March 26, 1940. C. E. HASKINS 2,195,303

DEVICE FOR CLEANING BALLS

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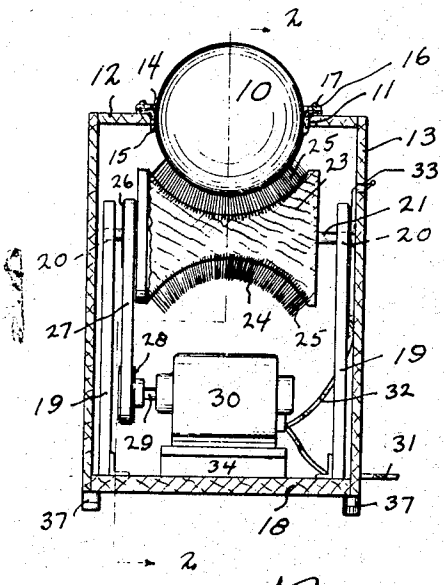


Fig. 1

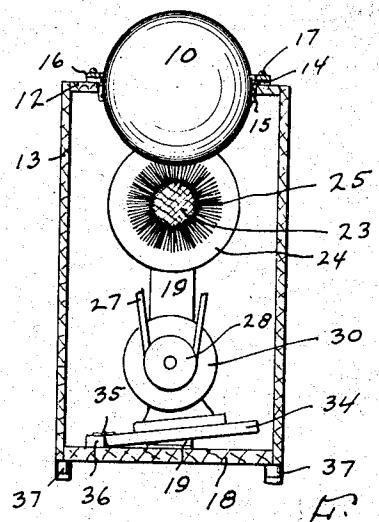


Fig. 2

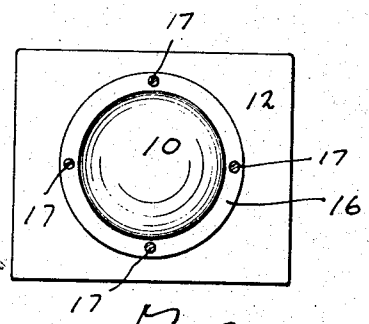


Fig. 3

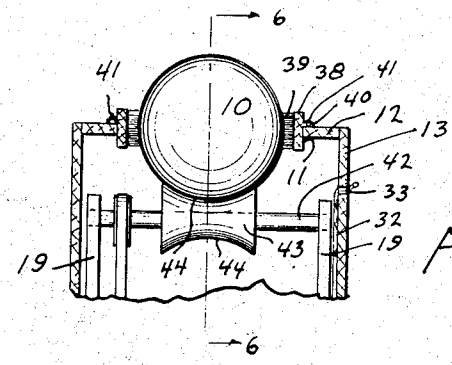


Fig. 4

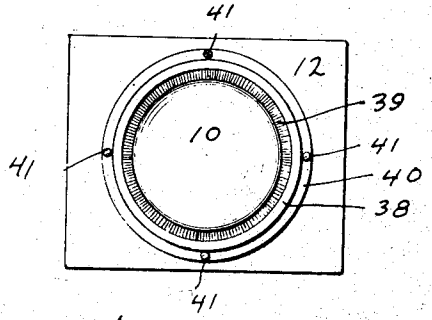


Fig. 5

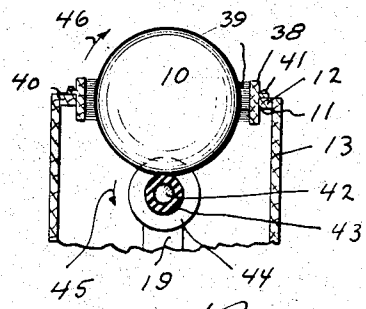


Fig. 6

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DEVICE FOR CLEANING BALLS

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Application April 27, 1939, Serial No. 270,360

2 Claims. (Cl. 15—21)

My invention pertains to a ball cleaning device and especially for large balls of the bowling type.

An object of my invention is to provide an automatic arrangement which will allow the ball to be placed in a convenient aperture and by suitable rotating arrangements to sufficiently clean the ball.

A further object of my invention is to provide an arrangement which, due to the substantially large weight of the ball, will provide a positive scouring or cleaning action uniformly and over the entire surface of the ball.

A further object of my invention is to provide means for maintaining a uniform tension against the driving arrangements and to provide an arrangement which will not get out of order and which can be easily cleaned.

A further object of my invention is to provide, together with other objects, a simple construction for this purpose.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a sectional view taken substantially through the axis of the cleaning brush,

Figure 2 is a sectional view taken along the lines 2—2 of Fig. 1,

Figure 3 is a plan view,

Figure 4 is a modification,

Figure 5 is a plan view of Fig. 4, and

Figure 6 is a sectional view taken substantially along the lines 6—6 of Fig. 4.

I have used the character 10 to represent a typical bowling ball and to receive the ball 10 I provide an opening 11 which is located centrally in the top wall 12 of the casing 13. Attached within the aperture or central opening 11 is the annular felt cleaner 14 which includes the portion 15 which extends substantially vertically and is adapted to snugly engage the ball 10. An annular ring 16 is attached by means of the screws 17 to the top wall 12 and securely holds the felt member 14 in place. Attached to the base 18 of the casing are the uprights 19 in which is suitably journaled at 20 the shaft 21. Receiving the shaft 21 and securely attached thereto is the spool 23 having the inwardly curved concave portions 24 along the surfaces of which are attached the stiff bristles 25. The bristles 25 follow substantially the contour of the portions 24 and at their outer ends conform practically to the surface of the ball 10.

Driving the spool 23 is the pulley 26 and over which is received the belt 27 which passes over the further pulley 28 which is attached to the shaft 29 which shaft is driven by the electric motor 30. The electric motor is controlled by leads 31 and the switch leads 32 which pass to the control switch 33. The motor 30 is attached to a platform 34 which is attached to the hinge 35 which is further attached to the strip 36 which strip is attached to the base 18. The casing 13 includes the legs 37 or other similar structure for supporting the same.

The device is operated in the following manner: The bowling ball is placed in the aperture 11 and is thereby retained against the felt member 14 and also rests upon the stiff bristles 25. The switch 33 is then operated which actuates the motor 30 which drives the belt 27 which in turn rotates the spool 23. The rotation of the spool will cause the bristles 25 to scrape against the ball and to impart a vigorous scouring action thereagainst, and at the same time will rotate the ball due to the frictional engagement therewith which, together with the felt member 14, provides an even and uniform cleaning action. Only a few seconds is necessary for this operation and when the ball is removed it is thoroughly cleaned.

The pivotal attachment of the platform 34 to the hinge 35 and due to the weight of the motor 30 upon the platform 34 maintains a constant and uniform tension against the belt 27. The result then is a continuous cleaning as well as rotating action against the ball 10 as above explained, the mass of the ball being sufficient to provide a relative rotation between the brush and the ball itself so that the bristles will partially move against the ball surface as well as turn it.

A modified form of this arrangement is shown in Figures 4, 5, and 6, in which there is seated in the aperture 11 an annular ring 38 in which ring are affixed the annular arrangement of stiff bristles 39, the ring 38 including a flange 40 through which passes the screws 41 which attaches the brush to the top wall 12 of the casing. It will be noted that the bristles 39 extend a substantial distance to either side of the equator of the ball 10. Suitably journaled in the uprights 19 is the shaft 42 to which is attached centrally thereof the rubber friction driving member 43 which is curved into the arcuate portions 44 to snugly engage the ball 10. It will be seen from this arrangement that when the motor 30 is op-

erated, it being understood that the other portions of the device are the same as that explained above, the shaft 42 will be rotated, and assuming it to travel in the direction of the arrow 45 the ball will correspondingly be rotated in the direction of the arrow 46 which will turn the ball against the bristles 39 and by continued action will insure that the entire surface of the ball is cleaned, since constantly successive portions of the ball will be continually passing against the ring shaped series of bristles 39.

The brush can be quickly removed for cleaning purposes as well as in the other construction explained.

It will now be seen that I have provided a ball cleaning device especially adapted for cleaning bowling balls which imparts a uniform scouring and cleaning action to the ball without any attention being necessary except that of placing the ball in an aperture and then removing; it will be seen further that I have provided means for rotating the ball against a series of bristles, that I have provided an arrangement which can be operated simply and conveniently, and which is simple in construction.

Some changes may be made in the construction and arrangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. A ball cleaning device comprising a casing having a top wall, a circular aperture in said top wall, an annular cleaning member adapted to snugly engage the equator of the ball, means positioned beneath the ball and engaged therewith for rotating the same including a rotatable spool including bristles attached thereto, said bristles being positioned to conform to the arcuate curvature of the ball, said rotary spool rotating on a horizontal axis for rotating said ball simultaneously with the cleaning action thereof by said bristles, said annular cleaning member adapted to further clean the ball on all exterior surface portions during such rotation.

2. A ball cleaning device comprising a casing having a top wall, a circular aperture in said top wall, an annular cleaning member adapted to snugly engage the equator of the ball, means positioned beneath the ball and engaged therewith for rotating the same including a rotatable spool including bristles attached thereto, said bristles being positioned to conform to the arcuate curvature of the ball, said rotary spool rotating on a horizontal axis for rotating said ball simultaneously with the cleaning action thereof by said bristles, said annular cleaning member adapted to further clean the ball on all exterior surface portions during such rotation, said annular cleaning member comprising a replaceable dirt gathering ring, means for attaching the same to said top wall including a flange member adapted to compress and retain said cleaning member, the inner portions of said annular cleaning member adapted to snugly engage an equatorial band about said ball.

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