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3,494,615

STARTER BLOCK APPARATUS

Filed May 7, 1968

FIG. 1

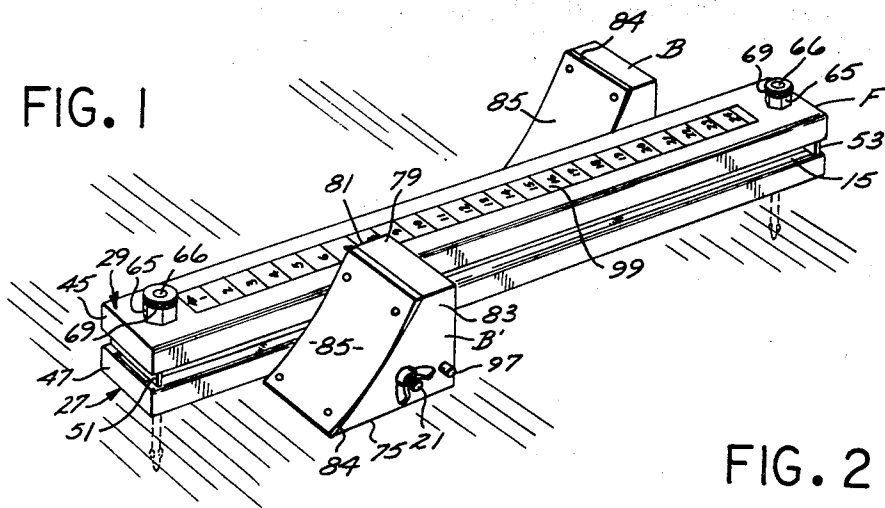


FIG. 2

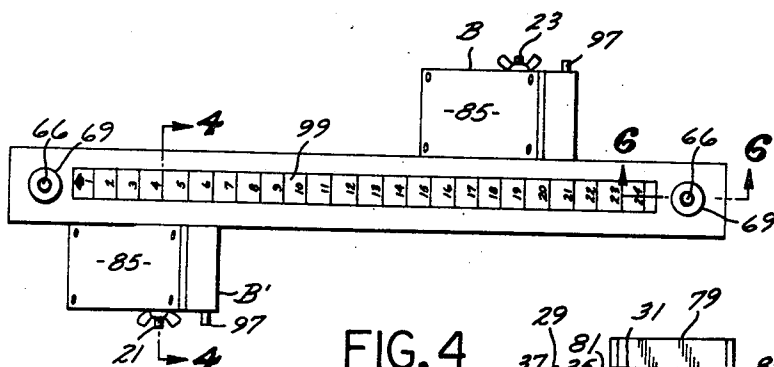


FIG. 3

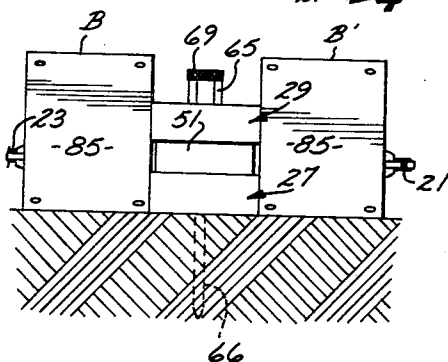


FIG. 4

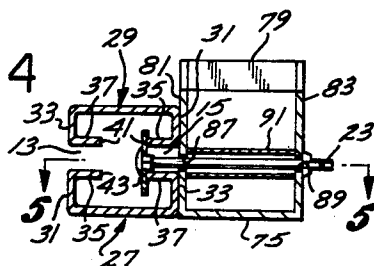


FIG. 5

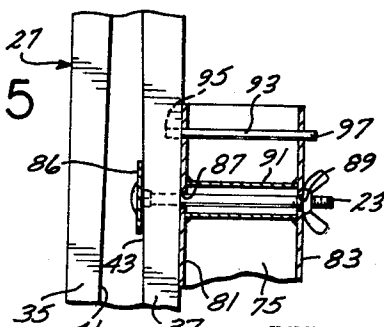
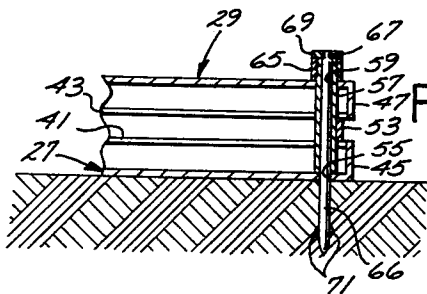


FIG. 6



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STARTER BLOCK APPARATUS

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8 Claims

ABSTRACT OF THE DISCLOSURE

A starter block apparatus including an elongated frame having longitudinal tracks on opposite sides thereof, such tracks being formed with lips turned inwardly toward the axis of said frame and such lips being tapered to define rearwardly and inwardly-angled bearing surfaces. Blocks are disposed adjacent the respective tracks and include horizontal bolts which project into said track, the heads of such bolts engaging behind the bearing surfaces and wing nuts being threaded onto the outer extremities thereof. Thus, the blocks can be adjusted to any selected position along the length of the frame and the wing nuts hand-tightened and the force of a runner's foot pressing rearwardly against the block will serve to wedge the block more tightly against the frame thereby preventing the block from slipping along the frame. The frame is held in contact with the track by stakes which are journaled through a pair of vertical tubes attached to the frame.

BACKGROUND OF THE INVENTION

Field of the invention

The present invention relates generally to starter blocks as used by runners or sprinters and more particularly to starter blocks which can be easily adjusted to any selected block arrangement.

Description of prior art

Prior art starting block devices are generally characterized by elongated frames having index bores spaced along opposite sides thereof for receiving index pins which locate blocks disposed on opposite sides of the frame. Devices of this type have the disadvantage of being incapable of being set to any selected block arrangement because of the predetermined pattern of the pin receiving bores.

There are no prior art starting block apparatus known to applicant that include tracks having tapered bearing surfaces engaged by a locking means carried on the blocks whereby the locking means can be hand tightened to urge the blocks against the frame and the rearward force of a runner on the blocks wedges such locking means tighter to frictionally resist movement of such block.

SUMMARY OF THE INVENTION

The starting block apparatus of present invention is characterized by an elongated frame having longitudinal, opposed tracks formed with inwardly facing, rearwardly and inwardly-angled bearing surfaces which are engaged by locking means carried on blocks. Thus, with the locking means unlocked the blocks can be exactly adjusted along the length of the frame and when the locking means is locked to urge the blocks against the frame, rearward forces on the blocks will wedge them tighter against the frame to frictionally resist movement of such blocks relative to the frame.

Other objects and features of the invention will become apparent from consideration of the following description taken in connection with the accompanying drawing.

DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of a starter block apparatus embodying the present invention;

FIG. 2 is a top view of the starter block apparatus shown in FIG. 1;

FIG. 3 is a left end view, in enlarged scale, of the starter block apparatus shown in FIG. 1;

FIG. 4 is a transverse vertical sectional view, in enlarged scale, taken along the lines 4—4 of FIG. 2;

FIG. 5 is a horizontal sectional view taken along the lines 5—5 of FIG. 4; and

FIG. 6 is a partial longitudinal vertical sectional view, in enlarged scale, taken along the lines 6—6 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The starter block apparatus shown in FIG. 1 includes an elongated frame F having longitudinal tracks 13 and 15 formed in opposite sides thereof. Starter blocks B and B' include bolts 21 and 23, respectively, which engage the respective tracks 13 and 15 for frictionally locking the blocks in position along the frame F.

Referring to FIGS. 4 and 6, the frame F includes a pair of C-channels 27 and 29, such channels including upstanding side walls 31 and 33 which are turned inwardly to form confronting lips 35 and 37. Referring to FIG. 5, the lips 35 and 37 terminate in confronting bearing surfaces 41 and 43 which angle rearwardly and inwardly whereby the lips 35 and 37 are wider at the rear extremity of the frame F than at the front extremity. End walls 45 and 47 cover the opposite ends of the channels 27 and 29. Referring to FIGS. 1 and 6, a pair of transverse spacer strips 51 and 53 are welded on the top side of the channel 27 and the channel 29 rests thereon whereby the width of such strips define the width of the tracks 13 and 15.

Referring to FIG. 6, a bore 55 is formed in the back of the lower channel 27 and an upstanding tube 57 is disposed thereover and welded to the channel. A bore 59 is formed in the back of the upper channel 29 and the top extremity of the tube 57 projects therethrough and is threaded for receiving a nut 65. A stake in the form of a metal spike 66 projects downwardly through the tube 57 and is reduced in diameter at its upper extremity 67, such extremity being threaded for receiving a flat head 69 which forms a finger grasp portion. The stake 66 is close fit within the tube 57 and includes a pair of oppositely projecting transverse ears 71 on its lower extremity for abutting the lower channel 27 to hold the stake captive in the frame F.

Referring to FIGS. 4 and 5, the blocks B and B' are of generally hollow construction and include bottom, top and side walls 75, 79, 81 and 83. A concave upwardly and rearwardly inclined ramp 84 covers the front of the blocks B and B' and is covered with a rubber mat 85 which is also concave to cooperate with the ramp to accommodate the ball of the foot of the runner. A pair of aligned bores 87 and 89 are formed in the side walls 81 and 83, respectively, for receiving the bolt 21. The bolts 21 include square flanges 86 which are received behind the bearing surfaces 41 and 43 to hold the head of the bolts 21 captive in the tracks 13 and 15. A square tube 91 extends between the sidewalls 81 and 83 and the bolt 21 extends coaxially therethrough. Referring to FIG. 5, a rod 93 projects transversely through the rear portion of the blocks B and B' and extends through the opposed walls 81 and 83 and projects a short distance therebeyond to define followers 95 and 97 projecting from opposite sides of the respective blocks, one of such followers engaging the respective track 13 or 15. A metering strip 99 is affixed to the upper channel 29 for indicating location of the blocks B and B'.

In operation, the blocks B and B' are secured to the frame F by unscrewing the heads 69 of the stakes 66 and unscrewing the nuts 65 from the respective tubes 57. The upper channel 29 is then raised to enable the flanges 86 of the bolts 21 to be disposed behind the bearing surfaces 41 and 43 as shown in FIGS. 4 and 5. The nuts 65 are then screwed back onto the tubes 57 to hold the channels 27 and 29 firmly together and the heads 69 are screwed onto the stakes 66. It is of particular importance that the bolts 21 can be installed from either direction in the blocks B and B' whereby either block will serve as a left or right hand block. Depending on whether the block is on the left or right hand side of the frame F, either the follower 95 or the follower 97 will be engaged with the respective track 13 or 15 to prevent rotation of the respective blocks B or B' on the respective bolts 21. The runner will then place the frame F adjacent the starting line and will position the blocks B at a location along such frame which feels comfortable to him and provides favorable starting support. With the blocks B and B' so positioned the wing nuts 23 are tightened on the bolts 21 to frictionally hold the blocks B and B' against the frame F and the stakes 61 driven into the ground. When the sprinter then takes his position and starts the race the rearward force exerted on the blocks B and B' will tend to force such blocks rearwardly with respect to the frame but due to the taper of the bearing surfaces 41 and 43 any such rearward movement tends to wedge the respective block B or B' tighter against the frame F to resist such movement. Once a runner has determined the desired positioning of the blocks B and B' relative to the frame F he will memorize the location of the respective blocks B and B' relative to the metering strip 99 and can easily so position his blocks for a subsequent race even though, in the meantime, another runner has used the apparatus and re-positioned the blocks B and B' to a position desired by himself.

From the foregoing it will be apparent that the starter block apparatus of present invention is straight-forward in design and economical to manufacture. The starting block apparatus provides for exact placement of the blocks B and B' along the frame F without any limitation dictated by spaced index holes and after such blocks have been positioned the bolts can be hand tightened and movement thereof will be prevented by cooperation of the locking means and wedge surfaces.

Various modifications and changes may be made with regard to the foregoing detailed description without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. Starter block apparatus, comprising:
 - an elongated frame including a pair of longitudinal tracks on opposite sides thereof, said tracks forming rearwardly and inwardly-angled bearing surfaces;
 - a pair of starting blocks disposed on said opposite sides of said frame; and
 - locking means on said blocks engaging said bearing surfaces formed by said track for urging said blocks

against said frame whereby said blocks can be moved to any selected position along said respective tracks and said means locked to urge said blocks against said frame whereby rearward forces imposed on said blocks by a runner will wedge said blocks more tightly against said frame to frictionally hold said blocks from movement relative to said frame.

2. Starter block apparatus as set forth in claim 1 wherein said locking means includes a bolt including a flange for engaging said bearing surface.

3. Starter block apparatus as set forth in claim 1 wherein each of said blocks includes a follower spaced from said locking means for engaging said tracks to prevent rotation of said respective blocks about said locking means.

4. Starter block apparatus as set forth in claim 1 wherein said elongated frame includes:

a pair of opposed, vertically spaced apart channels including inwardly-turned lips which are tapered to define said bearing surfaces;

spacers to maintain said channels spaced apart; and fastening means for connecting said channels together.

5. Starter block apparatus as set forth in claim 1 that includes:

a pair of vertical tubes in the frame; and

a pair of stakes journaled through said tubes and including heads on their upper ends and holding ears on their lower ends for holding said stakes captive in said tubes.

6. Starter block apparatus as set forth in claim 1 wherein said frame includes measuring indicia along its length for measuring the position of said blocks.

7. Starter block apparatus as set forth in claim 2 wherein said blocks include through transverse bores for removably receiving said bolts; and followers spaced from said bolts and projecting from opposite sides of said blocks whereby said blocks can be arranged on either side of said frame.

8. Starter block apparatus as set forth in claim 4 that includes:

a pair of bores in the top channel;

a pair of vertical tubes affixed to the bottom channel and projecting through said bores, said tubes including threads on their upper extremities;

nuts for screwing onto said tubes to hold said channels together; and

a pair of stakes projecting through said tubes to stake said frame down.

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