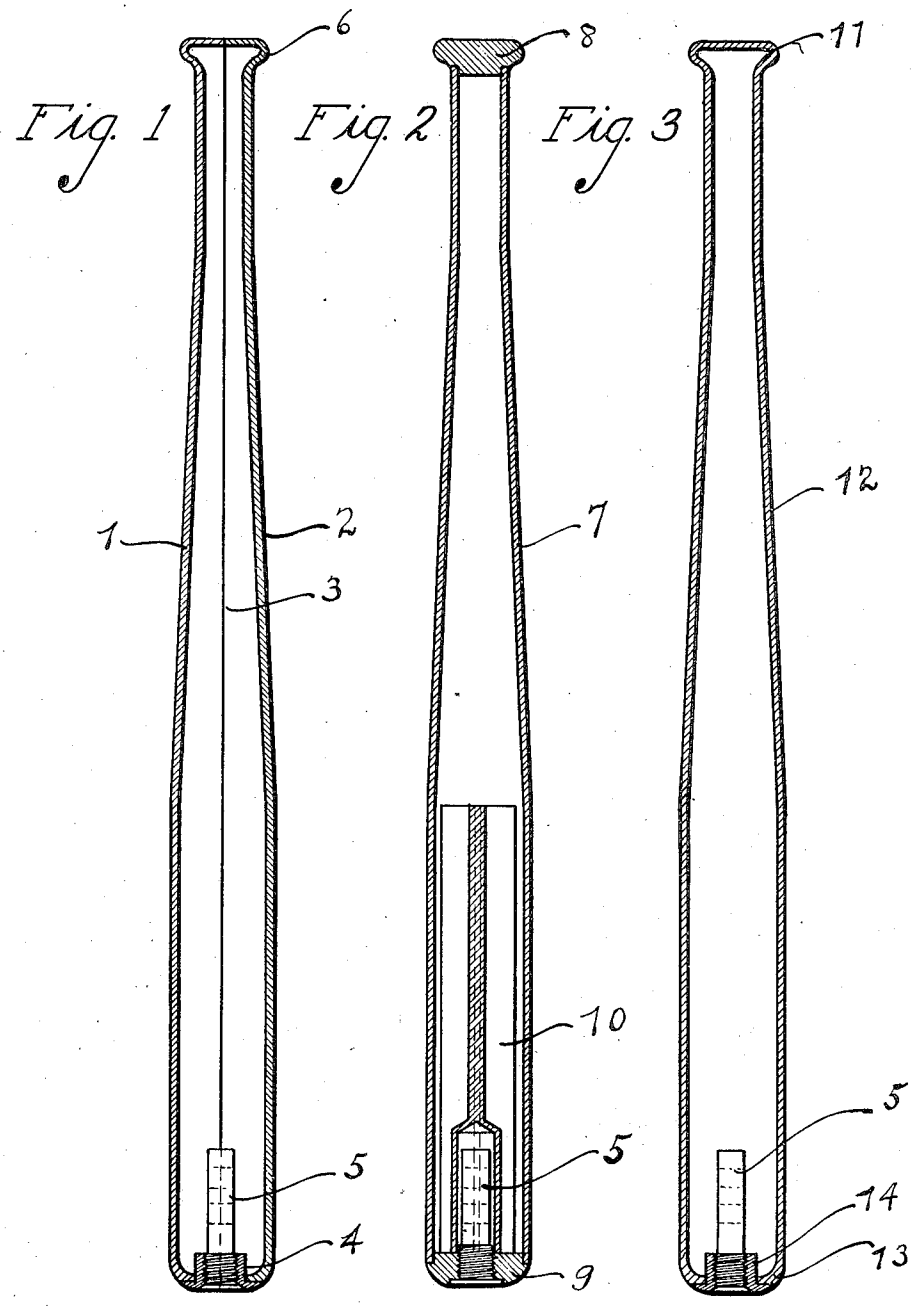
June 24, 1924. 1,499,128

W. A. SHROYER, JR

BASEBALL BAT

Filed May 27, 1922



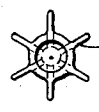


Fig. 4

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UNITED STATES PATENT OFFICE.

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BASEBALL BAT.

Application filed May 27, 1922. Serial No. 564,246.

To all whom it may concern:

Be it known that I, WILLIAM A. SHROYER, Jr., a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Baseball Bats or the like, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in base-ball bats,—having particular reference to all-metal bats.

The main object of the invention is to provide an all-metal base-ball bat that will have the essential qualities of wood bats, as lightness, spring, or resiliency and balance, which are qualities of wood ball bats of approved construction.

A further object of the invention is to overcome certain inherent disadvantages which are common to wood ball bats—as the grain of the wood which causes the bats to split, when not held properly, as a ball is struck, or upon throwing the bats on the ground, or opening of the grain, caused by exposure of the bats to the weather, formation of splinters, and the ordinary fractures and indentures of the wood which result from rough usage.

Thus it is an object of the present invention to substitute metal for wood, which will eliminate all inherent weaknesses in wood bats due to the more fragile qualities of wood which causes it to become marred by exposure and rough handling.

A further object in my invention is to produce an all-metal bat in which provision is made to regulate the weight balance and spring of the bats to meet the ideas or requirements of individual users,—the bats for stock being made to standard sizes, each size being adapted for adjustment as to weight by means of a weight insert which can be regulated as desired within required limits.

In a preferred form provision is made in my improved bat to reinforce the wall of the striking portion of the bat to prevent indentures of the wall from the force of the impact when a ball or other object is struck.

It is a further object of the invention to provide a design for an all-metal bat which will be adapted for cheap production, which will result, when produced in either of the preferred forms of construction herein illustrated and described, in a bat in all respects suited to the purposes for which it is intended and which will be practically indestructable under normal usage.

In the accompanying drawings:

Fig. 1 is a longitudinal sectional view illustrating an all-metal bat embodying the invention in a preferred form of construction;

Fig. 2 is a longitudinal sectional view of the bat illustrating certain modifications of construction;

Fig. 3 is a longitudinal sectional view illustrating further modifications of construction, and

Fig. 4 is a detail view of a part of the construction illustrated in Fig. 2.

It will be understood that the different figures of the drawings illustrate the underlying principle of the invention, as well as preferred forms of construction, and that further modifications can be made in the details of construction without departing essentially from the invention as defined and comprehended in the appended claims.

As illustrated in Fig. 1 the bat comprises two longitudinal equal parts —1 and —2, joined one to the other by a butt weld —3,— an internally threaded lug —4 welded to the ends of parts —1 and —2 and shaped to form a symmetrical end for the bat,—and a weight element —5 which is adapted to be cut to any suitable length, as indicated by dotted cross lines, to effect the weight and the desired balance of the bat. The knob —6 is formed integrally with parts —1 and —2 which are adapted, as here shown, to be produced with swedging dies from steel or brass tubing of any suitable gauge.

The bat illustrated in Fig. 2 consists of a body portion —7 formed of an integral piece of tubing by a turning or spinning operation to produce the taper,—the knob —8, as here shown, being a separate piece, preferably a casting, welded or brazed on the tapered end of the tube. The opposite end of the bat is closed by a symmetrical end —9 having a threaded aperture into which a weight element —5 is threaded in the same manner illustrated in Fig. 1. An elongated truss, or spider —10 is inserted, as here shown, in the end of the tube, adjacent the piece —9, to reinforce the wall whereby to prevent indentures thereof,—the part —10 being assembled in the tube preferably by a drive fit, or by securing the same in any suitable manner

to the end piece —9,—the part having an elongated clearance aperture to receive the projecting end of weight member —5.

The construction illustrated in Fig. 3 is a modification of that shown in Fig. 2,—the knob —11, as here shown, being formed as an integral part of the tube —12. In this construction the body of the bat, including the knob —11, is also formed from a single piece of tubing by a spinning or forming operation in which heat is applied to the metal during the operation for forming the knob, and may also be applied in shaping the opposite inwardly curved end —13,— the end being preferably closed and then drilled or bored out to receive the lug —14 and weight —5 which are applied in the same manner as illustrated and described in connection with Fig. 1.

In making the all-metal bats in any of the forms illustrated, it will be understood that a guage of tubing will be selected as will be required for the weight and strength of the bat, as well as for the desired spring at the tapered handle portion.

Having described my invention, I claim:

1. An all-metal base ball bat comprising an integral tubular member shaped to form the body of the bat including the knob, having its opposite end adapted to receive a weight element whereby to determine the weight and effect the balance of the bat, and having an insert in said end adapted to support the wall of the tube.

2. An all-metal base ball bat comprising an integral tubular member shaped to form the body of the bat, having a knob at one end, and a variable weight element inserted at the opposite end whereby to determine the weight and effect the balance of the bat.

3. An all-metal base ball bat comprising an integral tubular member shaped to form the body of the bat, having a knob at one end, an internally threaded plug secured to the opposite end of the bat, and a variable weight element supported in said plug.

4. An all-metal base ball bat comprising an integral tubular member shaped to form the body of the bat, having a knob at one end, a plug secured in the opposite end of the bat, and a weight element supported in said plug and adjustable by regulating the length thereof to determine the weight and effect the balance of the bat.

5. A metal base ball bat comprising a tubular member shaped to form the body of the bat, having a knob at one end and an end cap and reinforcement for the wall of the tube secured in the opposite end of the bat.

6. A metal base ball bat comprising a tubular member shaped to form the body of the bat, having a knob at one end and a reinforcement for the wall of the bat driven in the opposite end of the bat.

7. A metal base ball bat comprising a tube conforming to the shape of a ball bat, having a knob at one end and a spider reinforcement inserted in the opposite end to strengthen the wall of the bat.

8. A metal base ball bat comprising a tube conforming to the shape of a ball bat, having a knob at one end, and a weight to balance the bat and a support for the wall of the tube inserted at the opposite end of the bat.

9. A metal base ball bat formed of an integral tube having its striking end weighted to effect the balance of the bat, and reinforced to prevent indentures thereof, and its opposite end tapered and regulated by the guage of the tube and the degree of taper to effect the desired spring of the bat.

In testimony whereof, I affix my signature.

WILLIAM A. SHROYER, JR.