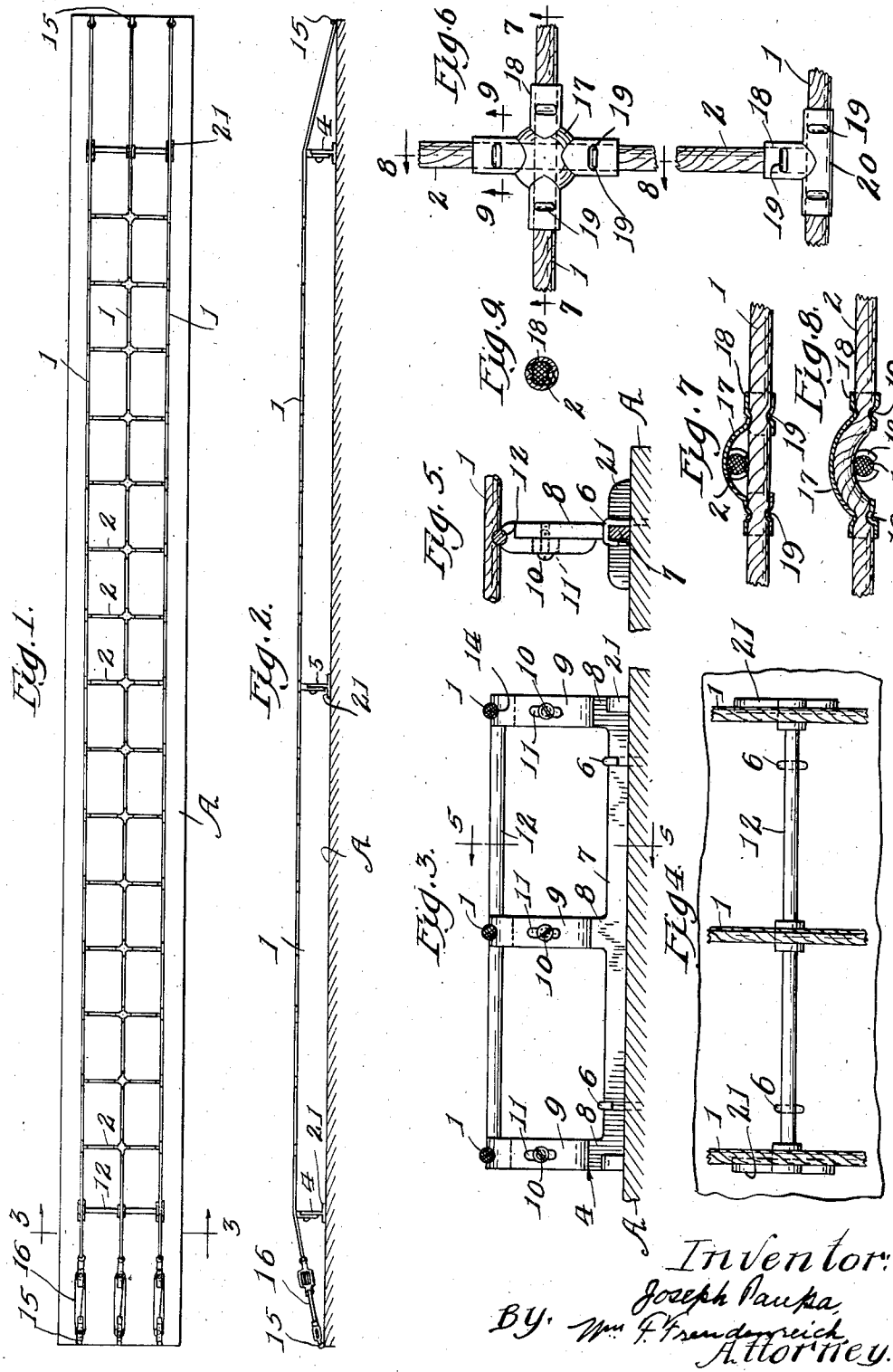
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RUNNER TRAINING APPARATUS

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RUNNER TRAINING APPARATUS

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8 Claims. (Cl. 35—29)

There are a great many things in the art of running that are not instictive in human beings and, accordingly, most boys grow to maturity without acquiring much, if any, skill therein. There are, for example, the need to learn proper knee action and the proper lifting of the feet in ordinary running; but even more important is the ability to dodge, twist, zig-zag, side step and change pace and direction in what may be termed irregular or deceptive running, not only in playing games but, also, in combat. These things can only be learned through the teaching of experienced coaches and instructors.

The object of the present invention is to produce a simple and novel apparatus by means of which the work of the teacher is greatly simplified and standardized to such an extent that boys and men can quickly learn improvements and variations in the art of running.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but for a full understanding of the invention and of its object and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a plan view of my improved apparatus, set up on a suitable support; Fig. 2 is a side view of the apparatus; Fig. 3 is a section, on a larger scale, on line 3—3 of Fig. 1; Fig. 4 is a plan view of that part of the apparatus in the immediate vicinity of the frame appearing in Fig. 3; Fig. 5 is a section on line 5—5 of Fig. 3; Fig. 6 is a plan view, on a still larger scale, showing only fragments of two of the longitudinal ropes and one of the cross roads; and Figs. 7, 8 and 9 are, respectfully, sections on lines 7—7, 8—8 and 9—9 of Fig. 6.

My improved apparatus comprises a number of long ropes arranged parallel to each other at a substantial distance above the ground, floor or other level surface on which one may run, the ropes being spaced apart from each to provide at least two running lanes separated from each by one of the ropes. In the form of the apparatus illustrated there are three of these ropes, each indicated by the reference character 1. The ropes are approximately two feet apart and, at intervals of approximately three feet, are connected by cross ropes 2. The ropes 1 may be of any desired length, but I prefer that the ladder-like portions be about fifty feet long. This rope structure is secured in a taut condition less than knee high above the ground or floor A upon which the running is to be done. I have found fourteen or fifteen inches to be a good height for the ropes, the lower elevation being best adapted for the younger high school boys and the other being suitable for training older boys and young men.

The rope structure is preferably supported by light frames standing on the ground or floor. In the arrangement shown, there are three such frames, a frame 4 at each end and a frame 5 at the middle. If the installation is a permanent one the frames may be fastened to the floor or ground as, for example, by suitable fastenings 6. Each frame comprises a bar 7, constituting a base, and three upward projections or arms 8. Cooperating with each of these arms is a plate 9 lying flat against the same and adjustably secured thereto by a bolt or screw 10 passing through a vertically elongated hole or slot 11 in the plate and into the arm. By this means the effective height of the frames may be varied.

The arms of the endmost frames are preferably connected together at the top by stiff cross rods 12, secured to the upper ends of the plates 9, and serving as the endmost rungs of the ladders. This cross bar is omitted from the central frame where a runner might strike a shin, if not careful. The longitudinal ropes are preferably seated in grooves or depressions 14 in the upper edges of the adjustable plates 9 so that, when the ropes are drawn taut they cannot easily be displaced laterally.

The rope structure is held in place in a taut state by anchoring the ends of the long ropes to the ground or floor. The ropes may be tied or otherwise fastened at one end to suitable anchors 15, whereas there may be a block and tackle 16, or other force multiplying device between the other end of each rope and a stationary anchor element 15.

The ropes may be fastened to each other in any suitable way. In Figs. 6 to 9 there have been illustrated some simple metal fastenings for this purpose. Thus, at the point where a cross rope crosses the central longitudinal rope, there is a sheet metal member comprising a central dish-shaped part 17 provided with four tubular arms 18 radiating therefrom. The crossing ropes extend through these arms which may then be crimped, as indicated at 19, to tighten them about the ropes. The tubular arms may be split or divided as shown in Fig. 8, if desired. In the arrangement shown, only the tubular arms through which the long ropes pass are divided,

since it is easy to thread each short cross rope through undivided tubes in the corresponding fastenings.

The fastenings between the ends of each cross rope and the outer longitudinal ropes may take the shape of a T in which both the stem and the crosspiece are tubes as shown in Fig. 6.

It should be noted that the frames 4 and 5 are provided with feet 21, to give them wider bases, although this is an obvious expedient.

It will thus be seen that by means of a simple, inexpensive apparatus, that can easily be carried from one place to another and be quickly and easily set up indoors or outdoors, any one may practice running, either straight away or in various irregular styles, over a substantial distance. However, no matter in what manner the user runs, he must lift his foot at each stride through a height conforming to the kind of knee action which is generally regarded as being most desirable. This, coupled with the bending, turning and twisting motions made during many of the exercises, develops the muscles not only of the feet and legs but also of the abdomen and, in fact, of the entire body.

It should be noted that the user is not confined to the two lanes between ropes, in maneuvering, for he may step out on one or the other side of the rope structure, while keeping one foot within a rope lane. Whenever he places a foot outside of the rope structure and seeks to return it, he must be on guard to avoid tripping over a long rope or one of the cross ropes. Therefore the cellular arrangement of the rope structure forces the user to be watchful at all times, regardless of the kind of maneuvering that is being carried out and thus instills in him a sense of rhythm needed subconsciously to carry out the maneuvering.

While I have illustrated and described with particularity only a single preferred form of my invention, I do not desire to be limited to the exact structural details so illustrated and described; but intend to cover all forms and arrangements which come within the definitions of my invention constituting the appended claims.

I claim:

1. An apparatus of the character described, comprising a long, narrow flexible panel composed of at least three parallel, spaced, longitudinal lines and cross ties forming with the lines two ladderlike running lanes arranged side by side, and means to support said panel in a taut condition a short distance above a surface on which the user intends to run.

2. An apparatus of the character described, comprising a long, narrow, flexible panel composed of at least three parallel, spaced, longitudinal lines and cross ties forming with the lines two running lanes arranged side by side and each having a ladder-like construction wherein the sides of the ladder are about two feet apart and the rungs are about three feet apart, and means to support the panel in a taut condition a short distance above a surface on which the user intends to run.

3. An apparatus of the character described, comprising a long, narrow, flexible panel composed of at least three parallel, spaced, longitudinal lines and cross ties forming with the lines two running lanes arranged side by side and each having a ladder-like construction wherein the sides of the ladder are about two feet apart and the rungs are about three feet apart, and means to support the panel in a taut condition in the neighborhood of fifteen inches above a surface on which the user intends to run.

4. An apparatus of the character described, comprising a plurality of low, wide, upright frames arranged in parallel relation to each other at right angles to a common axis, at least three long, flexible lines stretched over the tops of the frames in spaced relation to each other and parallel to said axis, and flexible cross ties connecting said lines together at intervals that are only a small fraction as great as the intervals between the frames.

5. An apparatus of the character described, comprising a plurality of low, wide, upright frames arranged in parallel spaced relation to each other at right angles to a common axis, at least three long, flexible lines stretched over the tops of the frames in spaced relation to each other and parallel to said axis, and flexible cross ties connecting said lines together at intervals, the intervals between cross ties being about three feet and the distance between the central line and each of the others being about three feet.

6. An apparatus of the character described, comprising a plurality of low, wide, upright frames in the neighborhood of fifteen inches high arranged in parallel spaced relation to each other at right angles to a common axis, at least three long, flexible lines stretched over the tops of the frames in spaced relation to each other and parallel to said axis, and flexible cross ties connecting said lines together at intervals, the intervals between cross ties being about three feet and the distance from the central line and each of the others being about two feet.

7. An apparatus of the character described, comprising three low, wide, upright frames arranged in parallel, spaced relation to each other at right angles to a common axis, three long ropes resting on and stretched over the tops of the frames, one of the ropes being at the center of the frames and the others being at the ends, cross ropes connecting the long ropes together at intervals that are only a small fraction as great as the spacing between the frames.

8. An apparatus of the character described, comprising three low, wide, upright frames arranged in parallel spaced relation to each other at right angles to a common axis and about twenty-five feet apart, three long ropes resting on and stretched across the tops of the frames parallel to said axis and about two feet apart, and cross ropes connecting the long ropes together at about three foot intervals.

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