

No. 790,954.

PATENTED MAY 30, 1905.

C. DAVIS.
GOLF BALL.

APPLICATION FILED DEC. 7, 1901.

Fig. 1.

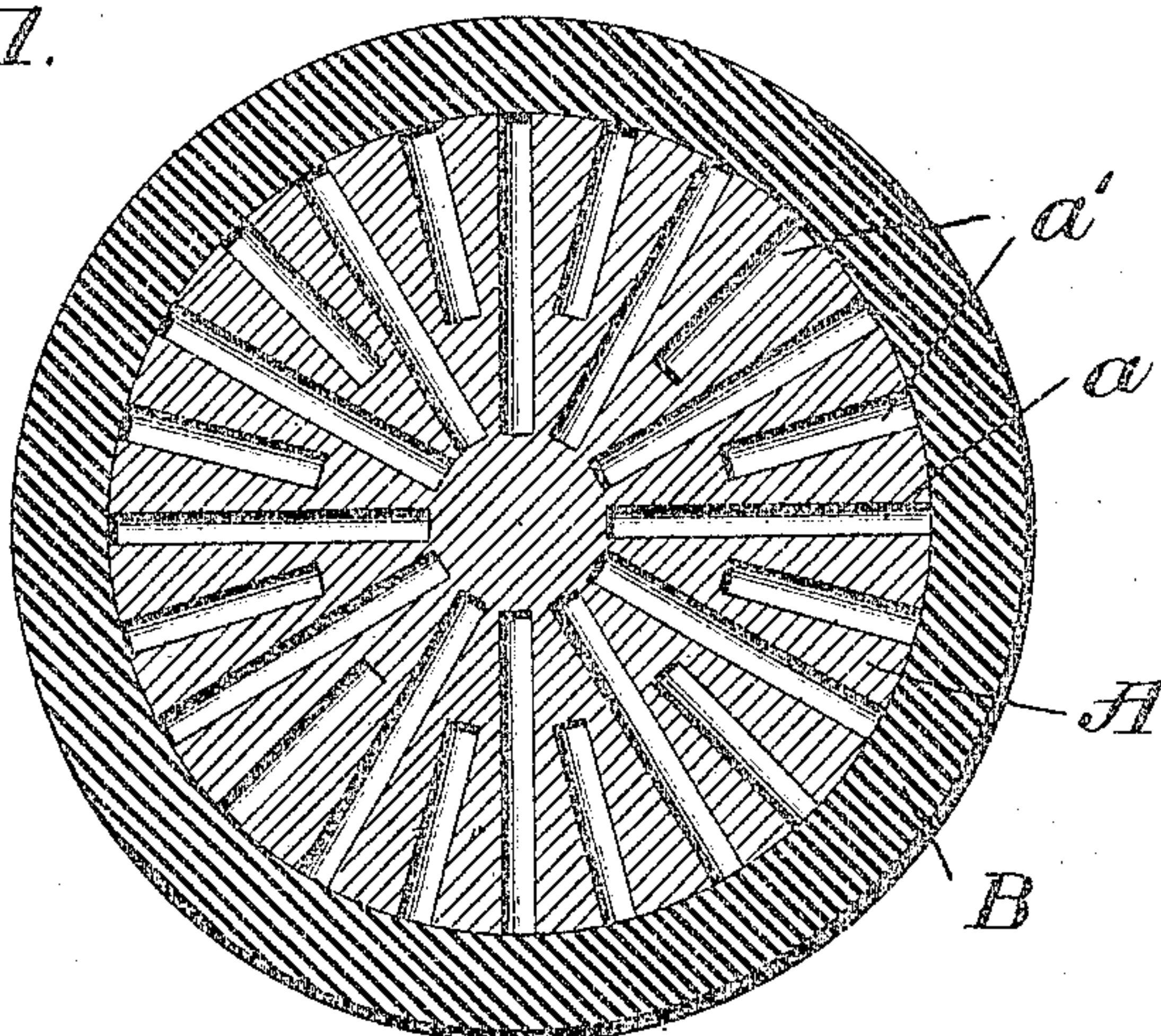


Fig. 2.

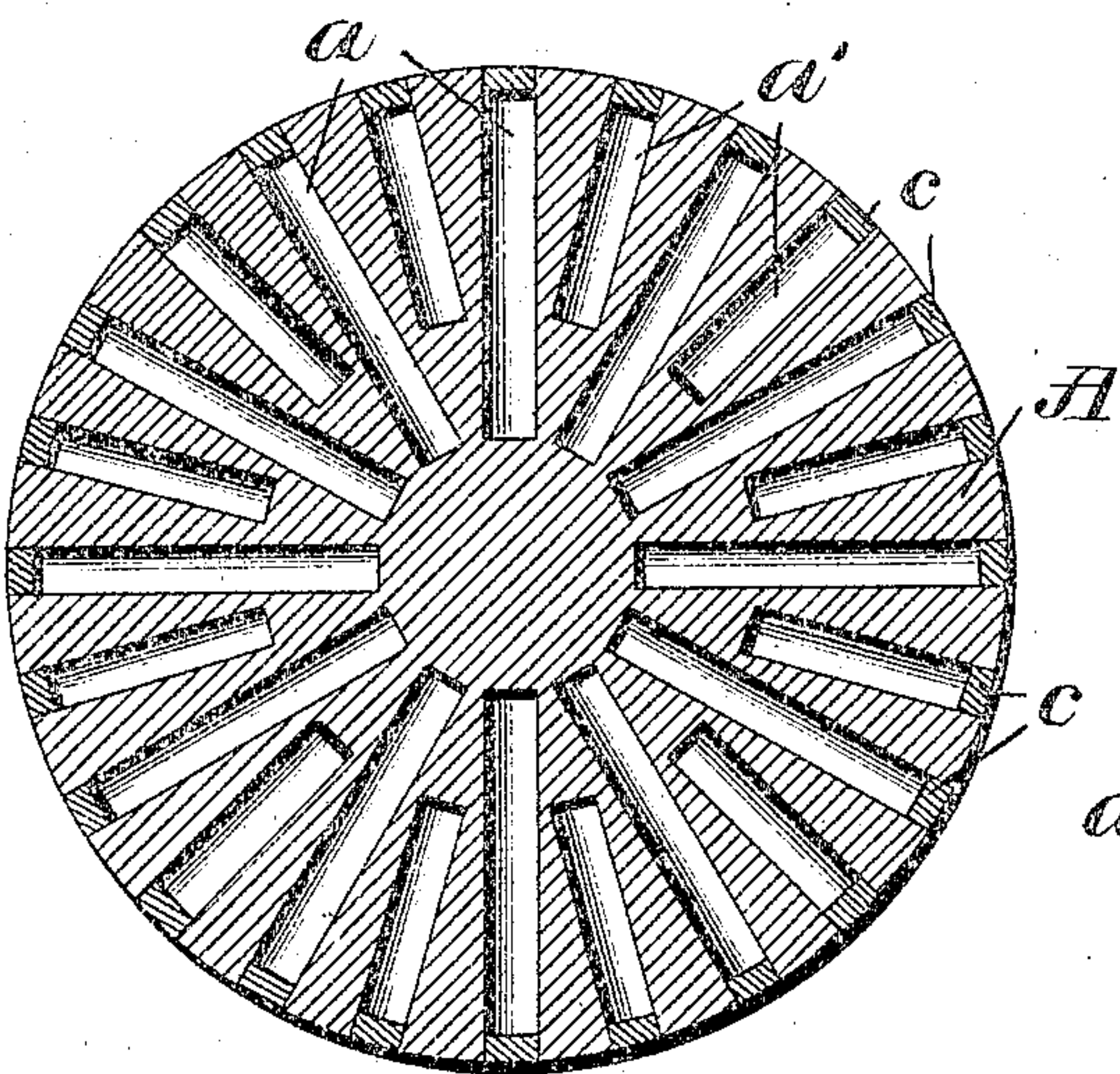
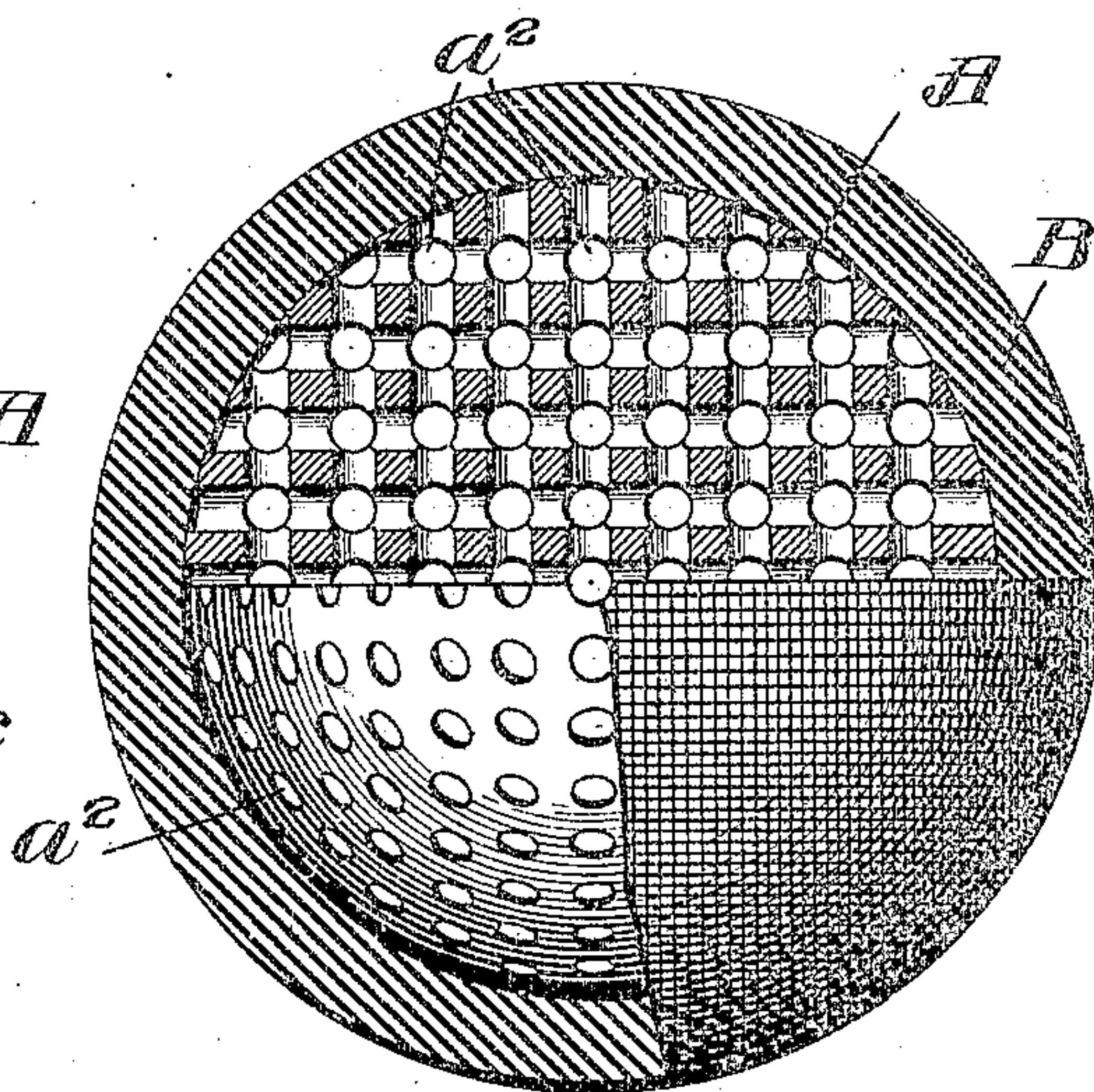


Fig. 3.



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UNITED STATES PATENT OFFICE.

CLELAND DAVIS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
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GOLF-BALL.

SPECIFICATION forming part of Letters Patent No. 790,954, dated May 30, 1905.

Application filed December 7, 1901. Serial No. 85,067.

To all whom it may concern:

Be it known that I, CLELAND DAVIS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Golf-Balls; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in golf-balls, and it is intended to provide a golf-ball of standard specific gravity, of high elasticity, and at the same time of greater cheapness than those now generally in use.

Golf-balls as at present constructed have a weight about that of an equal volume of water and are made mainly of gutta-percha or other expensive material. According to my invention I make the ball wholly or in part of nitrocellulose compounds, such as celluloid or the well-known colloid smokeless powder, and in order to reduce the weight of the mass I provide perforations therein. The outer ends of these perforations may be either stopped up with plugs of the same material or of other material, or this mass may be inclosed in a spherical shell of gutta-percha or other suitable elastic material.

My invention will be more clearly understood by reference to the accompanying drawings, in which—

Figure 1 represents a section of the ball sheathed in gutta-percha or like material and having its core provided with radial perforations. Fig. 2 represents a similar ball without the outer shell and having the perforations stopped up with plugs; and Fig. 3 is a sectional elevation, parts being broken away, of a ball similar to that shown in Fig. 1, except that the perforations are arranged intersecting each other, like the axes of X, Y, and Z in geometry.

In Figs. 1 and 2, A represents a spherical mass of colloid material—such as the well-known colloid smokeless powder, celluloid, or the like—having long perforations a , extend-

ing toward the center, and short perforations a' . The aggregate volume of these perforations will depend upon the density of the composition used. Thus with the well-known colloid smokeless powder, which has a specific gravity of about 1.56, it will be necessary to have the perforations take out about one-third of the total mass of the body A. In Fig. 3 the perforations a'' cross each other in three directions, and the aggregate volume of these perforations should be sufficient to bring the weight of the body A to about that of an equal volume of water, as before stated.

In Figs. 1 and 3, B indicates an inclosing shell, of gutta-percha or other suitable elastic material, which of itself has the specific gravity desired in a golf-ball. This shell serves to protect the ends of the perforations from becoming clogged up with mud or other foreign material and at the same time affords a suitable surface for the clubs to strike.

In the form shown in Fig. 2 the perforations are stopped up at their outer ends with plugs c , which serve to keep out foreign matter. These plugs may be made of the same material as the mass of the ball A, or any other suitable material for the purpose may be used, if desired. It would probably be preferable where the mass of the ball is of the well-known colloid smokeless powder to use the same material for the plugs, as these plugs may be dipped in solvent and put in place, when a junction similar to that known in metallurgy as "welding" will take place; but the ends of the holes may be stopped up in any convenient way.

Instead of a nitrocellulose compound I may use any suitable elastic material of a greater specific gravity than water with perforations to decrease its weight.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A golf-ball composed wholly or in part of a mass of elastic material having a greater specific gravity than water, and provided with closed hollow chambers to reduce its weight,

said chambers being symmetrically disposed about the center of the ball, substantially as described.

2. A golf-ball comprising a spherical mass
5 of elastic material having a greater specific gravity than water and provided with hollow chambers symmetrically disposed therein, and an outer spherical shell of elastic material inclosing said mass and closing the outer ends
10 of said chambers, substantially as described.

3. A golf-ball comprising a spherical mass of elastic material having a greater specific gravity than water and provided with hollow chambers therein, symmetrically disposed
15 about the center of said ball and an outer shell of gutta-percha inclosing said mass and closing the outer ends of said chambers, substantially as described.

4. A golf-ball comprising a spherical mass
20 of nitrocellulose compound provided with closed hollow chambers to reduce the weight of the said mass, and symmetrically disposed about the center of the ball substantially as described.

25 5. A golf-ball, comprising a mass of nitrocellulose compound provided with closed hollow chambers therein, said chambers being symmetrically disposed about the center of the ball, substantially as described.

30 6. A golf-ball having a core of molded elas-

tic material of spherical shape from which portions are omitted or removed, and an outer covering of rigid or hard but elastic material, substantially as set forth.

7. A golf-ball having a core of highly-elas- 35 tic substantially incompressible material molded into spherical form, portions of the material from the outer surface inward being removed or omitted, and an outer covering applied to such core, substantially as set forth. 40

8. A golf-ball composed partly of a mass of elastic material, having a greater specific gravity than water and provided with perforations to reduce its weight, the said perforations being symmetrically disposed about the center
45 of said ball, in combination with a hollow shell of elastic material, substantially as described.

9. A golf-ball comprising a spherical mass of elastic material having a greater specific gravity than water and provided with hollow
50 chambers symmetrically disposed therein, and an outer spherical shell of elastic material inclosing said mass and closing the outer ends of said chambers.

In testimony whereof I affix my signature in 55 presence of two witnesses.

CLELAND DAVIS.

Witnesses:

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FRED W. ENGLERT.