

March 7, 1933.

W. D. CRAIG

1,900,544

PLAYING BALL

Filed April 10, 1930

Fig. 1.

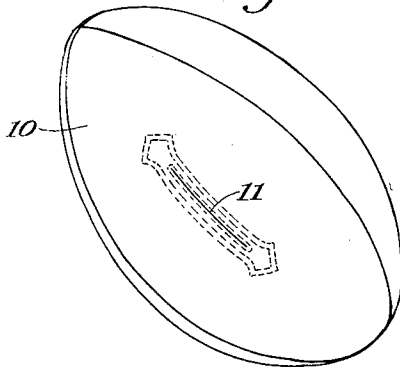


Fig. 2.

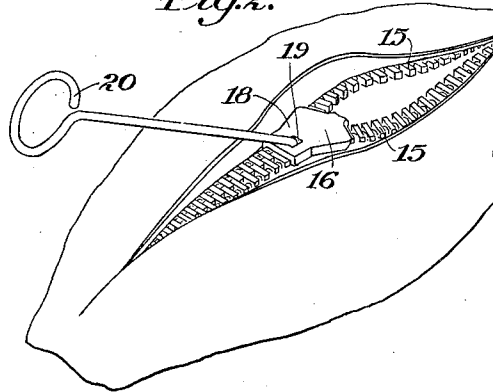


Fig. 7.

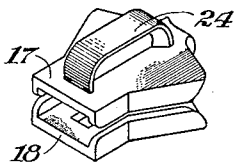


Fig. 6.

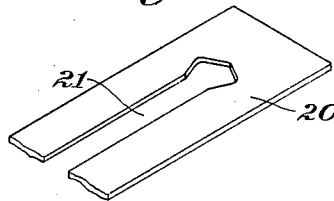


Fig. 3.

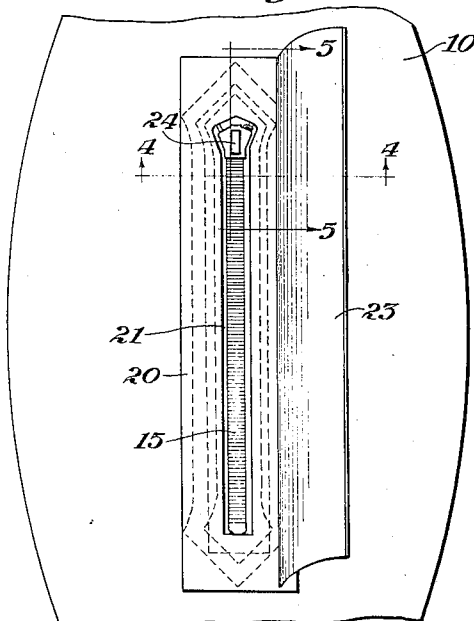


Fig. 8.

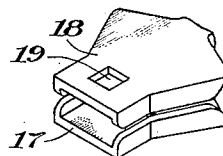


Fig. 4.

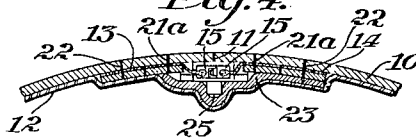
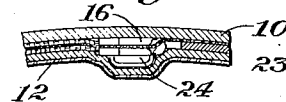


Fig. 5.



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PLAYING BALL

Application filed April 10, 1930. Serial No. 443,120.

My invention relates to playing balls and particularly to improved means for fastening together the edges of the slit in the cover of the ball, which is provided for insertion and removal of bags or bladders.

The general object of my invention is to provide improved fastening means for closing such slits, to take the place of the old leather laces.

A more specific object is to provide improved fastening means for closing a slit in a playing ball, of the slider controlled type, and especially to provide an improved locking device for holding the slider locked in closed position.

A still further object is to provide improved actuating means for the slider in a fastener as applied in playing balls or similar applications.

Other objects and advantages of the invention will hereinafter more fully appear.

In the accompanying drawing, I have shown for purposes of illustration, one embodiment which my invention may assume in practice. In the drawing:

Fig. 1 illustrates a playing ball provided with my improved fastening means.

Fig. 2 is an enlarged view of the fastener shown in partially open condition.

Fig. 3 is a view looking at the inside of the cover of the playing ball with the flap which underlies the fastener, lifted up to show the fastener.

Fig. 4 is a cross-section on line 4—4 of Fig. 3.

Fig. 5 is a partial longitudinal section on line 5—5 of Fig. 3.

Fig. 6 is a detail view illustrating a portion of the leather facing placed on the inner side of the fastener stringers.

Fig. 7 is a perspective view of the inner side of the slider.

Fig. 8 is a perspective view of the outer side of the slider.

The playing ball illustrated in Fig. 1 is in the shape of a football which has a leather cover 10 made up of several sections sewed together in the usual manner. The cover has a slit 11 extending longitudinally of the ball to provide an opening through which an

inflatable bag or bladder may be removed and a new one inserted. The bladder is shown in the sectional view at 12 in Fig. 4, and the inflating connection is not illustrated, it being located as usual opposite the slit.

Instead of the usual laces for closing the slit, a slide fastener having a pair of stringers 13 and 14 is provided and the detail construction of this fastener will not be described since it is well known in the art. A fastener of this type usually has cooperating series of metal fastener elements 15 clamped to the longitudinal edges of the fabric tape or stringers 13 and 14 and a slider 16 is employed to engage and release the fastener elements. The slider as illustrated in Figs. 7 and 8 comprises a pair of spaced inside and outside wings 17 and 18 respectively, the outside wing 18 having an opening or recess 19 along the longitudinal center line of the slider, in which a separate hook actuating member 20 may be engaged for moving the slider in either direction.

The manner of attaching the fastener stringers to the opposite sides of the slit is important since a considerable strain is placed on the parts when the bag 12 is inflated to a high pressure. A leather facing 20 may be arranged on the inner side of the fastener tapes 13 and 14, such facing being provided with a slot 21 of sufficient width for the free travel of the slider along the fastener elements. The tapes with the leather facing are then inserted through the slit 11 and placed in the proper position relative to the slit, then secured to the cover by double lines of sewing 21a and 22 on each side. Preferably also a flap 23 of leather or other suitable material, is attached along one side and is wide enough so that its opposite free edge underlies the metal fastener elements and the slider.

The inner wing 17 of the slider has an inwardly projecting lug 24 integrally formed thereon, which engages in a depression or recess 25 when the bag is inflated, and locks the slider against opening movement. In other words, when the bladder is inserted and the fastener closed by movement of the slider to the end of its travel, the bag may then be

inflated and during the process, it presses against the flap 23 and forces it up around the lug 24. The higher the pressure to which the bag is inflated, the harder will the bladder press against the flap and in turn against the lug 24. Thus all possibility of the slider moving along the fastener and allowing the slit to open up, is prevented even when the ball is subjected to severe usage.

10 By arranging the leather facing 20 on the inner side of the fastener stringers, the portions of the cover adjacent the slit are stiffened up and at the same time, the stress transmitted from the fastener stringers to the cover, is equalized so that there will be no tendency for the edges of the slit 11 to curl up as might be the case if the tapes were attached directly to the inner side of the cover without applying the leather facing.

20 As a result of my invention, it will be observed that an improved fastening means has been provided in playing balls which will overcome the principal objections heretofore met in attempting to apply slide fasteners in playing balls. In the place of the usual actuating means, the outer surface of the slider is left flat and an opening formed in the wing along the center line so that it will register with the slit, and a simple tool such as the hook 20 may be used to shift the slider from one end to the other of the fastener. Also a very secure locking arrangement for the slider has been devised which absolutely precludes slipping of the slider even when the ball is subjected to heavy blows.

35 While I have in this application specifically described one embodiment which my invention may assume in practice, it will be understood that this embodiment is merely for the purpose of illustration and description and that various other forms may be devised within the scope of my invention as defined in the appended claims.

What I claim as my invention is:

45 1. In a playing ball, a leather cover having a slit therein, a slide fastener having tape stringers arranged on the inner side of said cover adjacent said slit, metal fastener elements attached to the edges of said tape stringers and a slider movable along said elements to engage and release the same, reinforcing and facing strips arranged over said tape stringers on the inner side thereof and spaced apart sufficiently to allow free movement of the slider, a flap attached along one side to said cover and having its free edge extending over said metal elements and slider, and an inflatable bag inside said cover.

50 2. In a playing ball, a flexible cover having a slit therein, a slide fastener having stringers arranged on the inner side of said cover and secured to the edges of said slit, fastener elements on said stringers, and a slider movable along said elements to engage and release the same, said slider comprising parallel sub-

stantially flat wings connected at one end and a lug projecting inwardly from the face of the inner wing, and an inflatable bag inside said cover which when inflated swells around said lug to prevent movement of the slider. 70

In testimony whereof I affix my signature.
WILLIAM D. CRAIG.

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