

M. KERN.  
BOWLING BALL SHOCK ABSORBER.  
APPLICATION FILED AUG. 17, 1908.

924,472.

Patented June 8, 1909.

2 SHEETS—SHEET 1.

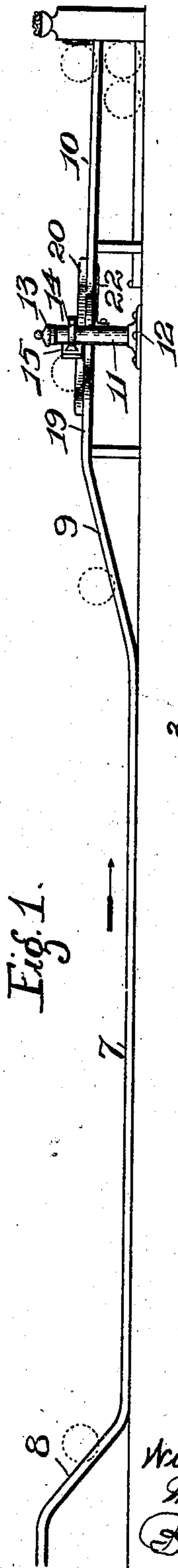


Fig. 1.

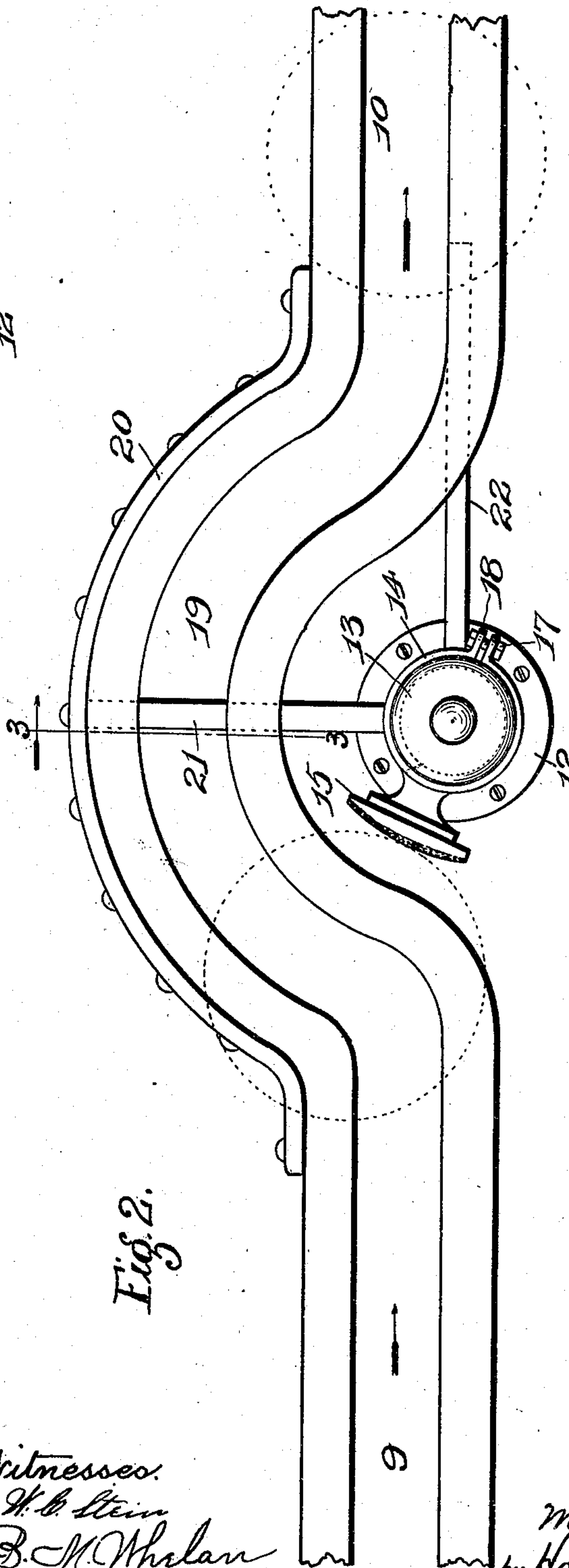


Fig. 2.

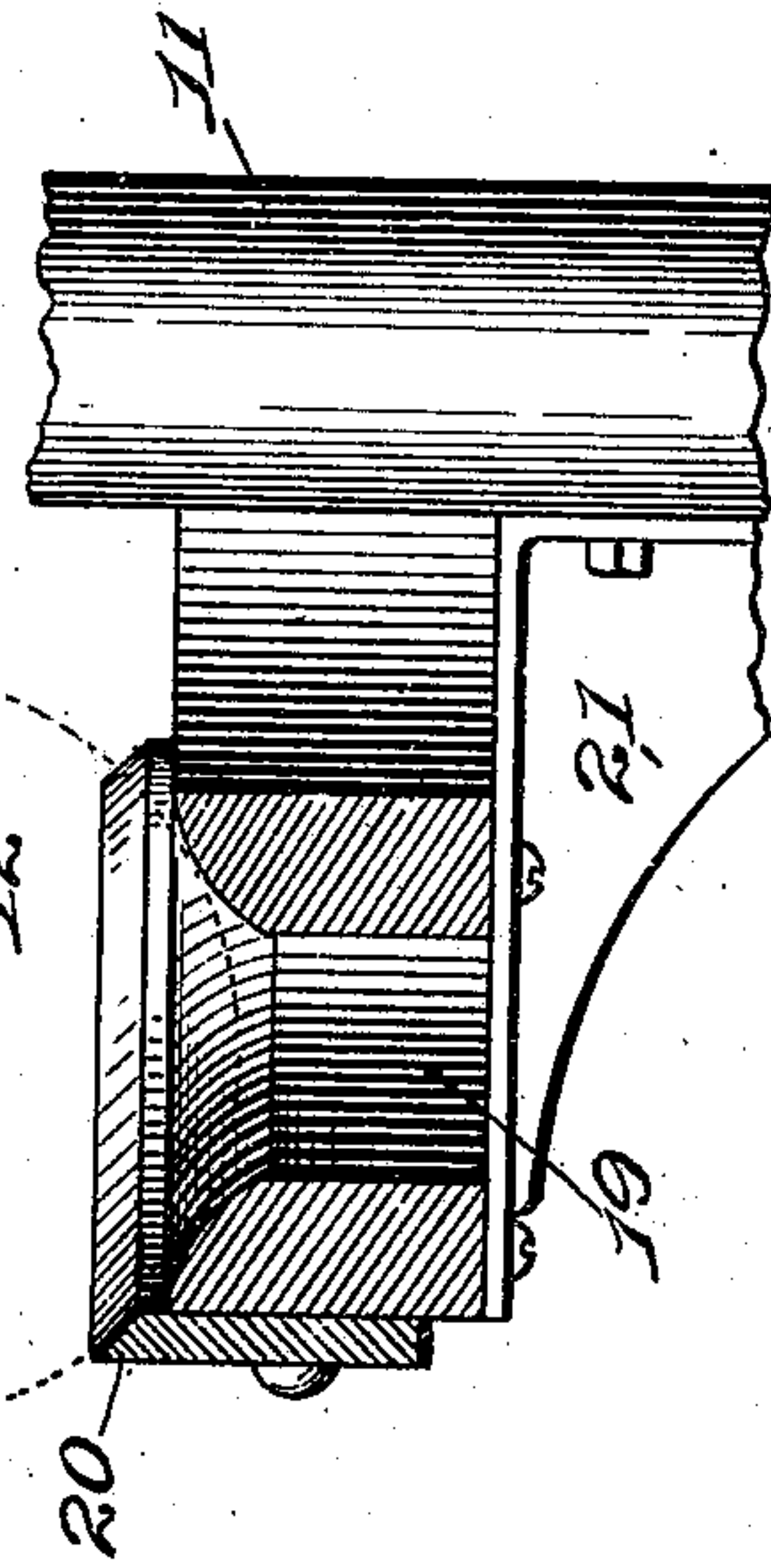


Fig. 3.

Witnesses:  
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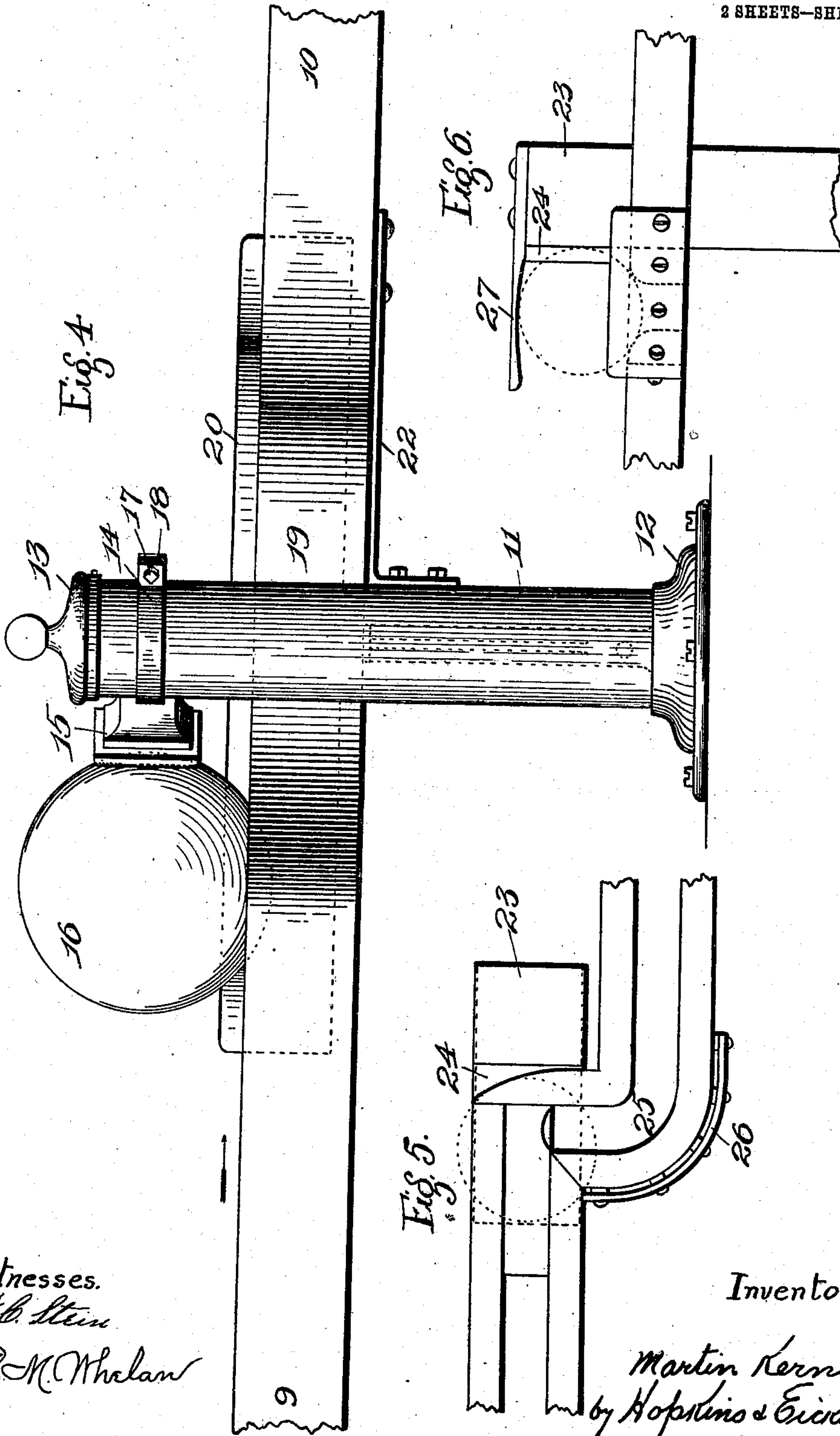
Inventor:  
Martin Kern  
by Hopkins & Eichs Attys.

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2 SHEETS—SHEET 2.



Witnesses.

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B. M. Whelan

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# UNITED STATES PATENT OFFICE.

MARTIN KERN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO JOSEPH H. JOAQUIN,  
OF ST. LOUIS, MISSOURI.

## BOWLING-BALL SHOCK-ABSORBER.

No. 924,472.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed August 17, 1908. Serial No. 448,859.

*To all whom it may concern:*

Be it known that I, MARTIN KERN, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Bowling-Ball Shock-Absorbers, of which the following is a specification.

This invention relates to improvements in bowling ball shock absorbers and consists in the novel arrangement, construction and combination of parts as will be fully hereinafter described and claimed.

The object of my invention is to provide the return track of a bowling-alley with a shock absorbing mechanism with which the bowling ball comes in contact and its speed reduced so that the ball can enter the repository at a low rate of speed and prevent the balls from contacting with the force that is common where the speed of the ball is not decreased.

A further object of my invention is to construct a mechanism with which each of the balls comes in contact when returned by the pin boys, the speed of each ball being retarded, the ball when contacting with the cushion of the shock absorber momentarily stopping the same and then permitting the ball to advance into the repository at a very low rate of speed.

Figure 1 is a side elevation of my invention shown in its relative position with the return rail of a bowling-alley. Fig. 2 is a top plan view of my invention. Fig. 3 is a cross sectional view with parts broken away taken on the line 3—3 of Fig. 2. Fig. 4 is a side view of my invention. Fig. 5 is a detail top plan view of a modified form of my invention. Fig. 6 is a side view of the same.

Referring to the drawings in detail, 7 indicates the return track; 8 the inclined elevation on which the balls are placed by the pin boys, said elevation being of the common type and of sufficient height to produce sufficient speed to the ball so that the same will travel to the repository.

9 indicates the inclined portion of the track which is in advance of the repository 10.

Upon the floor and immediately in front of the repository, I place a standard or column 11 mounted on a base 12 by which the said standard or column is rigidly and firmly fastened. Upon the standard or column is placed a detachable cap 13 and around said column is provided a band 14 on which is

supported a buffer 15, the said buffer being sufficiently padded and so arranged as to contact with the balls 16, and said band is tightly held upon the column by means of the bolt 17 or other fastening device extending through the projecting ears 18 of the band. By this construction, the buffer can be adjusted vertically as well as horizontally upon the column so that the same may be properly set to accommodate the size of balls used on the bowling-alley.

The track portion 19 located between the repository and the highest end of the inclined portion 9 is suitably curved as shown in Fig. 2; the upper edge of each rail forming the track being curved or beveled to accommodate the outer contour of the balls, and on the outer surface of the outer curved rail is located a guard 20 which projects upwardly a short distance beyond the upper surface of the track so as to prevent the balls from running over the edge of the track while the same is making the curve and on account of the sudden contacting with the buffer which retards the speed of the ball momentarily stopping the same and then permitting the ball to pass on in the direction indicated by the arrow (Fig. 2), allowing it to enter into the repository at a low rate of speed.

On the column 11 is provided a bracket 21 which supports the curved portion of the track (see Fig. 3), and on the column and secured to the bottom surface of one of the rails is a brace bar 22 which assists in bracing the column, preventing the same from becoming loosened by the continuous contacting of the balls with the buffer.

The essential feature of my invention is the application of a buffer located in alignment with the passage of the bowling ball making contact with the same at a given point, reducing the speed and permitting the balls to enter into the repository at a low rate of speed so as not to injure the balls by denting the same when each ball contacts.

In Figs. 5 and 6, I show a modified form. In this instance, I provide a post 23 placed in direct alinement with the track. On the post is placed a cushion 24 with which the ball comes in contact and after the speed has been reduced the ball is permitted to pass into the repository over a right angled projection indicated by the numeral 25 and on the outer curved portion of the right angular projection, a guard 26 is placed which



prevents the ball from running over the track while it is making the curve to enter the repository. When this form is used, I provide on the top of the post a projecting arm 27, its under surface being slightly curved and by means of this arm the ball is prevented from jumping off of the track when contacting with the cushion and in addition when the ball contacts with the cushion at the same time with the projection 27 it reverses the revolution of the ball which causes the same to momentarily stop in its travel and then passes on into the repository at a very low rate of speed.

Having fully described my invention what I claim is:

1. A bowling ball shock absorber comprising a rigid buffer; a support on which the buffer is mounted; a ball track in proper alinement with and extending around the buffer whereby the speed of the ball is sufficiently reduced before entering into the repository, substantially as specified.

2. A device of the class described comprising a ball return track a portion thereof being curved; a shock absorbing mechanism in alinement with the straight portion of the track located in relative position with the track so that the bowling ball may contact with the shock absorber and retard the speed yet permitting the ball to pass on at a low rate of speed around the shock absorbing mechanism, substantially as described.

3. A device of the class described comprising a ball return track; a repository; a shock absorbing mechanism located intermediate of the track and repository and independent

of the track; means for permitting the ball to pass into the repository from the track around the shock absorbing mechanism at a low rate of speed after the ball has contacted with the shock absorber and a guard for preventing the ball from leaving the track while on its travel after contacting with the shock absorber, substantially as specified.

4. A device of the class described comprising a ball return track; a repository; an upwardly inclined section located in advance of the repository; a standard located intermediate of the repository and the inclined section; a buffer adjustably mounted on the standard with which the ball is brought in contact and its speed retarded momentarily stopping the same and then permitting the ball to pass around the buffer and into the repository at a very low rate of speed, substantially as specified.

5. A bowling ball shock absorber comprising a return track; a buffer, a portion of said track bent around the buffer, said buffer being located in a position with the track to permit the ball to contact therewith for retarding the speed of the ball and permitting the same to pass to one side of the buffer at a reduced rate of speed, substantially as specified.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

MARTIN KERN.

Witnesses:

ALFRED A. EICKS,  
WALTER C. STEIN.