

No. 649,745.

Patented May 15, 1900.

W. H. NIEMEYER.

TENPIN.

(Application filed Dec. 29, 1899.)

(No Model.)

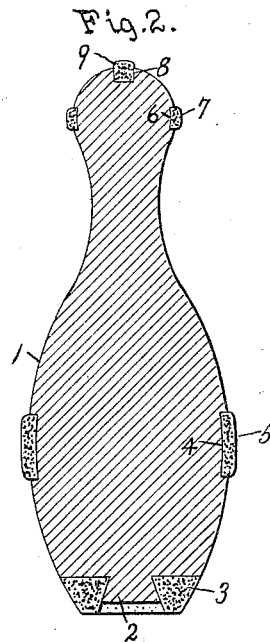
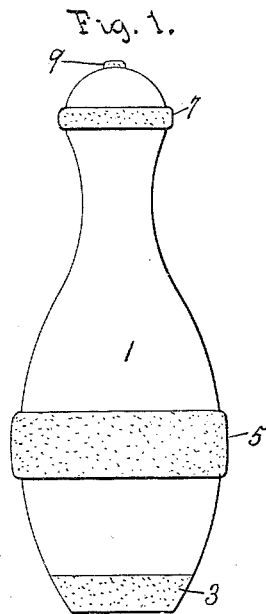


Fig. 3.

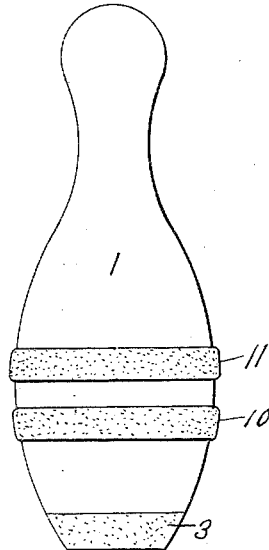


Fig. 4.

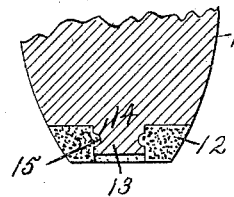
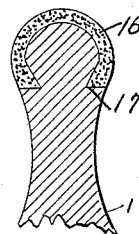


Fig. 5.



Witnesses:

*R. P. Rayden*  
*William Ringle*

Inventor:

*William H. Niemeyer*  
By *Ferguson & Gifford*  
Attys.

# UNITED STATES PATENT OFFICE.

WILLIAM H. NIEMEYER, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO WILLIAM B. MANN, OF SAME PLACE.

## TENPIN.

SPECIFICATION forming part of Letters Patent No. 649,745, dated May 15, 1900.

Application filed December 29, 1899. Serial No. 741,886. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. NIEMEYER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Tenpins, of which the following is a specification.

This invention relates to an improvement in tenpins.

- 10 Among the objects of the invention are to provide a tenpin which will prevent the battering out of shape and the destruction of the equilibrium of the pin, to prevent the destruction of the surface of the bowling-alley 15 caused by the hard edges of the pin contacting therewith, to prevent the destruction of the balls used in bowling, and to greatly lessen the noise caused by the ball striking the pin and the latter striking the floor.
- 20 Tenpins made entirely of wood are objectionable because the edge of the base soon becomes chipped or broken off, resulting in the destruction of the equilibrium of the pin, thereby causing the latter to fall when lightly 25 touched or jarred by the other pins. Tenpins having a metal base have also been found objectionable because they injure the surface of the bowling-alley and also the other pins when the edge of the metal base comes in 30 contact with the body of the other pins, which frequently results when the pins are knocked down. I have overcome these objections by providing the pin with an elastic base, such as rubber, the edges of which will not break 35 off and is of sufficient rigidity to retain its shape. This base will neither injure the surface of the alley nor the other pins with which it may come in contact and will maintain an even surface upon which the pin rests. I 40 also provide the head of the pin with an elastic band or cap to prevent the said head from defacing the surface of the bowling-alley when the pin is knocked down and also to prevent the noise caused by the head striking 45 against the said surface.

Other features of my invention will be fully set forth in the description of the accompanying drawings, in which—

- 50 Figure 1 is a side elevation of a tenpin, showing my improvements thereon. Fig. 2 is a vertical section of the same. Fig. 3 is

a modification showing two elastic bands around the body of the pin. Fig. 4 is a section of a part of the tenpin, showing a modification of the elastic base and means for securing same to the pin. Fig. 5 is a modification of the head of the pin and the elastic cap secured thereto.

Similar numerals refer to like parts throughout the several views.

In the accompanying drawings, 1 designates my improved tenpin, which has the general exterior contour. The lowermost part of the pin is cut away to form a dovetailed projection 2, around which latter the elastic base 3 is secured. The said base 3 is made of elastic material, such as rubber, and has a central aperture corresponding in shape to and slightly smaller than the projection 2 and is sprung over and projects below the latter, as shown in Fig. 2. By thus having the projection 2 and base 3 of the form described the latter will be securely held to the pin; but to insure a more perfect joint between the said two parts the base 3 may be additionally secured by the use of cement. It will be seen that by making the base 3 of elastic material of sufficient rigidity the edges thereof will not become rounded off or chipped, as is the case with wood pins. Thus the lower surface of the base 3 will remain even, thereby maintaining a perfect equilibrium of the pin at all times.

The body of the pin 1 is provided with an annular groove 4 in this instance, in which the band 5 is secured. This band 5 is also made of elastic material, such as rubber, and is smaller in circumference than the body of the pin. Therefore when forced over the body the band will spring into the groove 4 and be held securely to the pin. This band 5 may, however, be secured to the pin in any other suitable manner and is placed on the latter in position to receive the blow of the balls used in bowling. By the use of this elastic band 5 it will be seen that neither the pin nor the balls will be injured by the blow received in bowling, thus greatly increasing the usefulness of both.

The head of the pin is provided with an annular groove 6, in which is fitted an elastic band 7, which is placed in position and se-

cured the same as the band 5. The purpose of this band 7 is to prevent the noise caused by the head of the pin striking the surface of the alley in falling and also assist in maintaining the surface of the alley in good condition. 5 The head of the pin is also provided with an aperture 8, in which is secured an elastic plug 9, the object of which latter is to prevent the noise caused by the head of the pin striking against the surface of the alley, 10 which is frequently the case when the pins receive a hard blow by the ball.

In Fig. 3 I have shown two elastic bands 10 and 11 instead of one, as shown in Figs. 1 and 2. These bands may be made narrower 15 than the single band in Figs. 1 and 2 and are placed on the pin in such a position as to receive the blow of any sized ball, as in bowling it is usual to employ several sizes. The band 20 10 would be so placed as to receive the small balls and the band 11 to receive the large ones.

In Fig. 4 I have shown a modification of the elastic base 12 and the means of securing 25 it to the pin. The projection 13 is provided with a straight wall instead of dovetailed, as in Fig. 2, and is provided with an annular groove 14. This elastic base 12 is formed with a central aperture having a straight wall 30 and provided with an annular flange 15, which fits within the groove 14 and secures the said base in position. Cement may also be used with this base 12 the same as with the base 3. In this modification the base 12 also extends 35 below the projection 13.

Fig. 5 shows a modification of the head of the pin, which latter is cut away and has an

elastic cap 16 fitted over the cut-away portion. The elastic cap 16 is forced over the said head, and the lower edges spring into the 40 undercut 17, thereby holding the cap in position. This cap 16 comes in contact with the surface of the bowling-alley when the pin is knocked down and prevents the noise usually caused thereby and also prevents the pin 45 from defacing the surface of the alley.

Having thus described my invention, what I claim is—

1. A tenpin having a dovetailed projection, 2, at its lower extremity; and an elastic base, 50 3, secured to said dovetailed projection.

2. A tenpin having a dovetailed projection at its lower extremity, and an elastic base secured to and extending below said dovetailed 55 projection.

3. A tenpin having its lower extremity undercut leaving a projection from the center of the pin, and an elastic base sprung around said projection.

4. A tenpin having its lower extremity undercut leaving a projection from the center 60 of the pin, and an elastic base secured around and extending below said projection.

5. A tenpin having its lower extremity undercut leaving a projection from the center 65 thereof, and an elastic base secured around and extending below the said projection and having its side flush with the side of the pin.

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

WILLIAM H. NIEMEYER.

Witnesses:

CHAPIN A. FERGUSON,  
ROBERT GIPSON.