July 4, 1967 J. A. MORAN 3,329,428

FOOTBALL OFFENSIVE AND DEFENSIVE TRAINING APPARATUS

Filed March 19, 1962 3 Sheets-Sheet 1

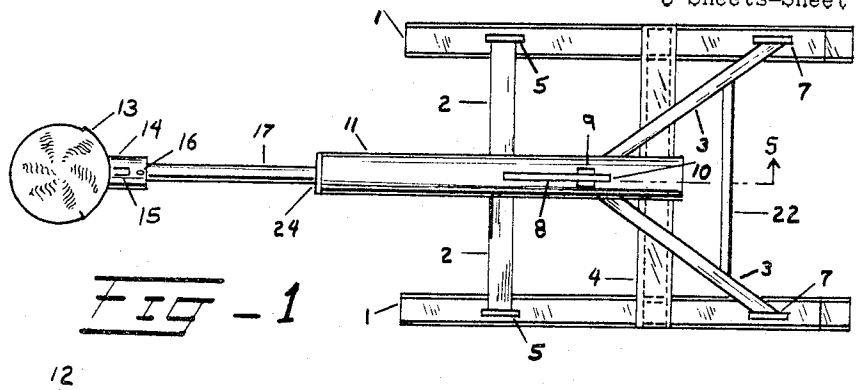


FIG - 1

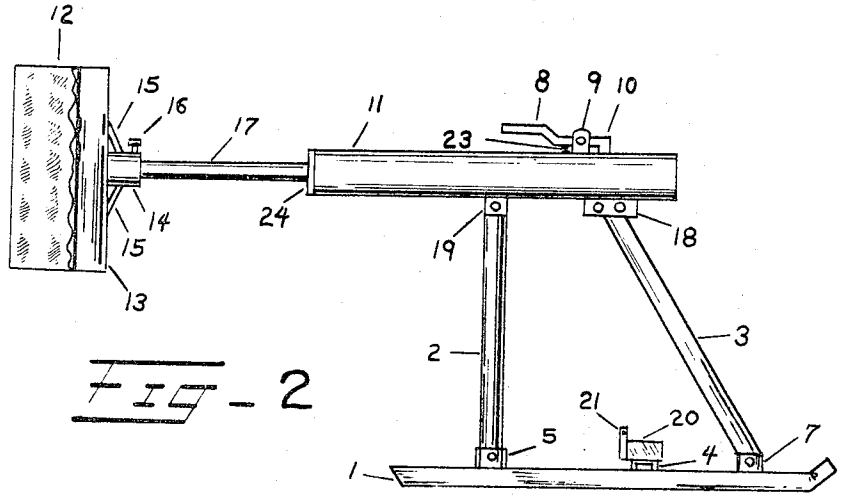


FIG - 2

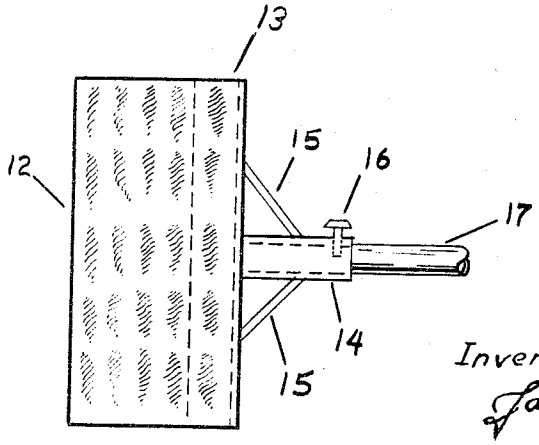


FIG - 3

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FOOTBALL OFFENSIVE AND DEFENSIVE TRAINING APPARATUS

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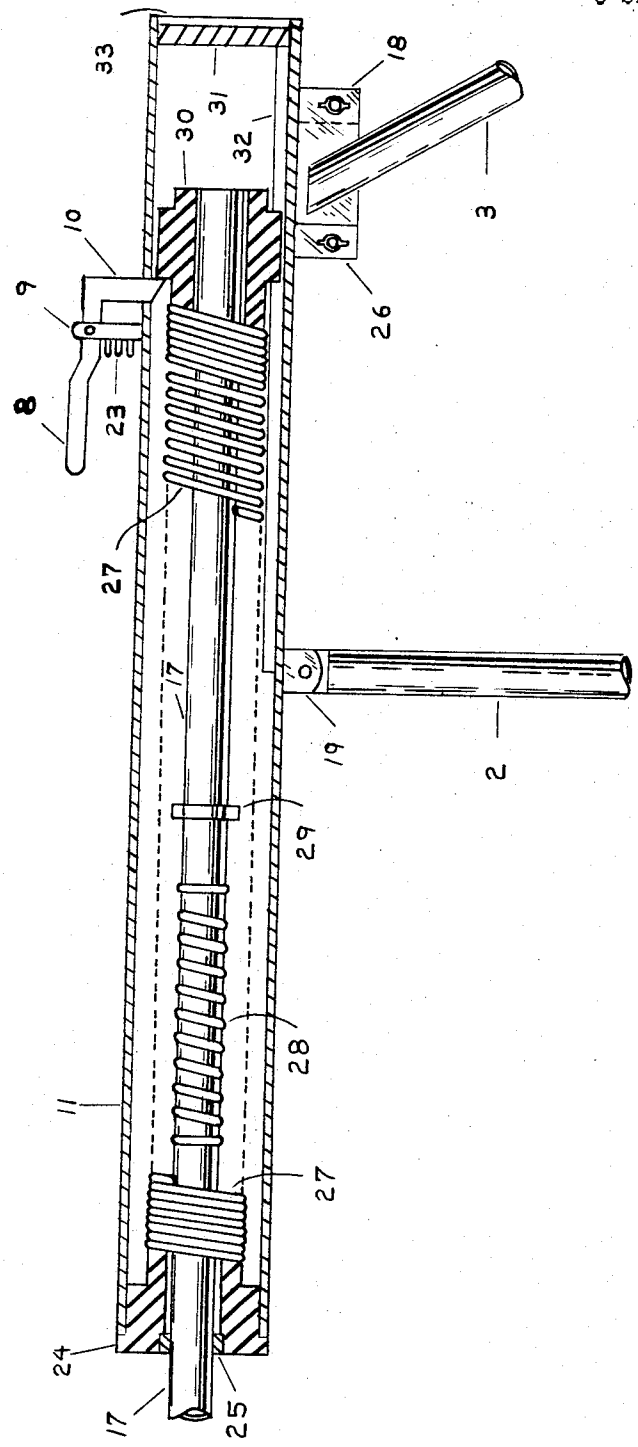


FIG. 4

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FOOTBALL OFFENSIVE AND DEFENSIVE TRAINING APPARATUS

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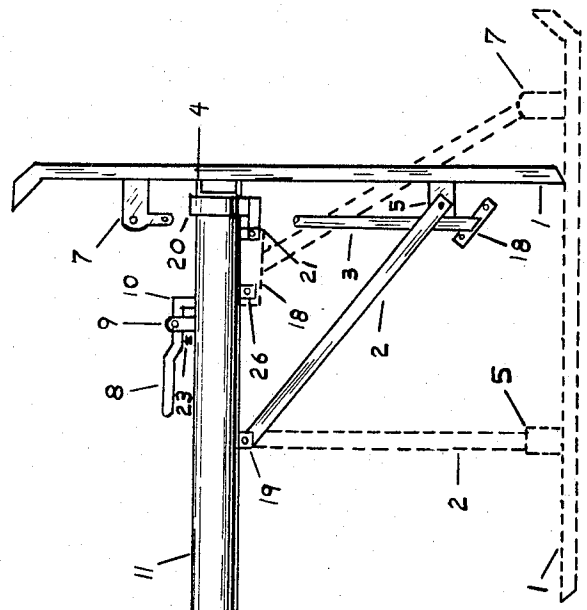


FIG - 5

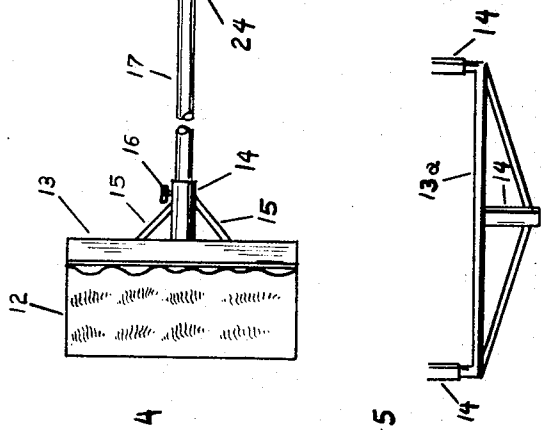


FIG - 7

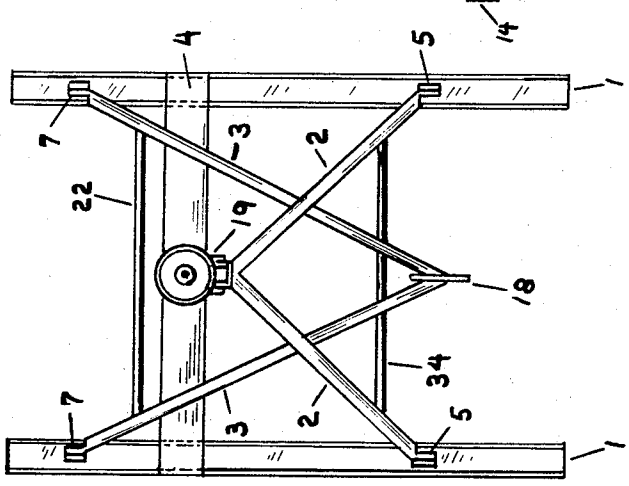


FIG - 6

United States Patent Office 3,329,428 Patented July 4, 1967

3,329,428

FOOTBALL OFFENSIVE AND DEFENSIVE TRAINING APPARATUS

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4 Claims. (Cl. 273—55)

This invention relates to athletic training apparatus, particularly designed for training football linemen in offensive and defensive techniques.

An object of this invention is to provide an apparatus that will simulate the charge of an opposing lineman, in the direction of an offensive lineman.

A further object is to present to an offensive lineman a blocking area similar in shape, size and movements to those encountered in game condition.

Still another object of this invention is to provide an apparatus which will be useful in developing quick reflexes, aggressiveness, along with proper timing, and proper blocking techniques.

Still a further object of this invention is to provide a training apparatus which can be used indoors and outdoors.

Another object of this invention is to provide a training apparatus which is safe to operate and easy to maintain.

Still another object of this invention is to provide a training apparatus which is compact, durable and inexpensive to manufacture.

Other objects and advantages of the invention will become apparent from a consideration of the drawings and description of same, in which:

FIGURE 1 is a plan view of the training apparatus according to the present invention.

FIGURE 2 is a side elevational view of the training apparatus according to the present invention.

FIGURE 3 is an enlarged view of the backing plate assembly and the impact bag mounted thereon.

FIGURE 4 is an enlarged cross-sectional view of the actuating device of the present invention, taken on line 4—4 of FIGURE 1.

FIGURE 5 is a side elevation of the present invention, showing the training apparatus in the indoor or wall-mounted position.

FIGURE 6 is a front elevation, with the impact bag removed, showing the present invention in the indoor or wall-mounted position.

FIGURE 7 is a modification of the backing plate assembly incorporating a plurality of impact bags.

Referring to the drawings in more specific detail, the training apparatus is embodied in FIGURES 1 through 6. The training apparatus includes a pair of base skids **1** to which are mounted front supports **2** and rear supports **3**. These supports, pivotally connected to base skids **1** by front and rear mounting brackets **5** and **7** respectively, affording supports **2** and **3** pivotal movement as shown in FIGURE 5 and FIGURE 6. Front support **2** and rear support **3** are reinforced by front spreader **34** and rear spreader **22**, respectively. Atop front support **2** a hinge **19** is located, secured to front support **2** and barrel **11**, affording barrel **11** pivotal movement about hinge **19** on front support **2**, as shown in FIGURE 5 and FIGURE 6. Rear support barrel mount **18** is secured to rear support **3** which facilitates securing rear support **3** to barrel **11**, by bolting rear support barrel mount **18** to barrel securing lugs **26**. These barrel securing lugs **26** are permanently mounted on barrel **11**.

Base skids **1** are permanently connected by base spreader **4**. Base spreader **4** serves as a mounting plate for barrel receptacle **20**, which is used in the indoor or wall-mounted position, as shown in FIGURE 5 and FIGURE 6. Attached to barrel receptacle **20** is lock plate **21**

which engages one of the barrel securing lugs **26**, thereby locking barrel **11** in the indoor or wall-mounted position as shown in FIGURE 5 and FIGURE 6. Barrel **11** encases and contains the actuating device of this invention. Actuating arm **17** passes through a bronze bearing **25** mounted in front barrel head **24**. Actuating arm **17** continues through front barrel head **24**, and follower head **30** is attached to actuating arm **17**, at its extreme end. A tension spring **27** is attached to front barrel head **24** and follower head **30**. The preferred method of attachment of said tension spring **27** to front barrel head **24** and follower head **30** is by threaded means. This might be achieved by other methods such as set screws, a flange engaging lug on said barrel head **24** and follower head **30**, respectively. Thus any thrust imposed on actuating arm **17** will cause actuating arm **17** to pass through front barrel head **24**, extending tension spring **27** to locked position, as shown in FIGURE 4. In this position, lock **10** engages follower head **30**, locking actuating arm **17**, and tension spring **27**, in an extended position.

Lock **10** is mounted on barrel **11** by lock mount **9**. Lock **10** is controlled by lock return compression spring **23**, insuring a positive lock. Upon release of lock handle **8**, actuating arm **17** will return to a forward position. Compression spring **28** will be engaged by stop **29** and act as a shock absorber. Follower head **30** is guided by key **32**, thus maintaining the position of blocking bag **12** and backing plate **13** at all times. Rubber stop **31** is secured to end plate **33**.

Impact bag **12**, having a shock absorbing material for its core, is mounted on backing plate **13** by lacing or other suitable methods. Backing plate **13** is supported by back plate supports **15** to insure rigidity. Backing plate mounting collar **14** slides over actuating arm **17** and is locked in position by lock pin **16**.

In order to convert this training apparatus from outdoor position, as shown in FIGURE 1 and FIGURE 2, to the indoor or wall-mounted position as shown in FIGURE 5 and FIGURE 6, the following simple procedure is followed. Remove bolts from rear support barrel mount **18**, allow rear support **3** to fold down as shown in FIGURE 5; place barrel **11** into barrel receptacle **20**; replace bolt in lock plate **21**, and stand as shown in FIGURE 5. The training apparatus can be secured to a wall with lag bolts or hangers.

In operation, the device is positioned as shown in FIGURE 2 or FIGURE 5. The coach takes a position to the side of lock handle **8**. The player assumes his position in front of blocking bag **12**. On a given count the coach releases the lock **10**, and the impact bag **12** moves in a direction toward the player. The player, on a given count, will charge the impact bag while the coach observes to detect the proper timing. The impact delivered by the player will move the impact bag **12** back to a locked position, by extending tension spring **27**. This apparatus can be used in this fashion to train both offensive and defensive linemen, using either a shoulder block or a hand charge.

This training apparatus can be changed to accommodate two men by replacing backing plate assembly **13** with a twin backing plate assembly **13***a*, accommodating a plurality of backing plates and impact bags.

From an evaluation of the aforementioned statements it is evident all the stated objects have been accomplished.

Although the present invention has been described and illustrated in connection with preferred embodiments and advantages, I do not wish to be limited to the details herein disclosed. Modifications and variations may be resorted to without departing from the spirit and scope of the invention as defined by the appended claims.

I claim as my invention:

1. In a football offensive and defensive training machine, a support means, said support means being pivot-

ally mounted on ground engaging skids, a casing pivotally mounted on said support means, an actuating arm reciprocally mounted in said casing, impact imparting and receiving means adapted to engage the body of the user, secured to one end of said actuating arm, externally of said casing, biasing means interposed between said casing and said actuating arm and continuously urging said arm outwardly of said casing, releasable locking means operatively engaging said biasing means, said support means comprising a front support member and a rear support member, the location of said pivotal mountings being such as to allow selective folding of said skids with respect to said casing into a substantially parallel relationship for ground engagement of said skids or substantially perpendicular relationship for vertical surface mounting of said skids.

2. In a football offensive and defensive training machine, as recited in claim **1**, said impact imparting and receiving means being more than one in number.

3. In a football offensive and defensive training machine, as recited in claim **1**, said biasing means including a tension spring disposed internally of said casing, said spring being secured to said actuating arm at a point adjacent the other end thereof and to said casing at a point remote from said last mentioned point.

4. In a football offensive and defensive training machine, as recited in claim **3**, said biasing means further including a follower head on said arm constituting the securing means for said spring, said releasable locking means engaging said follower head.

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