United States Patent [19]

Gardner

[11] **3,889,949**

[45] **June 17, 1975**

[54] **FOOTBALL BLOCKING SLED**

[76] Inventor: **John E. Gardner,** 4840 Koelsch Dr., Oklahoma City, Okla. 73117

[22] Filed: **Oct. 15, 1974**

[21] Appl. No.: **514,856**

[52] **U.S. Cl.** ..... **273/55 R;** 273/55 R

[51] **Int. Cl.** **A63b 67/00**

[58] **Field of Search** ..... 273/55 R, 55 A; 272/57 B

[56] **References Cited**

UNITED STATES PATENTS

3,044,776 7/1962 Weidmaier ..... 273/55 R

FOREIGN PATENTS OR APPLICATIONS

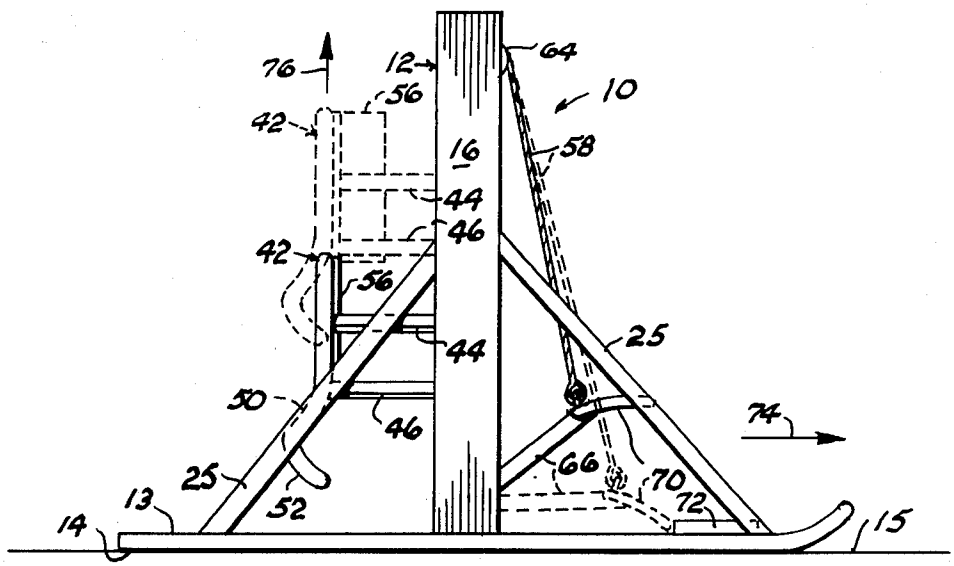
675,742 7/1952 United Kingdom ..... 272/57 B

Primary Examiner—Richard C. Pinkham
Assistant Examiner—T. Brown
Attorney, Agent, or Firm—Robert K. Rhea

[57] **ABSTRACT**

An apparatus for training and conditioning football players including an upright frame supported by spaced runners. A pair of blocking pads are supported by a carriage vertically movable within the frame by a lever and pulley means actuated by a coach standing on a platform supported by the runners for vertical movement of the blocking pads when contacted by a football player.

4 Claims, 4 Drawing Figures



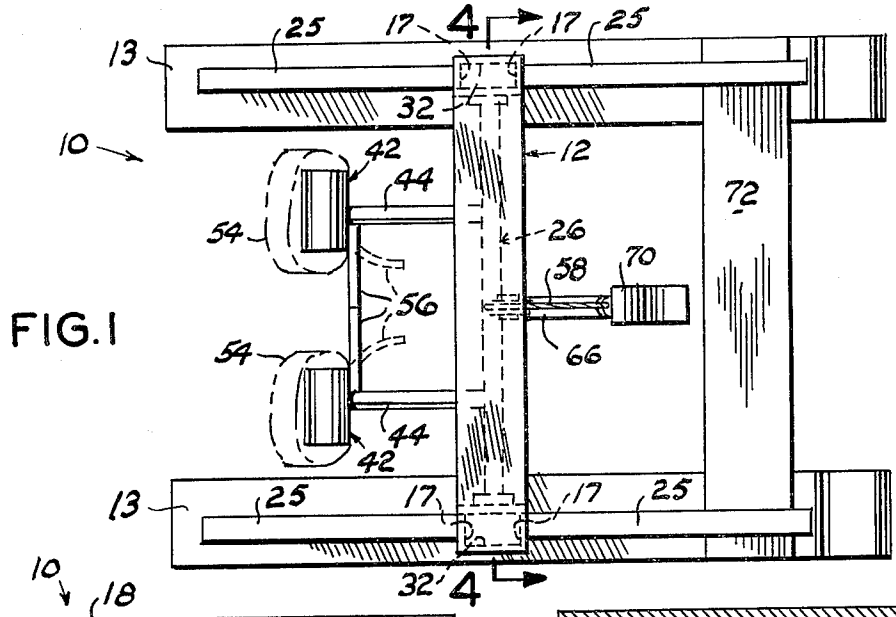


FIG. 1

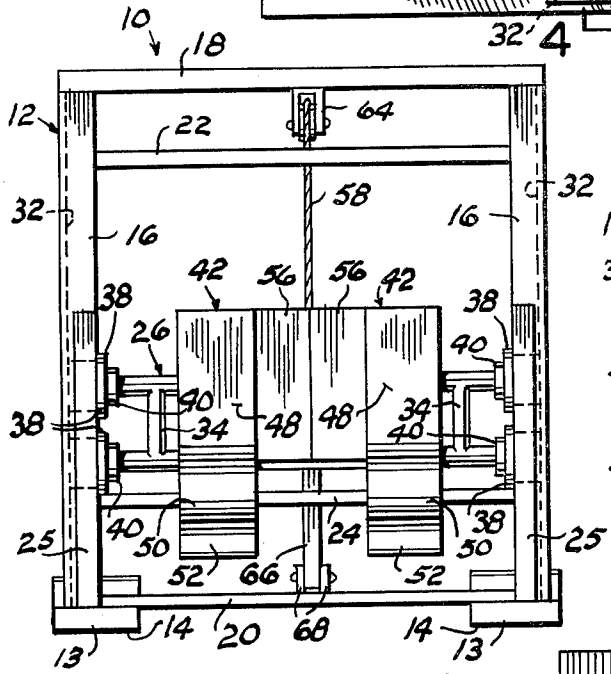


FIG. 2

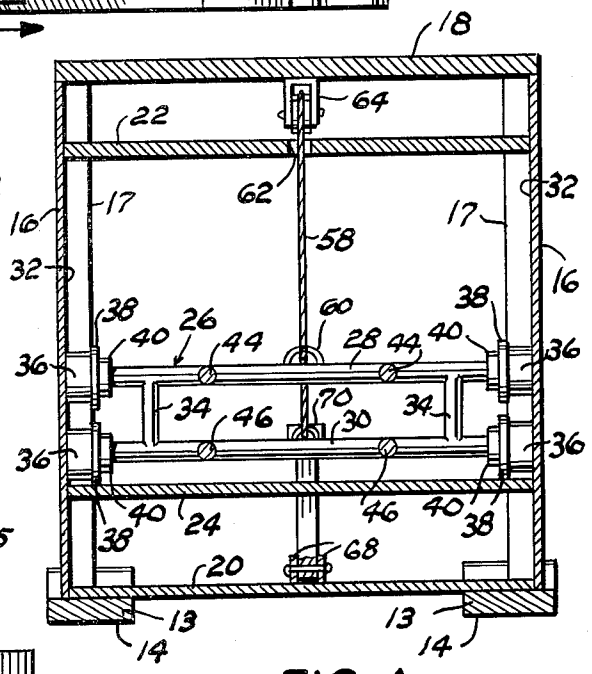


FIG. 4

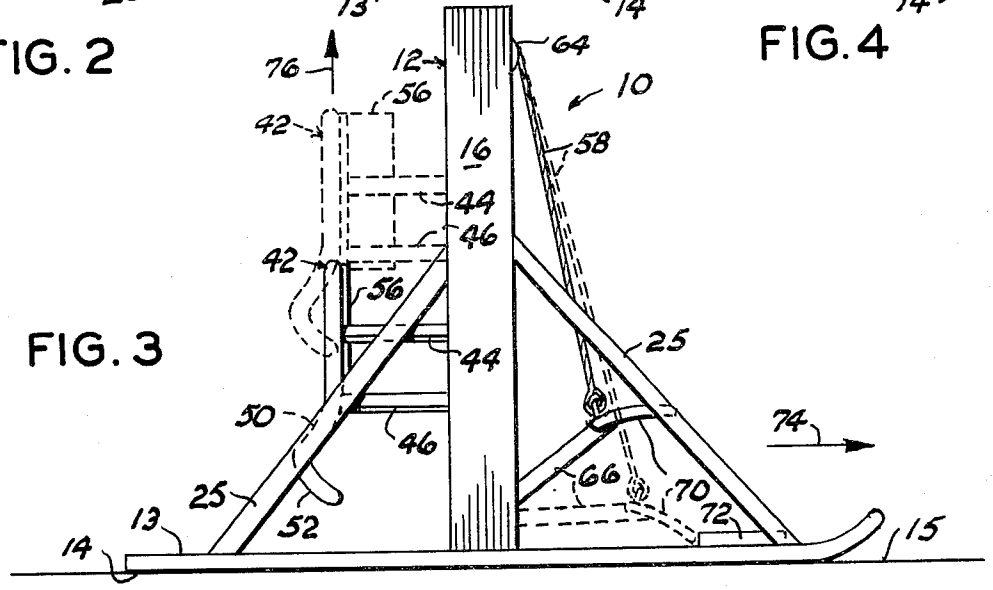


FIG. 3

FOOTBALL BLOCKING SLED

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to athletic training devices and more particularly to a football blocking sled.

An important exercise and activity in the training of football players relates to the development and improvement of their defensive and offensive blocking abilities.

Football offensive linemen below the college level must learn to stay low while charging across the line of scrimmage and make and maintain solid contact with the defensive player during the play. Since hitting and maintaining contact with the defensive lineman is the primary objective of the offensive lineman, he must learn to keep his eyes open to follow the movements of the opposing player.

2. Description of the Prior Art

Football blocking training devices generally comprise sled-like structures having one or more padded uprights or supports against which a player or players lunge and engage by their arms and shoulders and move the sled in a pushing motion.

With prior type blocking sleds a lineman making a low charge against the padded supports remains at that point while he semicrawls on his hands and feet, to push the sled, to prevent falling to the ground. The lineman's charge should be low with his head up and eyes open. When two opposing linemen charge toward each other and make solid contact, a pyramiding effect will take place. In other words, the force of contact brings both players to a higher upright position. If the offensive lineman's charge was low enough he will be against the body of the defensive lineman after the pyramiding effect and will be in position to block the defensive player. Conversely, if the offensive lineman's charge was too high, the defensive lineman will be against his body following the pyramiding effect and will be in control. With the prior type blocking sleds there is no pyramiding effect when contact is made with the padded supports thus the player is not subjected to the true action normally resulting from proper contact with an opposing lineman.

This invention overcomes most of the above objections of prior type blocking sleds presently available by, in addition to including a pair of padded supports for horizontal engagement by a player, providing a frame supported carriage means vertically movable upwardly by a coach at the time of and during contact between a player and the supports to simulate the pyramiding effect and movement of an opposing lineman when changing from an offensive to a defensive posture.

SUMMARY OF THE INVENTION

An upright frame is transversely supported by a pair of spaced parallel runners. A carriage is supported for vertical movement within the frame by antifriction rollers. A cable, connected with the carriage at one end and a lever at its other end, is entrained over a frame supported block for vertically moving the carriage in response to downward movement of the lever accomplished by an operator or coach standing on a platform forwardly of the frame. A pair of vertically disposed blocking pad supports are connected in spaced-apart relation to the carriage rearwardly of the frame. The spacing between the blocking pad supports is spanned by yielding panels.

The principal objects of this invention are to provide a football training blocking sled in which a pair of blocking pad supports are vertically movable while being contacted by a player to simulate the movement resulting from contact between two opposing linemen and the movement of an opposing lineman's determined attempt to hold his ground when he switches from an offensive to a defensive posture and to train a player to keep his eyes open while tackling or blocking.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a top view of the sled;

FIG. **2** is a left end elevational view of FIG. **1**;

FIG. **3** is a side elevational view illustrating, by dotted lines, the vertical movement of the carriage and blocking pad supports; and,

FIG. **4** is a vertical cross sectional view taken substantially along the line **4—4** of FIG. **1.**

DESCRIPTION OF THE PREFERRED EMBODIMENT

Like characters of reference designate like parts in those figures of the drawings in which they occur.

In the drawings:

The reference numeral **10** indicates the sled, as a whole, comprising an upright frame **12** transversely mounted on a pair of parallel spaced-apart runners **13,** each having an upturned forward end portion. The transverse width of the runners **13** is greater than their thickness to define a flat bottom surface **14** for contact with the surface of the earth **15.** The frame **12** comprises a pair of upright parallel channel members **16** arranged with the legs **17** of the channel shapes in confronting relation. Top and bottom bars **18** and **20** respectively extend horizontally between and are connected with the upper and bottom ends of the channels. Upper and lower intermediate braces **22** and **24** respectively extend between and are connected with the upper and lower end portions of the channels for the purposes presently explained. Forward and rearward pairs of inclined frame braces **25** maintain the plane of the frame **12** normal to the plane of the runners **13.**

A carriage **26** is supported within the frame for vertical movement between the intermediate braces **22** and **24.** The carriage comprises a pair of axles **28** and **30** extending horizontally in vertically spaced relation between the channels **16** and terminating at their respective ends in spaced relation with respect to the bight surface **32** of the respective channel. The axles are joined together by cross members **34.** Each of the axles **28** and **30** journals a roller **36** at its respective ends having a diameter slightly less than the spacing between the channel legs **17.** Each of the rollers **36** include a flange portion **38** having a diameter substantially equal to the spacing between the outer edge surfaces of the respective channel legs **17** to guide the rollers within the channel legs and maintain the axis of the axles normal to the channel bight surfaces **34** and prevent any binding action of the carriage within the channels during movement of the carriage as presently explained. The respective rollers **36** are maintained in a selected position on the respective end portion of each axle by a ring or collar **40** held in place in a conventional manner, as by a set screw, not shown. Obviously, roller

bearings, or the like, not shown, may be substituted for the rollers **36,** if desired.

A pair of rigid supports **42** are vertically secured in parallel spaced relation to the axles **28** and **30** of the carriage in rearward spaced relation with respect to the vertical plane of the frame by upper and lower pairs of rods **44** and **46.** The major portion of each support **42** is straight, as at **48,** with the depending portion thereof curved arcuately rearwardly and then forwardly, as at **50** and **52,** respectively. The medial portion of the straight section **48** of the supports **42** is preferably disposed 24 to 26 inches (61 cm to 66 cm) above the surface of the earth **15** when the carriage is in an at rest position. The purpose of the supports arcuate portions **50** is to engage the arms of the charging lineman and prevent vertical separating movement of the supports relative to the lineman when the supports and carriage are moved vertically as presently explained. The purpose of the arcuately forward curved portions **52** of the supports **42** is for preventing injury to the forearm portion of the player. Each of the supports **42** are covered by padding, indicated by the phantom lines **54** (FIG. **1**), to preclude injury to a player when contacting the supports. The forward surface of the straight portion **48** of the supports has a pair of panels **56** formed of resilient or yielding material secured thereto in door-like fashion which is contacted by a player's helmet. The purpose of the panels **56** is to induce a player to keep his eyes open when his shoulders contact the padding **54** and his head passes between the supports and contacts the panels **56.**

An elongated flexible strand, such as a cable **58,** is connected at one end with a loop or ring **60** secured to the uppermost axle **28,** medially its ends, with the cable extending upwardly through an aperture **62** formed in the top brace **22** and entrained through a block **64** secured to the top bar **18** with the other end of the cable connected with a lever **66.** One end of the lever **66** is pivotally connected for vertical pivoting movement of its other end portion about the axis of a horizontal pin extending through a pair of ears **68** mounted on the frame bottom bar **20.** The vertically movable end portion of the lever is provided with a pedal **70** adapted to be engaged by a foot of an operator or coach, not shown, standing on an operator's platform comprising a plank-like member **72** extending transversely between the forward end portions of the runners **13.**

OPERATION

In operation the carriage is normally disposed in the position shown by solid lines in the drawings, wherein the intermediate brace **24** supports the carriage **26.** The operator or coach stands on the platform **72** with one foot on the lever or foot pedal **70.** A football player approaches the padded supports **42** in a low crouching position in an action commonly described as "firing out" from his line position so that his head passes between the padded supports **42** and contacts the panels **56** while his shoulders and arms contacts the padding **54.** The force of the player's movement moves the sled, in the direction of the arrow **74,** while simultaneously the coach depresses the lever **66** to move the carriage **26** and supports **42** vertically in the direction of the arrow **76,** thus simulating the action resulting from contact between opposing linemen. Upward movement of the carriage is limited by the top brace **22.**

Obviously the invention is susceptible to changes or alterations without defeating its practicability, therefore, I do not wish to be confined to the preferred embodiment shown in the drawings and described herein.

I claim:

1. A football blocking sled, comprising:

an upright frame;

a pair of spaced-apart parallel runners transversely supporting said frame, each said runner having a flat surface adapted to engage the ground;

carriage means vertically movable within said frame;

a pair of blocking pad supports;

means mounting said blocking pad supports to said carriage;

carriage moving means connected with said carriage; and,

an operator's platform supported by said runners opposite the position of said blocking pad supports.

2. The blocking sled according to claim **1** in which said frame is characterized by a pair of upright spaced-apart channel members having the legs of the channel shapes arranged in aligned confronting relation and said carriage means includes:

antifriction means disposed between the legs of the respective pair of channel members; and,

axle means extending between said channel members and journalling the antifriction means.

3. The blocking sled according to claim **2** in which said carriage moving means includes:

a foot operated lever pivotally connected, at one end, with said frame and projecting, at its other end portion, toward said operator's platform;

a block connected with the uppermost limit of said frame; and,

a flexible strand connected, at its respective ends, with said carriage and said lever and entrained through said block.

4. The blocking sled according to claim **3** and further including:

a pair of flexible panels connected respectively with the blocking pad supports in opposed aligned relation and jointly spanning the space between the rearward limit of the blocking pad supports.

* * * * *