

Dec. 23, 1924.

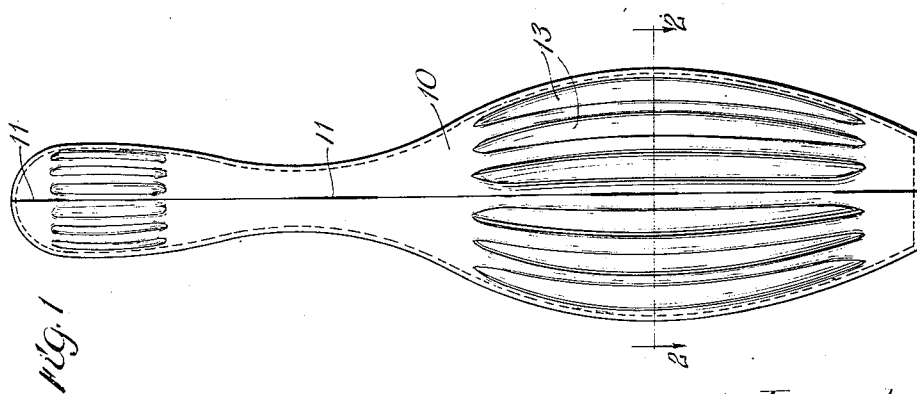
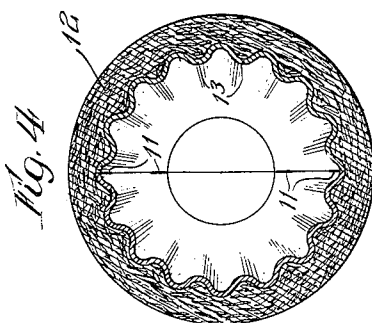
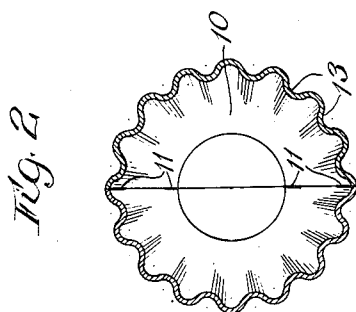
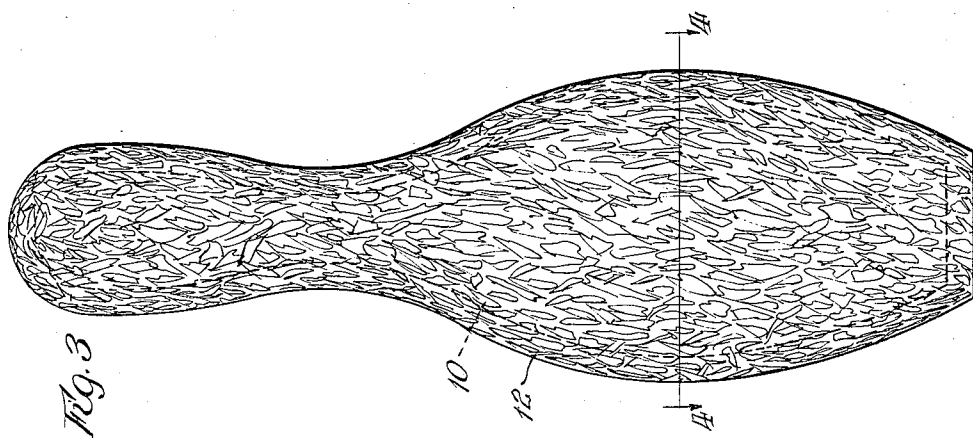
1,520,108

J. W. BISHOP ET AL

BOWLING PIN

Filed June 5, 1922

2 Sheets-Sheet 1



Inventors
Joseph W. Bishop and
John O. Matteson
By: Wm. O. Bell, Atty.

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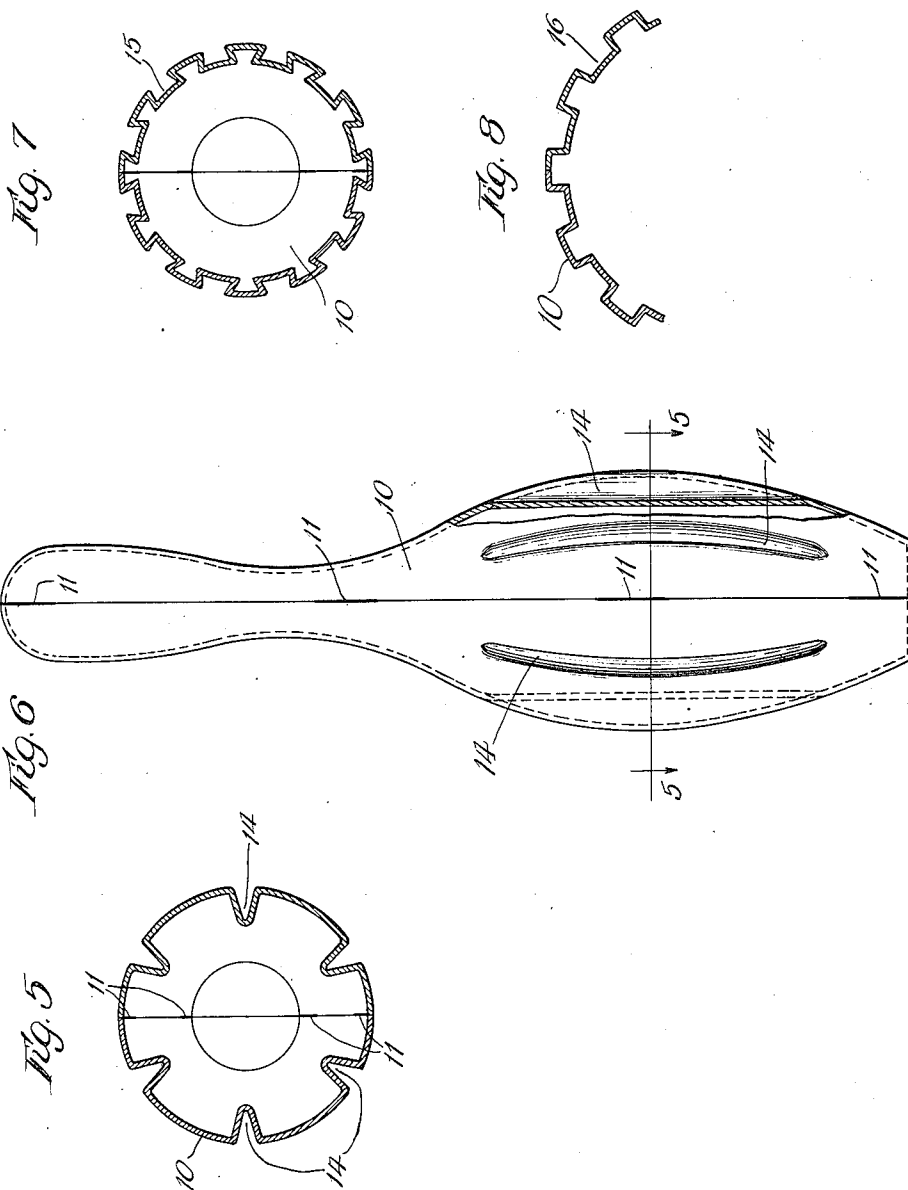
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2 Sheets-Sheet 2



Inventors
Joseph W. Bishop and
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UNITED STATES PATENT OFFICE.

JOSEPH W. BISHOP AND JESSE O. MATTESON, OF MUSKEGON, MICHIGAN, ASSIGNORS
TO THE BRUNSWICK-BALKE-COLLENDER COMPANY, OF CHICAGO, ILLINOIS, A
CORPORATION OF DELAWARE.

BOWLING PIN.

Application filed June 5, 1922. Serial No. 565,967.

To all whom it may concern:

Be it known that we, JOSEPH W. BISHOP and JESSE O. MATTESON, citizens of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, has invented certain new and useful Improvements in Bowling Pins, of which the following is a specification.

This invention relates to bowling pins of that class which comprise a core enclosed within a composition covering and its object is to reinforce and strengthen the core and to secure the covering thereon in a firm and rigid manner.

In the accompanying drawings illustrating a selected embodiment of the invention—

Fig. 1 is an elevation of a core embodying the invention;

Fig. 2 is a transverse sectional view on the line 2—2 of Fig. 1;

Fig. 3 is an elevation of the completed pin having a covering of a preferred composition;

Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 3;

Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 6;

Fig. 6 is an elevation partly in section of another form of core;

Figs. 7 and 8 are transverse sectional views illustrating other formations of the core which may be employed.

Referring to the drawings the core may be cast but it is preferably stamped or pressed out of sheet metal in a plurality of members which are securely united by welds or other suitable means. The covering may be of any suitable composition but we prefer to employ a hard rubber compound having small pieces of wood in the form of little sticks or splinters thoroughly incorporated therewith which composition is molded and vulcanized on the core and thereby united therewith.

To strengthen the core where it receives the severest blows, and to unite the covering more securely with the core we may corrugate the core at the belly and also at the head if desired. We prefer to have these corrugations run lengthwise of the core and they may be formed as shown at 13 in Figs. 1-4 in regular curves after the manner of ordinary corrugations or they may be formed by providing comparatively deep

indentations as shown in Figs. 5 and 6 or the corrugations may be of a dove-tail shape as shown at 15 in Fig. 7 or of a square groove shape as shown at 16 in Fig. 8.

The corrugations reinforce and strengthen the core against the impact of heavy blows of the ball and other blows occasioned by pins hitting each other on the bowling alley and in the pit. And the corrugations provide recesses to receive the composition which not only thickens the covering upon the corrugated part of the core but provides to a more or less extent for an interlocking engagement between the cover and the core which tends to strengthen the union between the covering and the core, thereby providing a substantial and durable pin which will withstand the shocks and blows of usage in a superior manner.

The core may be made of wood, solid or laminated, with the corrugations suitably formed therein and we are aware also that a metal core may be variously constructed with corrugations otherwise formed than as herein shown and described and we reserve the right to make all such changes as fairly fall within the scope of the following claims.

We claim:

1. A bowling pin comprising a core having corrugations in its outer surface and a composition covering enclosing the core.

2. A bowling pin comprising a core made of sheet metal and having corrugations in its outer surface, and a composition covering enclosing the core.

3. A bowling pin having a core with corrugations in its outer surface extending lengthwise of the core, and a composition covering enclosing the core.

4. A bowling pin having a core with corrugations in its outer surface extending substantially the length of its belly, and a composition covering enclosing the core.

5. A bowling pin having a core with outside surface corrugations at its head, and a composition covering enclosing the core.

6. A bowling pin comprising a sheet metal core having a plurality of substantially parallel corrugations extending lengthwise of the core, and a composition covering enclosing the core.

JOSEPH W. BISHOP.
JESSE O. MATTESON.