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UNITED STATES PATENT OFFICE.

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GOLF BALL.

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To all whom it may concern:

Be it known that I, GEORGE C. WORTHINGTON, a citizen of the United States, residing at Elyria, county of Lorain, and State of Ohio, have invented certain new and useful Improvements in Golf Balls, of which the following is a specification.

My invention relates to balls in general, and to golf balls in particular, which must be possessed of considerable resiliency and which should be carefully balanced and retain this balance, notwithstanding the fact that they are severely struck from time to time and subject to instant, momentary deformation and restoration. As is well known, balls of this character are provided with a suitable center, various types of centers having been heretofore used, such as glue, Irish moss, gum tragacanth, gum arabic, albumen, starch, soap and the like. This center is usually wrapped with rubber in some convenient form, as, for example, in the ribbon form, whereby a resilient body is formed which is covered usually with gutta percha or the like, the latter being molded about the resilient core. Notwithstanding the use of these various substances, the golf balls heretofore made have not been as satisfactory as they should be. In some instances resilient centers have been made of rubber mixed with oils and minerals, the objection to this combination is that the ball very rapidly deteriorates.

Among the objects of my invention are:

To provide a golf ball with a soft, resilient, well balanced and permanent center.

To provide a ball which will go farther on the long shots, and which will preserve all the putting advantages of the balls now in use. I have found by actual tests that balls employing my invention realize these advantages.

To provide other details of improvement tending to increase the efficiency and serviceability of balls of the above character.

Other objects and advantages of my invention will be apparent from the following detailed description. The means and methods for accomplishing the foregoing and other useful ends I hereinafter more fully set forth and claim.

In making the ball contemplated, I treat balata with a solvent, such as gasoline. The solvent with its dissolved material from the balata is then drawn off and distilled. The residue I call extract of balata. I then take rubber, pure rubber, for example, which is heated and thereby softened, preferably upon the rolls, and with this softened rubber I mix some extract of balata, until the required consistency of the resilient material is obtained. When I desire to weight the center, I add a weighting material, such as finely divided white lead, for example, to increase the specific gravity of the resilient matter. This mixture is then wrapped with rubber tape, which may be weighted with white lead. The tape is preferably wound under tension. This center is then wound with rubber thread or tape under tension, and the cover put on in any suitable manner.

In a ball made in accordance with the preceding description I obtain more satisfactory resiliency than heretofore, and yet I have a core with a firmness that adds distance to a drive with a given effort as compared with balls heretofore used. Furthermore, the character of the internal structure enhances the life of the protecting cover.

I have described one embodiment of my invention, but I do not wish to be limited to this particular embodiment. It will be apparent to those skilled in the art that the invention is capable of being embodied in other forms, without departing from the spirit of my invention.

What I claim as my invention is:

1. A ball for playing purposes having a center made of balata extract and rubber.

2. A ball for playing purposes having a center made of balata extract mixed with rubber.

3. A ball for playing purposes having a core part made of balata extract and rubber mixed with a finely divided weighting material.

4. A ball for playing purposes having a center made of balata extract mixed with rubber and wrapped with rubber tape.

5. A ball for playing purposes having a center made of balata extract mixed with white lead and wrapped with rubber tape.

6. The process of making core parts for golf balls, which consists in treating balata with a volatile hydrocarbon, taking the solution, distilling off the liquid and mixing heat-softened rubber and white lead with the residue, that is, with the balata extract.

7. The process of making core parts for golf balls, which consists in treating balata with gasoline, taking the solution, distilling off the liquid and mixing heat-softened rub-

ber and white lead with the residue, that is, with the balata extract.

8. The process of making core parts for golf balls, which consists in treating balata with a volatile hydrocarbon, taking the solution, distilling off the liquid, mixing heat-softened rubber and white lead with the residue, that is, with the balata extract, and thereafter wrapping the resulting mixture with rubber tape under tension.

9. In a golf ball, the combination of a plastic center composed of a mixture of rubber and extract of balata enclosed within windings of rubber tape, windings of rubber thread under tension about said center, and a cover on the core.

10. A golf ball having a center including extract of balata.

In witness whereof, I have hereunto signed my name this 20 day of June, 1921.

GEORGE C. WORTHINGTON.