

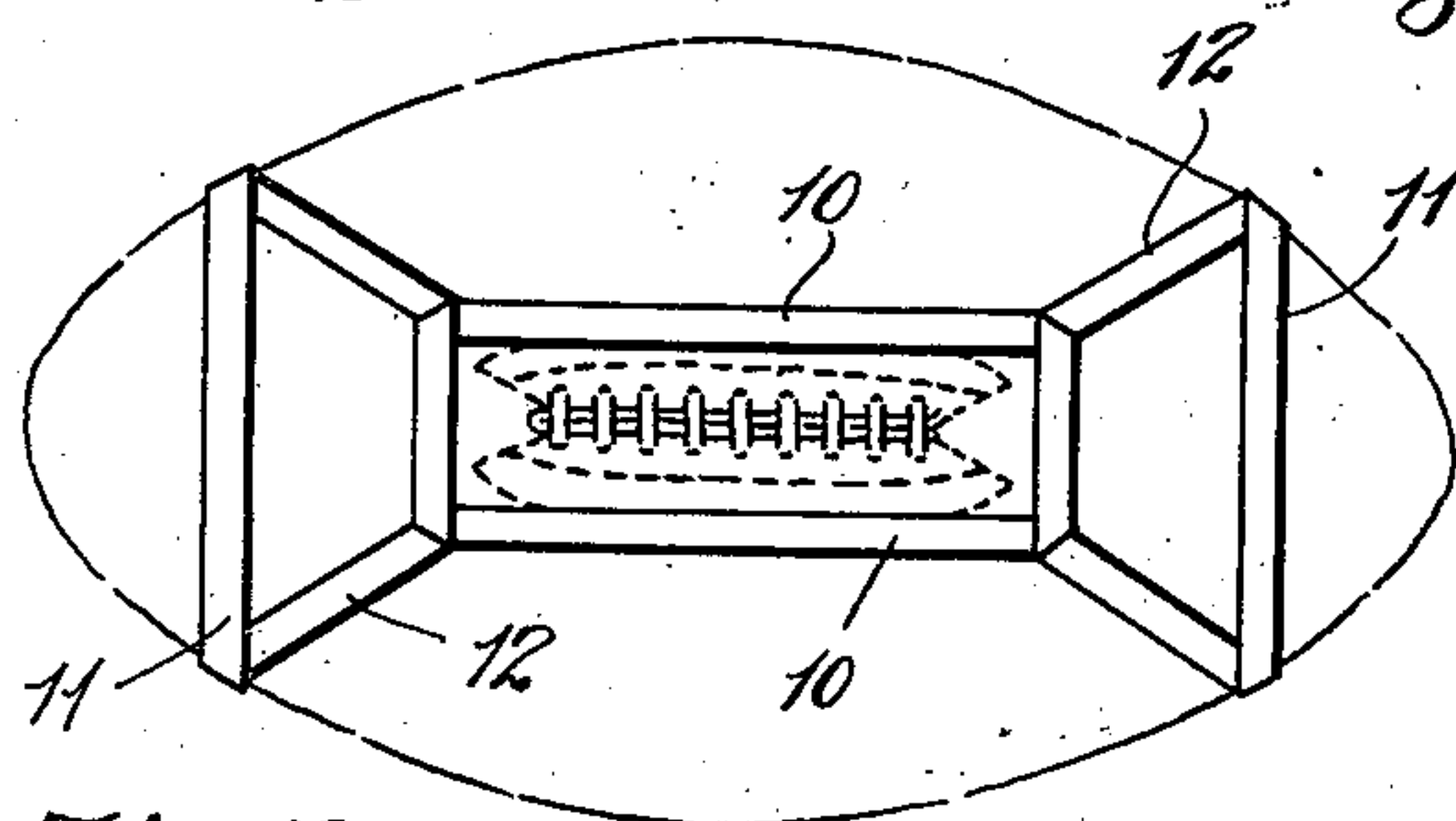
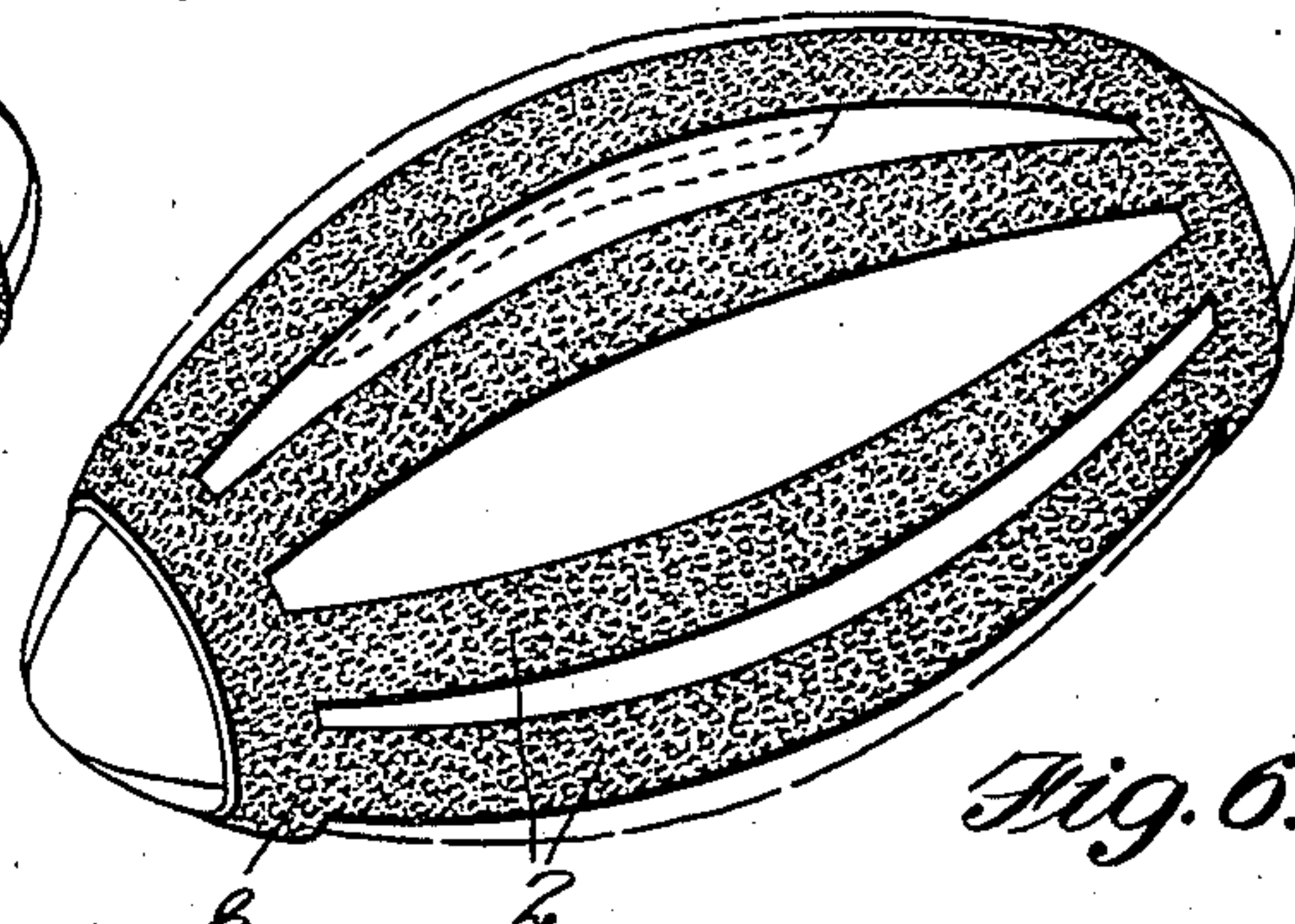
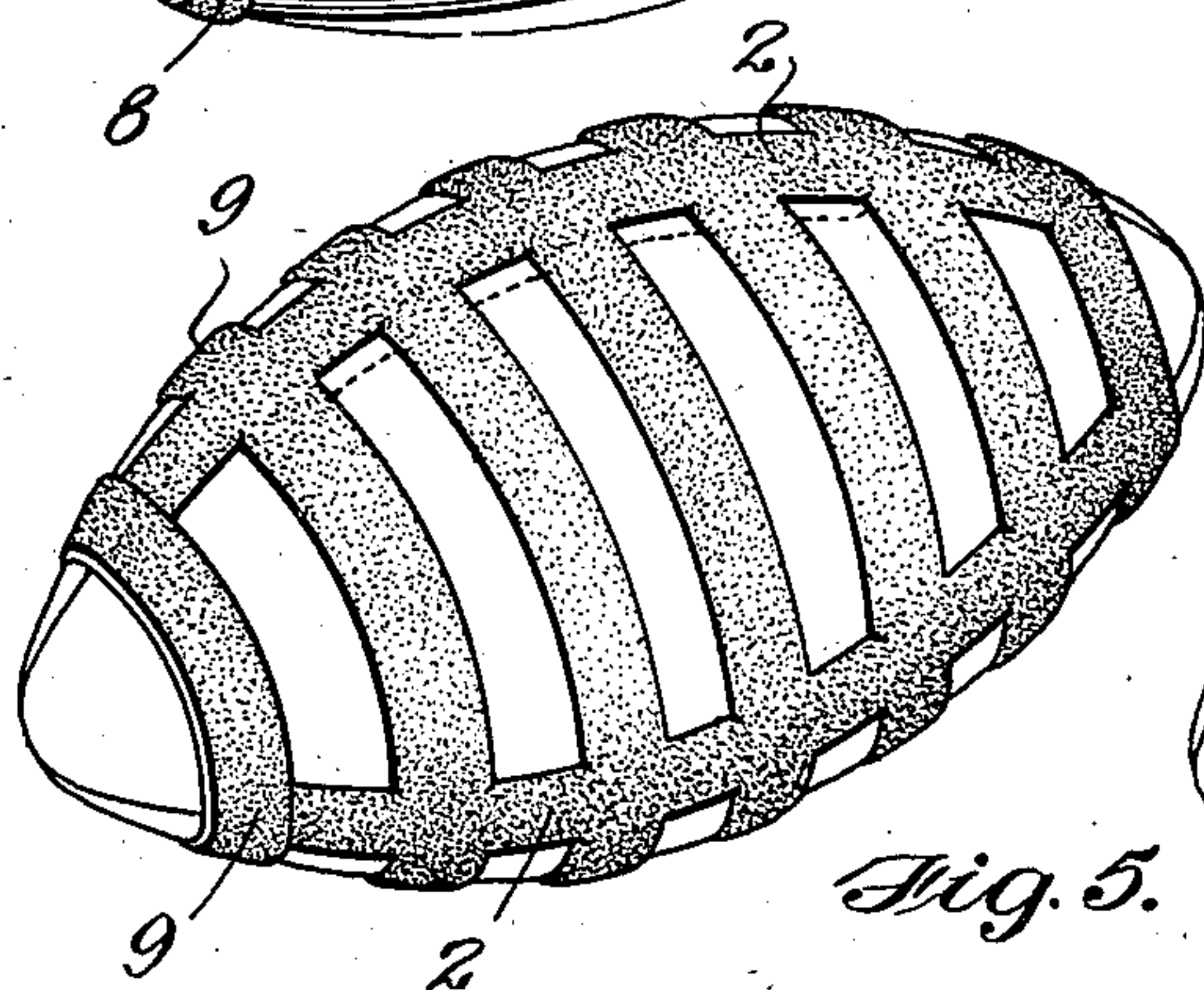
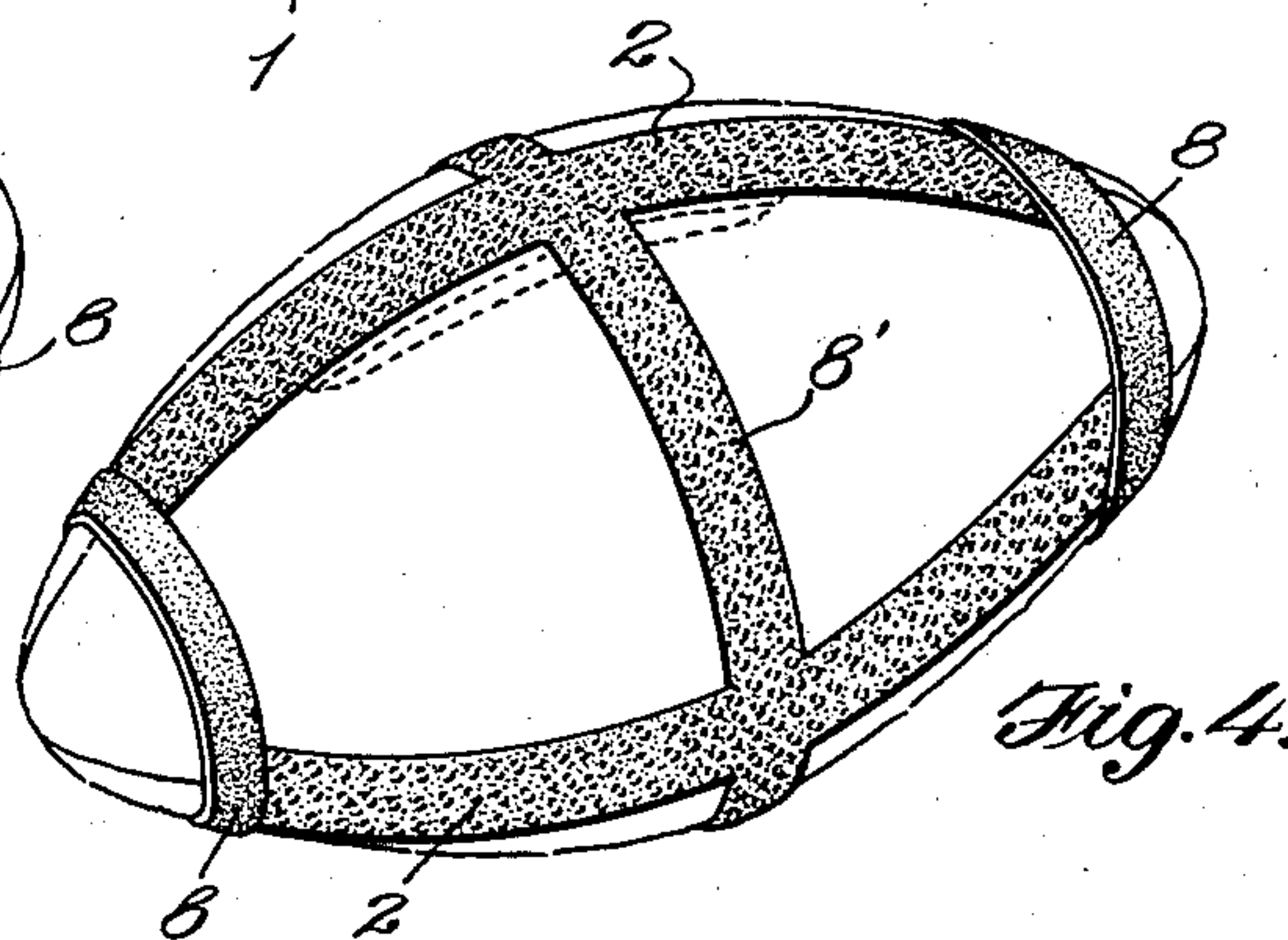
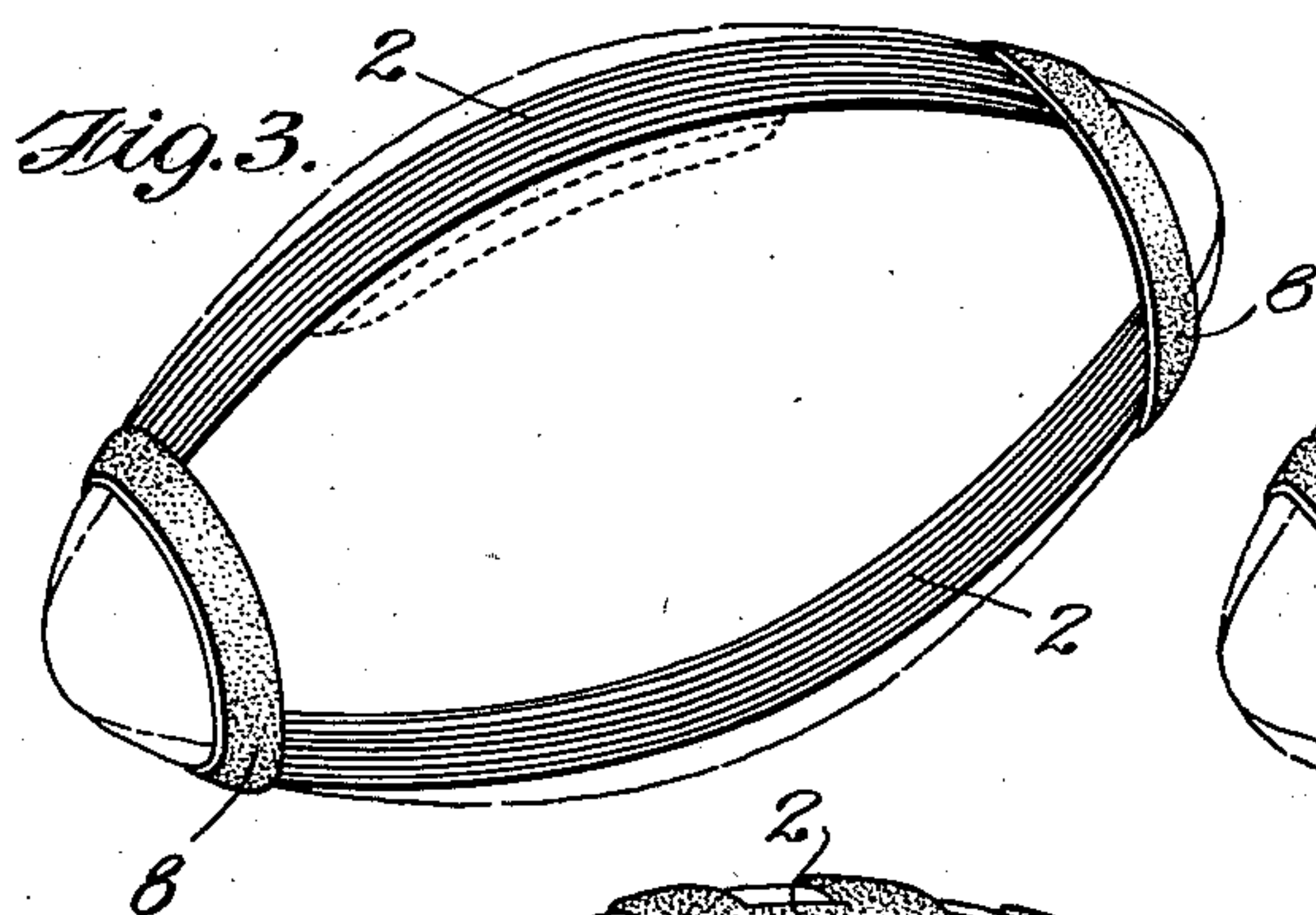
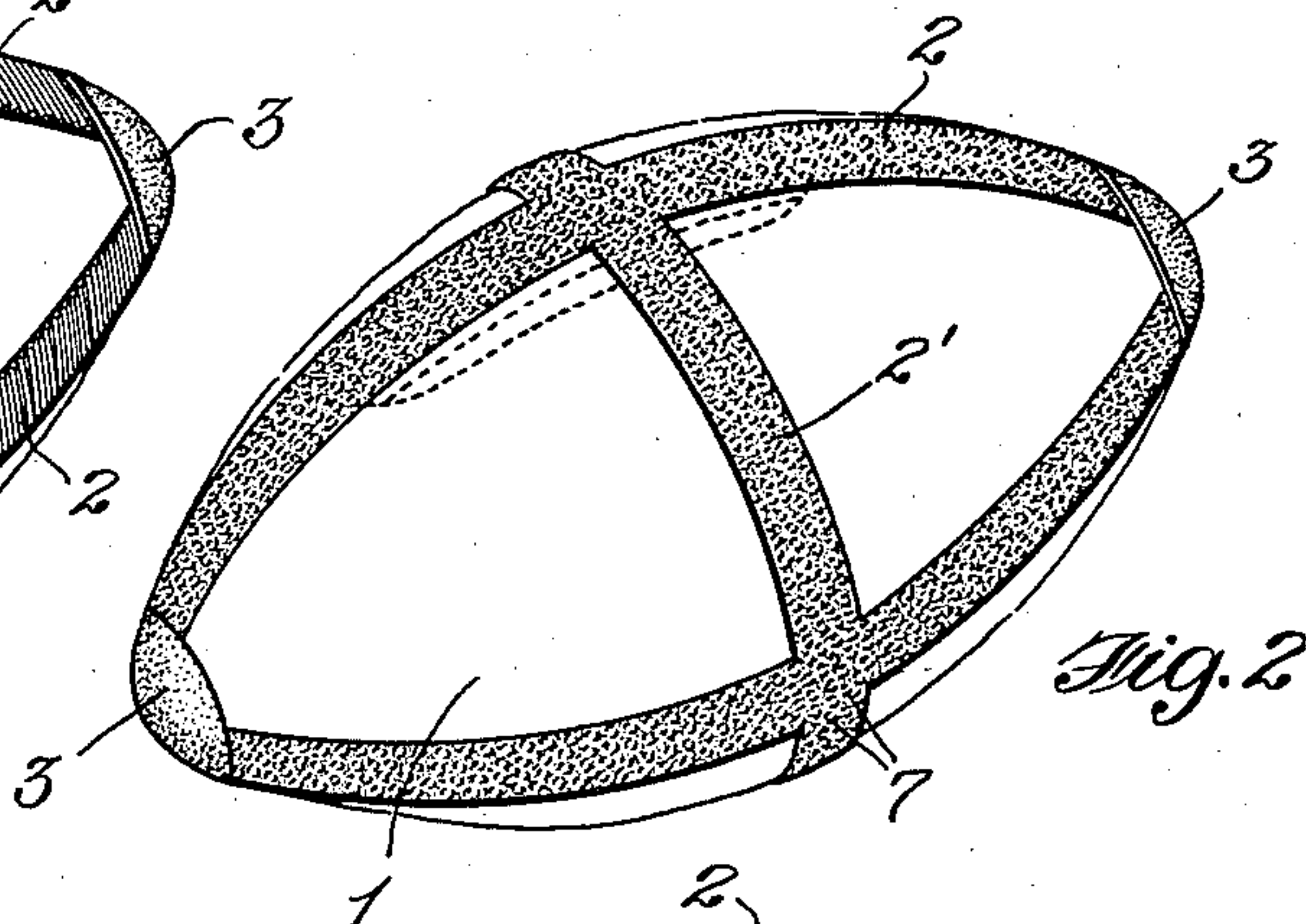
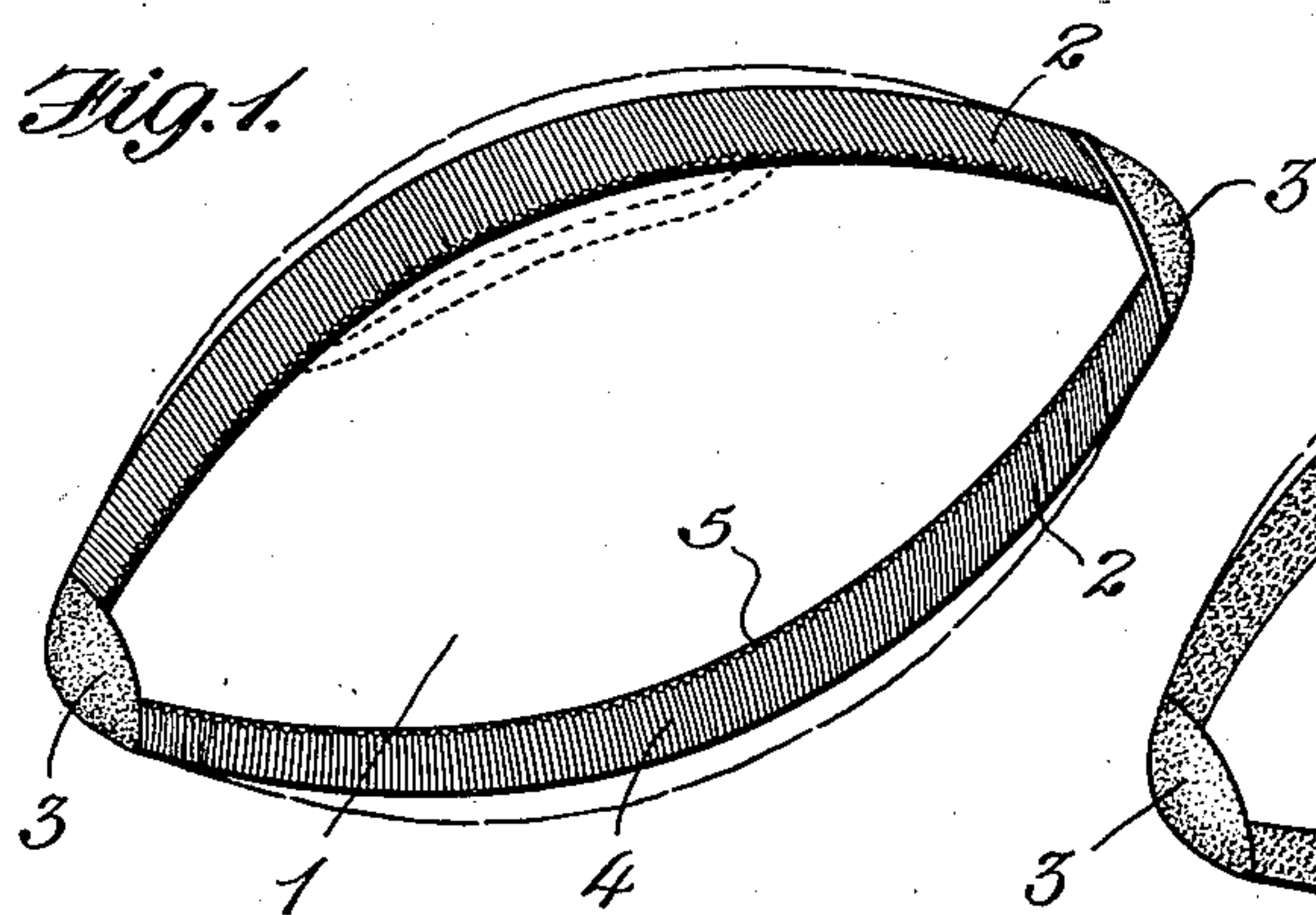
Aug. 20, 1935.

M. GALLINANT

2,011,760

ANTISKID BOOT OR SHEATH FOR GAME BALLS

Filed April 25, 1935



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2,011,760

ANTISKID BOOT OR SHEATH FOR
GAME BALLSMilton Gallinant, Ridgefield Park, N. J., assignor
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Application April 25, 1935, Serial No. 18,246

14 Claims. (Cl. 273—65)

My invention relates to game balls and more particularly to an attachment or accessory in the form of an anti-skid device for game balls.

The invention, in its broadest aspect, comprehends a boot, sheath, or over-shoe adapted to fit over a conventional game ball, the surfaces of the device being provided with friction means in the form of corrugations, projections and the like. The boot is made as a separate unit and is adapted to be readily attached or removed from a conventional ball, thereby making it possible to use a regulation game ball, for example a football, which may be handled with minimum fumbling when the weather is inclement and the playing condition of the field is such as to cause a wetting of the surface of the ball.

The device is not only designed for and intended to be used in regulation games but also for practice purposes. It will be appreciated that very often due to a muddy condition of the playing field, that a coach cannot instruct the players in the execution of plays involving handling of the ball, for the reason that the ball is too slippery for a player to obtain a firm grasp upon its surface. While instruction, in the form of lectures on fundamentals and so-called blackboard practice can be resorted to when the playing field is not in a condition for the usual practice routine, it is more desirable that the players actually have an opportunity to not only run through the formations, but also have a ball which can be readily grasped and manipulated on plays, the execution of which depends upon considerable passing and handling of the ball.

Heretofore, it has been proposed to form game balls, for example footballs and the like, with friction surfaces comprising ribs, projections or indentations integral with the cover structure of the ball. The game balls have usually been modified by forming projections which are continuations of the seams or by removing a portion of the outer surface of the cover to provide depressions or indentations throughout a substantial portion of their exterior surfaces. While the prior art arrangements are satisfactory where it is desired to have a game ball permanently equipped with friction or gripping means, these devices are open to the objection that the balls so constructed are not acceptable for use when the playing conditions for which they were designed do not obtain. None of the prior art arrangements, of which I am aware, provide for the use of a regulation game ball under both normal and adverse playing conditions.

An object of my invention is to provide an anti-skid boot or sheath for game balls.

Another object of my invention is to provide a boot or sheath for game balls which is readily attached or removed from a ball.

A further object of my invention is to provide an anti-skid device for footballs in the form of a boot or sheath having friction grip surfaces formed on the exterior thereof.

A still further object of my invention is to provide an anti-skid device for footballs having means formed therewith whereby it may be readily attached to a game ball.

With these and other objects in view, which may be incident to my improvements, the invention consists in the parts and combinations to be hereinafter set forth and claimed, with the understanding that the several necessary elements, comprising my invention may be varied in construction, proportions, and arrangement, without departing from the spirit and scope of the appended claims.

In order to make my invention more clearly understood, I have shown in the accompanying drawing means for carrying the same into practical effect, without limiting the improvements in their useful applications to the particular constructions, which for the purpose of explanation, have been made the subject of illustration.

In the drawing:

Figure 1 is a perspective view of a football equipped with my improved anti-skid device.

Fig. 2 is a perspective view of a modified form of the arrangement shown in Figure 1.

Fig. 3 is a perspective view of a football showing another modification of the device wherein a different form of end structure is used.

Fig. 4 is a modification of the arrangement shown in Fig. 3.

Fig. 5 is a perspective view of a football provided with a further modification of the device.

Fig. 6 is a perspective view showing a modified form and arrangement of Fig. 5.

Fig. 7 is a perspective view of a football equipped with an anti-skid device having a modified form of body and end structure; and

Fig. 8 is an enlarged, detailed sectional view showing the arrangement of one form of the surface.

Referring to the drawing, and more particularly to Figure 1, there is shown a conventional football 1 equipped with an anti-skid device in the form of a boot or sheath comprising a plurality of strips 2, connected to end members 3. The strips 2 may be formed of a combination of

these materials, rubber, woven fabric, or other synthetic resilient material adapted to conform with the contour of the game ball to which the sheath is applied. It will be noted that the strips extend longitudinally of the ball and are spaced to substantially coincide with the seams of the ball cover, the strips being constructed and arranged to fit snugly against the cover so that there will be no slippage of the strips during normal play and handling of the ball.

In order to increase the coefficient of friction of the gripping surfaces of the ball, so that it can be handled with minimum fumbling particularly when the cover has been wetted, strips 2 are provided with projections or corrugations 4 on the exterior surface thereof. It will be appreciated that the friction surface may assume a variety of different forms and configurations, for example, the corrugations may be placed diagonally of the strips or extend lengthwise thereof. Instead of having raised portions in the form of ribs as shown, a plurality of circular or diamond shaped projections may be formed on the strips or miniature vacuum cup devices may be provided. Whatever form of friction surface is used, it is important, for the purposes of the present invention, that the surface be such that the ball may be readily gripped and held.

In applying the sheath or boot to a game ball, for example the football shown in Figure 1, it is only necessary to expand or pull strips 2 apart, insert the ball endwise between the strips so that one end thereof seats in a cap 3, then slip the sheath over the other end of the ball. The sheath is then firmly attached to the ball, the ends of the ball being seated in caps 3. It will be understood that the caps and/or strips are formed of material which is sufficiently elastic to accommodate for the necessary stretching and expansion in elongating the members to fit or adapt themselves to a ball. I have found that a sheath made of rubber adapts itself readily to the configuration of the ball. The character of this material is such that the sheath, in the applied position, snugly fits and frictionally engages with the surface of the cover of the ball, with the result that it is securely held in place even when subjected to rough handling.

To insure positive gripping of the sheath to the surface of a game ball, the inner surface of the strips may be provided with an adhesive substance, the sticky surface of the strip being protected when not in use by means of a strip of material which may be removed at the time the sheath is applied to a ball. By means of this arrangement positive gripping is assured, and it has been found that a football so equipped will withstand rough handling without any relative displacement of the strips with respect to their normal positions on the surface of the ball. It will be noted that the edges of strips 2 are tapered as indicated at 5, forming a feather edge of material, which merged with the surface of the cover so that the tendency to slip, due to forces acting perpendicular to the edges, is negligible.

In the modification shown in Figure 2, a central strip 2' is provided for the purpose of reinforcing strips 2 and to give additional friction gripping areas which assist in maintaining the longitudinally extending strips in their normal position, directly over the cover seams of the ball. In the modified form, a slightly different arrangement of the gripping surface of strips 2 is used. Instead of corrugations as in Figure 1, hol-

low projections in the form of vacuum cups 7 are provided.

Referring to Figures 3 and 4, there is shown other slightly different modifications, wherein the end members are in the form of loops or bands, the ends of the ball fitting therein. In Figure 3, in place of a solid cap 3, there are provided looped portions 8 attached to the ends of strips 2. The sheath or boot structure shown in Figure 4 is similar to Figure 3, however, differs from it in that a central strip 8' is used, which provides an increased gripping area and also gives additional support to the longitudinally extending strips 2.

Further modifications of the sheath are shown in Figures 5 and 6. In Figure 5, a plurality of strips 9 are arranged to encircle the body of the ball and longitudinally extending strips 2 are connected therewith so that a gripping surface of increased area is provided. In Figure 6, strips 2 extend longitudinally of the ball and the ends of the strips are connected by means of circular members which are substantially the same as members 9 shown in Figure 5.

Referring to Figure 7, there is shown a still further modification comprising a sheath having a body portion formed of longitudinally extending strips 10, the ends of the sheath being attached to loop members 11, connected with the main body portion by means of diagonal strips 12. It will be understood that strips 11 extend around the body of the ball and the under side of the ball is equipped with the same type of body portion, namely, strips 10 and 12 as is shown in the plan view.

Referring to Figure 8, there is shown an enlarged detailed sectional view of one arrangement of the gripping surface. It will be noted that the edges 5 of strip 2 are tapered and the adhesive surface 13 is covered with a protective material 14, which may be removed when the sheath is applied to a ball. It will be understood that each of the strips 2 is provided with adhesive and that the protective material extends along the inner surface of the strip intermediate the end caps 3. The end caps may be provided with adhesive and any of the different types of gripping surface may be applied to the various modifications of the boot structure.

While I have shown and described the preferred embodiment of my invention, I wish it to be understood that I do not confine myself to the precise details of construction herein set forth, by way of illustrations, as it is apparent that many changes and variations may be made therein, by those skilled in the art, without departing from the spirit of the invention, or exceeding the scope of the appended claims.

I claim:

1. An anti-skid device for game balls comprising a body portion formed of a plurality of strips of flexible material, end members connecting the ends of the strips and forming there-with a boot adapted to fit over a conventional game ball, the exterior surfaces of said strips having friction means thereon.

2. In combination with a game ball, including an inflatable bladder and cover therefor, an anti-skid boot having friction means on its outer surface.

3. In combination with a game ball, including an inflatable bladder and cover therefor, a detachable anti-skid sheath having friction means on its outer surface.

4. In combination with a football, an anti-skid device comprising a reticulated boot hav-

ing friction means formed on its outer surface.

5. In combination with a football, an anti-skid device comprising a detachable reticulated boot having friction means on its outer surface.

5 6. In combination with a football, an anti-skid device comprising a flexible boot formed with a plurality of interstices, the portions of the boot defining said interstices being provided with friction surfaces.

10 7. As an article of manufacture, an accessory for game balls comprising an anti-skid boot adapted to fit over a conventional game ball.

15 8. As an article of manufacture, an accessory for game balls comprising a reticulated anti-skid boot adapted to fit over a conventional game ball.

20 9. As an article of manufacture, an accessory for game balls comprising an anti-skid boot adapted to fit over a conventional game ball and means to secure said boot to the ball.

10. As an article of manufacture, an accessory for game balls comprising a rubber anti-skid boot adapted to fit over and conform with the exterior surface of a conventional game ball.

25 11. As an article of manufacture, an accessory

for game balls comprising an anti-skid boot adapted to fit over a conventional game ball, a portion of the outer surface of said boot having friction means thereon.

12. As an article of manufacture, an accessory 5 for game balls comprising a rubber anti-skid boot adapted to fit over a conventional game ball, the outer surface of said boot being formed with corrugations.

13. An anti-skid device for game balls comprising a body portion formed of a plurality 10 of strips of flexible material, end members connecting the ends of the strips and forming therewith a skeletonized sheath adapted to fit over a conventional game ball.

14. An anti-skid device for game balls comprising a body portion formed of a plurality of strips of flexible material, end members comprising caps to receive the ends of a ball, said caps connecting the ends of the strips and forming 15 therewith a skeletonized sheath adapted to fit over a conventional game ball, the exterior surfaces of said strips having friction means thereon.

MILTON GALLINANT. 25