

C. H. BAGLEY.

MECHANICAL BALL THROWER.

No. 181,128.

Patented Aug. 15, 1876.

Fig. 1.

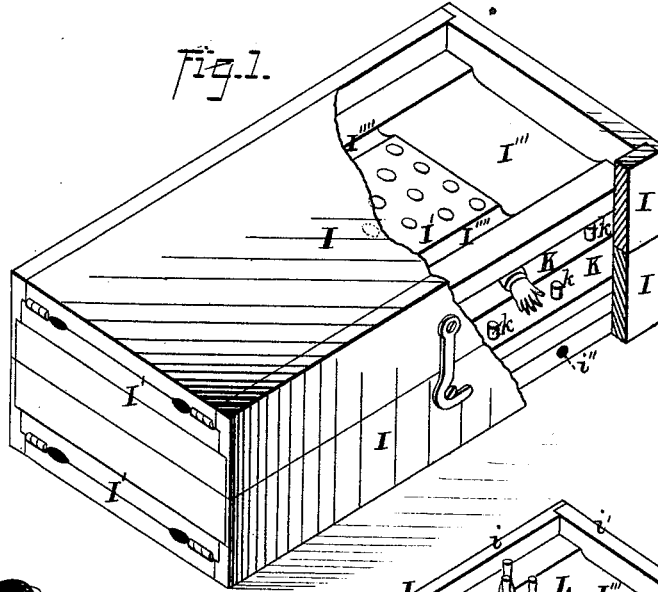


Fig. 2.

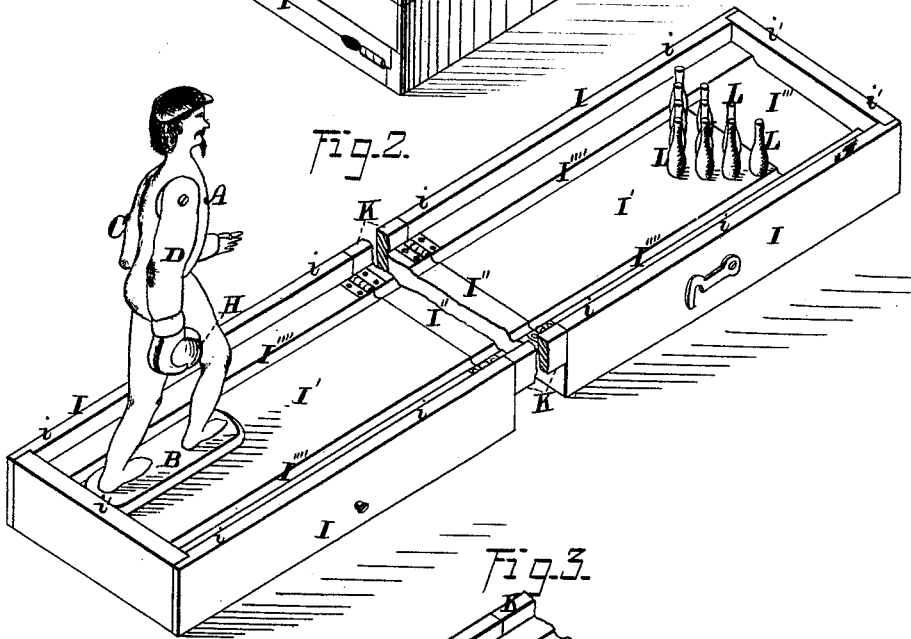
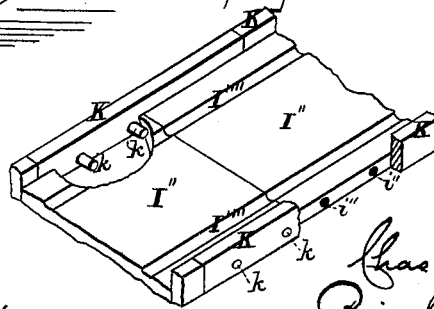


Fig. 3.



WITNESSES
 Jas. Hutchinson
 John R. Young

INVENTOR
 Chas. H. Bagley, by
 Prindle & Co. his Attys

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Fig. 4.

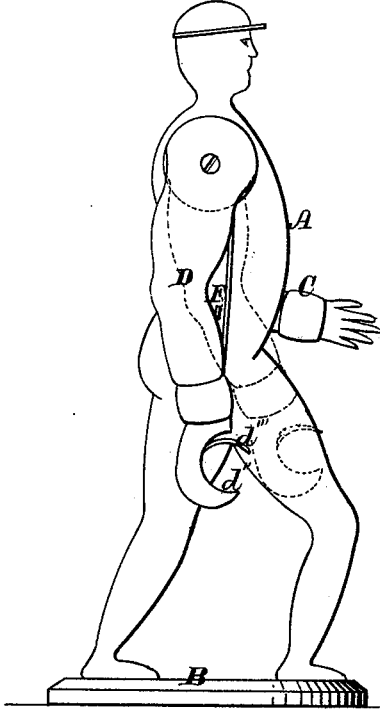


Fig. 5.

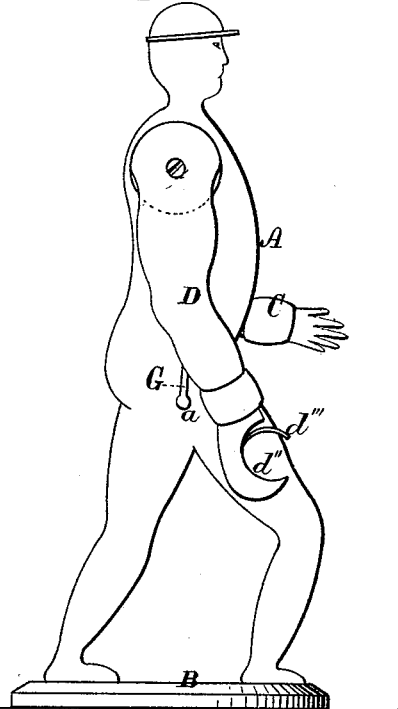


Fig. 6.

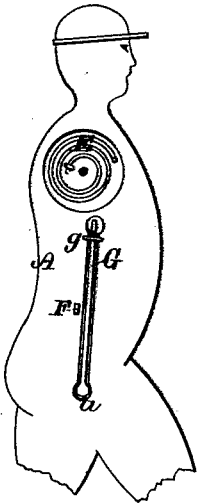
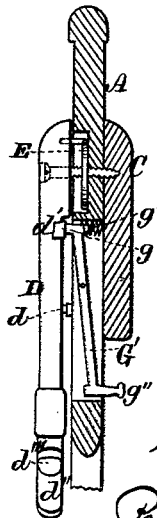


Fig. 7.



WITNESSES:
 Jas. C. Hutchinson
 John R. Young

INVENTOR:
 Chas. H. Bagley, by
 Prindle & Co. his Attys

UNITED STATES PATENT OFFICE

CHARLES H. BAGLEY, OF ELGIN, ILLINOIS.

IMPROVEMENT IN MECHANICAL BALL-THROWERS.

Specification forming part of Letters Patent No. 181,128, dated August 15, 1876; application filed June 20, 1876.

To all whom it may concern :

Be it known that I, CHARLES H. BAGLEY, of Elgin, in the county of Kane, and in the State of Illinois, have invented certain new and useful Improvements in Game Apparatus; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my game-box and base or alley as arranged for storage. Fig. 2 is a like view of said device opened and arranged for use, the figure and pins being in position. Fig. 3 is a perspective view of the central portion of said alley, and shows the means employed for uniting and curbing the same. Figs. 4 and 5 are side elevations of said figure, and show, respectively, the positions of the movable arm before and after the ball has been pitched. Fig. 6 is a like view of the same, said movable arm being removed, so as to show the operating-spring and detent; and Fig. 7 is a vertical section of Fig. 4.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to produce, for parlor amusement, the game of nine-pins, in which the ball shall be pitched by an imitation of a human figure; and to this end it consists, principally, in a figure provided with a movable arm, operated by a spring, which arm, when turned rearward and then released, will move forward and pitch a ball held within its hand, substantially as and for the purpose hereinafter specified. It consists, further, in the peculiar construction of the movable arm and its operative mechanism, substantially as and for the purpose hereinafter shown. It consists, further, in the peculiar construction of the stop mechanism and its combination with the body and with the movable arm of the figure, substantially as and for the purpose hereinafter set forth. It consists, further, in the particular construction of the combined box and alley, substantially as and for the purpose hereinafter shown and described. It consists, finally, in the game apparatus as a whole, its several parts being constructed in the manner and for the purpose substantially as hereinafter specified.

In the annexed drawings, A represents the figure of a man, secured upon and supported by means of a base, B, and provided with a fixed and a movable arm, C and D, respectively, the first of which occupies any desired position, while said movable arm hangs downward, as shown. The arm D is pivoted at the shoulder to or upon the body A, so as to be capable of a lateral swinging motion from rear to front, and within a suitable recess that is formed within either or both of the contiguous surfaces of said parts. Around said pivotal center is placed a coiled spring, E, which has its inner end secured to said body, and its outer end to said arm, and has such tension as to incline the lower end of the latter to move forward with considerable force.

A stop, F, projecting laterally outward from the side of said body A, engages with a lug, *d*, that projects inward from near the elbow of said arm, whenever the latter has moved forward to the position shown in Fig. 5, and prevents further motion in such direction.

Within a vertical slot, *a*, that is formed within the body A, is placed a bar, G, that is pivoted above its longitudinal center, and is capable of motion in a vertical plane, so as to cause its ends to be withdrawn within, or to project beyond, said slot.

Upon the upper end of the bar G is provided a lug, *g*, which projects laterally outward and engages with a lug, *d'*, that is provided upon the inner side of the arm D, the relative positions of said parts being such as to cause them to engage whenever said arm is moved rearward to the position shown in Fig. 4, by which engagement the latter is locked in said position.

A spring, *g'*, pressing against the upper end of the bar G, holds the lug *g* in engagement with the lug *d'*, while a stud, *g''*, secured within and projecting laterally outward from the lower end of said bar, at the side opposite to said lug *g*, enables said bar to be moved upon its pivotal bearing, so as to withdraw its upper end from engagement with said lug *d'*, and permit the arm to be thrown forward by the force of the spring E.

Within the lower end of the arm D is formed a semicircular recess, *d''*, which is open to the front, and at its upper side is formed by a flat

spring, d''' , as shown in Figs. 4 and 5. The spring d''' is bent inward sufficiently to cause it to lightly grasp a ball, H, and hold the same when placed within the recess d'' .

If, now, the ball H' is placed within the recess d'' , and the arm D moved to the rear limit of its motion, and then released by the withdrawal of the detent g , the spring E will move said arm forward with sufficient force to cause said ball to be disengaged and pitched forward in the same direction to a distance, the motion of said arm being substantially the same as that of a man when pitching a ball.

As the bowling-alley for use with the figure described must perform the additional office of a box for storing the latter, the ball, and the pins, the following-described construction is employed: Two sections are employed, each of which consists of a shallow box, I, that is open at one side, and is provided with a fixed bottom, I', and a false bottom, I'', that is hinged at one end to or upon the former, so as to be capable of being placed in line therewith, as seen in Figs. 2 and 3, or of being folded back upon said fixed bottom, as shown in Fig. 1, in which latter event said false bottom is contained within a corresponding recess that is formed by the projection of the sides i and of one end piece, i' , beyond said fixed bottom.

The edges of the false bottom I'' are provided with round recesses or openings i'' , which each receive a pin, k , that is secured within and projects inward from a strip, K, which is thus held in position.

The strips or side pieces K correspond in thickness and height above the false bottom or folding leaf I'' to the like features of the sides i of the box or section I, and, like said sides, they form a curb that prevents the ball from leaving the alley, while the center ones of said strips perform the additional office of a lock, and bind together the abutting ends of the folding leaves of said sections.

When arranged as shown in Fig. 2, the upper sides of the real and false bottoms I' and I'' form the bed or alley upon which the game is played. At one end of the bed is provided a depression, I''', and immediately in front of the same are arranged, in the usual triangular form, the spots upon which the pins L are placed, while from said depression a channel, I''', extends along each side of said bed to its opposite end.

The device is now complete, and is used by

arranging the pins in the usual form at their proper end, and then, by means of the automaton, which is placed at the opposite end, bowling them down with a ball pitched by said figure.

When the game apparatus is not used, the side strips K are detached, the false bottoms I'' folded upon the real bottoms I', said side strips, the automaton, the pins, and the ball placed within the interior of one section, and the other section then placed upon the same and secured thereto by hooks and eyes, or any other suitable fastenings.

While the figure is preferably employed for pitching or rolling a ball in the game of ninepins, it will be seen that it is equally applicable to other games, such as base-ball, quoits, &c.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. A figure provided with a movable arm operated by a spring, and arranged, when turned rearward and then released, to move forward and pitch in such direction a ball held within its hand, substantially as and for the purpose specified.

2. The combination of the body A, pivoted arm D, spring E, stop F, and lug d , substantially as and for the purpose shown.

3. In combination with the movable arm D, actuated by the spring E and provided with the lug d , the bar G', provided with the detent g and stud g'' , pivoted within the body A, and held in engagement with said lug by means of the spring g' , substantially as and for the purpose set forth.

4. The combined box and alley, composed of two sections, each of which consists of a box, I, provided with a fixed bottom, I', a false hinged bottom, I'', having in its edge the openings i'' and the side strips K, provided with pins k , said parts being constructed and combined to operate in the manner and for the purpose substantially as shown and described.

5. The hereinbefore-described game apparatus, in which the figure A, ball H, bed I K, and pins L are constructed and combined substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of June, 1876.

CHARLES H. BAGLEY.

Witnesses:

FRANK A. SCHALLER,
A. C. JOSLYN.