Feb. 27, 1968 F. T. MURRAY 3,370,851

FOOTBALL INCLUDING BALL-TO-KICKING LEG ORIENTATION MEANS

Filed March 9, 1965 2 Sheets-Sheet 1

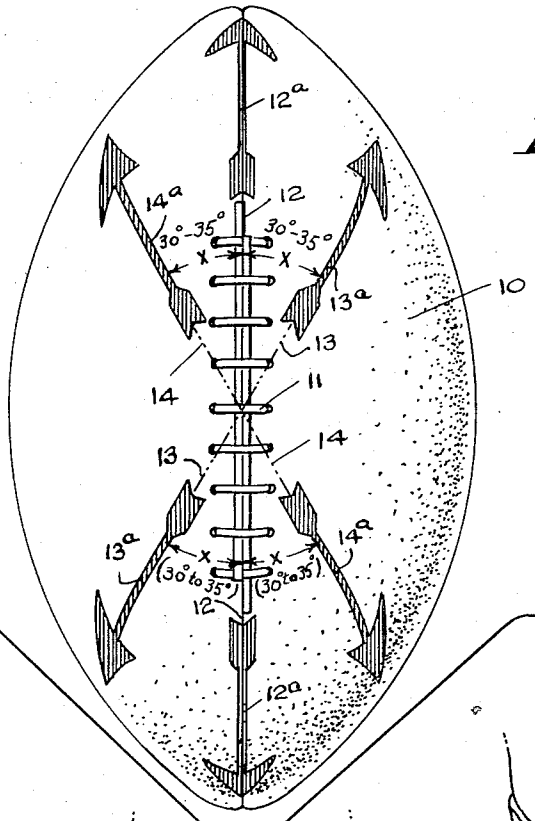


Fig. 1.

Fig. 2.

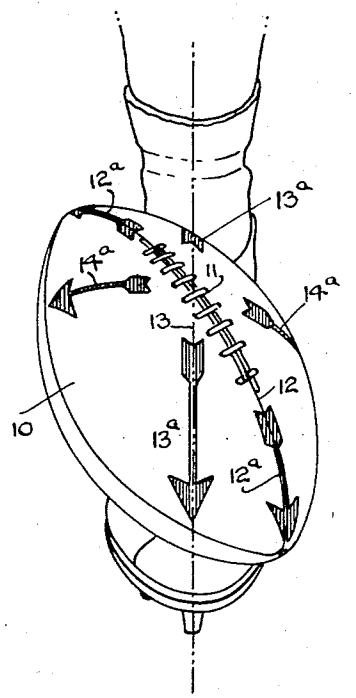
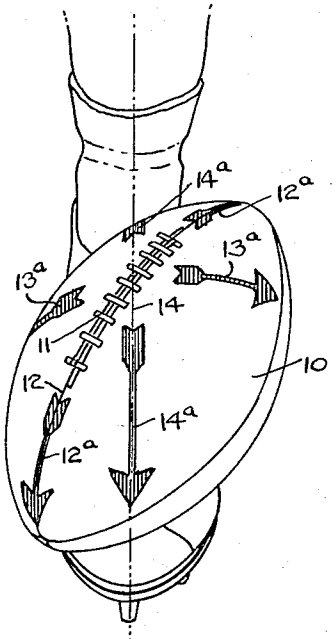


Fig. 3.



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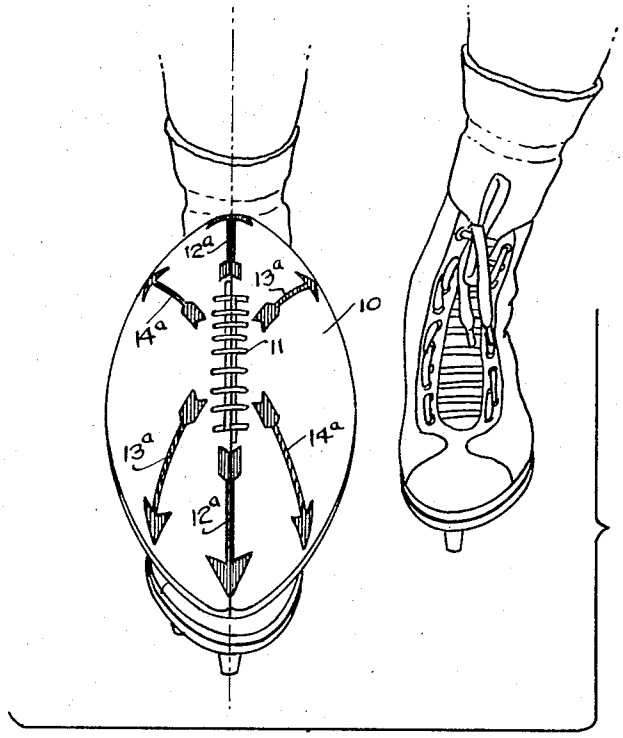


Fig. 4.

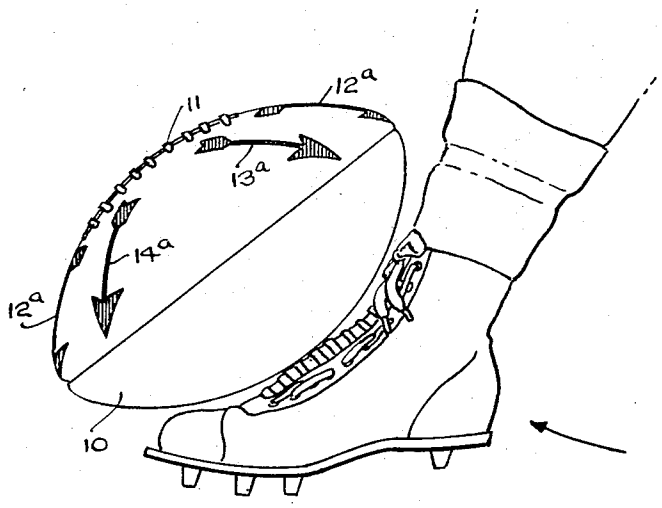


Fig. 5.

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FOOTBALL INCLUDING BALL-TO-KICKING LEG ORIENTATION MEANS

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1 Claim. (Cl. 273—65)

This invention relates generally to the art of kicking a football and more particularly to the provision in a football of means visible to the kicker during the process of kicking the ball for insuring its correct orientation relatively to the kicking foot for obtaining uniformly accurate results for each of several different types of kicks.

The official rules of the National Collegiate Athletic Association define the ball used in the game of football as having the shape of a prolate spheroid and it is due to this shape of the ball that it has been quite difficult to master the art of producing accurately directed and properly executed so-called "end-over-end" and "spiral" punts. These punts are those which the football rules define as being a kick by the player who drops it from his hands and kicks it before it strikes the ground.

Accurate punt kicking requires for its proper execution such absolute control of the ball that when the player drops it toward his kicking foot the ball, at the instant of impact with the instep of the foot, is properly oriented in relation to the longitudinal axis of the kicking leg and the vertical plane of its upward swing. The football, however, as ordinarily provided for use in the game of football, particularly because of its prolate spheroidal shape, is not readily susceptible of being automatically held in a recognizable position so that it may be accurately dropped in the required oriented position relatively to the kicking foot and it is because of this that very few football players have been able to execute consistently accurate punts despite long periods of practice.

I have found that the art of kicking punts, both end-over-end and spiral, may be developed to a high degree of accuracy and control by practice under conditions which enable the practicing kicker to uniformly drop the ball onto the instep of this kicking foot in correct position for execution of the desired punt and thereby acquire the ability to properly execute the kick even during the pressure of an actual game in play.

Having in mind the foregoing, it is among the principal objects of the present invention to provide a football for use in practicing correct and accurate execution of end-over-end and spiral punts which is provided with means for insuring that the ball is always held in a predetermined recognizable hand-held position so that when dropped it is correctly oriented relatively to the instep of the kicking foot at the instant of impact of the foot against the ball.

More specifically, it is an object of the present invention to provide a football with readily interpretable markings thereon which are constantly visible to the eye of the kicker for properly orienting the ball in his hands preliminarily to dropping the same toward his kicking foot.

Still another object of the invention is to provide a football with readily visible guide lines thereon which may be selectively employed by the kicker for his guidance in practice the execution not only of straight-away end-over-end punts, but also spiral punts as executed by the right or left-footed kickers, as the case may be.

Still another object of the invention is to provide a football having thereon readily discernable accurately calibrated guide lines or indicia which may be selectively employed by either a right-footed punter or a left-footed punter for his guidance in the proper handling of the ball for consistently accurate end-over-end punts and spiral punts, as may be desired.

Other objects and advantages of the present invention will be apparent from the detailed description which follows, it being understood that the invention consists in the combination, construction, location and relative arrangement of the elements of the invention as described in the following specification, as shown in the accompanying drawings and as pointed out in the appended claim.

In the accompanying drawings:

FIGURE 1 is a top plan view of a football as constructed in accordance with an embodying the principles of the present invention;

FIGURE 2 is a view showing said football in properly oriented position upon the instep of the right foot of a kicker for executing a spiral punt;

FIGURE 3 is a view similar to FIGURE 2 but showing the oriented position of the ball upon the instep of the left foot of a kicker for executing a spiral punt;

FIGURE 4 is a view showing the ball in oriented position relatively to the kicking foot for executing a straight-away end-over-end punt; and

FIGURE 5 is a side elevational view of the ball and kicking foot as illustrated in FIGURE 4.

Referring now more particularly to the drawings, it will be observed that the football **10** shown therein is of the conventional form and shape as used in the game of football, comprising an inflated rubber bladder enclosed within a cover of leather, rubber or other regulation material formed of four panels joined together by seams disposed in the orthogonally related longitudinally extending median planes of the ball, one of said seams being centrally interrupted to provide an opening through which the bladder may be inserted and inflated, the opening being defined by separable edges which are secured together by a lacing **11**. Normally, in kicking punts the ball is dropped so that its laced surface faces away from the kicking foot. For purposes of describing the present invention, the laced surface of the ball may be considered as the top of the ball as distinguished from the opposite surface which bottoms on the foot at the instant of its impact against the ball.

As most clearly appears in FIGURE 1, the laced or top surface of the football is provided with a plurality of readily discernible stripes or marks of a color contrasting with that of the ball itself to clearly delineate three sets of guide marks disposed along lines respectively designated **12**, **13** and **14**.

The guide line **12** is coincident with the longitudinally extending top seam of the ball and is delineated by a pair of longitudinally spaced and alined stripes or markings **12***a*—**12***a*, preferably in the form of well-defined arrows as shown, which markings are respectively disposed along the portions of the top seam extending from opposite ends of the lacing **11** to the corresponding pointed extremities of the ball.

The guide lines **13** and **14** each extend along the top of the football in intersecting, angular relation to one another and to the line **12**, their point of intersection with the line **12** being exactly at the midpoint of lacing **11**, which is the center point of the top of the ball. Thus, the lines **13** and **14** are symmetrically arranged with reference to the line **12**. As in the case of the line **12**, the angularly related lines **13** and **14** are each delineated by a pair of longitudinally spaced and alined stripes or markings **13***a*—**13***a* and **14***a*—**14***a*, also preferably in the form of arrows as shown, each of which extends from a point adjacent the lacing **11** to a point proximate the horizontal median plane perimeter of the ball as viewed from its laced or top surface. The symmetrical arrangement of the angularly related lines **12**, **13** and **14** are all visible to the kicker when held in his hands with the laced top uppermost and thus are available to him as guide lines no

matter which end of the ball is held pointed away from the body of the kicker.

I have found that in order to achieve the objectives of the present invention, the angularly related guide lines **13** and **14** should each extend at an angle X of about 30 to 35 degrees with respect to the guide line **12**. For the regulation size football having a length of 11.0 to 11.25 inches with an elliptical circumference of 28.0 to 28.5 inches and a transverse diameter of 6.73 to 6.85 inches with a girth circumference of 21.25 to 21.50 inches, optimum results are obtained when the aforesaid angle more closely approaches 35 degrees. Where the football is somewhat smaller than the above mentioned regulation size, the included angle between each of the guide lines **13** and **14** and the central line **12** is desirably decreased to more closely approach the lower value, namely 30 degress.

The guide lines **12**, **13** and **14** may be delineated by stripes or markings other than in the form of arrows as shown. Thus, they may be simply well defined continuous straight lines or they may be in the form of broken or dashed lines, such as may be formed of spaced dots or dashes. Whatever their form, the guide lines should extend in intersecting relation through the midpoint of the top of the ball and be so readily discernible that any one of said lines may be selected by the kicker as his guide line for properly orienting the ball in its hand-held position as the preliminary to execution of the desired type of punt.

FIGURES 2 and 3 illustrate the orientation of the ball relatively to the kicking foot for execution of spiral punts. In FIGURE 2 the ball is shown laid across the instep of the foot of a right-footed punter at the instant of impact of the kicking foot with the ball, in which case the ball is oriented to present its forward end pointing toward the left supporting foot and with the guide line formed by the arrow markings **12***a*—**12***a* lined up with the longitudinal axis of the kicking foot, ankle and leg. In order to obtain this correct orientation, the ball is initially rotated in the hands of the right-footed punter to aline the line **13***a*—**13***a* with the desired direction of flight of the ball and at the same time dispose it in the vertical plane of swing of the kicking foot so that when dropped the ball lays across the instep of the kicking foot as shown in FIGURE 2.

FIGURE 3 illustrates use of the guide marks **14***a*—**14***a* for execution of a spiral punt when the ball is kicked by a left-footed punter. The only difference is that whereas the markings **13***a*—**13***a* were used as the guide line for orienting the ball for a spiral punt off the right foot, the marking **14***a*—**14***a* are used, as shown in FIGURE 3, for executing the same type of kick, i.e., a spiral punt, when the ball is kicked by the left foot.

It will be noted that for execution of a spiral punt, the ball, while in the hand or hands of the kicker, is correctly oriented before being dropped by lining up one or the other of the angularly disposed guide lines (**13** or **14**) in registry with the plane of swing of the kicking foot, the ball being in either instance thereby disposed with its longitudinal axis extending at an angle of between 30 to 35 degrees, as above mentioned, with respect to the longitudinal axis of the kicking leg and its foot and with its front end pointing toward the opposite supporting leg of the kicker. These guide lines thus enable the player to precisely orient the ball relatively to the kicking foot for producing the desired spiral punt.

The straight-away guide line **12** delineated by the markings **12***a*—**12***a* along the top seam of the ball is employed for guidance in the execution of end-over-end punts. FIGURES 4 and 5 illustrate the execution of such punt by so orienting the ball and the markings **12***a*—**12***a* are lined up with the longitudinal axis of the kicking foot, ankle and leg. This is of course accomplished by the player orienting the ball in his hands so that the markings **12***a*—**12***a* are not only lined up with the desired direction of flight of the ball but are disposed also in the vertical plane of swing of the kicking foot. Then, when the ball is dropped toward the foot, at the instant of the impact of the instep against the ball, as shown in FIGURE 5, the longitudinal axis of the ball is precisely correctly oriented with respect to the vertical plane of swing of the kicking foot to thereby produce the desired end-over-end punt with maximum power, control and accuracy.

By providing the football with guide lines or markings as above described, it may be employed most effectively in kicking practice toward developing and achieving a high degree of skill in accurately kicking punts.

While the present invention has been shown as applied to a football of conventional construction having an inflatable inner bladder of rubber enclosed within a seamed cover having an opening in its top with lacing for closing the same, it will be understood that the principles of the invention are applicable to footballs made in simulation of the conventional football, such as football molded or otherwise formed into prolate spheroidal shape having applied to the upper half surface thereof guide marks or lines as hereinbefore described for the purposes set forth. Accordingly, it is to be understood that the present invention is susceptible of various changes and modifications which may be made from time to time without departing from the general principles or real spirit of the invention and it is accordingly intended to claim the same, broadly as well as specifically, as indicated by the appended claim.

What is claimed as new and useful is:

1. In a football of prolate spheroidal shape having a cover with lacing extending longitudinally along a portion of the top of the ball, at least three sets of clearly delineated, visible guide marks formed on said laced top of the ball, said sets of guide marks being disposed along lines which intersect at the midpoint of said lacing with the guide marks of each set visible at least upon both of the opposite end portions of the football, one of said lines being coincident with said longitudinally extending laced seam and the other lines being symmetrically disposed in intersecting relation each at an angle of between 30 and 35 degrees with respect to said one line, whereby any one of said lines of guide marks may be employed as a guide for precisely orienting the ball relative to the vertical plane of swing of the longitudinal axis of the kicking leg while held in the hand with its major axis disposed substantially horizontally so that when vertically dropped the ball is in correct position for execution of a predeterminedly desired type of punt, said one line of guide marks extending in coincidence with the seam being utilizable as an indicator to aline the longitudinal axis of the ball with said longitudinal axis of the kicking leg for a straight ahead end-over-end punt, while said other lines of guide marks extending in intersecting relation to said one line coincident with said seam are selectively utilizable as indicators for correct angular orientation of the major axis of the ball across said longitudinal axis of the kicking leg for a straight-ahead spiral punt having a clockwise or counterclockwise spin of the ball about its major axis depending upon which line of said guide marks extending in intersecting relation to said one line coincident with the seam is alined with the longitudinal axis of the kicking leg.

References Cited

UNITED STATES PATENTS

676,506	6/1901	Knight et al.	273—213
1,931,429	10/1933	Buckner et al.	273—65
2,182,053	12/1939	Reach	273—65
2,330,951	10/1943	Burmester et al.	273—94
3,087,727	4/1963	Watterlohn	273—63

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