

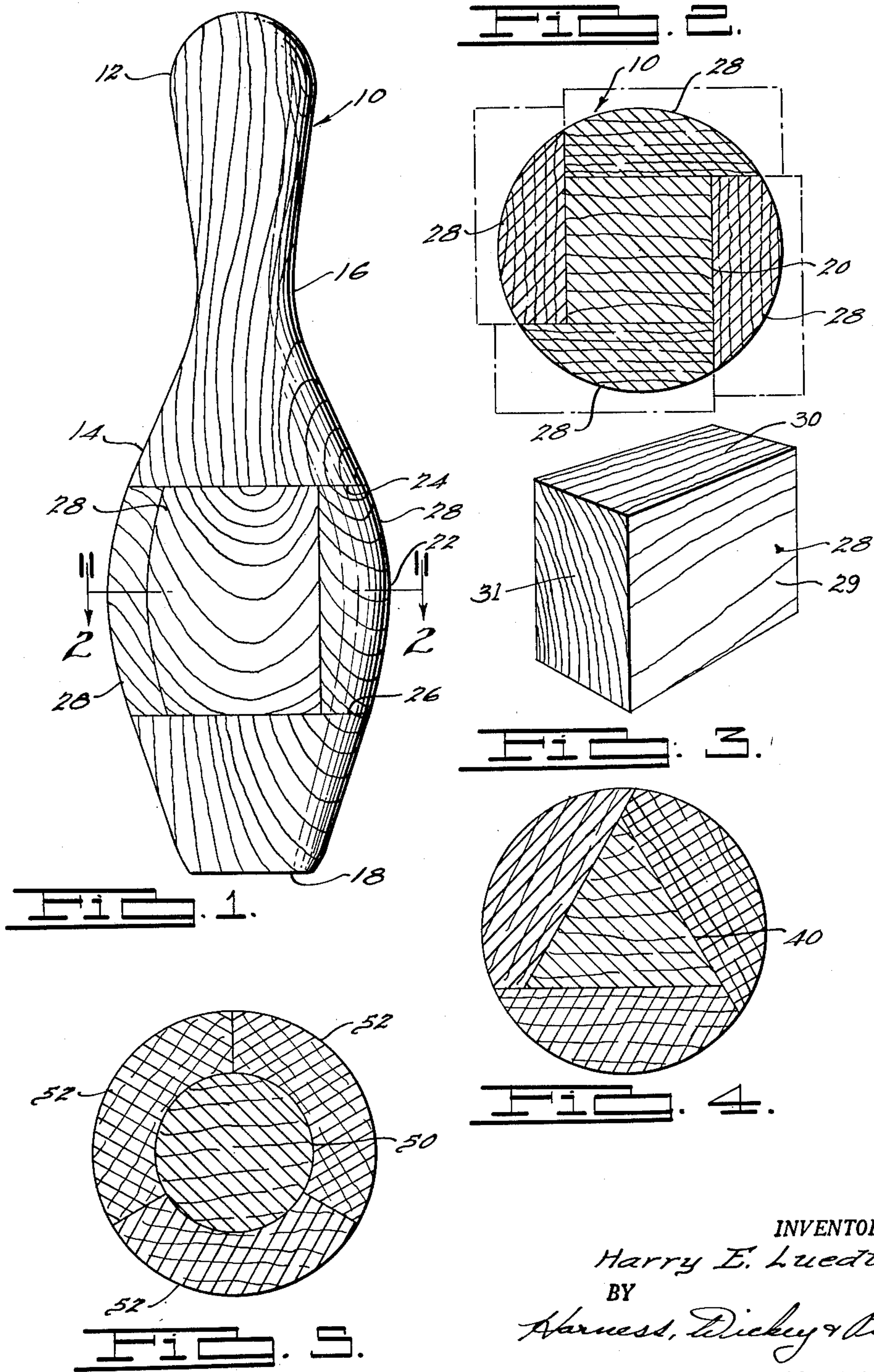
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REINFORCED WOODEN BOWLING PIN

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REINFORCED WOODEN BOWLING PIN

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The present invention relates to bowling pins and more particularly to an improved fabricated bowling pin.

Bowling pins are formed of wood and are subjected to very severe punishment from heavy impact with the bowling balls, other pins, etc. For this reason after relatively short periods of time the pins become damaged, primarily from chipping off of pieces of the wood, to a degree preventing their further use as first class pins. Experience has shown that bowling pins are most vulnerable and suffer the greatest damage on the body portion in its region of greatest diameter. In spite of the difficulties in drying the wood and considerations of cost, both of which have led to numerous attempts to develop prefabricated pins, the most common present day bowling pins is still turned from a single piece of wood. In this type of pin the places at opposite sides of the body, the eyes, or area where the complete or close grain lines appear, are most vulnerable and large slabs frequently break off at these points, the wood separating along the grain lines. Both in this type of pin and in previously known fabricated pins the grain runs longitudinally of the pin.

Accordingly, it is an object of the present invention to provide an improved fabricated bowling pin having an improved body portion which is highly resistant to chipping and other damage at the portion thereof which is subjected to the most abuse.

Another object is to provide such a pin which is simple and economical of construction and durable in use.

Other and more detailed objects will become apparent from a consideration of the following specification, the appended claims, and the accompanying drawing, wherein:

Figure 1 is an elevational view of a bowling pin constructed according to the present invention;

Fig. 2 is a transverse sectional view of the structure illustrated in Fig. 1, taken along the line 2—2 thereof and illustrating in broken lines an initial shape which the blocks may have prior to reducing them to their finished shape;

Fig. 3 is a perspective view of one of the blocks showing the grain thereof; and

Figs. 4 and 5 are transverse sectional views similar to Fig. 2, illustrating modified forms of the invention.

Referring to Figs. 1 and 2 of the drawing, the bowling pin 10 there illustrated is of the usual conventional tenpin shape and comprises an up-

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per head or handle portion 12, a lower base or body portion 14, and an intermediate neck portion 16. In a generic sense these three portions may be connected in any suitable manner and in the embodiments illustrated are integrally formed from a single piece of wood. Intermediate the neck 16 and the bottom end 18 of the pin the body portion 14 has an integrally formed core 20 extending longitudinally of the pin 10 substantially equal distances above and below the point of maximum diameter of the pin indicated at 22. Adjacent the opposite ends of the core 20 the body portion 14 extends out to the full diameter of the finished pin and defines opposed axially facing shoulders 24 and 26.

In the broader aspects of the invention the core 20 may be of any suitable shape but in the preferred embodiment illustrated is square in cross section and is surrounded by four blocks 28 which are closely fitted between the opposed shoulders 24 and 26 and glued or otherwise suitably secured to the body portion 14 of the pin. The blocks 28 may be initially rectangular in shape as illustrated in Fig. 3 and in broken lines in Fig. 2 and turned down to the shape illustrated in full lines in Figs. 1 and 2, or may be formed in any other suitable manner. The blocks 28 are disposed with the grain or annular growth rings of the wood extending substantially perpendicular to the axis of the pin, or in other words when the pin 10 is in the vertical position illustrated in the drawing, the blocks 28 are disposed with the wood fibers thereof horizontal, i. e., at right angles to the position in which they grow in a vertical tree trunk. Thus, the four blocks 28, as illustrated in Fig. 3, fit against the four sides of the core 20, as illustrated in Figs. 1 and 2, with the slab grain on the faces 29 disposed horizontally and the edge grain on the faces 30 abutting the shoulders 24 and 26, and the end grain on the faces 31 of the blocks overlapped on one end by the slab grain of the adjacent block.

The core 20 should be sufficiently small to permit substantial thickness, and consequent strength, of the blocks 28 at all points. Also, it will be appreciated that by employing the blocks 28 in the number and arrangement illustrated there is no area on any block at which the grain is perpendicular to the finished surface, thereby eliminating the possibility of splitting of the blocks by blows on the end grain.

By constructing the pin as above described, the pounding of the blocks 28, which are disposed at the region of roughest treatment, merely serves

to compress the blocks and tightly wedge them between the shoulders 24 and 26. This compressing of the blocks increases their hardness and ability to resist damage from the action of the pins and affords an extremely durable belt around the body portion at its otherwise weakest point.

As illustrated in Figs. 4 and 5, the shape of the core may be varied as desired, Fig. 4 illustrating a construction having a triangular core 40 and Fig. 5 illustrating one having a circular core 50. When a circular core is used the number of blocks may be varied as desired. Three blocks 52 are illustrated in Fig. 5, and more than two blocks should be used as otherwise the end grain of the wood in the blocks will intersect the finished surface of the blocks at right angles thereto and be exposed to blows along the grain. Wood is well known to be readily damaged by blows on the end grain.

It will now be appreciated that the present construction is not limited to new pins but is particularly well adapted to the renovating of used pins. The damaged peripheral portion of the body portion of the pin may be removed and a suitable core formed and surrounding blocks affixed as above described.

Pins constructed in accordance with the present invention have been found to be still in first class condition after periods of use greater than the normal life of conventionally constructed pins.

Although only several specific embodiments of the invention have been illustrated and described in detail, numerous modifications and changes will be readily apparent to those skilled in the art without departing from the spirit of the invention or from the scope of the appended claims.

What is claimed is:

1. A fabricated bowling pin comprising a body portion having a reduced core extending longitudinally of said pin between top and bottom shoulders, and a plurality of blocks of wood secured to said body portion, each of said blocks of wood being disposed wholly at one side of said core and said blocks of wood being arranged to surround said core, said blocks being disposed with the slab grain thereof extending substantially perpendicular to the axis of said pin and the edge grain engaging the shoulders.

2. A fabricated bowling pin comprising a body portion having a reduced core extending longitudinally of said pin between top and bottom shoulders, and a plurality of blocks of wood secured to said body portion, each of said blocks of wood being disposed wholly at one side of said core and said blocks of wood being arranged to surround said core, said blocks being disposed with the slab grain thereof extending substantially perpendicular to the axis of said pin with the edge grain abutting said shoulders to prevent the spreading of the blocks when compressed.

3. A fabricated bowling pin comprising a body portion having a reduced core and defining a pair of opposed shoulders at opposite ends of said reduced core disposed substantially at right angles to the axis of said pin, a plurality of blocks of wood secured to said body portion, each of said blocks of wood being disposed wholly at one side of said core and said blocks of wood being arranged to surround said core, said blocks being disposed with the slab grain thereof extending perpendicular to the axis of said pin and the edge grain engaging said shoulders.

4. A fabricated bowling pin comprising a body portion having a reduced polygonally shaped core extending longitudinally of said pin disposed between a pair of shoulders, and a plurality of blocks of wood individual to each face of said core and secured to said body portion, each of said blocks of wood being disposed wholly at one side of said core and said blocks of wood being arranged to surround said core, said blocks being disposed with the slab grain thereof extending substantially perpendicular to the axis of said pin and with the edge grain engaging said shoulders.

5. A fabricated bowling pin comprising a body portion having a reduced square core extending longitudinally of said pin disposed between a pair of shoulders, and four blocks of wood secured to said body portion, each of said blocks of wood being disposed wholly at one side of said core and said blocks of wood being arranged to surround said core, said blocks being disposed with the slab grain thereof extending substantially perpendicular to the axis of said pin and with the edge grain engaging said shoulders.

6. A fabricated bowling pin including, in combination, a body portion having a reduced core of polygonal formation disposed between spaced shoulders, a plurality of blocks of wood secured to said core one on each flat face thereof, with the end grain on one block overlapped by the slab grain of an adjacent block and the edge grain of all the blocks abutting said shoulders.

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