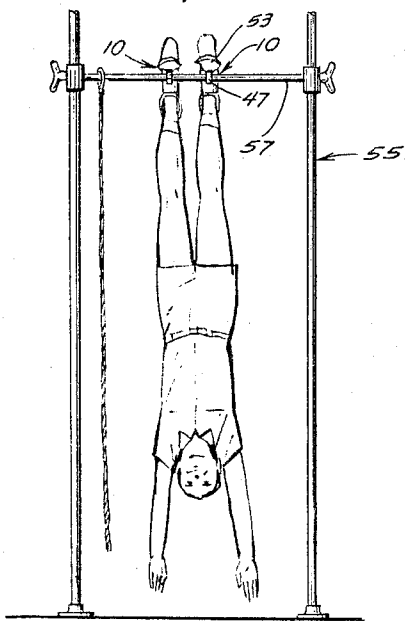
April 30, 1968 R. M. MARTIN 3,380,447

ANKLE DEVICE FOR SUPPORTING AN INDIVIDUAL IN AN INVERTED POSITION

Filed Oct. 19, 1965

Fig. 1



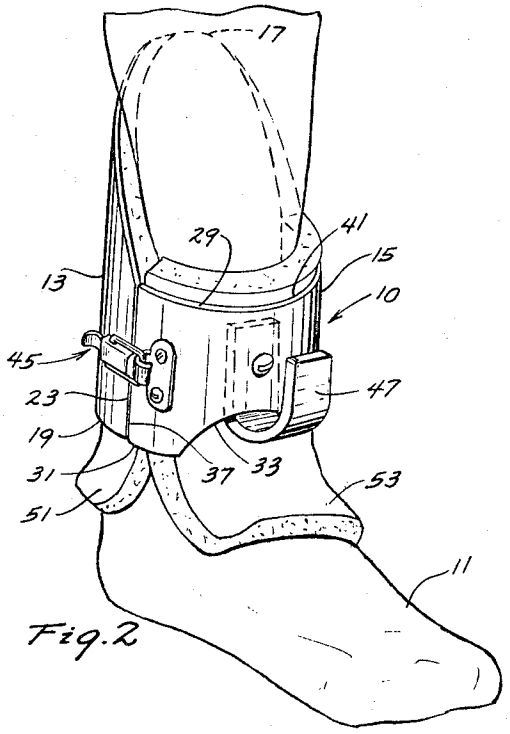
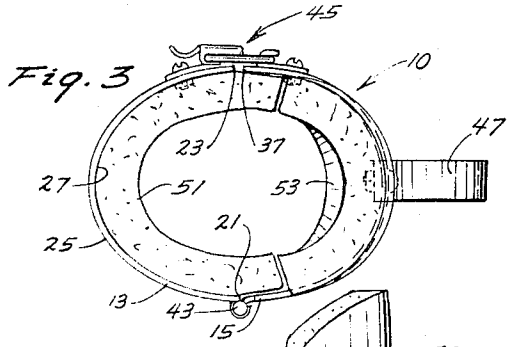


Fig. 2

Fig. 3



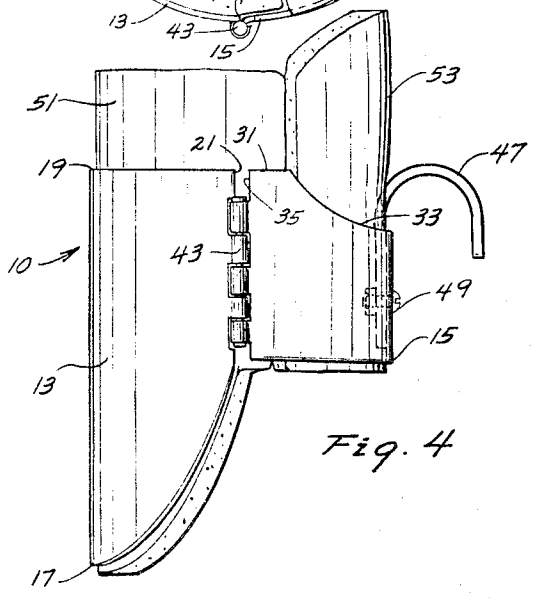


Fig. 4

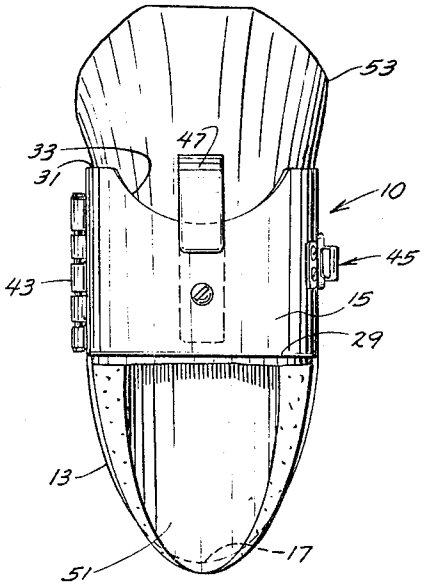


Fig. 5

INVENTOR.
ROBERT M. MARTIN
BY
Dick, Earley, McKee & Thomte
ATTORNEYS

United States Patent Office 3,380,447
Patented Apr. 30, 1968

3,380,447

ANKLE DEVICE FOR SUPPORTING AN INDIVIDUAL IN AN INVERTED POSITION

Robert M. Martin, 90 N. Hudson Ave., Pasadena, Calif. 91101

Filed Oct. 19, 1965, Ser. No. 497,767
9 Claims. (Cl. 128—75)

This invention relates to an ankle device and more particularly to an ankle device for supporting an individual in an inverted position.

The anatomical, physiological and mechanical reasons for supporting an individual in an inverted position from the individual's lower limbs are as follows: (1) lengthen the body; (2) separate the joint spaces, especially the intervertebral joint spaces; (3) to aid in the elimination of vascular and visceral ptosis; (4) to decompress the body; (5) to aid circulatory exchange; and (6) to readjust the lines of stress upon the body. In other words, the inversion of the individual's body serves to reverse the effects of erect posture.

Therefore, it is a principal object of this invention to provide an ankle device for supporting an individual in an inverted position.

A further object of this invention is to provide an ankle device for supporting an individual in an inverted position which is conveniently and quickly attached to the ankle.

A further object of this invention is to provide an ankle device for supporting an individual in an inverted position which is comfortable and safe.

A further object of this invention is to provide an ankle device for supporting an individual in an inverted position so that the full body weight can act as traction and as an elongating load through the long axis of the body.

A further object of this invention is to provide an ankle device for supporting an individual in an inverted position which is economical of manufacture, durable in use and refined in appearance.

These and other objects will be apparent to those skilled in the art.

This invention consists in the construction, arrangements, and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, specifically pointed out in the claims, and illustrated in the accompanying drawings in which:

FIG. 1 is a front view illustrating an individual being supported in an inverted position by the ankle devices which are secured to the individual;

FIG. 2 is a front perspective view of the ankle device secured to an individual, the broken lines indicating the configuration of the posterior jaw member;

FIG. 3 is a bottom elevational view of the device;

FIG. 4 is a side elevational view of the device in an inverted position; and

FIG. 5 is a front elevational view of the device in an inverted position.

The numeral **10** generally designates the ankle device of this invention while the numeral **11** generally designates an individual's leg. Ankle device **10** includes jaw members **13** ad **15** hingedly secured together. Jaw member **13** includes a curved upper end **17**, lower end **19**, opposite ends **21** and **23**, exterior surface **25** and interior surface **27**.

Jaw member **15** includes an upper end **29**, lower end **31** having a cut-away portion **33** formed therein, opposite ends **35** and **37**, exterior surface **39** and interior surface **41**. As best seen in FIGS. 3–5, ends **21** and **35** of jaw members **13** and **15** respectively are hingedly secured together at **43**. As best seen in FIGS. 2 and 3, jaw member **13** and **15** are adapted to be detachably secured together

by means of snap lock means **45**. An inverted, substantially U-shaped hook **47** is secured to jaw member **15** by means of bolt assembly **49**. Preferably, hook **47**, jaw member **13** and jaw member **15** are constructed of a metal material.

A layer of padding **51** is secured to the interior surface **27** of jaw member **13** by suitable adhesive or the like and may be comprised of rubber, leather, etc. As seen in FIG. 2, the lower end of padding **51** extends below the lower end **19** of jaw member **13** and extends slightly above the upper end **17** of jaw member **13**. A layer of padding **53** is secured to the interior surface **41** of jaw member **15** by a suitable adhesive or the like and may be comprised of rubber, leather, etc. As best seen in FIG. 2, the lower end of padding **53** extends below the lower end **31** of jaw member **15** and the upper end of padding **53** extends slightly above the upper end **29** of jaw member **15**.

The numeral **55** generally designates a horizontal bar assembly having a horizontal bar **57** mounted thereon.

When it is desired to support an individual in an inverted position, it is simply necessary to detachably secure an ankle device **10** to each of the ankles of the individual. The hinged relationship between jaw members **13** and **15** permits the device to be opened to facilitate the insertion of the individual's leg therein. Snap lock means **45** is then locked to prevent the device from inadvertently opening when in use. The individual then simply maneuvers his body on the horizontal bar assembly **55** until hooks **47** on each of the ankle devices extend over the horizontal bar **57** as illustrated in FIG. 1. The individual then hangs in a position as illustrated in FIG. 1 to permit the full body weight of the individual to act as a traction and as an elongated load through the long axis of the body. The layers of padding **51** and **53** prevent the ankle of the individual from coming into contact with any hard or sharp portion of the device to provide the individual with utmost comfort. The individual hangs in the inverted position for a predetermined length of time and then removes himself from the horizontal bar apparatus **57** whereupon the ankle devices are easily and quickly removed from the legs of the individual.

The configuration of jaw member **13** conforms to the posterior side of an individual's lower leg for maximum comfort and support. The curved upper end of jaw member **13** conforms to the configuration of the lower portion of an individual's calf.

The configuration of jaw member **15** conforms to the anterior side of an individual's lower leg for maximum comfort and support. Cut-away portion **33** of jaw member **15** partially receives a portion of the individual's ankle to permit the individual to walk when the device is attached to his ankle. Cut-away portion **33** of jaw member **15** also partially receives a portion of the individual's ankle when the individual is in the inverted position of FIG. 1 for comfort.

Thus it can be seen that the device accomplishes at least all of its stated objectives.

Some changes may be made in the construction and arrangement of my Ankle Device for Supporting an Individual in an Inverted Position without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

1. In a device of the class described,
an inversion boot adapted for attachment to a person's leg including a first jaw member having opposite ends and a second jaw member having opposite ends,
said first jaw member hingedly secured at one of its ends to one end of said second jaw member,

means detachably securing said other end of said first jaw member to said other end of said second jaw member.

and a hook means secured to one of said first and second jaw members.

2. The device of claim 1 wherein said first jaw member is curved across its width and has a curvature complementary to the posterior side of an individual's lower leg.

3. The device of claim 2 wherein said second jaw member is curved across its width and has a curvature complementary to the anterior side of an individual's lower leg.

4. The device of claim 2 wherein said first jaw member has a curved upper end complementary to the lower calf of an individual's leg.

5. The device of claim 3 wherein said second jaw member includes a lower end having a cut-away portion formed therein adapted to partially receive a portion of an individual's ankle.

6. The device of claim 3 wherein said second jaw member includes a front portion and wherein said hook means includes an inverted substantially U-shaped member secured to the front portion of said second jaw member.

7. The device of claim 1 wherein said first and second jaw members each include exterior and interior surfaces

and wherein a padding means is secured to the interior surfaces of said first and second jaw members.

8. The device of claim 3 wherein said first and second jaw members each include exterior and interior surfaces, and upper and lower ends and wherein a padding means is secured to the interior surfaces of said first and second jaw members, said padding means on said first jaw member having a length greater than the length of said first jaw member and also having a width greater than the width of said first jaw member; said padding means on said second jaw member having a length greater than the length of said second jaw member.

9. The device of claim 1 wherein said hook means is adapted to be detachably secured to a horizontal bar means when the inversion boot is in an inverted position.

References Cited

UNITED STATES PATENTS

2,583,895	1/1952	Siebrandt	128—84
2,723,663	11/1955	Davis	128—75
3,081,085	3/1963	Girolamo	272—58

FOREIGN PATENTS

739,111	10/1955	Great Britain.

LAWRENCE W. TRAPP, *Primary Examiner.*