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B. DEWICK AND D. B. CADDY.

APPARATUS FOR PLAYING A GAME OF SKILL.

APPLICATION FILED AUG. 28, 1919.

1,327,464.

Patented Jan. 6, 1920.

5 SHEETS—SHEET 1.

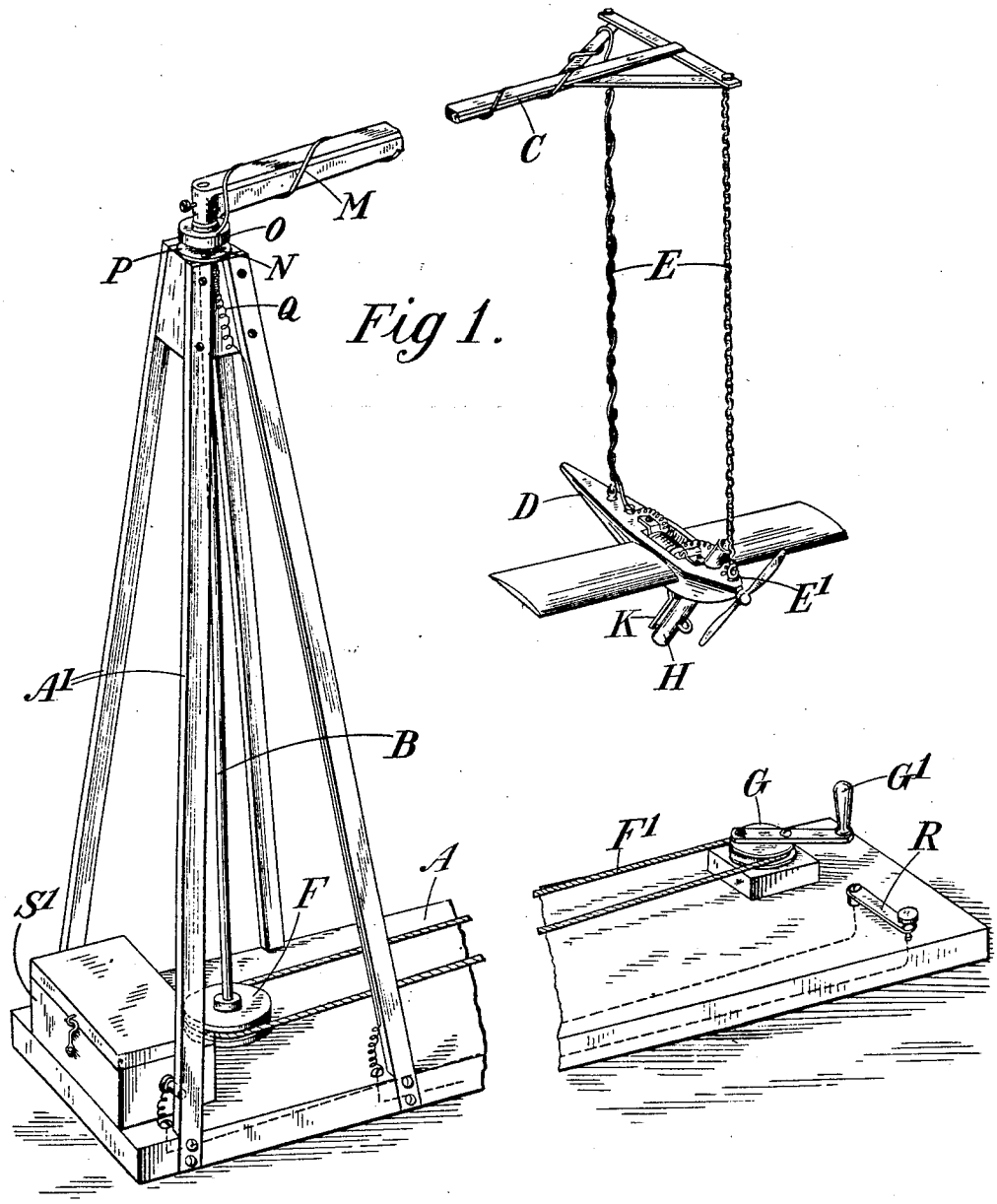


Fig 1.

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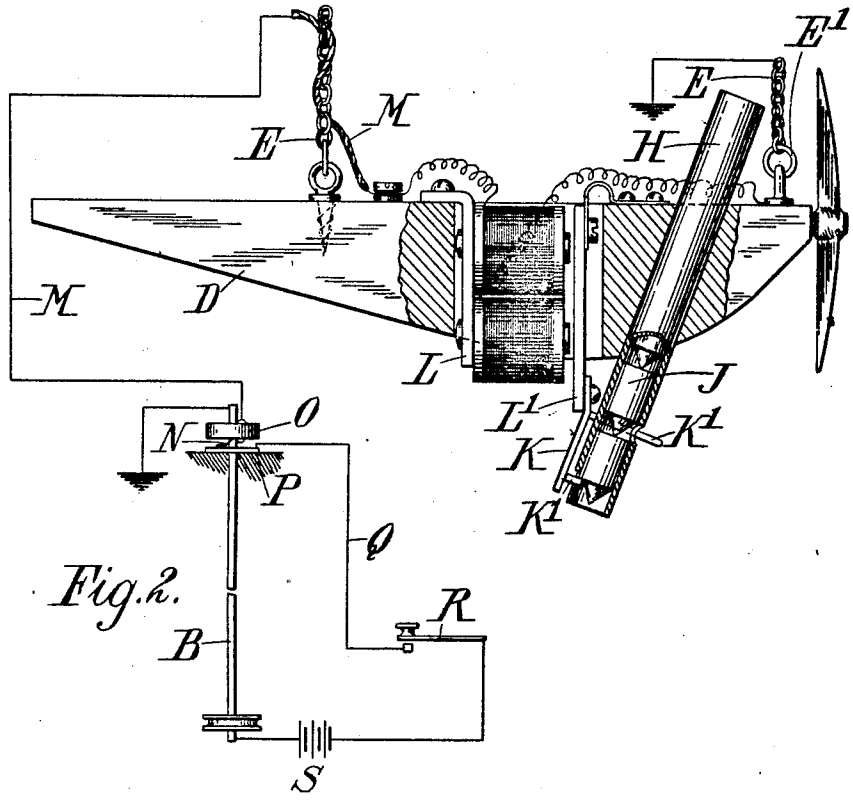


Fig. 2.

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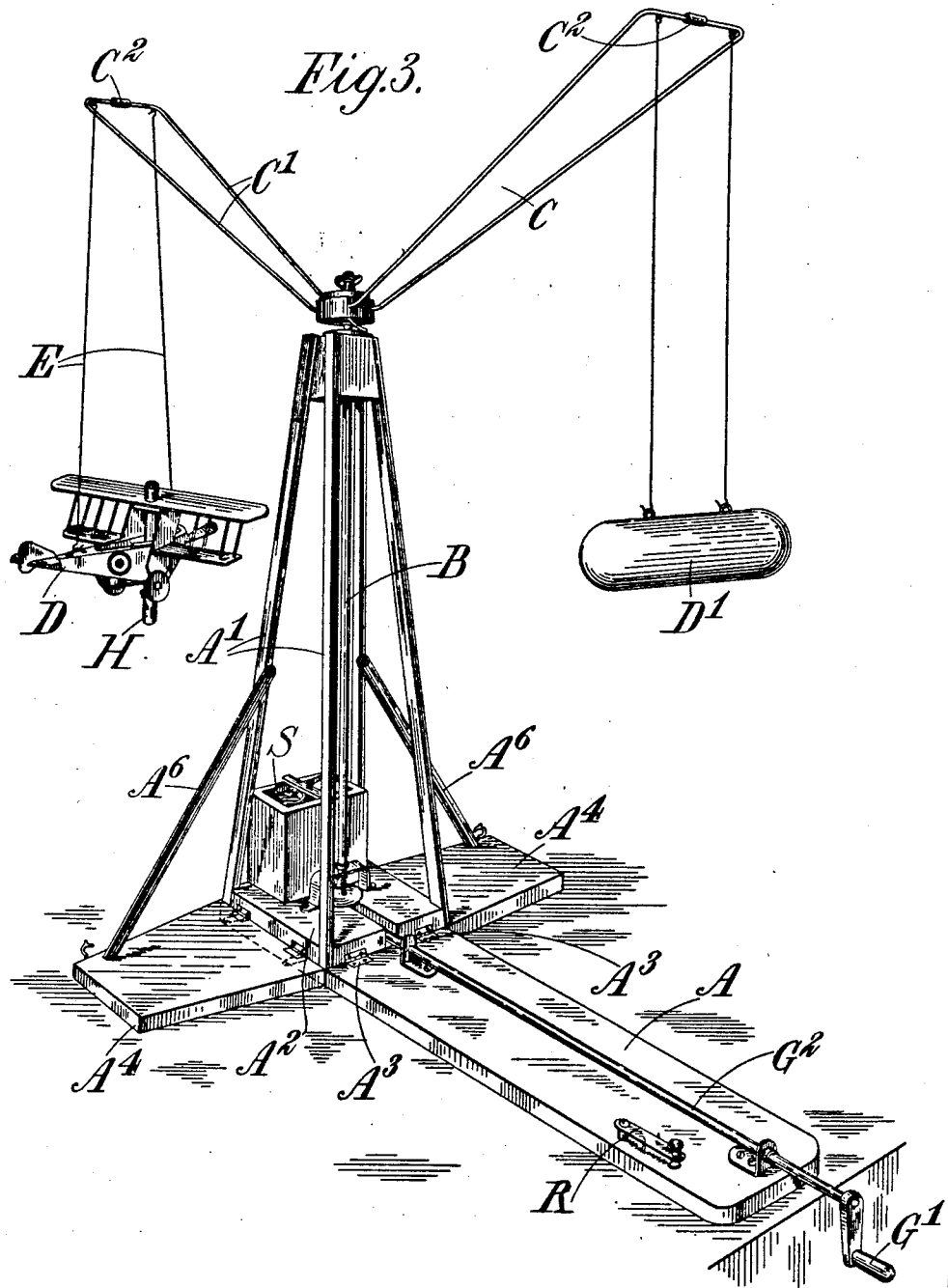
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5 SHEETS—SHEET 3.

Fig. 3.



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5 SHEETS—SHEET 4.

Fig. 4.

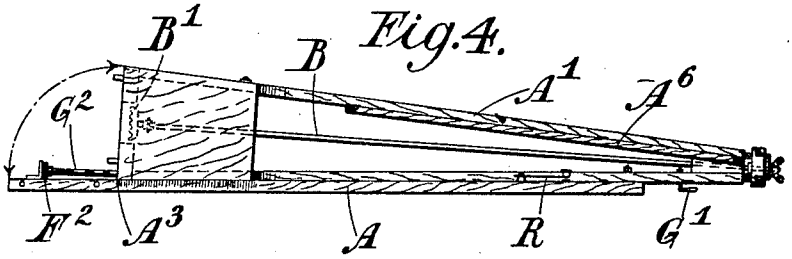


Fig. 5.

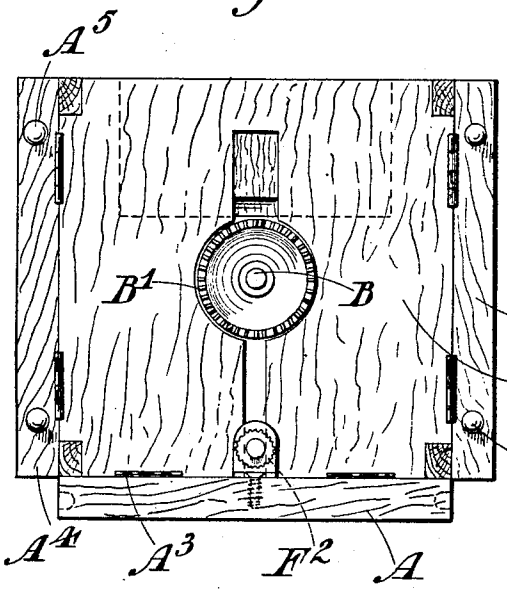
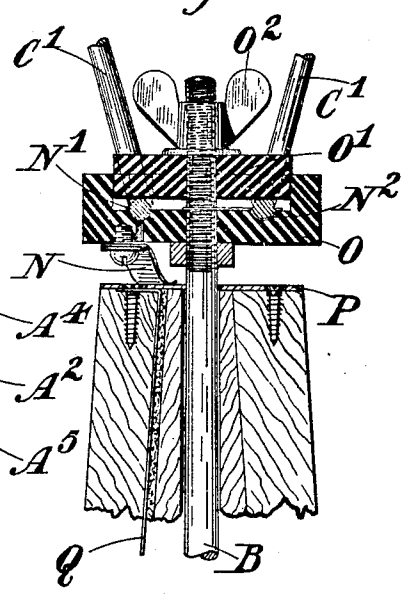


Fig. 6.



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5 SHEETS—SHEET 5.

Fig. 7.

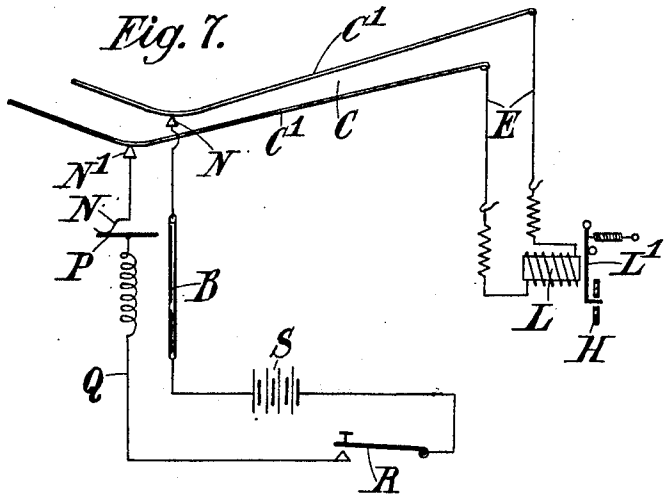
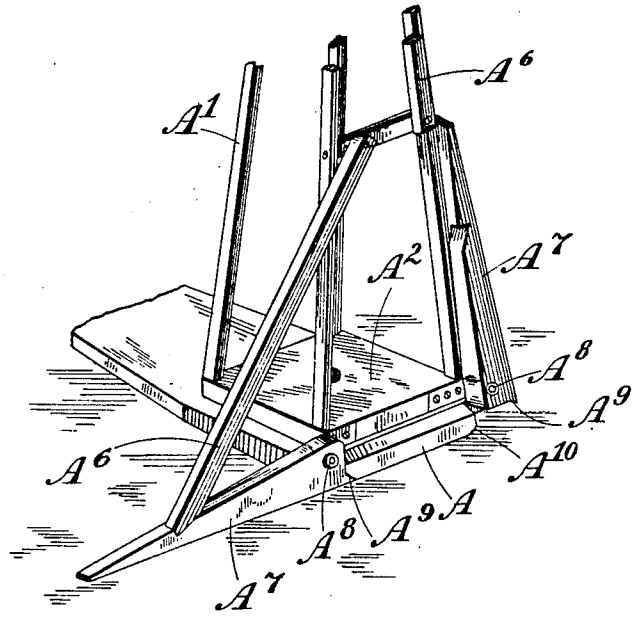


Fig. 8.



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UNITED STATES PATENT OFFICE.

BERNARD DEWICK AND DONALD BUIST CADDY, OF LONDON, ENGLAND, ASSIGNORS TO THE BRITISH EVER READY COMPANY LIMITED, OF HOLLOWAY, LONDON, ENGLAND.

APPARATUS FOR PLAYING A GAME OF SKILL.

1,327,464. Specification of Letters Patent. Patented Jan. 6, 1920.

Application filed August 28, 1919. Serial No. 320,482.

To all whom it may concern:

Be it known that we, BERNARD DEWICK and DONALD BUIST CADDY, subjects of the King of England, residing at London, N., England, respectively, have invented certain new and useful Improvements in Apparatus for Playing a Game of Skill, of which the following is a specification.

This invention relates to apparatus for playing a game of skill, and its primary object is to provide apparatus which shall afford the exercise of considerable judgment and skill in dropping projectiles upon targets from a moving projectile-dropping device.

Another object is to provide that the projectile-dropping device shall be free to swing in all directions during the movement of the member carrying it.

A further object is to provide that a number of projectiles carried in the projectile-dropping device can be released at will one at a time from the device.

A still further object is to provide for an arm which carries the projectile-dropping device a support which can be folded into a relatively small space and which, when erect, shall be sufficiently tall and rigid for the purposes of the game.

Another object is to mount the arm on its support in such a manner that it can be readily detached therefrom and so that when placed in position thereon it shall be automatically connected in an electrical circuit containing the releasing means.

To this and other ends, the invention consists in the construction, arrangement and combination of parts described hereinafter and pointed out in the claims.

One embodiment of the invention and modifications thereof are illustrated by way of example in the accompanying drawing, wherein:—

Figure 1 is a perspective view of one form of apparatus partly broken away according to this invention and,

Fig. 2 is an elevation, partly in section showing the projectile-dropping device and a diagram of the electric circuit of an electro-magnet controlling the same;

Fig. 3 is a perspective view of a modified form of apparatus according to the invention comprising a foldable support shown in its unfolded working position,

Fig. 4 is a side elevation of the foldable support in its folded position,

Fig. 5 is an end elevation of the folded support as seen from the left hand side of Fig. 4,

Fig. 6 is a detail sectional view enlarged showing one method of mounting the arm for carrying a projectile-dropping device, and

Fig. 7 is a diagram of the electric circuit employed in the apparatus shown in Fig. 3;

Fig. 8 is a perspective view of part of a modified form of foldable support according to this invention.

Like reference letters designate like parts throughout the several views.

Referring first to Fig. 1, a support A, A^1 formed of wood or other convenient material comprises a base A, and a standard A^1 mounted at one end thereof. Fast on the upper end of a spindle B journaled vertically in the support is secured one end of a metal arm C, from the other T-shaped end of which a model aeroplane D is suspended by means of two flexible suspension members E which may be cords, wires, chains or the like. Fast on the lower end of a spindle B is a pulley F which is geared by means of an endless cord F^1 with a pulley G which is mounted to rotate on the other end of the base A and can be driven by a crank handle G^1.

As clearly shown in Fig. 2, the aeroplane D is provided with a bomb-dropping device comprising a tubular magazine H containing projectiles J in the form of toy bombs. The magazine is provided with feed mechanism K in the form of an escapement whereof the pallets or stops K^1 are arranged to enter alternately into the tube H above and below the lowest projectile J when an armature L^1 whereon the member K is mounted is attracted and released by an electro-magnet L mounted on the aeroplane D.

One end of the winding of this electro-magnet L is connected by a flexible cord M to a wiping contact-spring N which is mounted on the under-face of a piece of insulation O secured on the spindle B immediately below the arm C. When the arm C

is rotated by hand or by driving mechanism, this contact-spring N wipes over a contact-ring P which is fixed on the top of the standard A^1 and is connected by a wire Q by way of a switch or key R to one pole of a battery S, for example of dry cells, which in Fig. 1 is shown contained in a box S^1 fixed on the base A. The other pole of the battery S is connected to the spindle B which is electrically connected by the arm C and one of the chains or flexible cords E with an eyelet E^1 to which the other end of the winding of the electro-magnet L is connected, thus completing an electric releasing circuit for the projectile-dropping device.

When playing a game with the described apparatus, it is contemplated to provide a map, chart or the equivalent, having indicated or formed thereon various representations, models, figures, names of towns, ships, harbors, or in fact targets of any desired character, these targets being given different values as to points in the game, those farthest from the axis of rotation of the arm carrying the aeroplane being designated with higher values than those nearer such axis. The aim of the player will be to rotate the aeroplane at such a speed and to operate the key with such skill and judgment as to hit the targets with the projectiles and to obtain as many points as possible.

Referring now to Figs. 3–7, a foldable support made of wood or other convenient material comprises a base-member A and a standard A^1 having its base A^2 mounted by means of hinges A^3 at one end of the member A. Two side flaps A^4 are hinged to opposite sides of the base A^2 and are arranged each to engage the member A by dowel pins A^5 when in their unfolded position. Each flap has allotted to it a strut A^6 which is hinged at one end to the standard near the middle thereof and is arranged to enter into a recess in its allotted flap when in its unfolded working position. As shown in Fig. 4, when the support is folded the standard lies along the base-member A the flaps A^4 lie against the standard, and the struts A^6 lie parallel with the latter, so that the folded support occupies a relatively small space.

In this modified apparatus the arm C comprises two metal rods C^1 and is mounted in the manner described hereinafter on the spindle B. Fast on the lower end of this spindle is a crown wheel B^1 which when the standard A^1 is erect meshes with a pinion F^2 fast on a driving shaft G^2 which is journaled on the base-board A and can be rotated by a handle G^1.

The projectile-dropping device and the feed-mechanism thereof in this modified apparatus are similar to those described above with reference to Figs. 1 and 2 and are controlled by an electro-magnet L having an armature L^1 shown diagrammatically in Fig. 7. One end of the winding of this electro-magnet L is connected by way of a suspension wire E and one of the rods C^1 and a contact piece N^1 to a wiping contact-spring N which is mounted on the underface of a disk O of insulating material secured on the upper end of the spindle B. This disk O has in its face two grooves wherein the rods C^1, which are insulated from one another at their ends by pieces of insulation C^2, are clamped by means of a ring O^1 secured in place by a winged nut O^2 screwed on to the spindle B. The contact-piece N^1 is in the one groove in the disk O, and in the other is a contact-piece N^2 which is electrically connected to the upper end of the spindle B.

When the arm C is rotated by turning the handle G^1 this contact-spring N wipes over a contact-piece P which is fixed on the top of the standard and is connected by a wire Q by way of a switch or key R to one pole of a battery S. The other pole of this battery is connected to the bottom of the spindle B which is electrically connected by way of the contact-piece N^2, one of the rods C^1 and one of the wires E to the other end of the winding of the electro-magnet L. The feed mechanism for the projectile-dropping device can thus be actuated by pressing the key R.

The aeroplane D suspended from the one end of the arm C may be counter-balanced by another model aircraft, for example a model airship D^1 made of insulating material, suspended from the other end of the arm.

It will be seen that owing to the described construction and arrangement of the arm C comprising rods C^1 on its support, the arm can be readily removed from its working position, and when it is placed in position in the grooves provided for it, it is automatically connected with the electric circuit of the releasing means for the projectiles.

In Fig. 8 a modified form of the foldable support is shown wherein the side members take the form of arms A^7 instead of the flaps A^4, the said arms being hinged or pivoted at A^8 to the base A^2 of the standard A^1 and kept in their operative position by struts A^6. These arms A^7 are provided with lips A^9 at their inner ends which lie under the base-member A when in their operative position, the member being beveled at its under edges as shown at A^{10} to receive the lips.

Obviously the flaps A^4 shown in Fig. 3 could be arranged to engage the base-member A in the same manner as just described if desired or the dowel-pins shown on the flaps A^4 could be applied to the arms A^7.

It will be appreciated that various modifications may be made in the apparatus as described above without departing from the

spirit of the invention as defined in the claims. For example, power driven mechanism may be provided for rotating the arm carrying the aeroplane instead of the hand-driven mechanism shown, or the described driving mechanism may be dispensed with and the arm C rotated directly by hand. The projectiles may be of any desired character, for example, in the form of weighted darts, which when released from the aircraft, will stick into the support on which it falls, or they may be designed to leave a mark, or to burst where they fall so as to indicate the point hit. Also, it is to be understood that the term projectile as used herein includes mail bags or the like.

What we claim as our invention and desire to secure by Letters Patent is:—

1. In apparatus for playing a game of skill, the combination with a support, of an arm mounted to swing thereon, a projectile-dropping device carried by the arm, and manually-controlled releasing-means operatively connected with the projectile-dropping device for actuating the latter and allowing a projectile to drop therefrom during the movement of the arm.

2. In apparatus for playing a game of skill, the combination with a support, of an arm mounted to swing thereon, a projectile-dropping device carried by the arm, driving-means for swinging the arm, and manually-controlled releasing-means operatively connected with the projectile-dropping device for actuating the latter and allowing a projectile to drop therefrom during the movement of the arm.

3. In apparatus for playing a game of skill, the combination with a support, of an arm mounted to swing thereon, a flexible suspension-member attached at one end to the arm, a projectile-dropping device carried by the other end of the suspension-member, and manually-controlled releasing-means operatively connected with the projectile-dropping device for actuating the latter and allowing a projectile to drop therefrom during the movement of the arm.

4. In apparatus for playing a game of skill, the combination with a support, of an arm mounted thereon to turn about a vertical axis, a projectile-dropping device carried by the arm, and manually-controlled releasing-means operatively connected with the said device for actuating the latter and allowing a projectile to drop therefrom during the turning movement of the arm.

5. In apparatus for playing a game of skill, the combination with a support, of an arm mounted thereon to rotate about a vertical axis, a projectile-dropping device carried by the arm, driving means for rotating the arm about the said vertical axis, and manually-controlled releasing-means operatively connected with the projectile-dropping device for actuating the latter and allowing a projectile to drop therefrom during the rotation of the arm.

6. In apparatus for playing a game of skill, the combination with a support, of an arm mounted thereon to rotate about a vertical axis, a flexible suspension member attached at one end to the arm, a projectile-dropping device carried by the other end of the suspension member, driving means for rotating the arm, and manually-controlled releasing-means operatively connected with the projectile-dropping device for actuating the latter and allowing a projectile to drop therefrom during the rotation of the arm.

7. In apparatus for playing a game of skill, the combination with a support, of an arm mounted to swing thereon, a projectile-dropping device carried by the arm, said device comprising a magazine for projectiles and feed-mechanism arranged to control the same, and manually-controlled releasing-means arranged to actuate the feed mechanism during the movement of the arm.

8. Apparatus for playing a game of skill comprising in combination a vertical support, an arm mounted thereon to rotate about a vertical axis, driving means for rotating the arm about the said axis, a flexible suspension member attached at one end to the arm, a projectile-dropping device carried by the other end of the suspension member, said device comprising a magazine for projectiles and feed-mechanism arranged to control the same, and manually-controlled releasing-means arranged to actuate the feed-mechanism during the rotation of the arm.

9. In apparatus for playing a game of skill, the combination of a foldable support, an arm detachably mounted to swing thereon, a projectile-dropping device carried by the arm, and manually-controlled releasing-means operatively connected with the projectile-dropping device for actuating the same and allowing a projectile to drop therefrom during the movement of the arm.

10. In apparatus for playing a game of skill the combination of a foldable support, an arm detachably mounted to turn thereon, a projectile-dropping device carried by the arm, and manually-controlled releasing-means operatively connected with the projectile-dropping device for actuating the same and allowing a projectile to drop therefrom during the movement of the arm, said support comprising a base-member, a standard hinged at its lower end thereto, two side members hinged to opposite sides of the lower end of the standard and arranged each to engage the base-member when in their unfolded working position, and struts, one for each of said side mem-

bers, hinged each at one end to the standard and arranged to bear against an abutment formed on its allotted side member when in their unfolded working position.

11. In apparatus for playing a game of skill, the combination with a base-member, a standard hinged at its lower end thereto, a spindle journaled on the standard, an arm detachably mounted on the upper end of the spindle, a projectile-dropping device carried by the arm, a gear-wheel fast on the lower end of the spindle, a driving shaft journaled on the base-member, a gear-wheel carried by the driving shaft and arranged to mesh with the former gear-wheel when the standard is in its vertical position, and manually-controlled releasing-means operatively connected with the said device for actuating the same and allowing a projectile to drop therefrom during the turning movement of the arm.

12. In apparatus for playing a game of skill, the combination with a support, of an arm mounted to swing thereon, a projectile-dropping device carried by the arm, and manually-controlled electro-magnetic releasing-means operatively connected with the projectile-dropping device for actuating the latter and allowing a projectile to drop therefrom during the movement of the arm.

13. In apparatus for playing a game of skill, the combination with a support, a vertical spindle journaled thereon, driving means for rotating the spindle, a disk of insulating material fast on the upper end of said spindle and having two grooves in its upper face, an arm comprising a pair of metal rods which are insulated from one another at their ends and are detachably seated one in each of said grooves, a projectile-dropping device which is carried by the arm, said device comprising a magazine for projectiles and electro-magnetic feed-mechanism which is arranged to control the same and is electrically connected to said rods, contact-pieces arranged one for each rod in said grooves, and manually controlled releasing means electrically connected to said contact-pieces.

In testimony whereof we have signed our names to this specification.

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