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BOWLING PIN AND LIKE ARTICLE.

APPLICATION FILED MAY 20, 1913.

1,087,927. Patented Feb. 24, 1914.

Fig. 1.

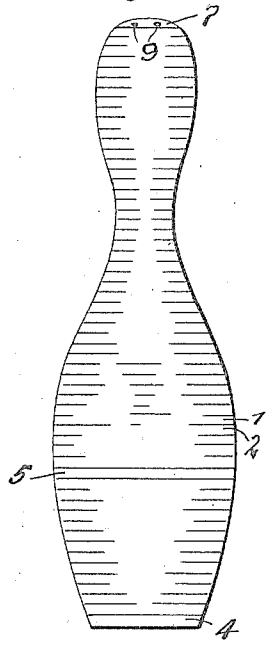


Fig. 2.

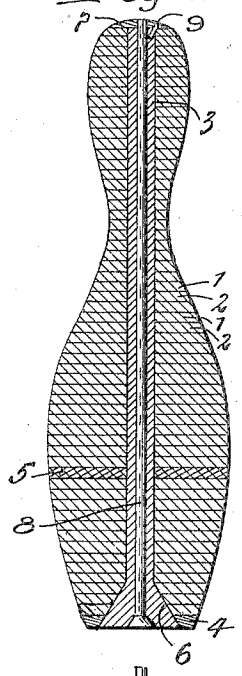


Fig. 3.

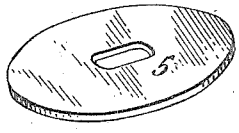


Fig. 4.



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BOWLING-PIN AND LIKE ARTICLE.

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Application filed May 20, 1913. Serial No. 768,754.

To all whom it may concern:

Be it known that I, LORENZ A. DEUTHER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a certain new and useful Improvement in Bowling-Pins and like Articles, of which the following is a specification.

This invention relates to improvements in bowling games and primarily to the construction of articles used in bowling apparatus.

In the adaptation of the invention shown in the accompanying drawings, a bowling or ten pin of conventional form is illustrated which is constructed of composite layers of material fitted and cemented upon a central dowel.

The object of the invention is to produce articles of this character of strong and durable construction and extremely long life and which will not split or chip off when in operation.

In the accompanying drawings,—Figure 1 is a side elevation of the improved pin. Fig. 2 is a central longitudinal section through the improved pin. Fig. 3 is a view of the hard fiber shock sustaining disk detached from the remainder of the pin. Fig. 4 is a detached view of the metal center pin for the dowel.

In referring to the preferred adaptation of the invention shown in the accompanying drawings in detail, like numerals designate like parts.

The bowling or ten pin shown is constructed or superimposed alternate relatively thin sheets or layers of wood such as veneer 1 and paper or other suitable fabric such as straw board 2 which are fastened firmly to each other with cement, a central dowel 3 which passes longitudinally through the superimposed sheets or layers, an end reinforcement 4 of hard fiber, and a disk 5 of hard fiber which is inserted in an intermediate portion of the pin in position to be struck by the ball and is adapted to receive and sustain the striking shock of the ball.

In order to positively fasten the end reinforcement in place, the lower end of the central dowel which is preferably made of wood is enlarged and tapered as shown at 6, in Fig. 2, and a central beveled opening is cut in the reinforcement 4 in which the tapered portion 6 dovetails and locks.

A reinforcement 7 of hard fiber similar to the end reinforcement may be fitted on the top of the pin as shown in Figs. 1 and 2.

The wooden dowel 3 is made comparatively larger in diameter, of rectangular or oval shape to hold the composite board securely when turning and extending longitudinally throughout the pin from the top to the bottom thereof, and said dowel is reinforced throughout the greater portion of its length or from the top of the pin to a point below the striking point of the ball by a metal core or pin 8 which is driven snugly and rigidly in a central longitudinal opening in the wooden dowel, as shown in Fig. 2.

To secure the top reinforcement 7 in place, one or more small supplementary dowels 9 are driven through the reinforcement 7 in a diagonal direction or downwardly and inwardly and into the center dowel 3.

These improved articles are preferably constructed as follows: Alternate sheets of veneer and straw board are superimposed upon and cemented to each other to the thickness of about one-half an inch, the composite or built up board is then put in a suitable press for twelve to twenty-four hours and at the expiration of the time it is removed from the press and placed in a drying room having an approximate temperature of about eighty degrees. In making a pin, the composite or built up boards, which have been cut or stamped to a size slightly larger than the diameter of the pin at its different points, with a central opening to snugly fit the dowel 3. The hard fiber reinforcement 4 is first slipped or fitted on the lower end of the dowel 3 and dovetailed locked thereon as before described. Sufficient composite boards are fitted on the dowel 3 over the reinforcement 4 to build the pin up to the point just below where the pin is struck by the ball, and the fiber disk 5 is then fitted on the dowel over the boards. The composite boards necessary to build the pin up to the desired length are then placed on the dowel over the fiber disk. The partially completed pin is now put in a press for a certain number of hours or over night, after which it is placed in a drying room for about forty-eight hours and is then finally finished by turning it to the desired size in a suitable lathe and coating it with varnish or other suitable material.

It should be understood that the construction of this improved article may be altered,

or changed or some of the parts thereof may be altogether omitted within the scope of the following claims without departing from my invention.

I claim,—

1. An article of the class described composed of a series of alternate sheets of veneer and paper cut to conform to the desired shape superimposed upon and cemented to each other, a central dowel of wood extending completely through the superimposed sheets and a metal reinforcing pin centrally fitted in said dowel.

2. An article of the class described composed of a series of relatively thin sheets of material superimposed upon and cemented to each other and cut to conform to the desired shape and an intermediate disk of hard fiber interposed between the sheets in position to receive the blows and sustain the shock of an impinging article.

3. An article of the class described composed of a series of relatively thin sheets of material superimposed upon and cemented to each other and cut to conform to the desired shape, a central dowel extending longitudinally through the superimposed sheets of material, top and bottom end reinforcements of hard fiber, and an intermediate shock sustaining disk of hard fiber.

4. An article of the class described composed of a series of relatively thin sheets of material superimposed upon and cemented to each other and cut to conform to the desired shape, a central dowel extending longitudinally through the superimposed sheets of material and having an enlarged tapering end and an end reinforcement of hard fiber dovetail locked in place on the tapering end of the dowel.

5. An article of the class described composed of a series of relatively thin sheets of material superimposed upon and cemented to each other and cut to conform to the desired shape, a central dowel extending longitudinally through the superimposed sheets of material, an end reinforcement, and a small supplementary dowel extending diagonally through the end reinforcement and into the central dowel.

6. An article of the class described composed of a series of superimposed sheets of material such as veneer and paper in alternate arrangement pressed and cemented together and cut to conform to the desired shape, a central dowel extending through the superimposed sheets of material, top and bottom end reinforcements fitted on the top and bottom ends of the article, and an intermediate shock sustaining disk of hard fiber.

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