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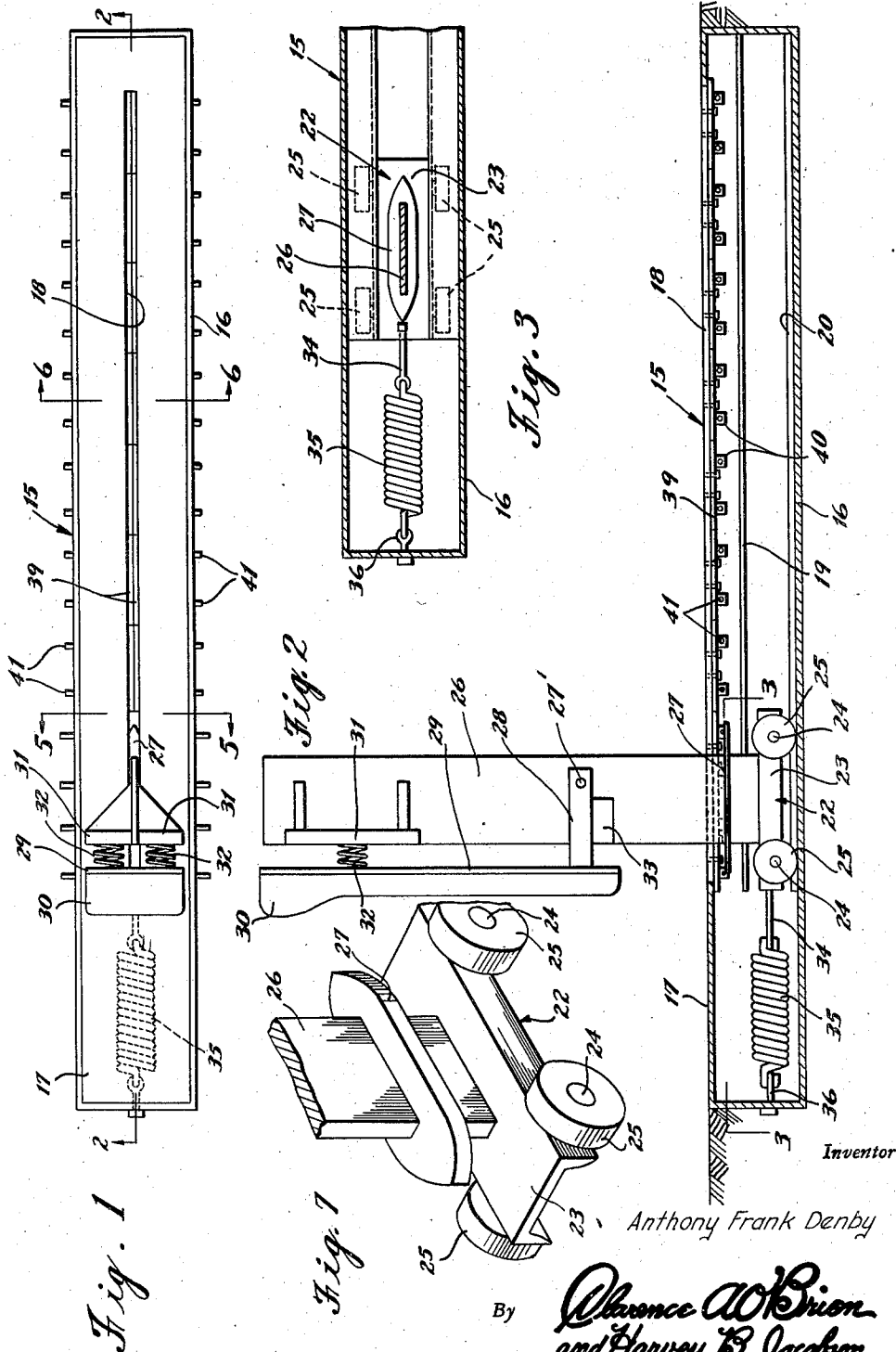
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2,440,577

FOOTBALL TRAINING MACHINE

Filed March 5, 1946

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

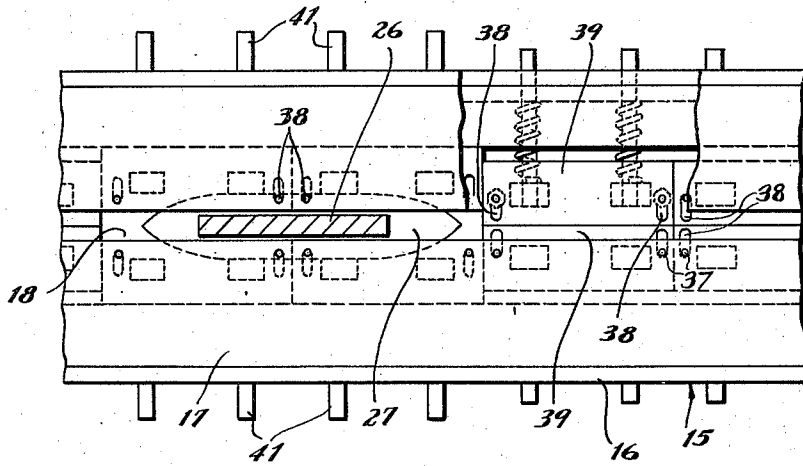


Fig. 4

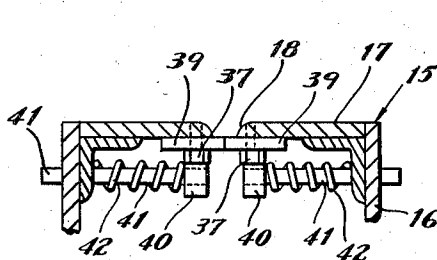


Fig. 6

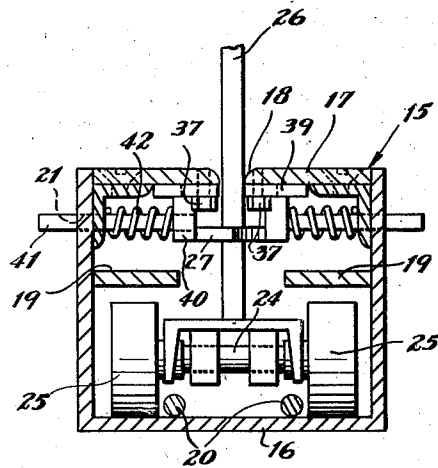


Fig. 5

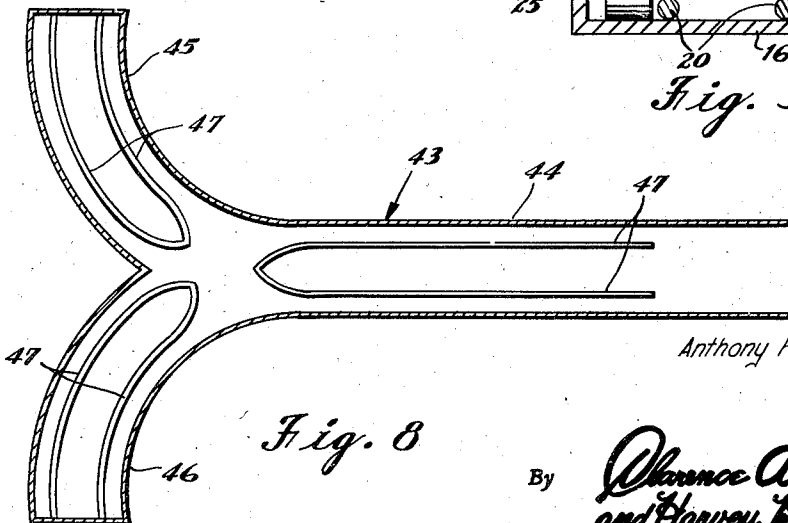


Fig. 8

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UNITED STATES PATENT OFFICE

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FOOTBALL TRAINING MACHINE

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5 Claims. (Cl. 273-55)

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This invention relates to a football training machine and has for its primary object to condition athletes for playing the popular game of football.

Another object is to develop the leg and body muscles of the athlete and to aid in teaching him the technique of tackling and blocking.

The above and other objects may be attained by employing this invention which embodies among its features a track adapted to be embedded in the ground with its top flush with the surface thereof; a carriage movable along the track; a spring yieldingly to hold the carriage near one end of the track; a column rising from the carriage and a yielding pad carried by the column against which a player in training may place a portion of his anatomy to move the carriage against the spring.

Other features include a cover for the track having a longitudinal slot therein; transversely sliding plates yieldingly held in slot closing position, and means operable upon movement of the carriage for parting the transversely movable plates in advance of the movement of the column along the slot.

In the drawings:

Figure 1 is a top plan view of a football training machine embodying the features of this invention.

Figure 2 is a longitudinal sectional view taken substantially on the line 2-2' of Figure 1;

Figure 3 is a fragmentary sectional view taken substantially on the line 3-3' of Figure 2;

Figure 4 is a fragmentary enlarged plan view of the track, showing portions broken away to more clearly illustrate the details of construction.

Figure 5 is a transverse sectional view taken substantially on the line 5-5' of Figure 1 on a slightly enlarged scale.

Figure 6 is a fragmentary enlarged sectional view taken substantially on the line 6-6' of Figure 1.

Figure 7 is a detail perspective view of the carriage, and

Figure 8 is a horizontal sectional view through a modified form of track.

Referring to the drawings, my improved training machine includes a track designated generally 15 which comprises a transversely U-shaped box-like structure 16, the upper side edges of which support a cover 17 provided with a longitudinally extending slot 18. Extending inwardly from the side walls of the trough or U-shaped track 16 in spaced relation to the bottom wall

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thereof are horizontally extending flanges 19, and welded or otherwise rigidly fixed in spaced parallel relation to the bottom of the track are guide rails 20. Formed at spaced intervals in the side walls of the box-like track structure 16 are aligning apertures 21 the purpose of which will more fully hereinafter appear.

Mounted for longitudinal movement in the track 15 is a carriage designated generally 22 which comprises an inverted channel section 23, the side flanges of which are pierced to receive axles 24 upon the outer ends of which are fixed rollers 25. These rollers are of a diameter to ride on the bottom wall of the box-like track body 16 and just beneath the underside of the inwardly extending flanges 19 so as to prevent the carriage from tilting. Rising from the bed or channel 23 of the carriage 22 is a centrally disposed column 26 carrying near its lower end and just below the underside of the cover 17 of the track 15 a shoe 27 the opposite ends of which are pointed for a purpose to be more fully hereinafter described.

Pivotally supported as at 27' on the column 26 above the track 15 is a yoke 28 carrying at the end opposite its pivoted end a base 29 which normally extends substantially parallel to the longitudinal axis of the column 26 and is provided with a suitable pad 30 on its outer exposed face. A pair of outwardly extending brackets 31 are supported near the upper free end of the column 26; and seated on these brackets and bearing against the inner face of the base 29 are compression coil springs 32 which yieldingly urged the free end of the base 29 away from the column. A stop 33 is attached to each side face of the column 26 in a position to engage opposite arms of the yoke 28 to limit the movement of the pad 30 under the influence of the springs 32.

Carried at one end of the carriage 22 is a link 34 to one end of which a retractile coil spring 35 is attached while the opposite end of said spring is connected to a suitable bolt 36 carried by the end wall of the box-like body 16 of the track 15.

Formed at spaced intervals on opposite sides of the slot 18 in the cover plate 17 are internally screw threaded openings for the reception of guide bolts 37 which extend through slots 38 to slidably support transversely movable closure plates 39 which are adapted to close the slot 18 as illustrated in Figures 1 and 6. Each of these plates is provided on its underside with a depending ear 40 which is pierced to receive a push rod 41 the opposite end of which extends through one of the openings 21 and cooperates with the

bolts 37 in holding the plate 39 in proper position against the underside of the cover 17. A compression coil spring 42 surrounds each push rod 41 and serves to urge its respective plate 39 toward the center of the track. It will thus be seen that the slot 18 will be closed by the plates 39 so as to prevent the cleats commonly employed on the shoes of football players and like athletes, from getting caught in the slot in the track.

In the modified form of the structure illustrated in Figure 8 the track designated generally by the numeral 43 and comprises a transversely rectangular body 44 having branches 45 and 46 at one end, and carrying on the bottom wall guide rails 47 which correspond in all respects to the guide rails 20 previously referred to. It is to be understood of course that the upper side of the box-like structure 44 is closed by a cover plate in all respects corresponding to the cover plate 17 and that the slots therein may be closed by closure plates corresponding in all respects to the plate 39.

In use a player in training will place his shoulder against the pad 30 and push the carriage 22 along the track against the tension of the spring 35. As the carriage advances the member 27 engages the depending lugs 40, thus causing the plates 39 to slide transversely and open the slot 18 to permit the passage of the column 26 therealong. The tipping of the column is prevented by engagement of the wheels 25 with the flanges 19 and the bottom of the body 16 and in this way the leg muscles and other parts of the anatomy of the player may be properly conditioned.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What I claim is:

1. In a football training machine, a track adapted to be embedded in the ground with its top flush with the surface of the ground, a carriage movable along the track, a spring yieldingly holding the carriage near one end of the track, a column rising from the carriage and a yielding pad carried on the column against which a player in training places a portion of his anatomy to move the carriage against the spring.

2. In a football training machine, a track adapted to be embedded in the ground with its top flush with the surface of the ground, a cover closing the upper side of the track, said cover having a longitudinal slot therein, a carriage movable longitudinally of the track beneath the cover, a column rising from the carriage and extending through the slot, a spring yieldingly holding the carriage and the column near one end of the track, and a yielding pad against which

a player during training places a portion of his anatomy to move the carriage against the spring.

3. In a football training machine, a track adapted to be embedded in the ground with its top flush with the surface of the ground, a cover closing the upper side of the track, said cover having a longitudinal slot therein, a carriage movable longitudinally of the track beneath the cover, a column rising from the carriage and extending through the slot, a spring yieldingly holding the carriage and the column near one end of the track, a yielding pad against which a player during training places a portion of his anatomy to move the carriage against the spring, transversely sliding plates to close the slot in the cover on opposite sides of the column and means to move the plates to clear the slot as the carriage moves in the track.

4. In a football training machine, a track adapted to be embedded in the ground with its top flush with the surface of the ground, a cover closing the upper side of the track, said cover having a longitudinal slot therein, a carriage movable longitudinally of the track beneath the cover, a column rising from the carriage and extending through the slot, a spring yieldingly holding the carriage and the column near one end of the track, a yielding pad against which a player during training places a portion of his anatomy to move the carriage against the spring, transversely sliding plates mounted on the underside of the cover to close the slot therein, yielding means holding the plates in slot closing position and means operable upon movement of the carriage longitudinally of the track to slide the plates against the yielding means and open the slot in the track.

5. In a football training machine, a track adapted to be embedded in the ground with its top flush with the surface of the ground, a cover closing the upper side of the track, said cover having a longitudinal slot therein, a carriage movable longitudinally of the track beneath the cover, a column rising from the carriage and extending through the slot, a spring yieldingly holding the carriage and the column near one end of the track, a yielding pad against which a player during training places a portion of his anatomy to move the carriage against the spring, transversely sliding plates mounted on the underside of the cover to close the slot therein, yielding means holding the plates in slot closing position, means operable upon movement of the carriage longitudinally of the track to slide the plates against the yielding means and open the slot in the track and a shoe carried by the carriage and operable upon longitudinal movement thereof for parting the plates as the carriage is moved longitudinally of the track.

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