

M. REDGRAVE.

Improvement in Bagatelles.

No. 115,357.

Patented May 30, 1871.

Fig. 1.

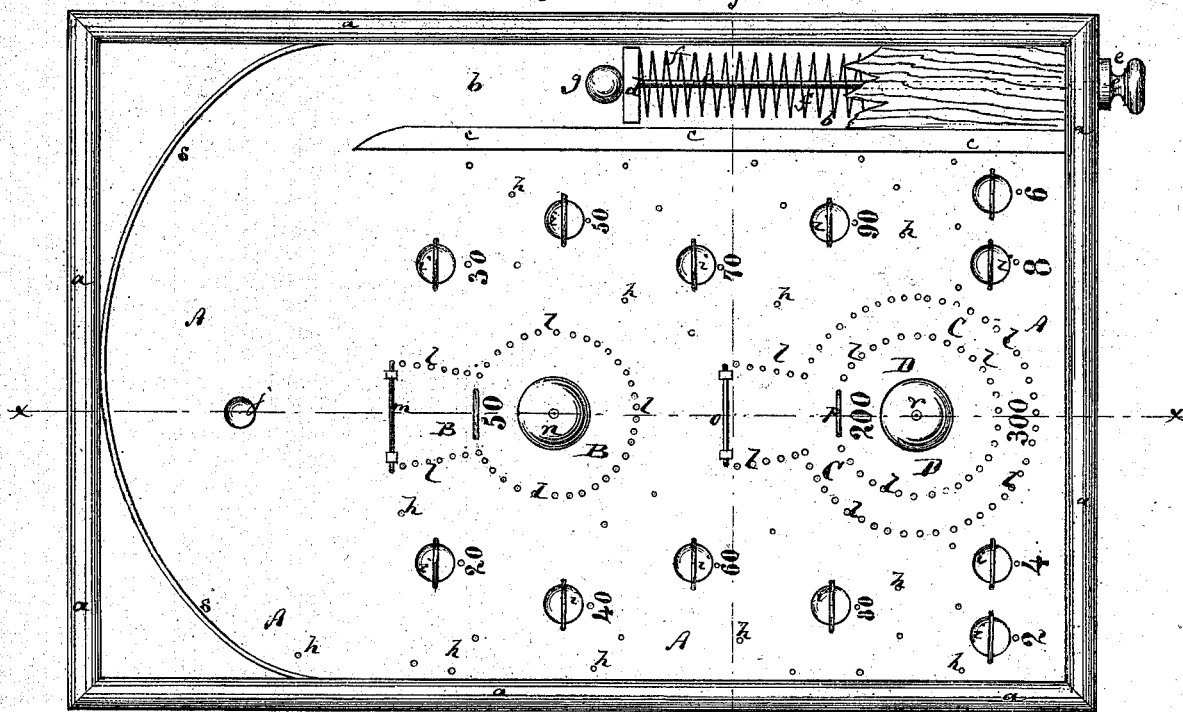


Fig. 2.

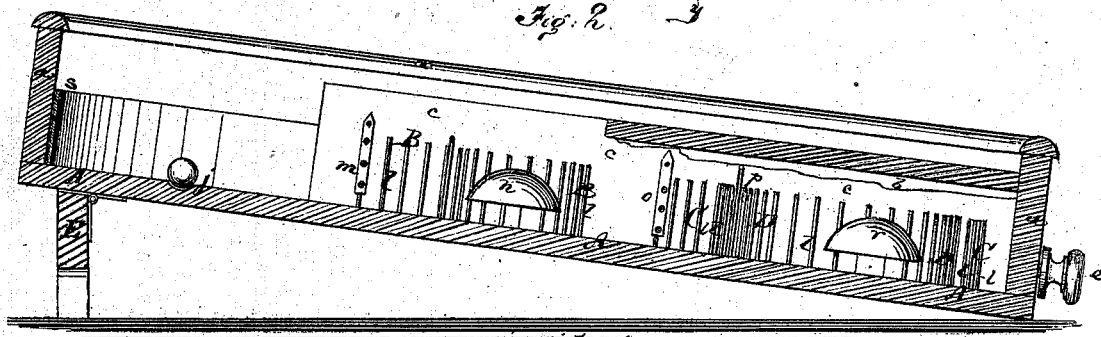
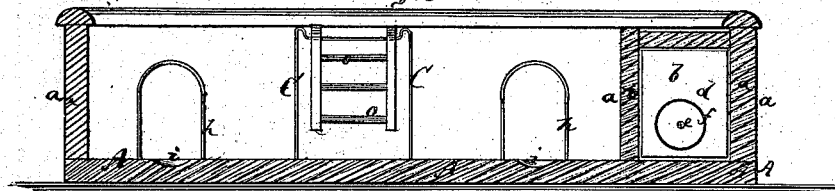


Fig. 3.



Witnesses:

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## UNITED STATES PATENT OFFICE.

MONTAGUE REDGRAVE, OF CINCINNATI, OHIO.

## IMPROVEMENT IN BAGATELLES.

Specification forming part of Letters Patent No. 115,357, dated May 30, 1871.

*To all whom it may concern:*

Be it known that I, MONTAGUE REDGRAVE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Parlor Bagatelle; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a plan or top view of my improved parlor bagatelle. Fig. 2 is a longitudinal section of the same taken on the plane of the line *x x*, Fig. 1. Fig. 3 is a transverse section of the same taken on the plane of the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates generally to bagatelle-boards; and consists in several new and useful devices, by which an amusing game of skill is obtained that may be introduced into the social and family circles. The general principle or character which distinguishes my parlor bagatelle from all others hitherto known to the public consists in combining gravity with muscular power to act as antagonistical forces, the one tending to carry the ball in one direction and the other in an opposite direction; the one impelling it against the action of the other until the muscular power is spent, when gravity takes it in hand and moves it until arrested. This I accomplish by inclining the table at an angle to a horizontal plane. It consists, secondly, in the application of a tension-spring to the piston that propels the ball, whereby any desired quantity of force may be given and easily graduated by the eye. This is a great advantage over the ordinary cue; with it all the mathematical science may be possessed without the firmness of nerve necessary to execute, and without the ability to impart that exactitude of force which is the foundation of success in this game. It consists, thirdly, in the application about the central cups of courts to prevent the approach of the balls to the cups except in one direction, and create difficulty in counting at these points. It consists, fourthly, in the arrangement of gates in front of the courts to break the force

of the momentum acquired by the ball in descending the declivity.

A in the drawing represents the platform or table of my improved bagatelle. The same is placed in an inclined position to be lowered at the front end, as shown in Fig. 2. A projecting ledge, *a*, is arranged around the entire table. The shooting-trough *b* is formed at one side by a projecting flange or plate, *c*, which is parallel to the side ledge, as in the ordinary parlor bagatelle. A sliding piston, *d*, is arranged within the trough, and connected with a piston-rod, *e*, which pierces the lower ledge of the table. A spring, *f*, is placed behind the piston. By pulling the rod *e* outwardly the spring will be contracted, and if the rod is then let go the spring will violently propel the piston upwardly, and thereby, also, the ball *g* placed against the same. The ball enters the counting-board at the upper end of the same and rolls down, being detained by pins *h h* or arrested in cavities *i i* in the ordinary manner. A cavity, *j*, for the king-ball, which counts double at every figure to which it is brought, is provided at the upper part of the table. By means of wire pins *l l* special courts B C for the arrest of balls are provided on the table. The upper court B is single, and has a swinging gate, *m*, at its upper end. This gate is suspended from above and swings on a horizontal pivot. The ball, when it strikes the gate, swings under the same and enters the court, where it strikes a little bell, *n*, secured therein. The court C is double—that is to say, contains within it another court, D. The ball in entering the court C through the gate *o* of the same can either pass around the court D or also enter the same through the opening *p* at its upper side. A bell, *r*, is arranged within the court D. The upper end of the table is rounded by a projecting rim, *s*. The rules of the game may be variable; also, the values for the play of the several cavities and courts.

The mode of operation is as follows: The object of the player being to throw the ball into the court-cup B, he draws the spring far enough back to impart just sufficient force to carry it up and curve it around to the middle of the board, where gravity takes it down hill with accelerating velocity and momentum till it reaches the gate *m*. This gate acts as a

spring on a vehicle, to take up the shock or acquired momentum and allow the ball to roll quietly into the court. If the spring has, however, been drawn back too far, or not far enough, the direction of the ball will be changed by every object with which it comes into contact.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The cups, courts, pins, and spring-piston, combined with a board supported on an incline by a piece, E, at the further end, whereby the principle of gravity is applied to the ball to carry it in a direction opposite to that in which the spring-piston tends to carry it.

2. The piston *d*, arranged in shooting-trough *b* and upon the end of slide rod *e*, combined

with a spiral spring, *f*, placed on said rod between the piston and ledge *a*, for the purpose specified.

3. The arrangement centrally between the cups and pins of courts B D, through which the ball can only enter from the front and only reach the bells with difficulty, for the purpose of making high counts, require care and skill, as described.

4. The arrangement of central courts B D, provided with swinging gates with respect to the caps and pins, as and for the purpose specified.

MONTAGUE REDGRAVE.

Witnesses:

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