated as at 8 in the base 5 is equipped at its upper end with a pin 9 adapted to be fitted into any of a series of attaching stations 10 on the under side of the track B for holding the track in a selected position of adjustment.

The airplane A includes a fuselage 11, wings 12 and 13 and tail fin 14. Guide members 15 and 16 are secured to the bottom of the wing 12 and are spaced from each other so as to extend downwardly adjacent opposite sides of the track B for preventing the airplane from being displaced laterally from the track. The wing 12 may be secured to the fuselage by round-headed fasteners 17, the heads of which serve nicely as slides engageable with the top of the track B.

In operation, the airplane A is positioned on the track B near the top end thereof as shown in full lines in Figure 1 and is then released. It will slide gravitationally down the inclined track part 1 and when it reaches the curved part 2 it will "level off" and then pass over the reversely inclined part 3, finally clearing the track B and going unsupported for a short further distance and coming to rest on the supporting surface E. Preferably wheels 18 are journalled on the guide pieces 15 and 16 for supporting the front end of the airplane when it lands on the surface E.

The front end portion of the airplane A, preferably the fuselage 11, is formed with a bore 19 which extends inwardly from the plane nose 20 and terminates within the fuselage. A projector or spring 21 mounted in the root end of the bore has its rear end secured against displacement by a pin 22. The front end of the spring is free and the spring is thus adapted to be compressed by being pushed rearwardly by the projectile C. The latter is formed with a reduced end portion 23 providing a shoulder 24 engageable by a latch 25 pivoted on a screw 26 at the front of the airplane A. It is apparent that when the latch 25 is swung clockwise as viewed in Figure 4, the projectile will be released and the spring 21 will expand so as to project the projectile D forwardly from the nose of the airplane.

Means are provided for releasing the latch 25 while the airplane is passing along the lower end portion of the track A. In the form shown a cam 27 on one side of the track lower end por-

tion has its curved surface 28 so positioned as to be engaged by an arm 29 on the latch 25 as the airplane moves along the lower end portion of the track, thus rocking the latch clear of the shoulder 24 on the projectile and permitting the latter to be projected forwardly by the spring 21 while the airplane continues its flight. In order that the airplane may thus continue its flight without interference by the cam 27, the guide member 16 adjacent the side of the track on which the cam 27 is located is cut out as at 30 to provide a clearance space for the cam. Thus the cam will not be struck by any part of the airplane during its flight, being engageable only by the latch arm 29.

The trajectory of the projectile can be controlled by changing the alignment of the track and by changing the track's inclination. Thus the projectile can be aimed at the target D when the latter is placed in different positions.

The apparatus disclosed herein embodies the invention in the form now preferred, but it is to be understood that changes may be made without departing from the invention as defined in the claims.

I claim:

1. In a toy for simulating airplane attack, an airplane; means for directing the airplane to move along a predetermined path; a projectile mounted in the nose of the airplane; a projector tending to project said projectile forwardly from said nose; releasable means mounted on said airplane for holding said projectile against being so projected; and means mounted in the path of movement of said releasable means and engageable with said releasable means for operating the latter to effect releasing of said projectile.

2. In a toy for simulating airplane attack, an airplane; means for directing the airplane to move along a predetermined path; a projectile mounted in the nose of the airplane; a spring carried by said airplane and tending to project said projectile forwardly from said nose; a latch mounted on said airplane for holding said projectile against being so projected; and means mounted in the path of movement of said latch and engageable with said latch for operating the latter to effect releasing of said projectile.

3. In a toy for simulating airplane attack, an airplane; means for directing the airplane to move along a predetermined path; a bore extending from the nose of the airplane into the fuselage thereof; a spring seated in said bore; a projectile loosely fitted into said bore and pressed against by said spring; a latch mounted on said airplane and normally holding said projectile in said bore against the action of said spring; and a cam mounted in the path of said latch but clear of the path of the airplane and engageable by said latch as the airplane moves past for releasing the latch and thus enabling said spring to project said projectile forwardly from said nose.

4. In a toy for simulating airplane attack, an inclined track terminating in a lower end portion which curves toward a reverse inclination; an airplane including means for guiding the airplane to follow the track; a projectile; means on the airplane for mounting said projectile for movement with the airplane and for movement forwardly from said airplane; a spring carried by said airplane and tending to project said projectile forwardly from said airplane; a latch mounted on said airplane for normally holding said projectile against being projected by said spring; and a cam mounted on the lower end portion of said track and being cooperable with said latch during movement of said airplane along said lower end portion of the track for operating the latch to enable said spring to project said projectile.

5. In a toy for simulating airplane attack, an inclined track terminating in a lower end portion which curves toward a reverse inclination; an airplane including means for guiding the airplane to follow the track; a projectile; means on the airplane for mounting said projectile for movement with the airplane and for movement forwardly from said airplane; a spring carried by said airplane and tending to project said projectile forwardly from said airplane; a latch mounted on said airplane for normally holding said projectile against being projected by said spring; a cam mounted on the lower end portion of said track and being cooperable with said latch during movement of said airplane along said lower end portion of the track for operating the latch to enable said spring to project said projectile; and means for mounting said track at differently inclined positions to enable the trajectory of the projectile to be controlled.

6. In a toy for simulating airplane attack, an inclined track terminating in a lower end portion which curves toward a reverse inclination; an airplane adapted to rest upon and slide down said track; guide members fast with the bottom of the airplane and adapted to extend respectively alongside opposite sides of said track for preventing lateral displacement of the airplane from the track; a bore extending inwardly from the front of said airplane; a spring seated in said bore; a projectile loosely fitted into said bore and pressed against by said spring; a latch mounted on said airplane and normally engaging said projectile for holding the projectile in said bore against the urge of said spring; an arm on said latch extending adjacent one side of said track; and a cam on said one side of the lower end portion of said track engageable with said arm during passage of said airplane along said track lower end portion for operating the latch to release the projectile, the guide member which extends adjacent said one side of said track being formed to provide a clearance space for said cam to thus enable the airplane to pass beyond said cam.

ROBERT C. FLYNT.