June 18, 1929. B. KLUM 1,717,693

FOOTBALL APPARATUS

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Fig. 1

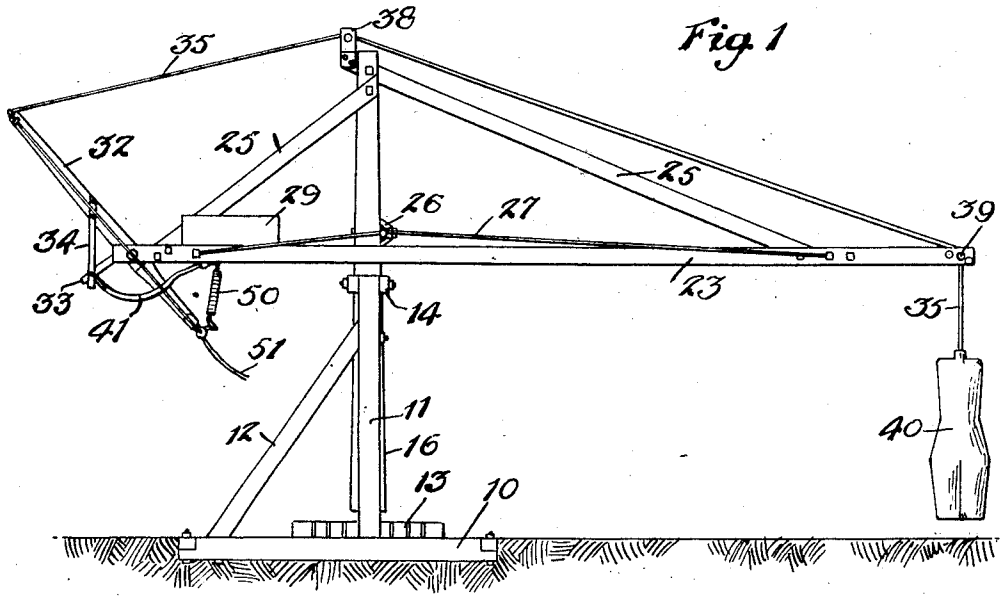
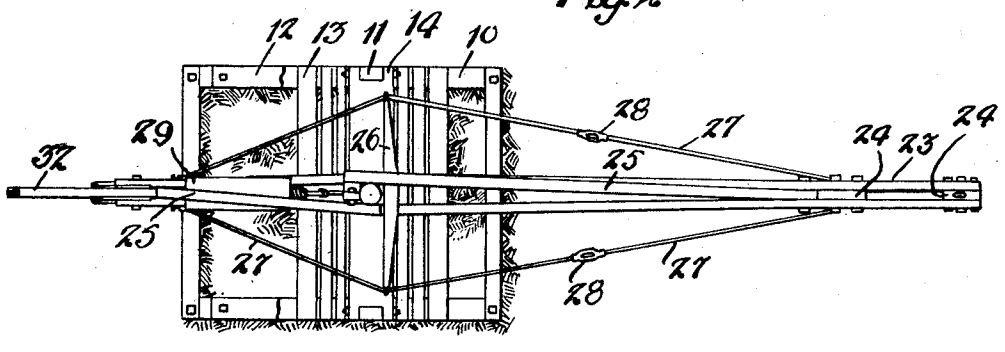


Fig. 2



Blaine Klum
Inventor

By Wm. L. Symons

Attorney

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FOOTBALL APPARATUS

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Fig. 3

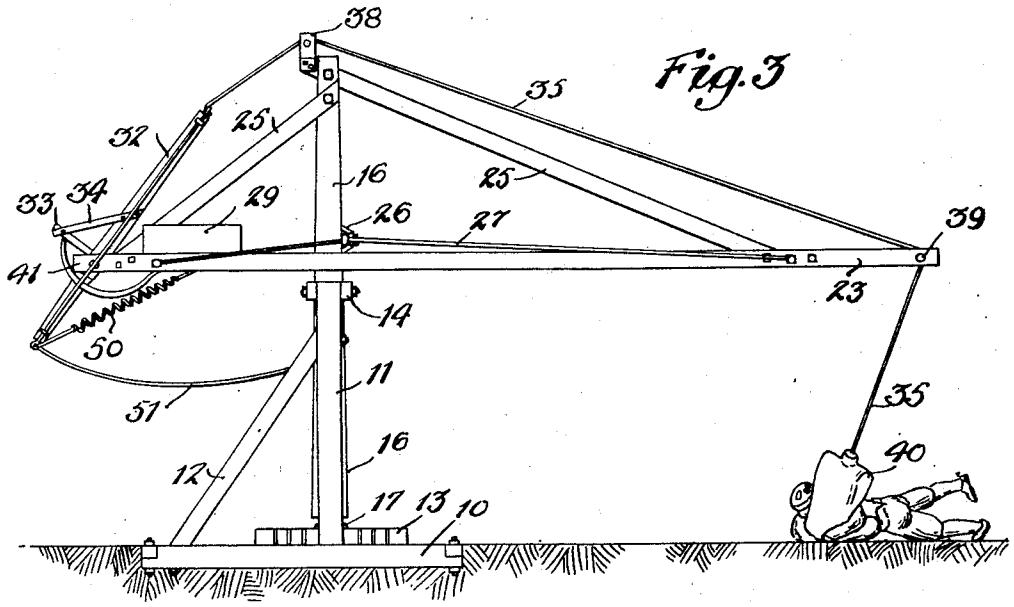


Fig. 4

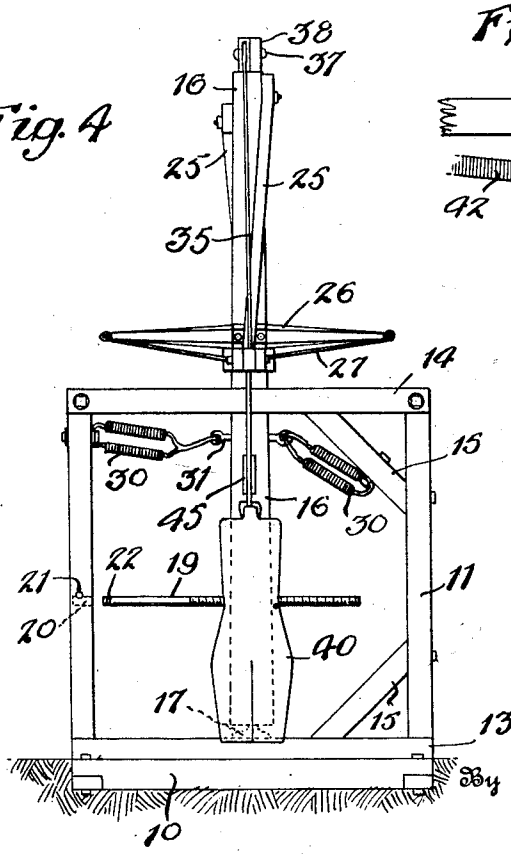
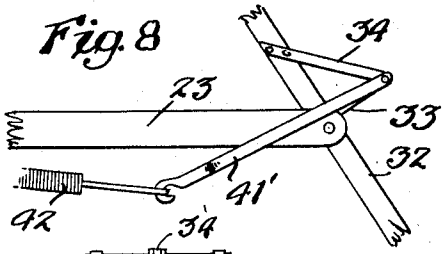


Fig. 8



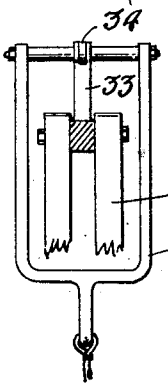


Fig. 9

Blaine Klum
Inventor

By Wm. L. Symons

Attorney

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FOOTBALL APPARATUS

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Fig. 5

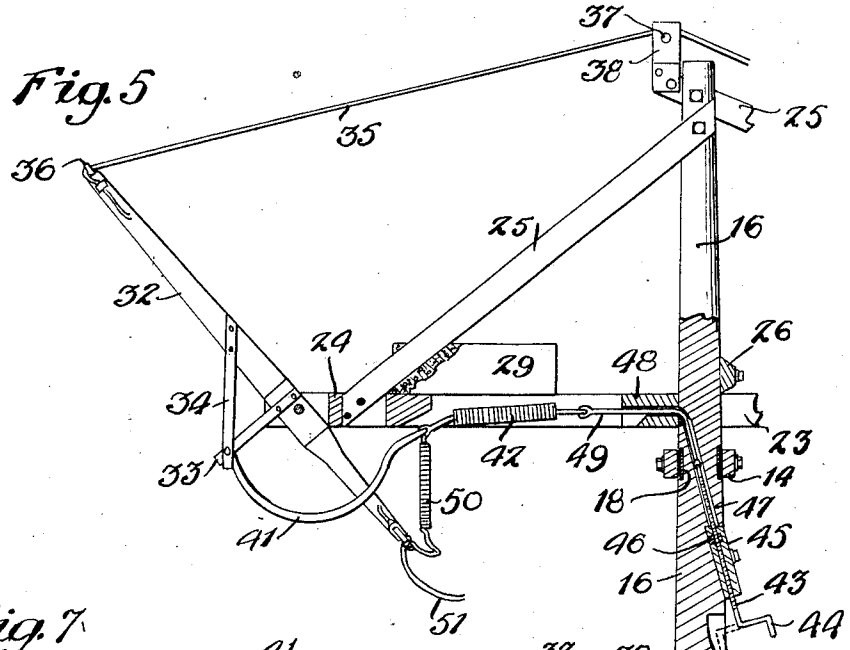


Fig. 7

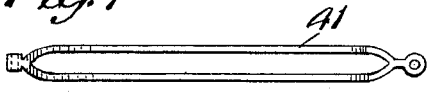


Fig. 6

Blaine Klum
Inventor

By Wm. L. Symmons

Attorney

Patented June 18, 1929. 1,717,693

UNITED STATES PATENT OFFICE.

BLAINE KLUM, OF OAKLAND, CALIFORNIA.

FOOTBALL APPARATUS.

Application filed May 28, 1928. Serial No. 281,242.

My invention relates to football apparatus and more particularly to a device adapted for training football players in tackling and blocking.

The tackling dummies at present in use for this purpose do not fully answer the purpose for which designed because they do not simulate the actual conditions existing in a football game.

An important object of my invention is the provision of a tackling and blocking dummy apparatus which will simulate the approximate conditions met by a player in tackling or blocking an opponent during a football game.

Another object of my invention is to provide a device of the above mentioned character which is of simple construction and operation, is inexpensive to manufacture, strong and durable.

Other objects and advantages of my invention will be apparent during the course of the following description.

In the accompanying drawings which form a part of this specification and wherein like characters of reference denote like or corresponding parts throughout the same,

Figure 1 is a side elevation of a device embodying my invention,

Figure 2 is a plan view thereof,

Figure 3 is a side elevation showing the position after the dummy has been tackled,

Figure 4 is an end elevation of my tackling apparatus,

Figure 5 is a detail fragmentary view, partly in section, showing the normal position,

Figure 6 is a similar view showing the position after tackling,

Figure 7 is a detail of the link member,

Figure 8 is a detail of a modified link assembly, and,

Figure 9 is a plan view thereof.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 10 designates a rectangular base having a pair of standards 11 supported thereon on the side edges thereof adjacent its center. A pair of inclined bracing beams 12 connect the standards 11 with the base 10, and a platform 13 is arranged on the base between and to either side of the standards. A horizontal beam 14 connects the standards at their upper ends and is securely bolted thereto. Additional bracing members 15 may be provided to strengthen the arch formed by the standards 11 and the beam 14.

A mast or pole 16 rests upon a bearing 17 in the center of the platform and extends vertically through the center of the beam 14, and a substantial distance thereabove. The mast is preferably tapered towards its upper end and is provided with a suitable bearing surface 18 to engage the beam 14. A horizontally arranged rod 19 extends transversely through the pole 16 at a point spaced from the platform about the height of a man's waist, and the rod is preferably provided with screw-threads to engage threads in the pole 16. The rod 19 is used to rotate the pole 16, and when not in use may be screwed outwardly until its outer end extends into an opening 20 in one of the beams 11, and a bolt or other securing member may be passed through a transverse opening 21 to engage a groove 22 in the end of the rod to prevent its removal from the opening 20 and hold the mast 16 in a stationary position. It will be understood that any other means many be utilized to rotate the mast such as gearing or power driven means.

A boom or arm 23 composed of spaced planks arranged with the mast between them, is secured to the mast a short distance above the beam 14 at a point nearer to one end of the arm than to the other. Suitable spacing blocks 24 are arranged between the planks of the arm 23 and are bolted thereto.

Bracing members 25 have their ends arranged between the planks of the arm or boom 23 adjacent their ends and are connected at their other ends to the upper end of the mast 16. A transversely arranged spar 26 is secured at its center to the mast immediately above the boom 23, and suitable struts 27 connect the ends of the spar with the end portions of the boom, turnbuckles 28 being provided for tightening the struts 27.

It will be seen that the struts 27 cooperate with the braces 25 to give rigidity to the boom 23. A weight 29 is carried by the short end of the boom and may be formed of concrete or any suitable material, whose usefulness is to counter balance the upper structure supported by the mast to facilitate easy rotation.

Coil springs 30 are secured to the stand-

ards 11 adjacent their upper ends and are operatively connected to radial arms 31 on the mast below the beam 14 and will be put under tension when the mast is rotated. When the mast is released, the springs 30 will tend to return it to its normal position. The springs also prevent jarring of the mast in stopping.

An arm 32 is pivoted nearer its lower than its upper end between the ends of the planks of the short end of the boom 23 and is provided with a transversely extending member 33 which projects outwardly from the arm 32 a substantial distance and is braced by a member 34 secured to the arm 33 at a point arranged a substantial distance above the pivot point of the arm.

A cable 35 is adjustably secured to the arm 32 and passes through an eye 36 at its upper end and from the eye extends over a pulley journaled at 37 in a pulley block 38 secured to the end of one of the braces 25 or to the top of the mast 16. The cable 35 passes from the pulley block 38 to the end of the long arm of the boom where it passes over a pulley journaled at 39 between the planks of the boom and extends downwardly and at its lower end supports the usual tackling dummy 40.

A curved link 41 formed of spaced parallel rods converging at their ends, is connected at its outer end to the outer end of the member 33 and is arranged with the lower portion of the arm 32 between the two rods thereof. The inner end of the link 41 is connected to a coil spring 42 arranged between the planks of the boom. An adjusting member comprises a screwthreaded shaft 43 having a crank 44 on its end and is received in the bore of a removable block 45 provided with an interior screw-threaded metallic portion 46 which engages the screw-threaded portion of the shaft 43. The end of the shaft extends beyond the block 45 and into an upwardly inclined opening 47 in the mast which communicates with the bore of a guide block 48 arranged between the planks of the boom immediately adjacent the mast. A flexible cable 49 connects the end of the shaft 43 with the spring 42, and the tension of the spring may be adjusted by the crank 44.

A coil spring 50, smaller than the spring 42 is arranged between the end of the link 41 and the lower end of the pivoted arm 32.

A flexible cable 51 may be attached to the lower end of the arm 32 and connected to some convenient portion of the frame for resetting the arm 32.

In operation the mast is turned by means of the handle bar 19 or any other suitable means and the dummy will move in a wide arc at the end of the boom, simulating a football player circling the end. The player tackles the dummy which is in motion, and the tackle is resisted by the spring 42 transmitted through the link 41, the member 33, arm 32 and cable 35.

When the arm 32 passes its center the action of the spring will assist the inward motion of the arm, instead of resisting it, and the dummy will fall in the same manner that a player falls when thrown off balance by a tackler, as shown in Figure 3 of the drawings.

When the mast is released the springs 30 will return it to its normal position and the arm 32 may be reset by pulling on the cable 51.

In Figure 8 I have shown a modification in which in place of the link 41 I use a straight link 41′ forked at its end to straddle the end of the boom. The action will be the same as in the preferred form.

It will be obvious that in place of the spring 42, the link 41 may be of spring material, anchored at its end and provided with a loop or loops. The spring 50 serves to cushion the fall of the arm 32 after it has passed its dead center.

It will also be obvious that in place of the construction shown I may utilize a framework, mast and boom of metal tubing and angle iron, or any suitable arrangement, and that in place of the coil springs 30 I may use leaf springs or other resilient means.

While I have shown and described the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claims.

Having thus described my invention, what I claim and desire to protect by Letters Patent is:

1. Football apparatus comprising a dummy, means to resist initial falling movement of said dummy, and means to accelerate the falling movement of said dummy after the initial resistance.

2. Football apparatus comprising a dummy, means to resist the initial falling movement of the dummy, and means whereby the resistance to the falling of said dummy is overcome when the dummy has passed its initial falling distance.

3. Football apparatus comprising a dummy, means to move said dummy in the arc of a circle, means to resist the initial falling movement of the dummy, and means to accelerate the falling movement of the dummy after the initial resistance.

4. Football apparatus comprising a mast, a boom secured to said mast, a dummy supported by said boom in spaced relation to the mast, an arm pivoted to said boom and connected with said dummy whereby falling movement of the dummy will move the arm about its pivot, means to resist the initial movement of the arm, and means to acceler-

ate the movement of the arm after it has passed its dead center.

5. Football apparatus comprising a mast, a boom secured to said mast, a dummy supported by said boom in spaced relation to the mast, resilient means engaging said mast, and means to rotate said mast against the tension of said resilient means whereby when the mast is released the resilient means will tend to return the mast to its normal position.

6. Football apparatus comprising a mast, a boom secured to said mast, a dummy supported by said boom in spaced relation to the mast, an arm pivotally secured to said boom, means operatively connecting said arm with the dummy whereby falling movement of the dummy will move the arm about its pivot, resilient means engaging said arm and adapted to resist the initial movement of the arm, and means whereby further movement of the arm will be accelerated by said resilient means.

7. Football apparatus comprising a mast, a boom secured to said mast, a dummy supported by said boom in spaced relation to the mast, an arm pivotally secured to said boom, means operatively connecting the arm with said dummy whereby falling movement of the dummy will move the arm about its pivot, resilient means engaging said arm and adapted to resist the initial movement of the arm, means whereby further movement of the arm will be accelerated by the resilient means, and means to vary the tension of said resilient means.

8. Football apparatus comprising a rotatable mast, means engaging said mast and resisting its rotational movement whereby when the mast is released it will be returned to its normal position, a boom rigidly secured to the mast, an arm pivotally secured to said boom, a dummy supported by said boom in spaced relation to the mast, means operatively connecting the dummy with said arm, whereby falling movement of the dummy will move the arm about its pivot, resilient means engaging the arm and adapted to resist the initial movement of the arm, and means whereby further movement of the arm will be accelerated by the resilient means.

9. Football apparatus comprising a mast, a boom secured thereto, a dummy supported by said boom in spaced relation to the mast, an arm pivoted to the boom and operatively connected to the dummy whereby falling movement of the dummy will move the arm about its pivot, a lateral extension on said arm adjacent its pivot point, resilient means engaging said lateral extension and resisting its initial movement, means whereby said resilient means will accelerate the movement of the lateral extension after it has passed its dead center.

10. Football apparatus comprising a mast, a boom secured thereto, a dummy supported by said boom in spaced relation to the mast, an arm pivoted to the boom and operatively connected to the dummy whereby falling movement of the dummy will move the arm about its pivot, a lateral extension on said arm adjacent its pivot point, resilient means engaging said lateral extension and resisting its initial movement, means whereby said resilient means will accelerate the movement of the lateral extension after it has passed its dead center, and means to cushion the fall of said arm.

11. Football apparatus comprising a support, an arm pivoted thereto, a dummy suspended from said support and operatively connected with said arm whereby falling movement of the dummy will move the arm about its pivot, means to resist the initial movement of the arm about its pivot, and means to accelerate the movement of said arm after the initial resistance.

12. Football apparatus comprising a support, an arm pivoted thereto, a dummy suspended from said support and operatively connected to said arm whereby falling movement of the dummy will move the arm about its pivot, a lateral extension on said arm adjacent its pivot point, resilient means engaging the lateral extension and resisting its initial movement, and means whereby the resilient means will accelerate the movement of the lateral extension after it has passed its dead center.

In testimony whereof I affix my signature.

BLAINE KLUM.