

May 23, 1944.

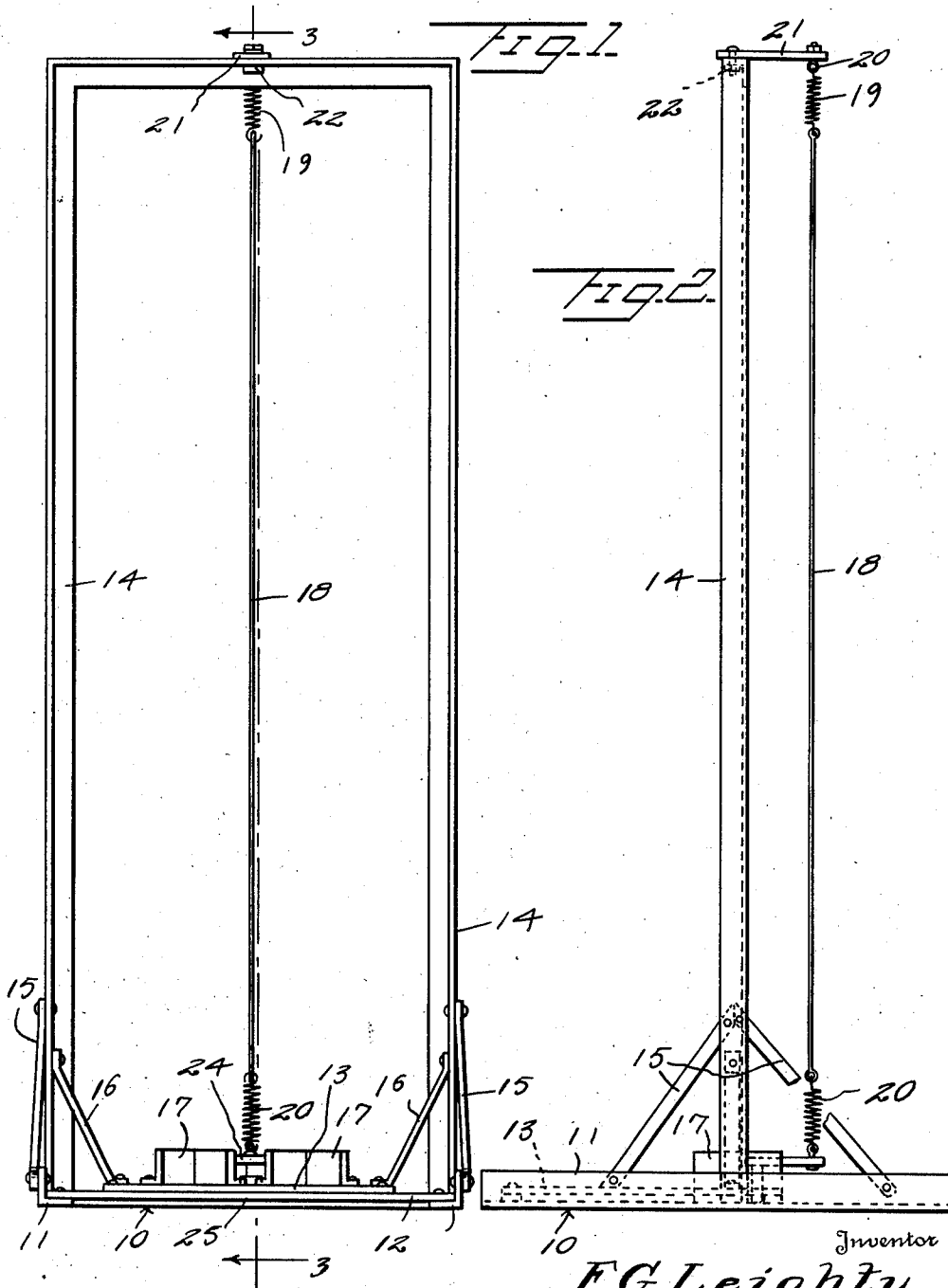
F. G. LEIGHTY

2,349,664

FRAME FOR MEASURING BODY POSTURE

Filed March 11, 1943

2 Sheets-Sheet 1



Inventor
F. G. Leighty
By *L. F. Ransom*
Attorney

UNITED STATES PATENT OFFICE

2,349,664

FRAME FOR MEASURING BODY POSTURE

Fred G. Leighty, Birmingham, Ala.

Application March 11, 1943, Serial No. 478,780

2 Claims. (Cl. 33—174)

This invention relates to a frame for measuring body posture and it aims to provide a novel structure equipped with a plumb line or string, especially adapting the structure for use in dynamic anatomy.

The more specific objects and advantages will become apparent and in part be pointed out in the description following taken in connection with accompanying drawings illustrating an operative embodiment.

In said drawings:

Figure 1 is a front elevation of the frame;

Figure 2 is a side elevation thereof;

Figure 3 is a vertical sectional view taken on the line 3—3 of Figure 1;

Figure 4 is a view primarily in plan but with the upper portion removed; and

Figure 5 is a detail section taken on the line 5—5 of Figure 4.

Referring specifically to the drawings wherein like reference characters designate like or similar parts, the construction as far as practicable is made from any suitable material as for instance angle iron strips or sections. A base is provided at 10 having angle bars 11 at the sides thereof which are connected by cross strips 12 and which in turn support a floor or platform 13.

Attached to the bars 11 preferably centrally thereof is a vertical inverted U-shaped frame 14 preferably of angle iron material. Braces 15, in diverging relation, are fastened to the frame 14 and to the bars 11 while braces 16 are fastened to said frame and to the platform 13.

A pair of heel pockets 17 of V shape or otherwise are fastened on the platform 13 adjacent the rear edge thereof, and adjacent to the same and centrally thereof is a vertical cord or plumb line 18. Said line is of any suitable material such as ordinary cord or a metallic wire, and its opposite ends are connected to contractile coil springs 19 and 20, respectively at the top and bottom thereof. Spring 19 in turn is fastened to an adjustable eyelet at 20 carried by an arm 21, pivotally mounted at the top of the frame 19 by means of a bolt 22. The other spring 20 is fastened to an adjustable eyelet 23 carried by an arm 24 similar to the arm 21 and pivoted on a bolt 25 fastened to the platform 13, a spacer or sleeve 26 preferably being interposed between the platform and arm 24 with the bolt 25 passing therethrough. It will be realized that bolts 22 and 25 may be tightened when the plumb line is at the proper adjustment, but may be loosened, in order to move the plumb line toward or away from the frame 14.

One function of the frame is to permit measuring the human body for fitting, shaping, or building up of a shoe which will balance the body. It is recognized that nature for humankind has

5 afforded a bone structure arrangement in the ankle and arch of the foot that produces a point of center gravity. Should, for various causes, the point of center gravity shift or bone play be present in this part of the foot, normal body balance is impaired. The frame is used by backing the patient into it while standing, that is the heels being placed in the sockets 17 at the closed ends thereof. The position of the spinal column of the patient is then measured or determined, and if the spine, down through the middle of the pelvis and coccyx, plumb on the plumb line string 18, there is normal body balance. If the above regions of the body splay off the plumb line string 18, the arch or arches of the feet are taped up until the spine and center of the pelvis coccyx plumb to this plumb line string. This proves that a different foot shape and size of the foot or feet has been produced. For this reason shoes alone cannot be properly fitted to feet that are weak and through this weakness permit faulty body posture, because the foot size and shape are somewhat changed after one balances the body. The foot or feet that have been taped up so as to plumb the body are measured and sponge rubber or any equivalent can be glued, and covered with leather, into a shoe that will fit this new shaped foot, and this material added to the inside of the shoe will balance the body just as taping the foot did. Structural change often is present in the body bone and muscle structure because of body wear and tear. The following reflex pain-producing complaints, when caused by faulty body balance, cannot be specifically treated without the use of such a frame for measurement: pelvic shift and pelvic rotation, slight rotation of the lumbar regions, and defect because of faulty posture also in the neural arch of the last lumbar sacral spine. Levelling the sacral base helps to neutralize strain; also measuring different leg lengths. Therefore, the above-mentioned foot, leg, hip, and back pains when the body is balanced definitely improve or cease. This fact could not be solved without the use of the present frame.

This frame aids body balance over a fee standing position, when the sacrum, pelvis, hips, or spine are X-rayed while standing. With the heels disposed in the V-members 17, the tips of the fingers on both hands are placed just in front

of the hip joints; therefore the arms which are made rigid by this V-shaped position of the arms and the hips touch securely each side of the frame, eliminating rocking sidewise, backwards, or forward while the X-ray pictures are being taken.

Various changes may be resorted to provided that they fall within the spirit and scope of the invention.

I claim as my invention:

1. A frame for measuring body posture comprising a platform, bars at the base thereof, means attaching the platform to the bars at opposite sides thereof, said bars extending rearwardly beyond the platform, a vertical arched frame rising from said bars adjacent the rear end of the platform, a pair of heel pockets secured to said platform at a location at the rear thereof crossed by the plane of said frame, and a vertical line member suspended centrally from 20

the frame in the rear of the pockets and centrally with respect thereto.

2. A frame for measuring body posture comprising a platform, bars at the base thereof, means attaching the platform to the bars at opposite sides thereof, said bars extending rearwardly beyond the platform, a vertical arched frame rising from said bars adjacent the rear end of the platform, a pair of heel pockets secured to said platform at a location at the rear thereof crossed by the plane of said frame, a vertical line member suspended centrally from the frame in the rear of the pockets and centrally with respect thereto, an arm pivoted to the upper portion of said frame and extending rearwardly therefrom, an arm pivoted to the platform extending rearwardly therefrom between the heel pockets, and said line member being connected directly to said arms. 10 15 20

FRED G. LEIGHTY.