

No. 697,417.

Patented Apr. 8, 1902.

E. KEMPSHALL.
GOLF BALL.

(Application filed July 27, 1900.)

(No Model.)

Fig. 1.

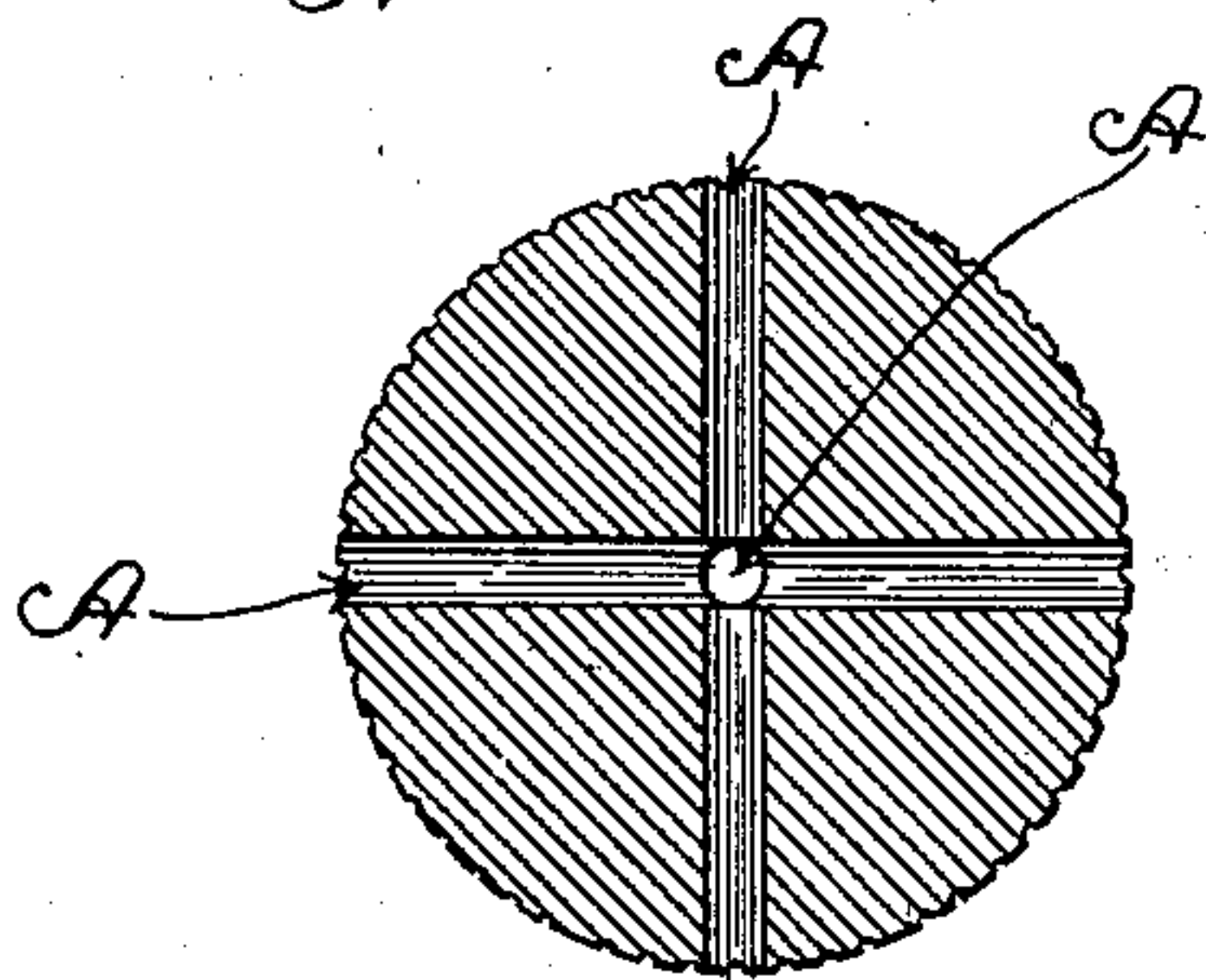
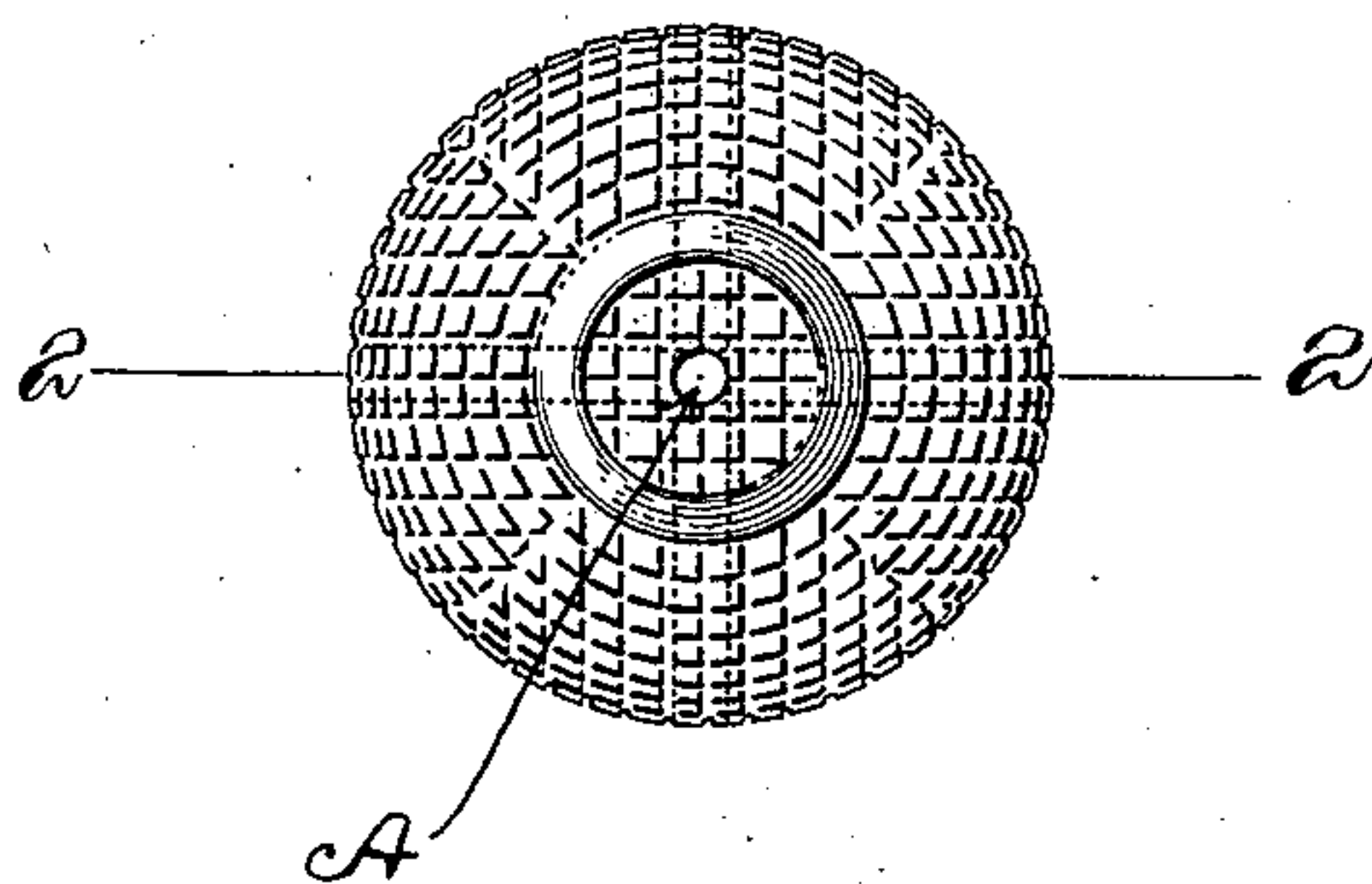


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

ELEAZER KEMPSHALL, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO THE
KEMPSHALL MANUFACTURING COMPANY, A CORPORATION OF NEW
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GOLF-BALL.

SPECIFICATION forming part of Letters Patent No. 697,417, dated April 8, 1902.

Application filed July 27, 1900. Serial No. 25,005. (No model.)

To all whom it may concern:

Be it known that I, ELEAZER KEMPSHALL, a citizen of the United States, residing at Newton, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Golf-Balls, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention embodies a feature by which a golf-ball is enabled to fly or carry farther for a given force of impact than in the case of a golf-ball without such feature in its construction and also is rendered less liable to deviation by lateral wind-pressure, as well as livelier and more resilient. Furthermore, the ball is caused in its flight to produce an audible sound or note, which facilitates tracing such flight and finding the ball and also signals persons near at hand, warning them of approach of the ball and putting them on their guard, so that they may avoid being struck.

When a golf-ball of ordinary solid spherical form is put in play by a stroke of a golf-club, it encounters in its flight a resistance from the air, which resistance is greater or less, according to the velocity with which the ball is traveling. This resistance impeding the progress of the ball prevents it from flying to the distance which it would otherwise attain were it not for such air resistance. The air resistance is caused by the inability of the air to escape with absolute freedom from the path of the advancing ball and effects the retarding of the ball in flight by the consequent compression and adverse increased pressure of the air so located.

My invention has among its objects to provide a means whereby the stoppage of the ball, due to the air resistance to its movement, is greatly lessened by rendering the accumulation of adverse air-pressure directly in advance of the ball less than can be the case in the case of the ordinary golf-ball. I accomplish this result by providing diametrical holes of convenient size through the ball, these holes extending symmetrically in various directions, so as to distribute the apertures equally on the surface of the ball. These holes establish vents from the front to the rear of the advancing ball, affording an additional means of escape for the accumulation of air and rendering the adverse pres-

sure in advance of the ball and the consequent retardation to the ball in its flight less than in the case of the ordinary ball.

In the drawings, Figure 1 represents in elevation an ordinary golf-ball, which may be made of any of the compounds suitable for use in its construction. Fig. 2 shows the same in transverse section.

A A A are the openings of a plurality (in this case three) of holes. These holes may be greater or less in size. In practice I have usually made them of about three-sixteenths of an inch diameter. They extend from one surface, intersecting at the center, and emerge at the diametrically opposite points of the sphere. These holes may be of any form or shape, many or few, large or small, so long as they establish vents from one to another part of the surface and extend symmetrically in different directions, so as to distribute the apertures uniformly on the periphery of the ball.

The ball embodying my invention is less susceptible to the effects of any lateral wind-pressure, since the pressure of the wind is allowed in part to pass through the ball instead of being entirely active over the whole surface of the ball. Also by the described construction a ball of greater resiliency is obtained than results from the customary unperforated or solid construction. The ball so constructed leaves the club with greater liveliness and elasticity than the solid ball, making it to fly farther for a given expenditure of force for this reason in addition to that due to the decrease of air resistance above pointed out. Again, as noted at the outset of this specification, the ball is caused to produce in its flight an audible whistling sound or note, which facilitates the tracing of such flight and the finding of the ball. The whistling sound serves as a signal which apprises persons near at hand and puts them on their guard against being hit.

What I claim is—

A playing-ball provided with three diametrical perforations at right angles to each other.

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

ELEAZER KEMPSHALL.

Witnesses:

CHAS. F. RANDALL,

WILLIAM A. COPELAND.