

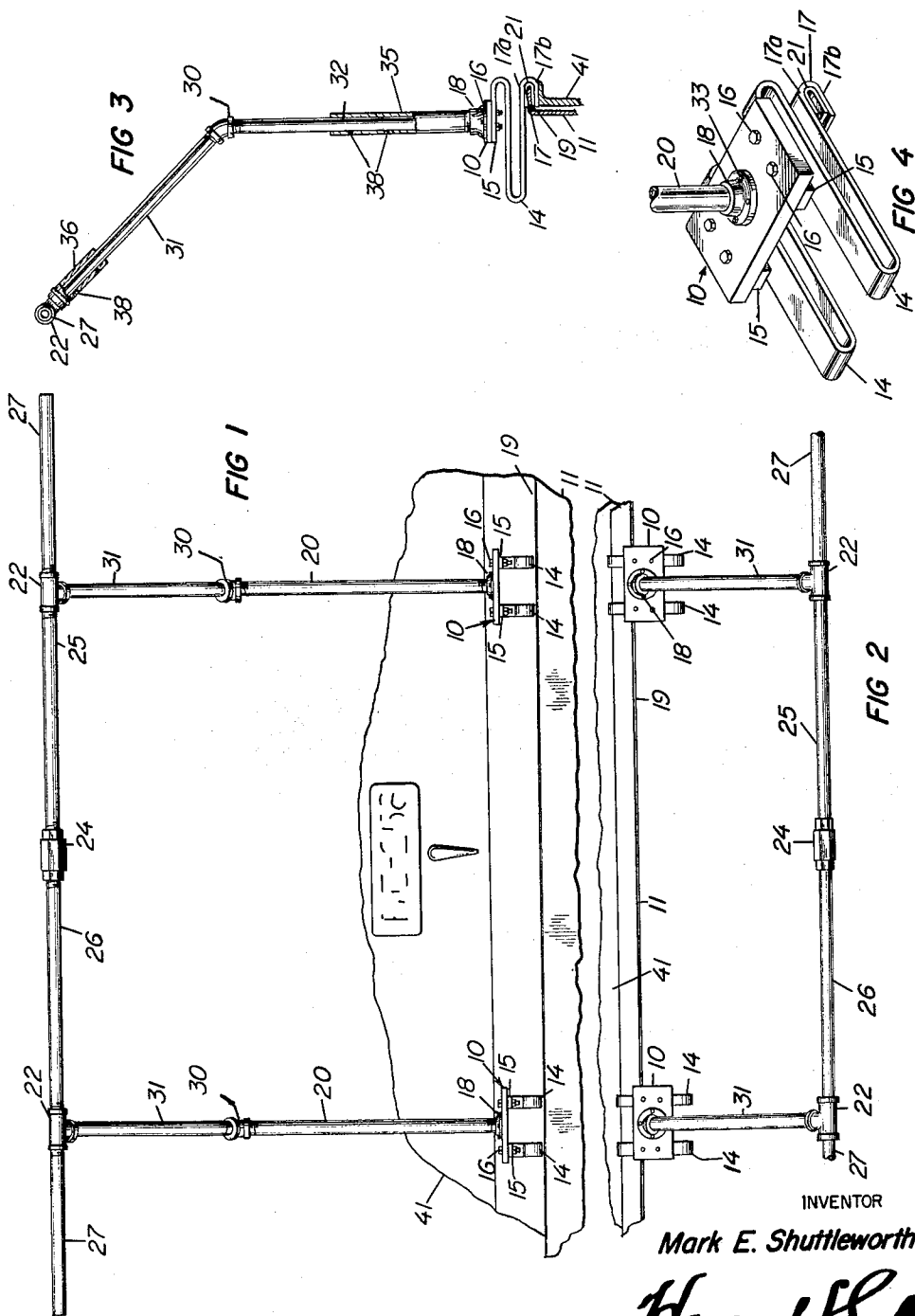
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EXERCISING DEVICE

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EXERCISING DEVICE

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5 Claims. (Cl. 272—59)

This invention relates to exercising and pacing devices and has for its principal object the provision of a frame-work that can readily be attached to and detached from the rear bumper of an automobile or similar vehicle, within reach of one to four persons such as members of a track team desiring to improve their performance.

It is a further object of the invention to provide such a pacing device of maximum strength at minimum cost coupled with safety. Special features of the device include means whereby the entire exercising frame may be released from the vehicle by pressing the frame in the same direction that the automobile is going; connections such that the different parts of the device can easily be replaced by other parts of slightly different size whereby the exercising device may be useful for boys and men of quite different physical proportions; and means whereby the horizontal holding bar may be positioned higher or lower or to extend farther from or nearer to the rear of the towing vehicle without replacement of any part.

In the drawings:

Fig. 1 is a rear elevation of the device.

Fig. 2 is a plan view.

Fig. 3 is a side vertical elevation taken at right angles to Fig. 1 and illustrating modifications.

Fig. 4 is an enlarged view of one of the base elements.

Its preferred form shown in Figs. 1 and 2, my exercising device includes a pair of spaced base elements 10 preferably pieces of metal roughly 4" x 7" x $\frac{3}{16}$ ", each element carrying on its bottom an attaching device 14 preferably in the form of two spaced flat strips of spring steel, say, 2 inches wide and about a foot long, bent to form the letter "S," plus an upper portion 15 of the spring which is perforated to receive bolts 16 or similar fastenings to anchor the springs securely to the base elements 10 so that the lowest open slot 17 faces rearwardly and is of such size and shape as to receive loosely the top flange 19 of the rear bumper strip of an ordinary automobile. The reaches 17a and 17b forming the bumper receiving slot 17 are suitably cushioned with rubber, felt or the like as at 21 to minimize the noise of metal to metal contact.

Centrally of each base element 10 is a pedestal 18 threaded to receive the lower end of an upright 20 which may be a single piece of metal tubing, extending directly to the top of the exercising device and being secured to a threaded T connection 22 which receives the horizontal holding bar 25 preferably of a main central section 26 with a union connection 24 and two similar end pieces 27 each threaded in the proximate T 22, but if desired the entire holding bar can be a single piece of metal tubing extending through the two T's and held against lateral movement in any conventional manner.

Referring now particularly to Fig. 3; in order to provide quick and easy changing of the size of the device to accommodate athletes of different build I prefer to arrange for the raising and lowering of the holding bar 25 by using a 45° connection 30 and using different length pieces of tubing to screw into this connection. In such

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case the upright 20 is formed of two separate straight pieces of metal tubing 31 and 32 each threaded to the connection 30 but these pieces may each telescope respectively into a hollow standard 35 secured to the pedestal 18 and into a sleeve 36 fast to the T. The metal tubing sections 31 and 32 may be shifted within their respective sleeves and be locked in adjusted position by set screws 38. In such case the union 24 is not required. In many cases the device is furnished as illustrated in Figs. 1 and 2 with the central connection such as 30 rather than having the upright as a single piece of metal tubing the upper portion being offset 45° from the lower vertical portion by a curved central portion.

In the operation of the device, the exercising frame is assembled as illustrated in Figs. 1 and 2 with the various parts arranged in such manner that when the two base elements 10 are caught on the top flange 19 of the bumper 11 of an automobile, otherwise not shown, the horizontal holding bar will be positioned at about the level of the chests of the athletes who are to be exercised, this being about 4' 4" for an athlete of say 5' 8". The device is usually furnished with 1" metal tubing which may be of any desired material such as stainless steel, aluminum alloy, etc. A normal size of frame as furnished would usually include the 45° connection such as 30 with metal sections of perhaps 18 inches long for each of the pieces 31 and 32, different lengths of sections 31 and 32 being furnished on request.

My device gives a degree of flexibility which is found far superior to any other form I have tried, this being due in part to the shape and resiliency of the spring which secures the device to the rear bumper. It is imperative that the length of the uprights or the pieces of metal tubing should be long enough for the individual being exercised to have a full and free stride but this is readily obtained by proper selection of the various lengths of the pieces. Various changes may readily be made in the several portions of the device but I have found that by making the holding bar and the uprights as separate members with each upright formed of two separate pieces a much better exercising device is had than if the holding bar and the two arms or uprights are made of one integral piece of metal tubing suitably bent to give the desired freedom of action of the person or persons being paced.

The holding bar should be of a length within the overall width of the towing vehicle. The two end pieces 27 and the central portion 26 may of any length desired depending upon the distance apart of the two base elements which may be placed on the straight portion of the rear bumper flange but as is obvious the base elements can be slightly angled if the rear bumper of the particular car is appreciably curved or slanted. In the different models I have made I have found that by increasing the length of the two middle reaches, 17a and the reach immediately above it, I achieve greater flexibility, especially when these two reaches are increased to perhaps eight inches or so overall. I may use just one reversibly curved spring for each plate 10 but prefer the pair. One advantage of the single spring is that with a single spring about four inches wide the plate 10 can be omitted and the bolts 33 used to secure the pedestal 18 to the spring.

What I claim is:

1. An exercising device for pacing track athletes including a frame to be attached to the rear bumper of a moving vehicle, comprising a generally horizontal holding bar, a plurality of base elements, a spring attaching member on the bottom of each base element for holding the base element to the bumper, an upright extending from each base element and being directed to extend farther away from the vehicle at the top about breast-high of the athlete than at the bottom where secured to the

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base element, and means joining the holding bar to the two uprights.

2. The device of claim 1 in which the joining means includes two T connections, the attaching member is a pair of reversely bent spaced flat springs, each upright is formed of two pieces of metal tubing joined by a 45° connection located roughly midway of the upright, and the uprights are secured to the base elements by a pedestal, whereby either piece of each of the uprights may readily be removed for replacement by a different sized piece.

3. In combination, a holding bar, a base element, a resilient clamp for holding the base element to the rear bumper of a vehicle, and means extending from the base element to position the holding bar transversely of the vehicle and at a level between three and five feet above the ground, and spaced rearwardly of the bumper to afford plenty of room for the athlete to have a full and free stride as he is being paced.

4. An exercising device to be attached to the rear bumper of a moving vehicle comprising a plurality of base elements, a plurality of spring attaching members on the

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bottom of each base element, a tube extending upwardly from each base element, an upright telescoping in said tube, a horizontal holding bar, a plurality of sleeves extending downwardly from the bar to receive the top portion of the uprights, and means for securing the uprights in their sleeves.

5. The device of claim 3 in which the positioning means consists of two straight pieces of pipe connected by 45° connections, and rigidly secured to the bar and to the base element by threaded pipe fittings.

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