Feb. 5, 1935. A. M. BARRETT 1,989,732

TOY

Filed April 20, 1931 2 Sheets-Sheet 1

Fig. 1.

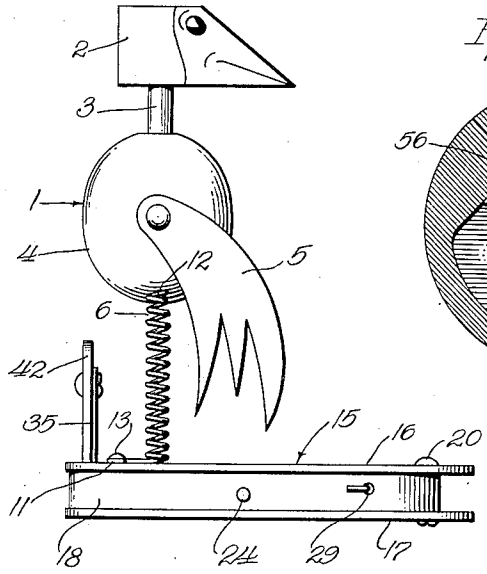
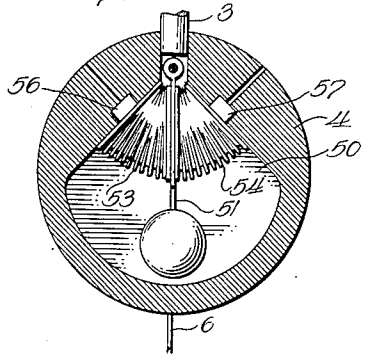


Fig. 8.



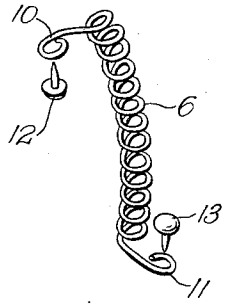


Fig. 7.

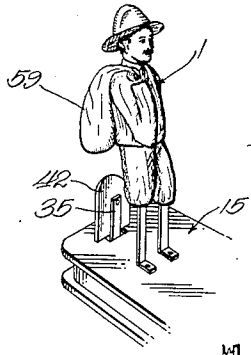


Fig. 9.

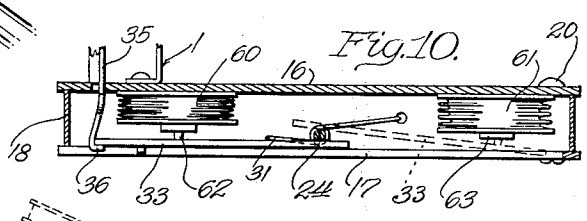


Fig. 10.

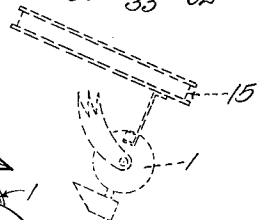
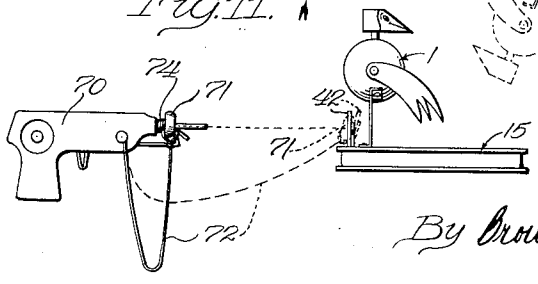


Fig. 11.



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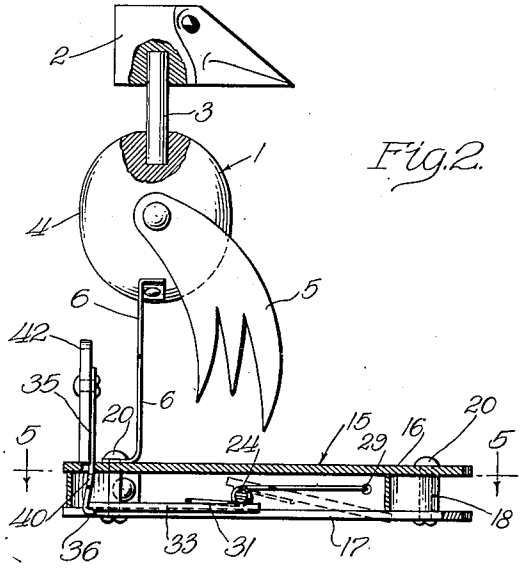


Fig.2.

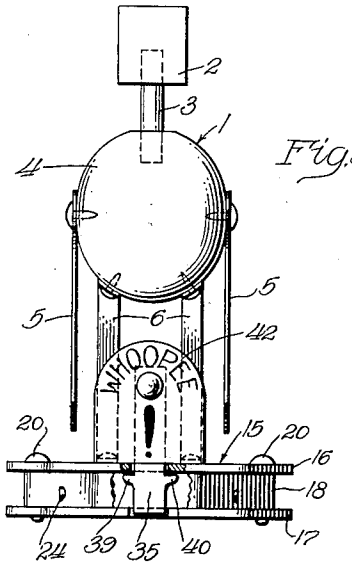


Fig.3.

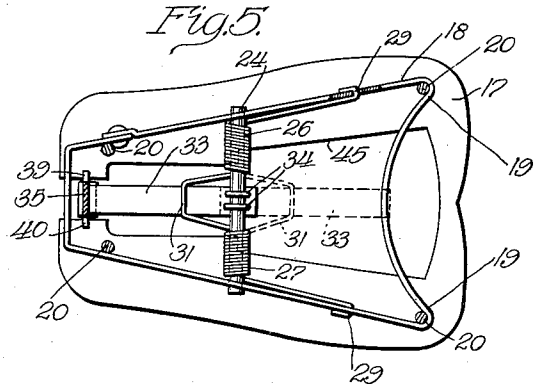


Fig.5.

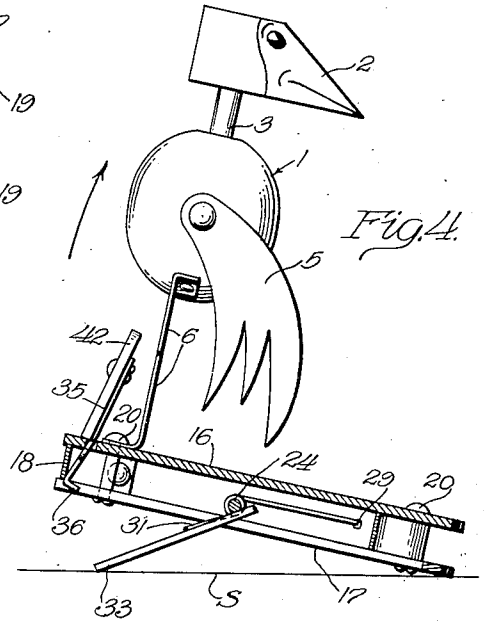


Fig.4.

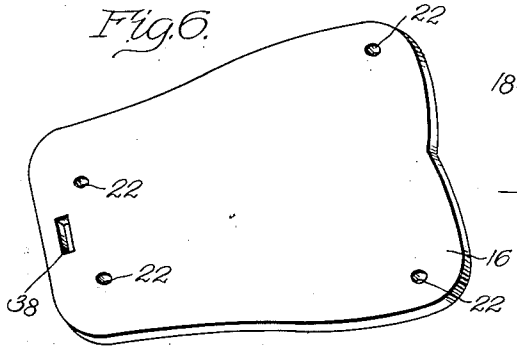


Fig.6.

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UNITED STATES PATENT OFFICE

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TOY

Arthur M. Barrett, Chicago, Ill., assignor to Herbert Specialty Manufacturing Co., Chicago, Ill., a corporation of Illinois

Application April 20, 1931, Serial No. 531,450

13 Claims. (Cl. 46—40)

The present invention relates generally to toys and similar amusement devices and has for its principal purpose the provision of a jumping figure and missile throwing means which are so arranged and constructed that when the figure is struck by the missile it executes a complete somersault in the air, emitting a sound or sounds as it does so, thus creating an interesting and more or less startling effect.

Other objects and advantages of the present invention will be apparent to those skilled in the art after a consideration of the following detailed description of the preferred structural embodiment, taken in conjunction with the accompanying drawings, in which:

Figure 1 is a vertical side elevation of my improved jumping figure toy;

Figure 2 is also a vertical side elevation, but showing certain parts broken away and in section, in order to more clearly show the interior thereof;

Figure 3 is a rear view of the device shown in Figures 1 and 2 and showing particularly the target and trigger mechanism and the pivotal support thereof on the base of the jumping figure;

Figure 4 is a view similar to Figure 2 and showing the position of the jumping figure as it begins the execution of the jump or somersault;

Figure 5 is a view of the power storing spring mechanism by virtue of which the somersault is executed and corresponding to a section taken substantially along the line 5—5 of Figure 2;

Figure 6 is a perspective showing the top plate of the base portion before the figure and associated parts are attached thereto;

Figure 7 is a fragmentary detailed view showing one of the spring legs for the figure proper, as shown in Figure 1, other form of spring legs being illustrated in Figures 2, 3 and 4;

Figure 8 is a vertical cross-section showing one form of sound device which, as shown, may be incorporated in the body of the figure proper;

Figure 9 is a modified form of figure showing, by way of example, a human figure bearing a knapsack in which may be incorporated a sound device;

Figure 10 is another form of jumping figure wherein the sound device is mounted on the base and is adapted to be actuated by the spring means which furnishes the energy by virtue of which the toy executes its movement; and

Figure 11 shows the way in which the jumping toy is used.

Referring now more particularly to Figure 1, the reference numeral 1 indicates, in its entirety, a figure in the form of a bird or similar animal, having a head 2, a neck 3, a more or less rounded body 4, wings 5 and legs 6. The legs 6 are formed of spring wire, as illustrated in Figure 7, the ends of which are looped, as at 10 and 11, by which fastening means 12 and 13 in the form of small tacks or nails may be used to secure the legs to the body 4 and to the flat base, the latter being indicated in its entirety by the reference numeral 15. By virtue of the resilient or spring legs 6, the figure is supported on the base 15 so that it is free to oscillate back and forth in quite a realistic and lifelike manner.

The base 15, in the preferred structural embodiment, contains most of the operating mechanism by which the figure is caused to execute its movements. The base 15 comprises a pair of spaced plates or flat members 16 and 17 of the general configuration shown in Figures 5 and 6. As there shown, one end of each of the base plates is slightly narrower than the other end, and it is upon the narrow end of the base that the figure itself is preferably mounted. The plates 16 and 17 are spaced by a strip of material 18 bent as best shown in Figure 5. Preferably the plates 16 and 17 are formed of cardboard or similar material while the strip 18 is preferably of sheet metal. Rivets 20 are utilized to secure the plates 16 and 17 together and to firmly hold the irregularly shaped strip 18 in place. To aid in this respect, the strip 18 is bent so that loops 19 are formed near the forward edge of the base which embraces the two forward rivets 20. Preferably, the plates 16 and 17 are apertured, as at 22 in Figure 6, before the rivets 20 are applied and secured in place.

The power for causing the figure to jump is derived from coil spring means, best shown in Figures 4 and 5. A rod or shaft 24 is received by suitably formed apertures in the sides of the strip 18 approximately centrally of the base 15. A length of spring wire is bent to form two sections 26 and 27, and each section is suitably coiled about the rod 24 to form thereby coiled springs spirally wound thereon. Each of the outer ends of the sections 26 and 27 is suitably fixed to the base 15, as by being passed through an aperture in the sides of the strip 18, as indicated in Figures 4 and 5 by the reference numeral 29. The other ends of the sections 26 and 27 form a loop 31 which serves as an extension or operating finger and which is extended along the base 15 radially from the rod 24. Although not essential, the loop 31 may embrace a finger or lever

33, one end of which is pivotally secured to the rod or shaft 24, as by staples 34, and the other end of which is of the proper length to reach almost to the rear edge of the base 15, as best shown in Figures 4 and 5. Preferably, the finger or lever 33 is formed of wood, but obviously other suitable material may be employed as may be desired.

Since one end of the coil spring means 26 and 27 is secured to the base 15 and the other end is secured to the pivoted finger 33, it will be clear that when the finger 33 is manually swung from its dotted line position shown in Figure 5 to the position shown in full lines, the coiled spring means 26 and 27 will be tensioned or stressed and will, when released, react against the floor, table, or other support to cause the toy to execute a vertical jumping movement. In this connection, it is important to note from Figure 4 that the end of the finger 33 which presses against the floor or other supports when placed in stressed or biased position, is substantially directly underneath the figure 1 at the beginning of the jumping operation.

The means for releasably holding the spring means 26, 27 and 33 in its biased position preferably comprises latch or trigger means in the form of a pivoted member 35 having a hook-like projection 36 at its lower end which is adapted to engage underneath the end of the finger or extension 33 to hold the same in that position against the action of the coiled springs 26 and 27. The member 35 is pivoted or otherwise movably mounted on the base 15 by virtue of being passed through a slot 38 formed near the rear edge of the upper base plate 16, the trigger member 35 having a pair of laterally extending ears or projections 39 and 40 (see Figure 3), which prevents the trigger 35 from becoming detached from the base 15.

The upper end of the trigger 35 bears a target plate 42 which is preferably riveted to the upper end of the trigger bar 35 after the same has been inserted through the opening 38 in the plate 16. Thus, the trigger or latch means 35 is movably or pivotally supported on the base 15 with its hooked end 36 in position to engage the outermost end of the finger or extension 33 when the same has been moved from its dotted line position against the action of the coiled springs 26 and 27 to a point near the rear edge of the base 15 and substantially directly underneath the figure 1. For the purpose of permitting the swinging or throwing movement of the extension 33, the lower base plate 17 is provided with a cut-out portion 45, best shown in Figure 5.

When the extension or finger 33 has been engaged by the trigger 35, the jumping figure is ready to be operated. All that it is necessary to do is to move the upper end of the member 35 carrying the target plate 42, forward slightly, that is, from its position shown in Figure 2 to its position shown in Figure 4, whereupon the finger 33 will be released and the power stored in the coiled springs 26 and 27 will be made available to force the outer end of the finger 33 against the table, floor or other supports, the reaction of this force being exerted against the base 15 and will forcibly rock the device about the forward edge of its base and also throw the same into the air where it executes a complete somersault, landing on its base in an upright position as indicated in Figures 4 and 11. Obviously, the strength and position of the springs 26 and 27 may be adjusted or arranged so as to cause the figure or toy to execute one or more complete turns, or the springs may be so arranged that the figure will jump into the air without turning, or any combination of these movements.

The interest and amusement derived from a toy such as that described is greatly increased where some form of sound emitting device is incorporated and made operative when the figure is executing its somersault or jumping movement. The present invention contemplates the association with the toy of a sound device of usual or conventional construction. Such a sound device, per se, forms no part of the present invention and will not be disclosed or described other than sufficient to show its association with the jumping figure of the present invention.

Referring now more particularly to Figure 8, I have illustrated one possible construction embodying a sound device or squawker. As there shown, the body 4 is hollow and defines or encloses a chamber or space 50 in which a weighted pendulum 51 is pivotally suspended. The pendulum 51 is arranged to hang pendant substantially in the middle of the space 50. Secured to the walls of the chamber or recess 50, or otherwise fixedly mounted in the body 4 of the jumping figure, are a pair of bellows 53 and 54 provided with cooperating reeds or other noise makers or squawkers indicated by the reference numerals 56 and 57 and which are arranged to be sounded when the bellows 53 and 54 are compressed.

The operation of the toy with a sounding device of this character is substantially as follows. When the trigger 35 is released the springs 26 and 27 throw the figure 1 upwardly into the air and cause the same to execute one or more somersaults as pointed out above. Since the weighted pendulum 51, however, possesses considerable inertia the tendency will be for the figure to turn with respect to the weighted pendulum 51 in a clockwise direction, as viewed in Figure 8, that is, the pendulum will tend to stay in its original position. This will compress the bellows 54 and will cause the device 57 to emit a sound, this occurring in practice practically instantaneously with the actuation of the trigger 35 releasing the extension or finger 33. The other bellows 53 and the sounding device 56 will be actuated when the figure completes its turning movement and lands on its base again, the weighted pendulum 51 by this time partially or wholly taking up the rotation of the figure 1. When the figure lands on the base the pendulum 51 will tend to continue in its rotation and the inertia thereof will therefore cause the pendulum to swing rearwardlly with respect to the body 4, thus compressing the bellows 53 and causing the device 56 to emit a sound. In this way, the jumping toy is caused to emit a sound or squawk immediately after the trigger is released and also immediately after the figure lands back on its base again.

While I have described in some detail above one form of sound device which may be associated with the jumping figure shown in Figures 1, 2, 3 and 4, it is to be understood that other sounding devices may be incorporated, and they may be mounted in a place or position other than in the body 4 of the figure 1. For example, the figure 1 may take the form of a person, such as a toy soldier bearing on its back a knapsack 59, this modification being illustrated in Figure 9. In such a figure as here shown, the squawker or other sound device may be mounted within the knapsack rather than within the body 4 of the figure.

Another possible location for the sounding device or devices is in the base 15. This mounting of the sounding devices is indicated in Figure 10. Here the base 15, carrying the figure 1 at or near its rear edge, is provided with a pair of squawkers 60 and 61. These squawkers may include some form of bellows and reed device (not shown). When mounted on the base, a convenient manner of operating the bellows is to have them actuated by the spring pressed finger or extension 33. For this purpose, a small rod or plunger 62 may be connected with the bellows in the squawker 60 and arranged with some form of spring so that when the trigger 35 releases the finger 33 and the same is swung downwardly relatively to the base 15, the bellows will be expanded and a noise or other sound emitted. As for the bellows 61, this may be operated in practically the same manner, except that the plunger or button 63 thereof will be connected with the bellows of the squawker 61 so that when the extension 33 is swung to its inoperative position, the button 63 will be contacted and forced upwardly, thereby operating the bellows to create the sound.

When my improved jumping figure is thus equipped with some form of sound emitting device or devices, a very novel and striking effect is secured when such a toy or amusement device is used as an object to be shot at with some form of toy pistol or other missile projecting device. The present invention contemplates such a combination as an important feature thereof and it is for this purpose that the trigger 35 is provided with the target 42 as described above.

Referring now more particularly to Figure 11, the toy pistol, indicated in its entirety by the reference numeral 70 may be of any type, but, as illustrated, is one of the kind wherein a wooden button 71, attached to the body of the piston 70 by means of a string 72, is projected by spring means 74 forming a part of the piston structure and which, per se, is not of the essence of the present invention. The pistol 70 is thus utilized in firing at the target 42, and if the spring finger 33 has been properly tensioned and engaged by the latch 35, immediately the target 42 is hit by the missile 70 the figure 1 jumps into the air emitting one or more sounds and landing back upon its base again in a most novel and life-like manner. The spring legs 6, giving resiliency to the support for the figure 1, greatly contributes to this result. Where the jumping figure is a bird-like animal, the sounds emitted from the one or more sound devices may imitate the cry emitted by a bird when struck by a pellet of some sort. Obviously other sounds or notes may be employed where desired.

While I have shown the jumping figure as set into operation by the release of the trigger mechanism 35, it is also contemplated by the present invention to associate the figure release 35, 36 directly with the figure 1 so that, in such cases, all that it would be necessary to do would be to project the missile 71 directly against the figure 1. It is also to be understood that, while I have shown a pistol 70 projecting a wooden pellet 71, other missile projecting devices may be utilized and are to be contemplated as falling within the scope of the present inventon. For example, balls, marbles, and the like may be thrown by hand or by some device at the figure 1, and if at sufficient distance considerable skill may be required to hit the target 42. In this sense, the jumping figure becomes of the nature of a game.

While I have shown and described the preferred structural embodiment of the present invention, it is to be understood that my invention is not to be limited to the specific means shown and described, but that, in fact, widely different means may be employed in the practice of the broader aspects of the present invention, as defined by the appended claims.

A cheaper embodiment of the present toy will have the target and the figure in one piece and the appended claims are intended to cover such embodiment of the invention.

What I claim, therefore, and desire to secure by Letters Patent is:—

1. A toy comprising, in combination, a figure having a base and spring legs connecting the base to the figure, said base having an opening therein, means adapted to be stressed to impart motion to the toy, a latch extending through said base opening for pivotal movement relative to said base and having one end thereof arranged to releasably hold the first mentioned means in inoperative position, and target means associated with the other end of said latch for releasing said stressed means.

2. A jumping toy comprising, in combination, a base, a figure mounted on said base, a spring biased member on the lower portion of said base and including a finger, a trigger extending through said base and pivoted thereon intermediate its length, said trigger having a catch adapted to engage said finger for releasably holding it in tensioned position, and means acting as a target on the upper portion of said trigger and arranged when impacted by a projectile to release said finger whereby the figure is caused to jump, said latch, target and spring biased member being carried by said base.

3. A toy comprising, in combination, a base, a figure mounted on said base, a transverse support fixed centrally of the base, spring means coiled about said support and having one end fixed to and carried by the base and a longitudinal extension at the other end, said extension being adapted to be placed near one end of the base and to be swung through the open bottom to occupy a stressed position near the other end of the base, a latch movably mounted on the base to project above and below the same and provided at its lower end with catch means to releasably retain said extension in stressed relation, and contact means on the latch adapted when moved to release said extension, whereby the reaction of the spring means causes the toy to execute a turning movement in the air, said latch being carried by said base.

4. A toy comprising, in combination, a figure, force storing means releasable to impart bodily movement to the figure, and means carried thereby for emitting a sound when the figure initially begins its movement and emitting another sound after the figure is moving.

5. A toy comprising, in combination, a figure, force storing means releasable to impart bodily movement to the figure, and inertia operated means supported by the body of said figure for emitting a sound when said figure initially begins its movement and when the figure has completed its movement.

6. A toy comprising, in combination, a base, a figure mounted on said base, force storing spring means releasably tensioned to impart movement to the figure and base, and latch means for releasably holding said force storing spring means in tensioned relation comprising an arm projecting outwardly of said base and pivoted inter-

mediate its length, a target secured to the projecting end of said arm, and hook means for the inner end of said arm to releasably engage said force storing spring means and to hold the same in tensioned relation until said target is actuated, said spring means, latch means and target being carried by said base.

7. A jumping toy comprising, in combination, a figure having a base, releasable spring actuated means confined within said base and operable when released to cause said figure and base to jump into the air, said base comprising an upper plate, a lower plate having an opening therein through which said spring actuated means operates, an enclosing strip mounted on edge between said plates to dispose the latter in spaced relation to each other, and means connecting said plates to hold the same against said strip and to hold the latter in position therebetween.

8. A toy comprising, in combination, a figure mounted on a base, spring actuated means confined within said base and releasably tensioned to impart movement to said base and figure, trigger means releasably connected with said spring actuated means, said trigger when struck releasing said spring means and thereby causing said figure and base to jump and inertia operated sound means for emitting two separate sounds, one when the figure starts to move after the spring means has been released and the other sound when the toy lands after completing the jump.

9. A toy comprising, in combination, a base member, a figure member on said base member, force storing means associated with one of said members and releasable to impart movement to said members, and a plurality of separate sound means associated with said members, said force storing means being arranged for directly contacting one of said sound means when said force storing means is in operative position and disposed for directly contacting the other of said sound means when moving to inoperative position, respectively, whereby one of said sound means is adapted to emit a sound when said force storing means is released and the other of said sound means is adapted to emit a sound when said force storing means comes to inoperative position.

10. A toy comprising, in combination, a figure, force storing means releasable to impart movement to the figure, and separate sound members associated with said figure, one of said members being operatively connected with said means when the latter is in operative position prior to its being released, the other of said sound members being disposed in the path of said means to stop the latter when released, whereby said force storing means actuates said one sound member to emit a sound when said means is released, and actuates said other sound member to emit a sound when said means comes to rest.

11. A toy comprising, in combination, a base having an opening therein, a figure mounted on said base, means adapted to be stressed to impart motion to the toy, a latch extending through said base opening for pivotal movement relative to said base and having one end thereof arranged to releasably hold said means in inoperative position, and target means associated with the other end of said latch for releasing said stressed means, said motion imparting means, latch and target being carried by said base.

12. In a toy of the class described, a base, a figure mounted upon said base, spring mechanism for imparting movement to the figure and base, a latch for holding said spring mechanism tensioned, and a target having means for releasing said latch, said spring mechanism, latch and target being carried by said base.

13. In a toy of the class described, a base, a figure mounted upon said base, spring mechanism for imparting movement to the figure and base, latch for holding said spring mechanism tensioned, a target having means for releasing said latch, said spring mechanism, latch and target being carried by said base, and spring means included in the means for mounting said figure on said base.

ARTHUR M. BARRETT.