B. N. MARTY.

AUTOMATIC BASE BALL PITCHING MACHINE.

APPLICATION FILED APR. 29, 1916.

1,211,738.

Patented Jan. 9, 1917.

2 SHEETS—SHEET 1.

Fig. 1

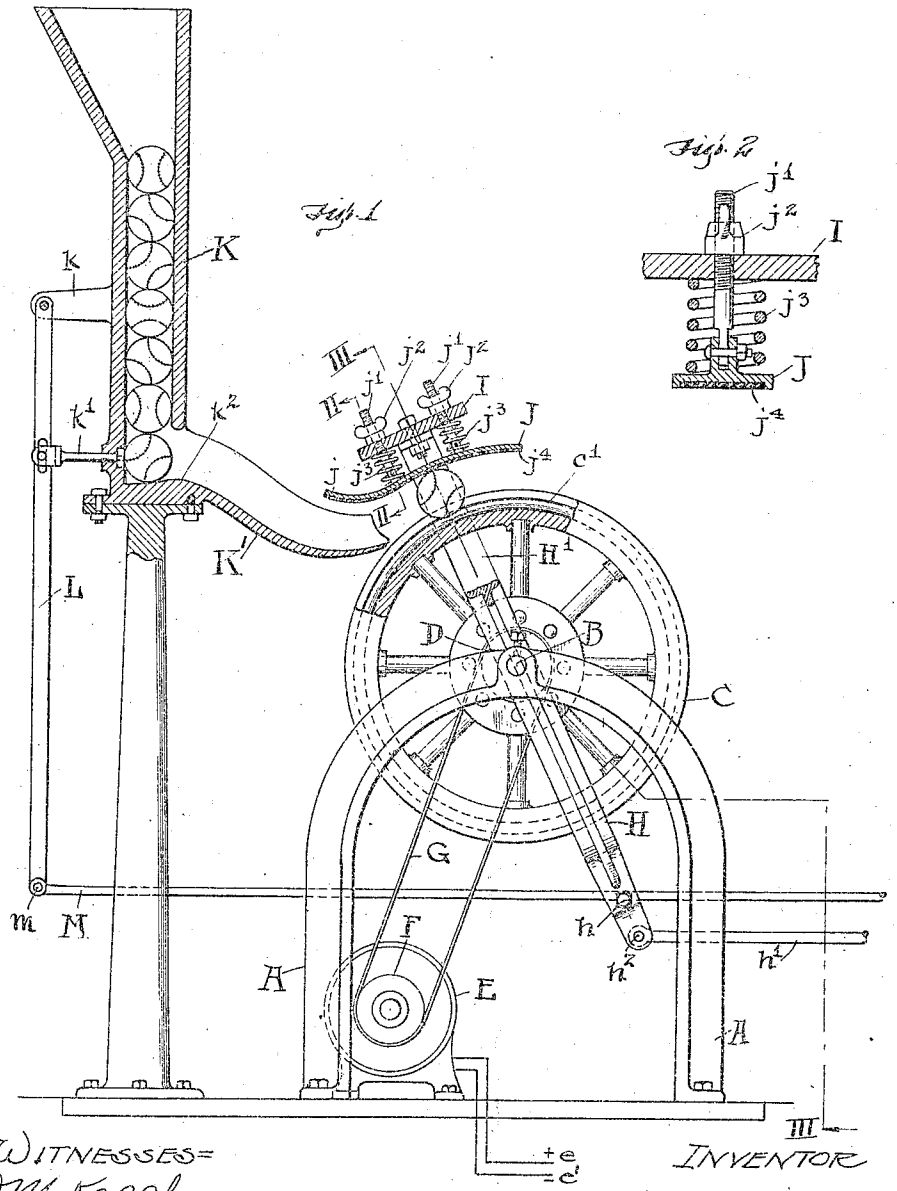


Fig. 2

WITNESSES=
O.M. Kappler
Herman Eisele

INVENTOR
Bartley N. Marty
BY
Geo. B. Marty
HIS ATTORNEY

B. N. MARTY.

AUTOMATIC BASE BALL PITCHING MACHINE.

APPLICATION FILED APR. 29, 1916.

1,211,738.

Patented Jan. 9, 1917.

2 SHEETS—SHEET 2.

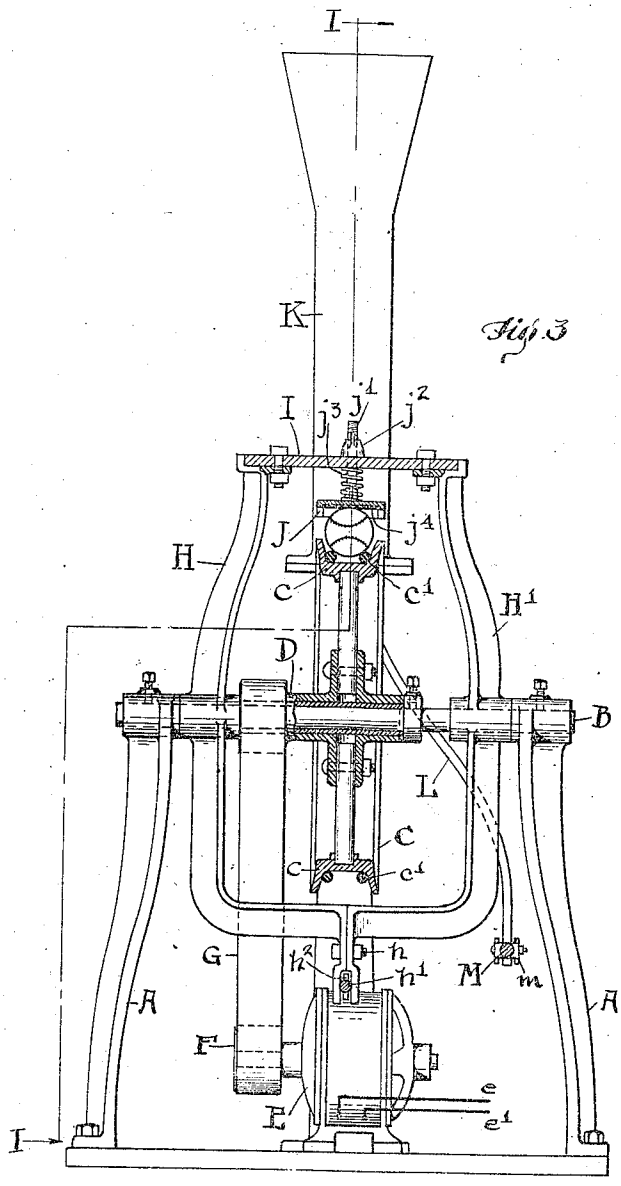


Fig. 3

WITNESSES=
O M. Kappler
Herman Eisele

INVENTOR
Bartley N. Marty
BY Geo. B. Marty
HIS ATTORNEY

UNITED STATES PATENT OFFICE.

BARTLEY N. MARTY, OF LAKEWOOD, OHIO.

AUTOMATIC BASE-BALL-PITCHING MACHINE.

1,211,738. Specification of Letters Patent. Patented Jan. 9, 1917.

Application filed April 29, 1916. Serial No. 94,490.

To all whom it may concern:

Be it known that I, BARTLEY N. MARTY, a citizen of the United States, residing in Lakewood, Cuyahoga county, Ohio, have invented certain new and useful Improvements in Automatic Base-Ball-Pitching Machines; and I hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of the invention is to construct in the simplest form a machine that will hurl a baseball with sufficient speed and at the same time with a twisting motion approximating that of a ball thrown by hand.

The machine embodying my invention consists primarily of a grooved wheel or pulley mounted on a shaft supported in a suitable frame, means for holding the ball in contact with the groove of the wheel while motion is being imparted to the ball by the revolving of the wheel, and means for revolving the wheel. In the machine shown in the drawings and herein described are also included means for regulating the height at which the ball is thrown to the batter. In practice there is also added means for automatically feeding the balls to the machine as desired.

In the accompanying drawing Figure 1 is a side elevation of one of my machines, partially in section. Fig. 2 is a sectional view at line II, II, Fig. 1. Fig. 3 is a front elevation with some of the parts shown in section at line III, III, Fig. 1.

A, A, A, A, are the frames for mounting the central shaft B, upon which is loosely mounted the grooved wheel C.

D is a pulley also loosely mounted on the shaft B, and preferably formed integral with the hub of the wheel C.

E is an electric motor for driving the machine and is connected to feed wires and controllers in the usual manner. F is the driving pulley of said motor and G is a belt for transmitting motion from the motor to the pulley D and wheel C.

Pivotally mounted on the shaft B are the frames H, H^1. The lower ends of H, H^1, are joined at h. The upper ends of the frames H, H^1, are joined together by the plate I. Depending from the plate I and extending downward between the frame-members H, H^1, is a shoe J, whose lower surface is preferably curved with a radius approximately equal to the distance from its lower surface to the center of the shaft B, while its left hand end j, (Fig. 1) is curved upward to facilitate the entrance of the ball as the latter comes out of the chute K^1. From the upper surface of the shoe J and pivotally connected thereto, the pins j^1, j^1, project upward through the plate I and are provided at their upper ends with the nuts j^2, j^2. Between the upper surface of the shoe and the lower surface of the plate I are coil springs j^3, j^3, adapted to force the shoe downward, while the springs are kept in tension and the position of the shoe adjusted by means of the nuts j^2, j^2.

The groove in the wheel C may be made round, or V shaped, or even with a flat bottom, but I prefer the construction shown in which the groove is provided with two rubber rings or tires, c, c^1, securely mounted therein, one at each side of the groove in such manner that the lower surface of the ball O impinges against each of the rubber tires or rings, while the upper surface of the ball impinges against the lower surface of the shoe J. This lower surface j^4, of the shoe J, may be of wood or metal, but is preferably leather, rubber or some similar material that will furnish a slightly yielding contact for the ball. On the side of the hopper K is a bracket k on which is pivoted the lever L. A short distance below the bracket k, and also supported in the hopper K, is a push rod k^1 also attached to the lever L. The lower end of the lever L is connected to the rod M at m, the rod M extending beyond the machine in the direction in which the ball travels to the point where the operator is stationed. The lower end of the frame elements H, H^1, are connected to the rod k^1 at k^2, this rod also extending forward to the point where the operator is stationed.

The direction of the ball may be controlled by grooving the shoe J and having the surface of the wheel flat or by grooving both the shoe and the wheel and still be within my invention. The length of the shoe may be increased or diminished as may be desired, it being found that the greater length of shoe and consequent longer contact between the shoe and the ball increases the amount of spin imparted to the ball.

The operation of the device is as follows: A suitable number of balls are placed in the hopper K, the lowest one being retained in its position by the slight incline k^2 in the

bottom of the hopper. The operator then turns on the current setting the motor in motion and revolving the wheel C, the upper surface thereof turning to the right, Fig. 1. The speed of the motor is controlled in the ordinary manner so as to pitch a fast or slow ball as may be desired. The operator then pulls the rod M actuating the lever L and causing the push rod h^2 to force the lowest ball in the hopper over the point h^2 and down the incline of the chute K^1 and upon the rings c, c^1, of the wheel C. The upper surface of the ball traveling with the wheel is thereupon brought into contact with the lower surface of the shoe J and rolls along the lower surface of the shoe while the lower surface is being carried forward at a more rapid rate by its contact with the rings c, c^1, of the wheel C. In this manner the ball as it is thrown from the wheel C in the direction of the arrow shown in Fig. 1, is caused to rotate upon its axis in a direction contrary to the rotation of the wheel C. This rotation of the ball is similar to that imparted by a pitcher in throwing an "upshoot" and causing the ball to maintain its flight to a greater extent than if its rotation were in the opposite direction. In addition to such control of the trajectory of the ball as the operator has through regulating the speed of the motor, the height at which it is delivered to the batter is also controlled by the operator by controlling the point at which the ball leaves the wheel C. This is accomplished by shifting the shoe J to the left or to the right, Fig. 1, by changing the position of the frame elements H, H^1, which in turn are controlled by the lever h^1 extending to the operator. If it is desired to throw a low ball the shoe J is shifted to the right, Fig. 1, while it is shifted in the opposite direction to throw a high ball.

In the event it is desired to make a machine to throw the ball with top spin and thereby to pitch a "drop," the shoe will be placed at the bottom of the wheel and the motion of the wheel reversed.

I have described my invention in that form which best embodies it, but it is obvious that the machine may be driven by any described form of power, that the groove in the wheel C may be of any desired form or that the surface of the wheel may be flat and the lower surface of the shoe J may be grooved or made V shaped and so accomplish the purpose of my invention, but all of these modifications are claimed to be within the scope of this invention. Also the frame of the shoe J, the method of its adjustment and the materials of which it is made or with which it may be lined may be modified or changed and still be within my invention.

Having described my invention I claim:

1. A baseball pitching machine, the combination of a wheel, a frame in which said wheel is rotatably mounted, a shoe mounted adjacent to the circumference of said wheel and in position to hold the ball against the surface of the wheel, and means for revolving said wheel, whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

2. In a baseball pitching machine the combination of a grooved wheel, a frame in which said wheel is rotatably mounted, a shoe mounted adjacent to the circumference of said wheel in position to hold the ball against the grooved surface of the wheel, and means for revolving said wheel, whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

3. In a baseball pitching machine the combination with a wheel having a circumferential groove with rings of yielding material to impinge against the ball, a frame in which said wheel is rotatably mounted, a shoe mounted adjacent to the circumference of said wheel in position to hold the ball against said rings of yielding material, and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

4. In a baseball pitching machine the combination of a wheel, a frame in which said wheel is rotatably mounted, a shoe adjustably mounted adjacent to the circumference of said wheel in position to hold the ball against the surface of the wheel, and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

5. In a baseball pitching machine the combination of a grooved wheel, a frame in which said wheel is rotatably mounted, a shoe adjustably mounted adjacent to the circumference of said wheel in position to hold the ball against the grooved surface of the wheel, and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved.

6. In a baseball pitching machine the combination of a wheel suitably mounted upon a shaft, a frame for supporting said shaft, an inner frame also mounted on said shaft, a shoe mounted on said inner frame adjacent to the circumference of said wheel in position to hold the ball against the surface of the wheel, means for adjusting said inner frame, and means for revolving said wheel, whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved, and the height at which the ball is delivered to the batter may be controlled by adjusting said inner frame.

7. In a baseball pitching machine, the combination of a grooved wheel suitably mounted on a shaft, a frame for supporting said shaft, an inner frame also mounted on said shaft, a shoe mounted on said inner frame adjacent to the circumference of said wheel in position to hold the ball against the surface of the groove of the wheel, means for adjusting said inner frame, and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved, and the height at which the ball is delivered to the batter may be controlled.

8. In a baseball pitching machine the combination of a wheel suitably mounted on a shaft supported in a frame and having a circumferential groove with rings of yielding material to impinge against the ball, an inner frame also mounted on said shaft, a shoe mounted on said inner frame adjacent to the circumference of said wheel in position to hold the ball against said rings of yielding material, means for adjusting said inner frame and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in a direction in which the wheel is revolved and the height at which the ball is delivered to the batter may be controlled.

9. In a baseball pitching machine the combination of a grooved wheel suitably mounted on a shaft, a frame for supporting said shaft, an inner frame also mounted on said shaft, a shoe adjustably mounted on said inner frame adjacent to the circumference of said wheel and in position to hold the ball against the surface of the wheel, means for adjusting said inner frame and means for revolving said wheel whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved, and the height at which the ball is delivered to the batter may be controlled.

10. In a baseball pitching machine the combination of a wheel suitably mounted upon a shaft and having a circumferential groove with rings of yielding material to impinge against the ball, a frame for supporting said shaft, an inner frame also mounted on said shaft, a shoe mounted on said inner frame adjacent to the circumference of said wheel in position to hold the ball against the groove of the wheel, means for shifting the position of said inner frame and the shoe whereby the point at which the ball leaves the wheel may be altered, and means for revolving said wheel, whereby a ball placed between said wheel and shoe will be thrown in the direction in which the wheel is revolved and the height at which it is delivered to the batter may be controlled.

In witness whereof I hereunto set my hand at Cleveland, Ohio, this 27th day of April, 1916.

BARTLEY N. MARTY.

In the presence of—
E. N. CONRAD,
E. A. PETERS.