

June 14, 1932.

M. SCUDDER

1,863,170

FOOTBALL, BASKET BALL, AND THE LIKE

Filed March 25, 1929

Fig. 1.

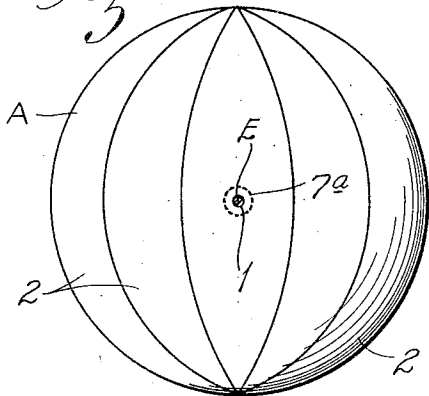


Fig. 2.

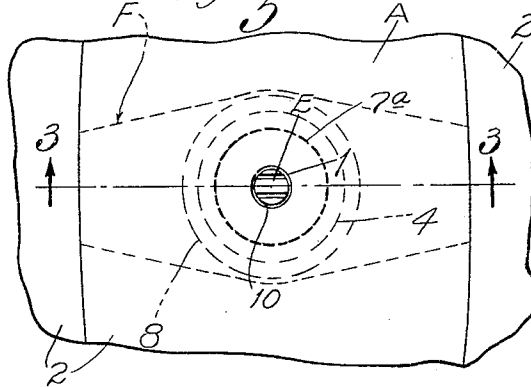


Fig. 3.

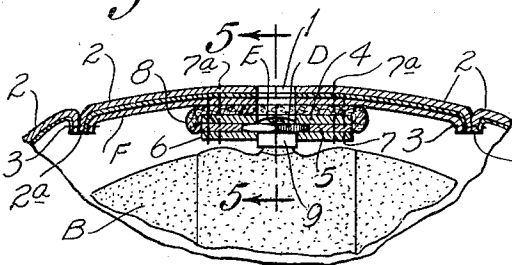


Fig. 5.

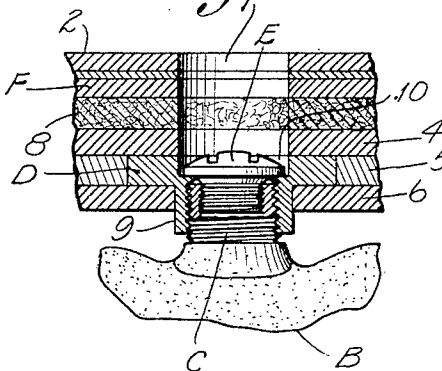
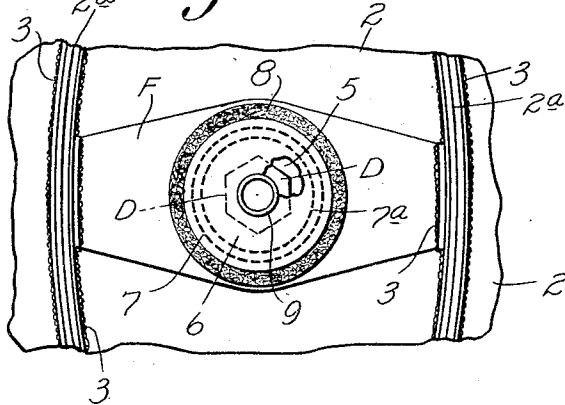


Fig. 4.



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MASON SCUDDER, OF CLAYTON, MISSOURI, ASSIGNOR TO RAWLINGS MANUFACTURING COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI

FOOTBALL, BASKET BALL, AND THE LIKE

Application filed March 25, 1929. Serial No. 349,872.

This invention relates to footballs, basket balls and the like of the type in which the bladder or inflatable member in the casing is provided with a metallic valve stem whose terminal portion is screwed into a nut arranged on the inside of the casing in concentric relation with a hole in the casing that permits a pump to be connected with the valve stem in the operation of inflating the bladder.

It has heretofore been the usual custom in balls of the general type mentioned to mount the valve stem nut in a pocket or supporting member arranged on the inside of the casing and attached to the casing by one or more rows of stitches which pass through the casing at a point in proximity to the hole in the casing that provides access to the valve stem. As said stitches are exposed on the outer side of the casing they are subjected to abrasion and wear when the ball is in use, with the result that said stitches soon break. When this happens the valve stem drops downwardly into the interior of the casing when the bladder becomes deflated, thereby making it necessary to unlace the casing sufficiently to grasp the valve stem and arrange the terminal portion of said stem in alignment with the hole in the casing through which the pump connection is inserted in the operation of connecting the pump with the valve stem.

One object of my invention is to provide a basket ball, football or the like of the general type mentioned, which is of such construction that there is no liability of the valve stem becoming disarranged or dropping downwardly into the casing when the bladder of the ball becomes deflated.

Another object is to provide a basket ball, football or the like of the general type mentioned, in which the removable closure for the valve stem is combined with the valve stem nut in such a way that it prevents relative rotary movement between said nut and

valve stem in a direction to cause the valve stem to screw out of said nut. Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawing is a top plan view of a football, basket ball or the like constructed in accordance with my invention.

Figure 2 is an enlarged fragmentary top plan view of the section of the casing in which the valve stem hole is formed.

Figure 3 is a sectional view, taken on the line 3—3 of Figure 2.

Figure 4 is a bottom plan view of the bridge piece inside of the casing that carries the pocket for the valve stem nut; and

Figure 5 is a sectional view, taken on the line 5—5 of Figure 3.

Referring to the drawing which illustrates the preferred form of my invention, A designates as an entirety the casing of a football, basket ball or the like, B designates the inflatable member or bladder that is arranged inside of the casing, C designates a metallic valve stem on said casing that is equipped with a conventional check valve for confining the air that is pumped into the casing by means of a pump connected with the valve stem, D designates a nut arranged on the inside of the casing that is adapted to have the valve stem C screwed into same so as to hold said valve stem in longitudinal alignment with the hole 1 in the casing A that permits the connection on the hose of the pump to be screwed into the valve stem in the operation of inflating the bladder and E designates a removable cap or closure for the valve stem that is provided with an externally screw-threaded portion which is adapted to be screwed into internal threads in the terminal portion of the valve stem C. As is usual in balls of this general type, the casing A is made up of a number of sections 2 whose edge portions are turned inwardly at 2^a and joined together by stitches 3, as shown in Figure 3, said inwardly-turned edge portions 2^a and

stitches 3 being located in the inside of the casing A of the ball.

The valve stem nut D is sustained or supplied by a pocket formed preferably by three disk-shaped pieces of leather 4, 5 and 6 arranged so that the piece 4 laps over the top face of the valve stem nut D, the bottom piece 6 engages the underside of said nut and the intermediate piece 5 surrounds the peripheral edge of the nut D, said intermediate piece 5 having a hole in same that conforms to the shape of the valve stem nut which is usually of hexagonal or other non-circular form. When these three pieces 4, 5 and 6 are secured together they co-operate with each other to form a pocket that receives the valve nut D and holds it against rotary movement.

Said valve stem nut pocket is sustained or supported by a bridge piece or supporting member F that is arranged on the inside of the casing transversely of the section 2 of the casing in which the valve stem hole 1 is formed, and which is combined with the casing by a means that is not subjected to wear or abrasion when the ball is in use. In the form of my invention herein illustrated the bridge piece F has its opposite end portions secured to the casing by the concealed stitches 3, previously referred to, that pass through the inwardly-turned edge portions 2^a of the section 2 of the casing in which the valve stem hole 1 is formed. Obviously, the bridge piece F might be attached to or combined with the casing A in various other ways, without departing from the spirit of my invention, so long as the means that is used for this purpose is of such a character or is arranged in such a way that the abrasions to which the casing is subjected when the ball is in service will not result in the bridge piece F breaking away or becoming detached from the casing.

The pocket in which the valve stem nut D is mounted is arranged on the underside of the bridge piece F, as shown in Figure 3, and is attached to said bridge piece preferably by stitches 7 that pass through the bridge piece and through the three members 4, 5 and 6 that constitute the pocket for the valve stem nut. If desired, a pad 8 of felt or other suitable material can be interposed between the valve stem nut pocket and the bridge piece, as shown in Figures 3, 4 and 5. Usually, the bridge piece F will be cemented to the inner side of the casing or to the lining of the casing in the event it is provided with an inner lining, and if desired, an additional row or rows of stitches 7^a can be inserted through the casing, through the bridge piece F and through the valve stem nut pocket so as to secure said pocket directly to the casing at a point in close proximity to the hole 1 in the casing that provides access to the valve stem. In such a structure the stitches 7^a are subjected to abrasion when the ball is in use and are

liable to wear out or break, but even if this should occur, the valve stem cannot drop downwardly into the casing when the bladder becomes deflated, due, of course, to the fact that the nut D into which the valve stem is screwed is sustained by the bridge piece F which is secured to the casing by concealed stitches 3 that are not subjected to abrasion. Accordingly, in a ball of the construction above described there is no liability of the valve stem shifting relatively to the casing and assuming a position that will necessitate loosening or removing the lacing of the casing, as so often occurs with basket balls, footballs or the like of the type now in general use in which the pocket or other member on the inside of the casing that receives and holds the valve stem nut is secured or attached to the casing by exposed stitches that are liable to wear out or break, due to the abrasion to which the casing is subjected when the ball is in use.

The valve stem nut D may consist of a conventional flat nut provided with internal screw threads into which the valve stem is screwed, but I prefer to equip the ball with a valve stem nut that is provided with a relatively long internally screw-threaded collar 9 that projects inwardly through the bottom member 6 of the valve stem nut pocket, so as to provide a relatively long bearing on the nut D for the valve stem. By constructing the valve stem nut in this manner I am able to form a recess 10 on the top side of said nut for receiving the cap piece or top portion of the valve stem closure E, thereby causing said closure to be practically housed in the nut D and to occupy a position considerably below the outer surface of the casing A of the ball.

In order to prevent relative rotary movement between the valve stem C and the nut D in a direction to cause said valve stem to screw out of said nut, I provide the valve stem closure E with an enlarged cap piece or top portion that projects laterally over the nut D and bears tightly against the bottom of the recess 10 in said nut when said closure E is screwed tightly into the valve stem, the frictional pressure which the cap piece or enlarged top portion of the closure E exerts on the valve stem nut causing the closure E, nut D and valve stem C to be bound tightly together, and thus effectively eliminating the possibility of the nut turning or the valve stem turning in the nut. In prior balls of this general type the closure of the valve stem consists simply of an externally screw-threaded plug screwed into the internal screw threads of the valve stem and having no portion that co-acts with the valve stem nut in such a way as to prevent relative rotary movement between the valve stem and valve stem nut. In my improved ball, however, the closure E for the valve stem is of such design

that when said closure is arranged in its operative position, a portion of same laps over the valve stem nut and thus checks any tendency of the valve stem or the nut to turn in a direction to result in accidental disengagement of the valve stem from the nut D which retains said valve stem in operative position.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A basket ball, football or the like, comprising a casing, an inflatable member inside of said casing provided with a valve stem, a member arranged on the inside of the casing with which said valve stem is detachably connected, and a supporting device for said last mentioned member arranged on the inside of the casing and secured to the casing by concealed stitches.

2. A basket ball, football or the like, comprising a casing, an inflatable member inside of said casing provided with a valve stem, a member arranged on the inside of the casing with which said valve stem is detachably connected, and a supporting device for said last mentioned member arranged inside of the casing and secured to the casing by stitches that are not subjected to abrasion when the ball is in use.

3. A basket ball, football or the like, comprising a casing, an inflatable member inside of said casing provided with a valve stem, a member arranged on the inside of the casing with which said valve stem is detachably connected, exposed stitches for securing said last mentioned member to the casing, and an independent means, consisting of concealed stitches, for holding said member in operative position in the event said exposed stitches break.

4. A basket ball, football or the like, comprising a casing, an inflatable member inside of said casing provided with a valve stem that is accessible through a hole in the casing, a part arranged on the inside of the casing and secured to same by concealed stitches, and a screw-threaded member carried by said part and adapted to have said valve stem screwed into same.

5. A basket ball, football or the like, comprising a casing, an inflatable member inside of said casing provided with a valve stem, a nut into which said valve stem is screwed, a pocket for said nut, and a bridge piece that carries said pocket arranged on the inside of the casing and secured to the same by stitches that pass through inwardly-turned edge portions of the sections of the casing.

6. A basket ball, football or the like provided with a casing composed of sections whose edge portions are turned inwardly and secured together by stitches, a bladder provided with an externally screw-threaded valve stem which is accessible through a hole

in said casing, a bridge piece arranged transversely of the section of the casing in which said hole is formed and having its ends secured to the casing by the stitches which pass through the inwardly-turned portions of said section, and a nut carried by said bridge piece and adapted to have said valve stem screwed into same.

7. A basket ball, football or the like provided with a casing composed of sections whose edge portions are turned inwardly and secured together by stitches, a bladder provided with an externally screw-threaded valve stem which is accessible through a hole in said casing, a bridge piece arranged transversely of the section of the casing in which said hole is formed and having its ends secured to the casing by the stitches which pass through the inwardly-turned portions of said section, a pocket carried by said bridge piece, and a nut mounted in said pocket in alignment with the hole in the casing and adapted to receive said valve stem.

8. A basket ball, football or the like, comprising a casing, a bladder inside of said casing provided with a valve stem, a pocket arranged on the inside of the casing adjacent a hole in the casing that provides access to the valve stem, a nut in said pocket, said nut having a recess in its top face, a relatively long, internally screw-threaded collar on said nut projecting inwardly through the bottom member of said pocket and adapted to receive said valve stem, and a removable closure for said valve stem, positioned in the recess in the top face of said nut.

9. A basket ball, football or the like, comprising a casing, a bladder in said casing provided with an internally-screw-threaded valve stem, a non-rotatable threaded member supported inside of the casing and adapted to have said valve stem screwed into same, and a removable closure for said valve stem provided with a part that co-acts with said threaded member to prevent relative rotary movement between said valve stem and threaded member.

10. A basket ball, football or the like, comprising a casing, a bladder in said casing provided with an externally screw-threaded valve stem, a pocket arranged inside of said casing in proximity to a hole in said casing which provides access to said valve stem, a nut in said pocket held against rotary movement and adapted to have the valve stem screwed into same and a removable closure for said valve stem having a cap piece or top portion that is adapted to bear tightly against said nut when said closure is in its operative position, so as to tend to prevent the stem from turning in the nut.

11. A basket ball, football or the like, comprising a casing, a bladder in said casing pro-

vided with an externally screw-threaded valve stem, a nut arranged inside of said casing in alignment with a hole in said casing that provides access to said valve stem, said
5 nut being held against rotary movement by co-acting surfaces on the nut and pocket, an internally screw-threaded collar on said nut into which the valve stem is screwed, said
10 nut having a recess in the top side of same, and a removable closure for the valve stem screwed into an internally threaded portion of said stem and provided with a cap piece or portion that is positioned in said recess and bears tightly against the bottom of the
15 recess when said closure is in operative position, thereby tending to prevent the stem from screwing out of the collar on the nut.

12. A basket ball, football or the like, comprising a casing composed of sections whose
20 edge portions are connected together by seams, a bladder in the casing provided with an externally screw-threaded valve stem that is accessible through a hole in one section of the casing, a bridge piece arranged trans-
25 versely on the inside of the section of the casing in which said hole is formed and secured at its ends to the seams of said section, a nut carried by said bridge piece and provided with an internally screw-threaded collar into
30 which the valve stem is screwed, and a removable closure for the valve stem having external threads that co-act with internal threads on said stem and provided with an enlarged top portion that laps over and bears
35 tightly upon said nut.

13. A basket ball, football or the like, comprising a casing composed of sections whose edge portions are connected together by seams, a bladder in the casing provided with
40 an externally screw-threaded valve stem that is accessible through a hole in one section of the casing, a bridge piece arranged transversely on the inside of the section of the casing in which said hole is formed and se-
45 cured at its ends to the seams of said section, a nut carried by said bridge piece and provided with an internally screw-threaded collar into which the valve stem is screwed, a removable closure for the valve stem having
50 external threads that co-act with internal threads on said stem and provided with an enlarged top portion that laps over and bears tightly upon said nut, and exposed stitches that pass through the casing and through
55 said bridge piece at a point adjacent the hole in the casing which provides access to the valve stem.

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