H. ROMÜNDER.

BOWLING PIN.

APPLICATION FILED FEB. 25, 1915.

1,170,339. Patented Feb. 1, 1916.

Fig. 1.

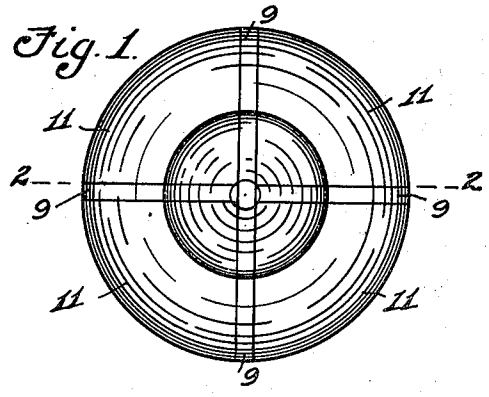


Fig. 2.

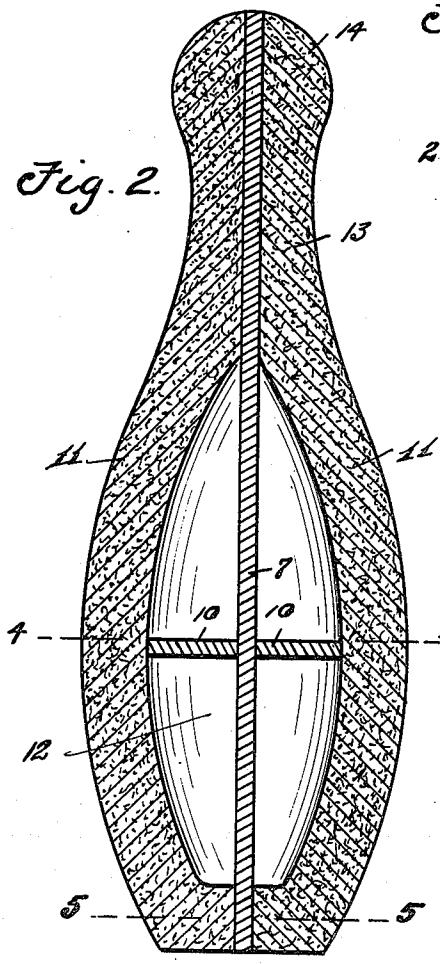


Fig. 3.

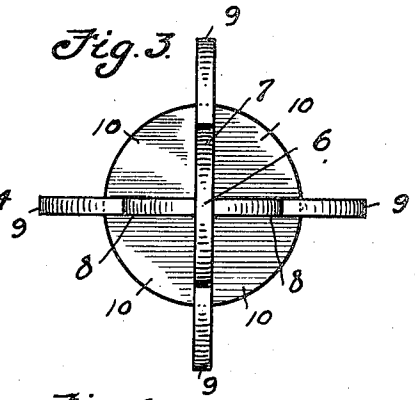


Fig. 4.

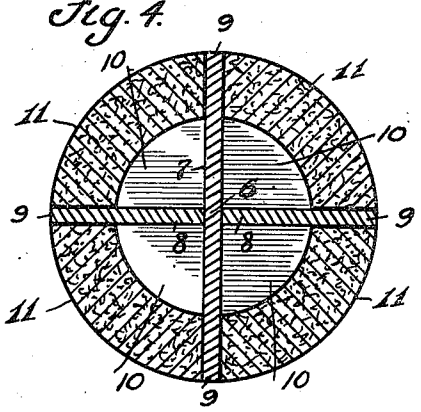
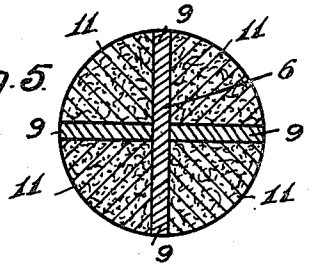


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

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BOWLING-PIN.

1,170,339. Specification of Letters Patent. Patented Feb. 1, 1916.

Application filed February 25, 1915. Serial No. 10,410.

To all whom it may concern:

Be it known that I, HERMANN ROMÜNDER, a citizen of the United States, residing at Mishawaka, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Bowling-Pins, of which the following is a specification.

The present invention relates to improvements in bowling pins for use in playing ten pins and other similar games, and the primary object of the invention resides in the provision of a pin for the purpose stated which has all the desired qualities of a solid wooden pin, with advantages not possessed by the latter.

A further object resides in the provision of a bowling pin constructed in sections and consisting mainly of a wood fiber composition, such as sawdust, shavings and the like, combined and held by a suitable binding element to form a solid, hard and tough material, suitable to withstand the hard knocks by the impact of bowling balls therewith, and which, owing to lack of any regular grain formation, as in natural wood, is less liable to split and splinter.

A still further object resides in the provision of a built-up sectional bowling pin characterized by a hollow body interiorly reinforced in a manner to withstand great stress, and by virtue of which construction the pin has a greater spring or propensity to re-bound under impact than that of a solid structure.

With the above and other objects in view as will further on appear, the invention in the preferred form of details will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a top view of a bowling pin embodying my invention. Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a top view of the reinforcing frame. Fig. 4 is a transverse section taken on the line 4—4 of Fig. 2. Fig. 5 is a transverse section taken on the line 5—5 of Fig. 2.

In the drawings 6 designates a frame for reinforcing the body of the bowling pin, and comprises longitudinal members 7 and 8, preferably made of wood, and disposed in relatively angular relation to form four right angles, said members being hereafter referred to as radial wings 9, comprehending that portion of each extending from their point of intersection to the outer edges thereof. Secured to the members 7 and 8 and transversely thereof, are sectors 10, preferably of wood, and disposed in the same plane, so that they collectively form a disk divided by said members. Each outer edge of the wings 9 are fashioned corresponding with the outer contour or surface form of a bowling pin.

The body of the pin consists of four sections 11, each section representing approximately a quarter of the complete body longitudinally divided, and having an outer surface contour corresponding to the usual form of a bowling pin, and an inner surface contour coincident with that of the outer contour for the major portion of its length from the bottom upwardly, so that when assembled in pin forming relation a hollow body will be formed, as indicated at 12, while the neck portion 13 and head portion 14 will have a solid formation. The body sections 11 are preferably formed of a composition consisting mainly of wood fiber, such as sawdust, shavings and the like, commingled with a suitable binding agent, such as glue or any other hard drying, tough viscous substance, the matter being placed in a mold of the required form and subjected to pressure.

Obviously the composition described may be variously modified with equally good results, and I do not limit the present invention to the use of the particular composition and method of forming the sections. The object of using a composition composed mainly of wood fiber is to overcome the tendency of the natural wood pin to split and splinter, due to the regular grain formation of the wood, under the hammering process of the swiftly thrown bowling balls, there being no regular grain formation in such composition to weaken the same at one point more than another. The body sections are glued to the side surfaces of the wings 9 of the reinforcing frame, with the outer surface of the sections flush with the edges of said wings, and with the said edges forming a portion of the outer surface of the body, and the edges of the sectors 10 abutting the inner walls of the sections at a point calculated to receive the impact of the bowling ball, thus transversely bracing and strengthening the pin at that point.

While the foregoing is the preferred form of my invention, I desire it to be understood

that I do not limit myself to the precise structure shown and described, as it is obvious that the number of sections forming the body of the pin, or the form of the reinforcing frame may be variously modified, as well as the substitution of natural wood for the composition of the body sections, without departing from the spirit of the invention.

What is claimed is:—

1. A bowling pin having a hollow body portion, and a reinforcing frame within the body comprising radially extending longitudinal members and a transverse brace member.

2. A bowling pin comprising a hollow body portion formed of longitudinal sections, and a reinforcing frame within the body having counterbraced radial members extending between the adjacent edges of the sections.

3. A bowling pin comprising a hollow body formed of longitudinal sections, and reinforcing means within the body extending longitudinally thereof and between the adjacent edges of said sections.

4. A bowling pin comprising a hollow body formed of longitudinal sections, and reinforcing members within the body extending the full length thereof and between the adjacent edges of said sections, the outer edges of the reinforcing members forming a part of the exterior body surface.

5. A bowling pin comprising a hollow body portion formed of longitudinal sections, and a reinforcing frame within the body extending longitudinally thereof and having radially disposed wing portions, the body sections being edgewise secured to the marginal side surfaces of the wing portions.

6. A bowling pin comprising an inner frame structure having radially disposed longitudinal wing members, and a transverse brace member, and a body portion consisting of longitudinal segmental sections having their side edges secured to the marginal side surfaces of the wing members and their inner surface abutting the edge of the transverse brace member.

In testimony whereof I affix my signature in presence of two witnesses.

HERMANN ROMÜNDER.

Witnesses:
L. W. Cook,
George J. Oltsch.