May 8, 1956 W. E. HEBER 2,744,279

FINGERGRIP WIPER FOR BOWLING BALLS

Filed Oct. 14, 1954

FIG. 1.

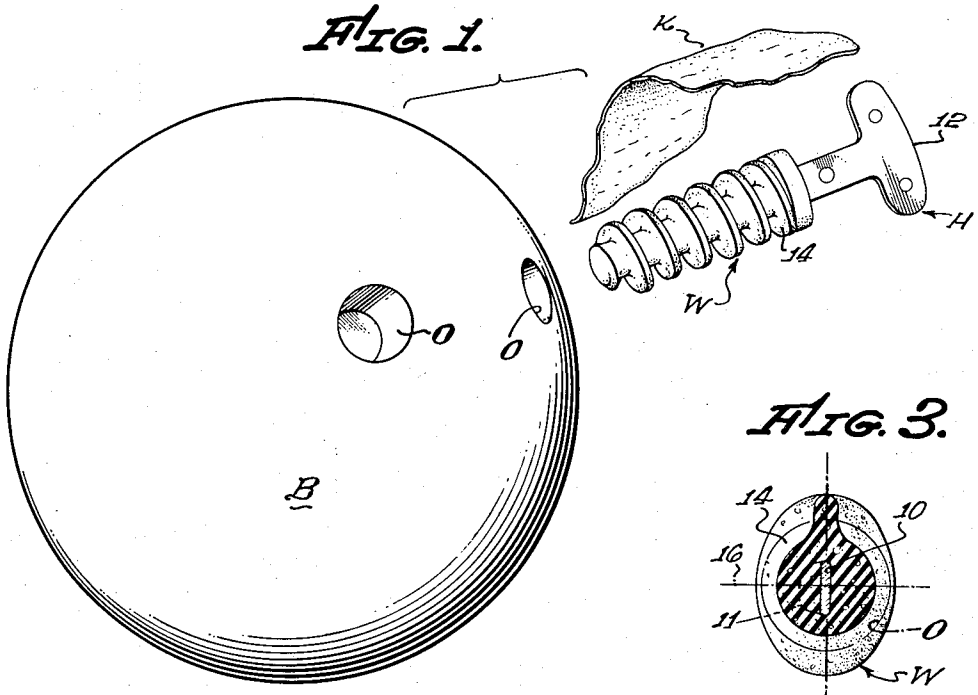



FIG. 3.




FIG. 2.

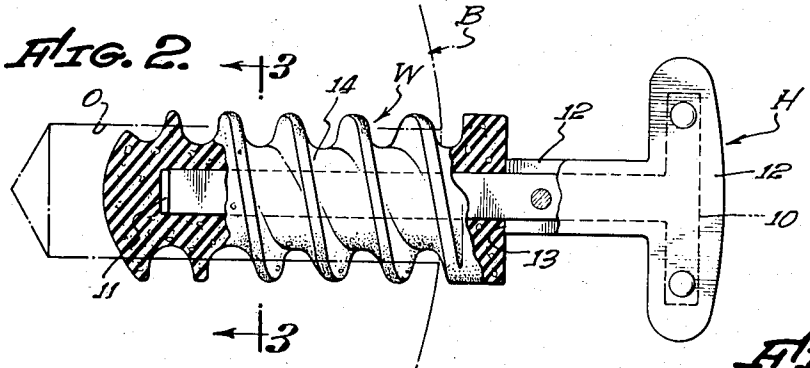



FIG. 4.

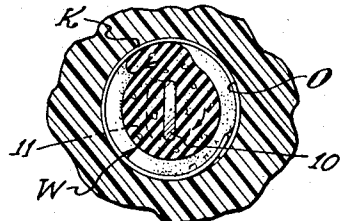
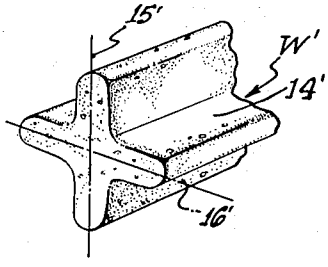



FIG. 5.




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2,744,279

# FINGERGRIP WIPER FOR BOWLING BALLS

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Application October 14, 1954, Serial No. 462,242

1 Claim. (Cl. 15—210)

This invention relates generally to sporting equipment, and more specifically to a useful device for the cleansing of the finger grips of bowling balls.

A less refined device of this type has previously been disclosed by the present inventor in United States Letters Patent 2,315,054, issued March 30, 1943 to William E. Heber. The present invention represents novel and substantial improvements over the earlier device in that it possesses more efficient cleansing action, it is much more hygienic, it has fewer parts and is consequently easily manufactured, thus allowing it to be marketed at a very reasonable price. The invention is also more attractive in appearance and adaptable to a greater range of hole sizes than was the prior device.

The invention has as a major object thereof the provision of a device to thoroughly clean the finger grip holes of bowling balls, removing perspiration or moisture of other character therefrom, as well as foreign particles, whereby a player may have a more secure, safer grip on the ball and so exercise greater control of the ball's course down the alley to the pins.

Another object of the invention is to provide a device of this character with a novel form of a cleaning member which will efficiently clean bowling ball holes, either with or without the use of tissue or other sheet material, and one that may be rotated either by hand or machine.

A further object of the invention is to supply a bowling ball finger grip wiper by which moisture and foreign deposits may be removed from said grip by means of frictional action of the resilient wiper body which is of cellular construction, when it is brought into rubbing contact therewith.

Another object of the invention is to provide a resilient, movable member of such shape and construction as to be readily deformed when positioned within a bowling ball finger grip hole, and when so deformed, capable of absorbing and removing moisture and foreign materials adhering to the side wall of the hole, as well as being capable of so engaging a sheet tissue that it may be moved therewith within the hole to accomplish the same result.

Yet a further object of the invention is to furnish a cleaning member for a bowling ball finger grip that may be rotatably supported on a machine and power-driven thereby to remove dirt, moisture, and foreign material from the finger grip hole in which the member is inserted.

It is an object of the invention as well, to provide such a device adaptable to clean a wide range of hole sizes.

Another important object of the invention is the provision of a device of the above character which may be used in a sanitary manner so as to avoid spreading of possibly infectious matter.

Yet another object is to provide a bowling ball finger grip wiper having a minimum of parts, being of such simple construction that it may be economically manufactured.

The foregoing and other objects will be readily apparent from the following specification and the drawings attached hereto in which drawings:



Figure 1 is a perspective view of the device in position to engage a cleansing tissue prior to entry into the hole to be cleaned;

Figure 2 is a side view of the device partly in section showing the bowling ball finger hole in phantom lines;

Figure 3 is a view taken on the line 3—3 of Figure 2 showing the oval shaped cross-section of the wiper element when not inserted in a finger hole;

Figure 4 is a transverse cross-sectional view of the device taken on the line 3—3 of Figure 2 when inserted in a finger hole; and,

Figure 5 is a fragmentary perspective view of another form of wiper element.

As indicated by the drawings, the invention is embodied in a handle, generally indicated by the symbol H, to which is affixed wiper element W, or the variation W' of said wiper element. The handle H consists of flat T-shaped base member **10**, preferably of metal, having a flange **11** formed on the lower end of the stem thereof, said member **10** having a plastic coating **12** molded on the other or upper end thereof, thus providing convenient means for manual rotation of the device. Shoulder **13** is formed at the meeting of the plastic covered and uncovered portions of member **10** and below this shoulder **13** wiper element W or, optionally, wiper element W', is vulcanized to base member **10**. Wiper element W is an elongated member formed of foam rubber or other resilient material having a somewhat elliptical cross-section with major axis **15** and minor axis **16**.

Helical passage **14** is formed on wiper element W on the exterior thereof and extends the longitudinal length thereof Wiper element W' is also an elongated foam rubber member but is of different cross sectional form. As can be seen in Figure 5, this form has a cross-shaped section with major axis **15'** and minor axis **16'**, said axis **15'** and **16'** being at right angles to one another. Fluted passages **14'** are thus defined longitudinally through wiper element W'. Either of wiper elements W or W', as the case may be, is so mounted on base member **10** that the widest part of the stem of said flat base member **10** coincides with the major axis of the particular form involved.

Although the form of device disclosed here is manually operated, it is obvious that it could appropriately and easily be incorporated into a coin operated or other machine, either singly or in groups.

The cleansing of the finger grip holes O in a ball B may be accomplished by placing cleaning tissue K over the hole O, or by wrapping element W with tissue K and inserting the two into hole O. Upon being thrust into hole O, element W will be compressed along major axis **15** and minor axis **16**, since these axes, particularly major axis **15**, are almost invariably greater than the diameter of hole O. However, element W will be more compressed along major axis **15** than along minor axis **16**, and the greater pressure will therefore exist between the walls of hole O and the extremities of the major axis **15**.

As a result of this differential in pressure between major axis **15** and minor axis **16**, upon turning of the handle H, element W will become distorted as indicated in Figure 4 and will remain so distorted so long as the device is turned. As the device is turned, cleansing tissue K between the walls of hole O and wiper element W is caused to rotate with element W. The tissue K being highly absorbent picks up the moisture and grime within the hole O, but will not allow such matter to pass through to wiper element W, since tissue K is more absorbent than element W.

In this manner the hole O is cleaned but the wiper element W does not absorb the foreign matter so removed and the life of element W is not reduced by the deteriorating effect of such foreign matter. Nor is wiper element W injured by abrasion since its surface does not move relative to the tissue K. After the device and tissue K have

been revolved in hole O, tissue K may be disposed of carrying the dirt with it and thus ending its transmission via either bowling ball or hole cleaner.

The helical passage **14** of wiper element W makes for ease in turning the element W within hole O by relieving pressure and offering less friction-generating area to the walls of hole O but the helical surface of element W insures that all of the walls of hole O is cleaned by tissue K and the oval cross-section of element W insures that pressure to effect cleaning is maintained across the major axis **15**. Wiper element W' operates in much the same way as element W, the fluted passages **14'** acting in the same manner as helical passage **14**, but affording element W' with greater effective cleaning area.

Having thus disclosed the invention, it will be apparent that various changes and modifications may be made in the foregoing disclosure without departing from the scope and spirit of the following claim.

I claim:

A bowling ball finger grip wiper comprising a flat base member having a stem thereon; a plastic handle molded about the upper portion of said member and said stem; and an elongated foam rubber wiper molded about and under the lower portion of said stem, said wiper having a helical passage extending longitudinally through its exterior, said wiper being oval shaped in cross-section and of such cross-sectional area as to allow it to be compressably thrust into said finger grip with a cleansing tissue intermediate said wiper and the surface of said finger grip whereby said wiper and said tissue may be rotated by said handle relative to the surface of said finger grip in order to cleanse said grip.



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