March 3, 1959 W. L. HUNT 2,876,011

METHOD OF REINFORCING AND FINISHING A BOWLING PIN

Filed Dec. 11, 1956

Fig. 1

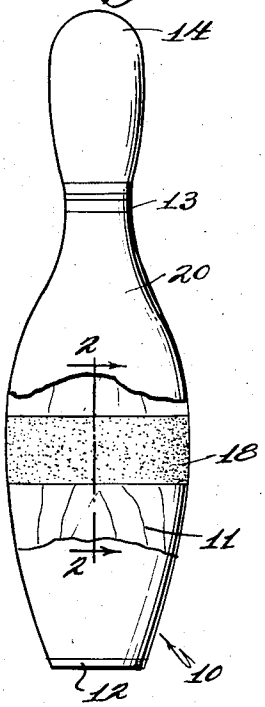


Fig. 2

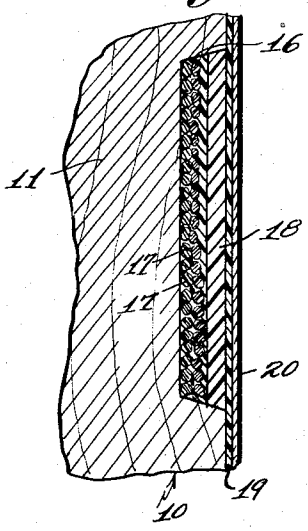


Fig. 3

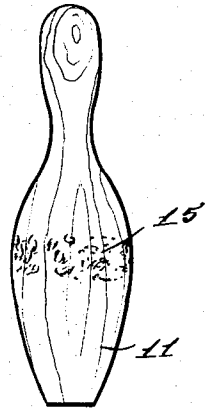


Fig. 4

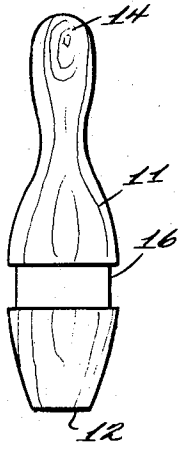


Fig. 5

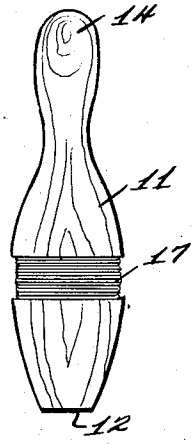
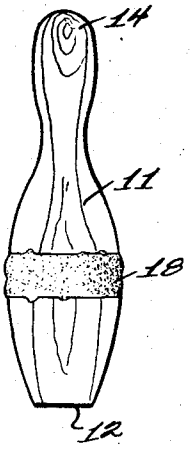


Fig. 6



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METHOD OF REINFORCING AND FINISHING A BOWLING PIN

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1 Claim. (Cl. 273—82)

The present invention relates to bowling pins, and more particularly to the method of forming same having means therein to prevent excessive deformation of the pin in the ball contact zone.

The primary object of the invention is to provide a method of forming a bowling pin in which the effective life of the pin is materially increased by reducing the incident of damage to the pin.

Another object of the invention is to provide a method of forming a bowling pin wherein pins damaged beyond use in normal bowling may be restored to full usefulness thereby.

A further object of the invention is to provide a method and means for refurbishing bowling pins whereby the pin meets all standards established for new bowling pins.

Another object of the invention is to provide a method of manufacturing and refurbishing bowling pins which is inexpensive, easy to perform, and which will produce a bowling pin having an effective life greater than a new bowling pin manufactured in a conventional manner.

Other objects and advantages will become apparent in the following specification when considered in the light of the attached drawings, in which:

Figure 1 is a front elevation of a bowling pin incorporating the invention shown partially broken away for clarity of illustration.

Figure 2 is a grossly enlarged vertical cross section of a fragment of the invention taken on the line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3 is a side elevation of the bowling pin damaged in normal play.

Figure 4 is a side elevation of a bowling pin with the first step of the invention carried out thereon.

Figure 5 is a side elevation of a bowling pin with the second step of the invention carried out thereon.

Figure 6 is a side elevation of a bowling pin with the third step of the invention carried out thereon.

Referring now to the drawings in detail wherein like reference characters indicate like parts throughout the several figures, the reference numeral **10** indicates generally a bowling pin constructed in accordance with the invention.

The bowling pin **10** comprises a maple wood body **11**, a base **12**, a neck portion **13**, and a head **14**. The conformation of the bowling pin **10** is conventional and is controlled by bowling organizations.

In normal use the wooden body **11** of the bowling pin **10** is struck by the bowling ball (not shown) in the fattest area of the body **11** and sustains damage as indicated at **15** to the wooden body **11**. After the bowling body **11** has sustained a considerable amount of damage

15, the conformation thereof no longer meets league standards and the pin can no longer be used in league games. A bowling pin **11** sustaining sufficient damage **15** to be substandard in size can then only be used in practice games, and even then the pin is undesirable since the action obtained therewith is below standard.

In carrying out the invention, a pin body **11** having damage **15** thereon, or a new pin body **11** in undamaged condition, is placed in a lathe (not shown) and an annular recessed band **16** is cut therein in the fattest portion of the pin body **11**. After the pin body **11** has been recessed at **16**, a double layer of twine **17** is wrapped thereon. The twine **17**, prior to being wrapped in the recess **16** of the pin **11** is first wet with a liquid plastic material and is wound onto the pin **11** in a wet condition.

The wet twine **17** is permitted to completely harden or dry at room temperatures and under normal conditions with respect to the atmosphere. After the plastic coated twine has hardened, a plastic material **18** having the general consistency of putty is pressed into the groove **16** in contact with the twine **17** to a height above the original contours of the pin **11**.

Illustrated in Figure 6 is a pin **11** with the plastic material **18** raised above the normal contours of the pin **11**. The plastic material **18** is then permitted to dry at normal temperatures and normal conditions of the atmosphere into a relatively hard impenetrable mass. The bowling pin body **11** is then turned in a lathe until the original contours thereof have been reestablished whereupon the pin **11** is provided with a plastic coat **19** and a paint coat **20** in a conventional manner.

When the pin **11** has the damage **15** thereof extending about and below the groove **16**, it should be understood that the plastic mass **18** may be utilized in filling the damaged areas prior to the turning of the pin **11**.

The twine **17** provides a combined reinforcement for the pin **11** and a cushion underlying the plastic mass **18** to cushion a portion of the shock occurring when the ball strikes the pin **11**.

Having thus described the preferred embodiment of the invention, it should be understood that numerous structural modifications and adaptations may be resorted to without departing from the scope of the appended claim.

What is claimed is:

The method of reinforcing and finishing a bowling pin which includes the steps of turning an annular groove in the ball contact zone of the pin, wrapping the pin in the turned groove to a height to partially fill the groove with plural layers of twine impregnated with a plastic material in a liquid state, drying the plastic impregnated twine, covering the dry plastic impregnated twine with sufficient plastic substance to fill the remainder of the groove and extend outwardly therebeyond, turning the pin including the plastic substance to standard bowling pin contours, and coating the turned pin and plastic substance with finish materials.

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