

- [54] **WHEELED FOOTBALL TRAINING SLED HAVING OVERHEAD CHUTE**
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- [51] Int. Cl. **A63b 67/00**
- [58] Field of Search..... **273/55 R; 73/379, 380**

- [56] **References Cited**
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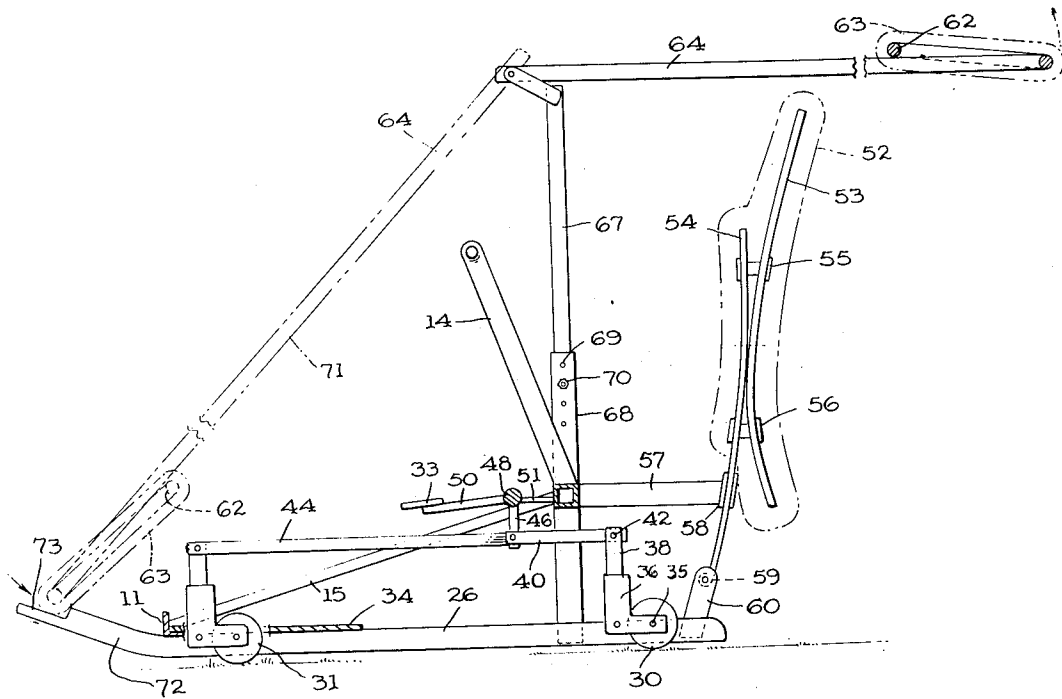
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[57] **ABSTRACT**

A charging apparatus for training and conditioning football players including a plurality of spaced blocking pads yieldingly carried on a frame which is supported on spaced rails or channel runners between which are mounted rollers controllable by foot pedals to enable an operator to vary the resistance to movement of the apparatus on either side of the apparatus. A chute selectably adjustable in height is mounted above the pads to train players to stay low when firing out.

5 Claims, 3 Drawing Figures



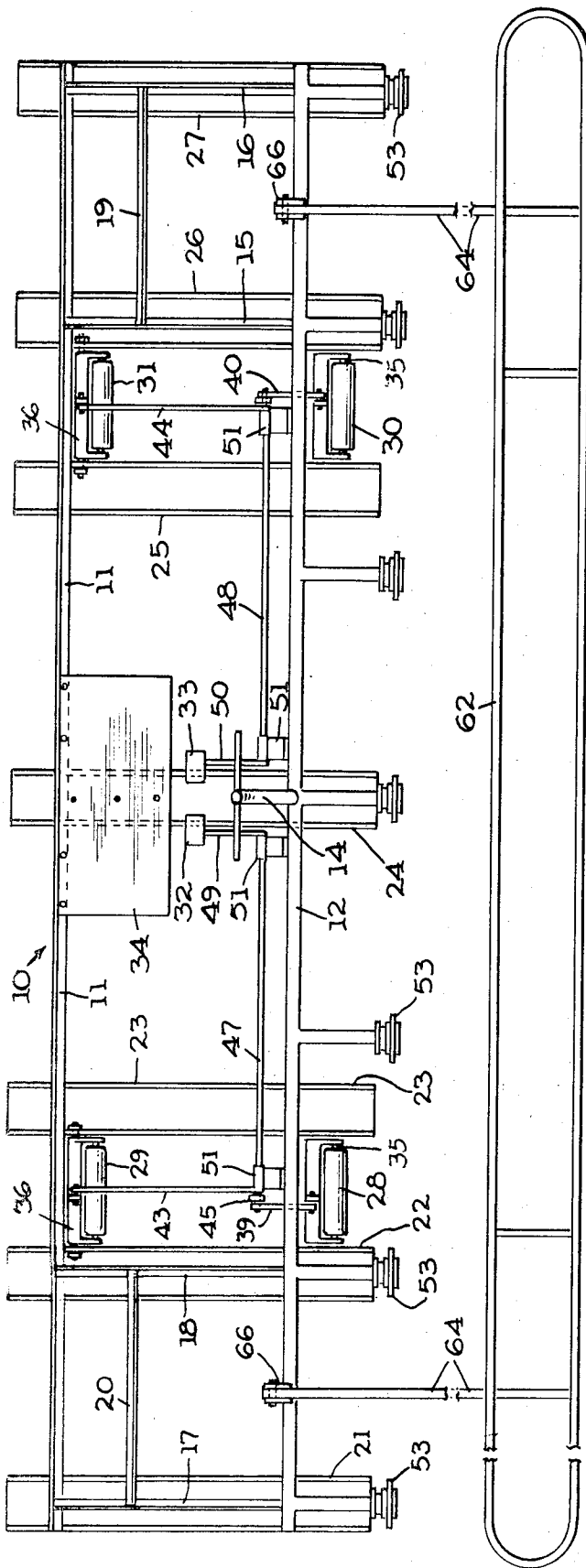
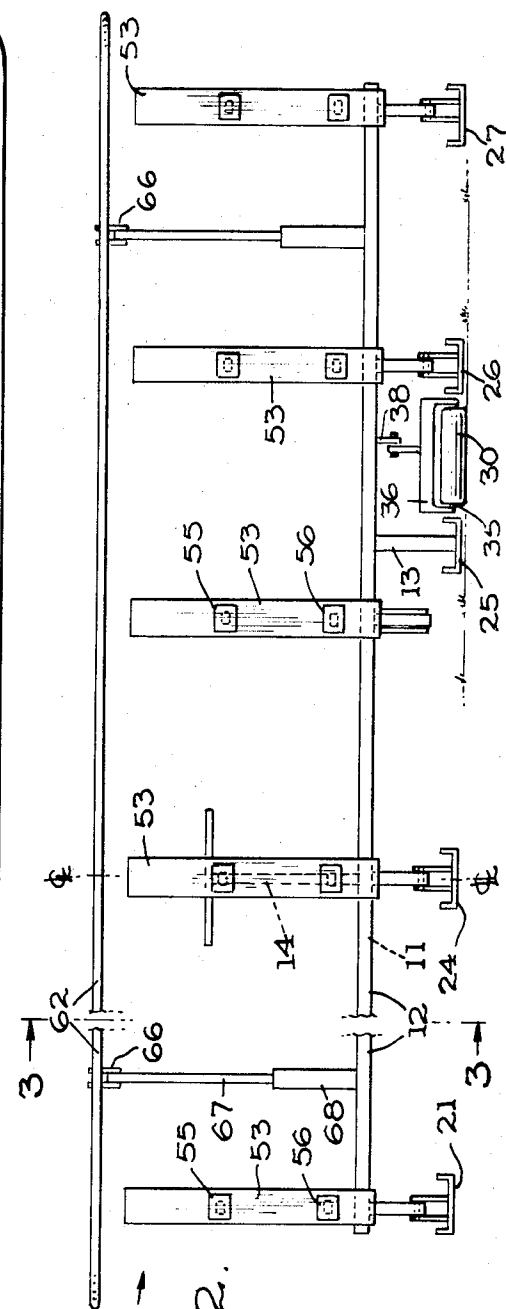


FIG. 1.

FIG. 2.

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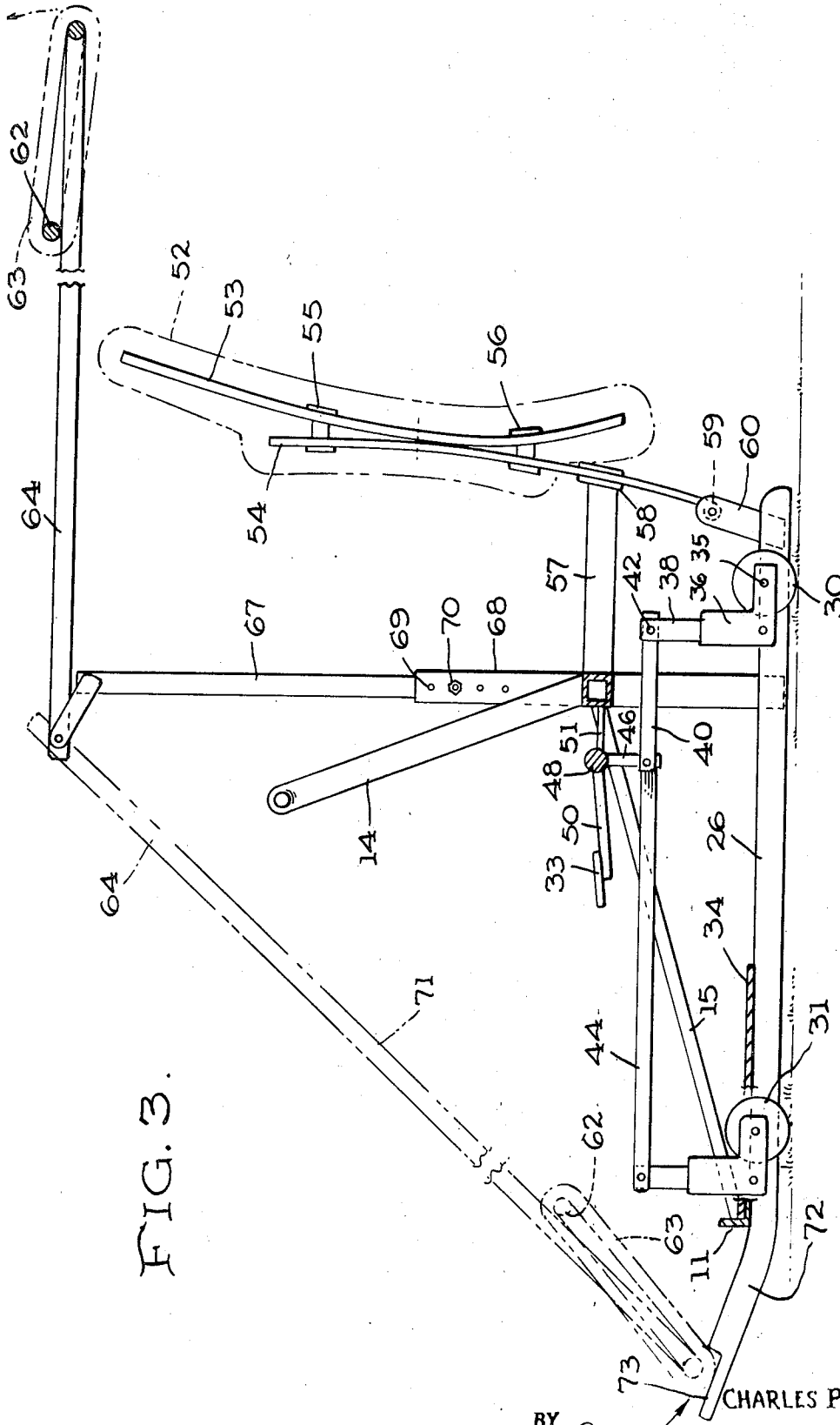


FIG. 3.

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DESCRIPTION OF THE PRIOR ART

In body contact sports such as, for example, football, many devices have heretofore been employed for training and conditioning athletes. Such devices generally comprise sled-like structures having padded uprights against which one or more athletes engage their arms and shoulders in an attempt to move the sled with a pushing motion. U.S. Pat. No. 2,653,816, illustrates and describes a typical seven man sled of this character.

Such training sleds are often of the "brute force" type and rely on their frictional engagement with the ground to resist the pushing or charging action of the athletes. It can be appreciated that seven man sleds are of primary importance in team training wherein the entire line of the football team engages in charging drills. Where a sled may be of sufficient weight for a "light" line, it is inadequate for training purposes for a "heavy" line, and sandbags or other weights are often added to compensate for the inadequacy in weight. Of course, where the sled is too heavy for a line, it is inadequate as a training device.

Since such sleds may be used for varying grades of teams, such as varsity, junior varsity and "frosh," where the weight of the lines may vary, the limitation of a single weight sled is often a handicap in the training process. These sleds also suffer from the disadvantage that they do not realistically simulate actual playing conditions and the actual body contact which occurs under playing conditions.

SUMMARY OF THE INVENTION

These and other disadvantages of the prior art are overcome by the present invention which provides an operator controlled seven man training sled having two sets of rollers controlled by foot pedals. Operation of the foot pedals enables the operator to vary the resistance or frictional engagement of the sled with the ground. An overhead chute that can be raised or lowered according to the height below which the coach desires the players to maintain when charging into the blocking pads of the sled is provided to train players to stay low when firing out. To further simulate the blocking sensation under actual playing conditions, the blocking pads are contoured and mounted to flexible, yieldable springs, while the foot pedals are independently operable to selectively vary the resistance to either side of the center line of the sled.

BRIEF DESCRIPTION OF THE DRAWINGS

While the specification concludes with claims which particularly point out and distinctly claim the subject matter of the present invention, the invention will be described with reference to the accompanying drawings in which like reference characters indicate like parts throughout the several views.

FIG. 1 is a top structural view of the seven man sled of the present invention;

FIG. 2 is a front elevational view of the sled shown in FIG. 1, with a portion of the sled to the left of the center line broken away; and

FIG. 3 is a side elevational view, partly in cross-section, taken along lines 3—3 of Fig. 2.

Referring to the drawings, reference numeral 10 represents generally the training sled of the present invention including a frame comprising a lower rear horizontal channel frame member 11, and a front horizontal frame member 12. Frame member 12 is elevated from the runners or skids by vertical support members 13 and is rigidly connected by channel framing pieces 15, 16, 17 and 18 to the rear frame 11. The channel framing is in turn reinforced by cross members 19 and 20. The various sections of the frame may be fastened together by any suitable means such as, for example, welding.

As shown in Fig. 1, the training sled is symmetrical about its center line and includes seven rails or channel runners 21, 22, 23, 24, 25, 26 and 27, each having a wide flat surface adapted to engage the ground. Advantageously, pairs of runners 22, 23 and 25, 26 between the center runner 24 and outermost runners 21 and 27, respectively, are spaced closer to each other than any two other runners. Each pair of runners 22, 23 and 25, 26 forms a set and have mounted therebetween a pair of rollers 28, 29 and 30, 31 operatively connected to foot pedals 32 and 33, respectively, located at the coaches supporting platform 34. Platform 34 is secured to the rear frame member 11 and centermost runner 24. Disposed above and to the front of platform 34 is an operator's rest or stabilizing handle secured to frame member 14.

Each roller is fixedly supported to an axle bar or rod 35 journaled in axle support member 36. Alternatively, the roller may be rotatably supported on rods 35 and the rods would then be rigidly mounted to the axle supports 36. Each axle support 36 has connected thereto a vertical lift rod which is in turn connected to horizontal link members.

As best seen in Fig. 1, front axle supports 36 are connected via lift rods 37 and 38 to horizontal link members 39 and 40 via pin members 41 and 42. Rear axle supports 36 are also connected through similar vertical lift rods to one end of the forwardly extending horizontal rods 43 and 44. Rods 43 and 44 are coupled at their forward ends to links 39 and 40 by vertical coupling bars 45 and 46. The coupled ends of link 39 and rod 43 and link 40 and rod 44 are connected to one end of transverse roller lift rods 47 and 48, the other ends of which are either integral with or rigidly connected to foot pedal rods 49 and 50. Pedals 32 and 33 are secured to the ends of rods 49 and 50, and suitable brackets 51 welded to the frame member 12 support the lifting mechanism.

Each pedal operates independently of the other. Depression of pedal 32 controls the left side set of rollers 28, 29 and causes lift bar 47 to rotate about its longitudinal axis. Rotation of bar 47, in turn, causes the lower end of bar 46 to swing forward in an arc. Links 40 and 44 which are coupled thereto are thus also swung forward carrying their respective rollers forward and upward. A similar action results with rollers 30 and 31 on the right side of the training sled, as viewed in the drawing, upon depression of pedal 33. It should be apparent that by controlling the extent of depression of the foot pedals, the extent of frictional engagement of the channel runners with the ground may be regulated. In the normal position, the rollers are in contact with the ground and the channel runners are spaced slightly above ground level. This enables the training sled to be

pushed about with relative ease. Of course, if desired, the training sled could be arranged with the channel runners normally resting on the ground and the rollers adapted to be controlled so as to raise the sled and thus control the effective resistance to movement.

As hereinbefore described, each foot pedal controls the roller sets on each side of the training sled independently of the other sets. This enables the coach or operator to control the resistance to movement of the sled on each side of the line. This is particularly advantageous for training purposes and enables simulation of weak left side or weak right side conditions. It also enables the application of heavier training methods where it might be expected that linemen on one side or both sides are "goofing off."

The training sled 10 includes seven forwardly disposed blocking pads 52, only one of which is illustrated in outline form in Fig. 3, each being carried on an arm 53. Each blocking pad is yieldably supported on a flexible leaf spring 54 to which the arm 53 is secured by mounting brackets 55 and 56. Each leaf spring is maintained in the forward position by means of a forwardly extending frame strut 57 to which the spring is mounted by bracket 58. As best seen in Fig. 3, bracket 58 is disposed below the center of the spring. If desired, greater stability may be provided by securing the lowermost end 59 of spring 54 to a fixed channel piece 60 rigidly secured to the frame. As shown, for example, channel piece 60 may be mounted to a channel runner.

In order to control the height at which the players charge into the blocking pads, the training sled is provided with a blocking chute 62, the height of which may be adjusted. Chute 62 is normally padded as indicated at 63, and extends beyond the blocking pads to ensure that the players are at the desired height when charging. To this end, the chute is mounted to one end of a pair of rods 64, the other ends of which are pivotally connected at 65 to corresponding link members 66. Each link member is in turn mounted to a chute height adjust rod 67 which telescopes within a vertically disposed sleeve or tube 68 mounted at its lower end to the front frame 12. Sleeve 68 and rod 67 are provided with a plurality of height adjustment apertures 69. A pin member 70 sets the height of the chute when inserted through an aligned sleeve and rod aperture. Other forms of height adjustment arrangements may also be used.

When desired, chute 62 may be swung back out of the way as illustrated by the dashed lines 71 in Fig. 3. One or more of the channel runners may be extended backwardly and curved outwardly as indicated at 72 to form a shoulder rest. To this end, portions of the side sections of the channel are cut away as at 73 to form a more positive seat. When use of the chute is to be discontinued for long periods, it may be removed from its sleeve 68 and stored in any convenient location.

Although only one particular embodiment of the invention has been described and illustrated, it will be obvious to those skilled in the art that various modifications may be made, and it is intended by the appended

claims to cover all such modifications which fall within the true spirit and scope of the invention.

I claim:

1. A training sled comprising a frame section, a plurality of channel runners symmetrically disposed with respect to the center line of the sled, each runner having a flat surface adapted to engage the ground, means for mounting said frame section to and above said channel runners, a plurality of spaced blocking pad supports, means for mounting said blocking pad supports to and forwardly of said frame section, a first set of rollers disposed between one pair of runners to one side of the center line of said sled, a second set of rollers disposed between a second pair of runners to the other side of the center line of said sled, axle means for rotatably supporting each of said rollers in a normal ground engaging position wherein said channel runners are out of engagement with the ground, a single operator's platform carried by said frame section at a position substantially on the center line of said sled, operating means supported to said frame section adjacent said platform and connected to said axle means for selectively controlling the position of said rollers between said normal ground engaging position and a raised position clear of the ground to thereby selectively vary the effective engagement of the surfaces of said channel runners with the ground and further including a vertically adjustable chute, a first rod member connected at one end to said chute, a vertical chute adjustment rod, means connecting the other end of said first rod member to said chute adjustment rod, said first rod member adapted to be disposed in a substantially horizontal position for maintaining said chute forwardly of and above said blocking pad supports, and means for adjusting the height of said chute adjustment rod.

2. A training sled as set forth in claim 1 wherein said means for adjusting the height of said chute adjustment rod comprises a vertically oriented sleeve supported to said frame section, said chute adjustment rod adapted to be received within said sleeve, and means for supporting said chute adjustment rod at various positions along said sleeve.

3. A training sled as set forth in claim 2 wherein said sleeve includes a plurality of apertures, said chute adjustment rod having at least one aperture, and pin means adapted to be received within said aperture in said chute adjustment rod and at least one aligned aperture of said sleeve for maintaining said chute at a fixed, selected height.

4. A training sled as set forth in claim 1 wherein said means connecting the other end of said rod to said chute adjustment rod comprises a link, said other end being pivoted to said link such that said chute may be swung rearwardly of said frame section.

5. A training sled as set forth in claim 4 wherein at least one of said channel runners extends rearwardly upward, a portion of the rearwardly extending channel being cut away to provide a seat for said chute when in its rearward position.

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