To all whom it may concern:

Be it known that I, Ellis Miller, a citizen of the United States of America, and resident of 167 Oxford street, London, W. 5, England, have invented a certain new and useful Improvement in Golf and like Balls; of which the following is a specification.

My invention will be better understood by referring to the accompanying drawings in which Figure 1 represents a diametral section through a ball, according to my invention, having a core of mixed inert and radio active material, surrounded by an external envelop of rubber or like elastic material; Fig. 2 represents a similar section in which the radio active material is centrally located and surrounded by an envelop of inert material which is itself surrounded by an envelop of rubber or like elastic material; Fig. 3 represents a similar section having a hollow central core of mixed inert and radio active material surrounded by an envelop of inert material, the whole being covered by a jacket of rubber or like elastic material; and Fig. 4 represents a similar section of a solid ball of rubber or like elastic material having particles of radio active material uniformly distributed throughout its mass.

In the several figures the radio active material is designated by 1, the elastic material by 2, the inert material by 3, the mixed inert and radio active material by 4, and the elastic material with uniformly distributed radio active material therein by 5.

This invention relates to balls used in playing games, such as golf for example, and composed of rubber, gutta percha, or other like material or composition either alone or in admixture, the object of the invention being to provide a ball which shall be capable of performing, with a given expenditure of energy on the part of a player using the ball, a longer flight than that performed by balls of similar weight and dimensions as at present manufactured.

According to the present invention there is provided within the improved ball, either separately, or in a state of incorporation with the material or with one or more of the materials whereof the ball is made, a radio-active substance or mixture such for example as a uranium mineral or ore (e. g. pitchblende) or the intensely radio-active bodies known as radium, polonium, actinium, mesothorium, and the like.

When the ball to which the invention is applied is of the hollow-core type, the radio active substance or mixture, if possessed of a high degree of radiant energy, is located within the cavity in the interior of the ball, and is held therein by means of a filling composed of an inert medium serving to prevent displacement of said radio-active substance or mixture and consequent detriment to the flight of the ball; whereas, if the radio-active substance or mixture be possessed of a low degree of radiant energy, or is present as an ingredient in a material of low radio-active power, said material may itself fill the cavity within the ball so that the employment of an inert filling medium is in such case not necessary.

Whether the ball be of the solid or hollow-core type, the radio-active substance or mixture may be incorporated in the material of which the ball as a whole is formed, or in one or more of the layers whereof the ball is built up; care being taken to obtain a composition of perfect homogeneity so as to insure equal radio-activity in all directions relatively to the center of the ball.

The radio-active substance or mixture employed may be used alone or in combination with any of the filling agents commonly used in the manufacture of balls such as golf-balls for example.

Instead of rubber I may substitute gutta percha or like elastic material in making any of the balls of my invention and where I speak of rubber, in the claims which follow, I mean gutta percha or like elastic material as well. Or, I may use any two or more of such materials admixed, instead of one of them, if I prefer.

What I claim is:

1. A ball of the class described comprising rubber and a radio active material both being symmetrically disposed as to the center of the ball.

2. A ball of the class described compris-
ing an outer envelop of rubber and a radio
active material within said envelop.
3. A ball of the class described compris-
ing a pellet containing radio active mate-
rial and a covering of rubber in direct con-
tact with said pellet.
4. A ball of the class described compris-
ing a hollow shell of rubber and, within the
cavity of said shell, a radio active material
and an inert filling material which retains 10
said radio active material in position and
prevents its displacement.

ELLIS MILLER.