



US 20100087295A1

(19) **United States**  
(12) **Patent Application Publication**  
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(10) **Pub. No.: US 2010/0087295 A1**  
(43) **Pub. Date: Apr. 8, 2010**

(54) **EXERCISE FRAMEWORK APPARATUS**

**Related U.S. Application Data**

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(60) Provisional application No. 61/103,038, filed on Oct. 6, 2008.

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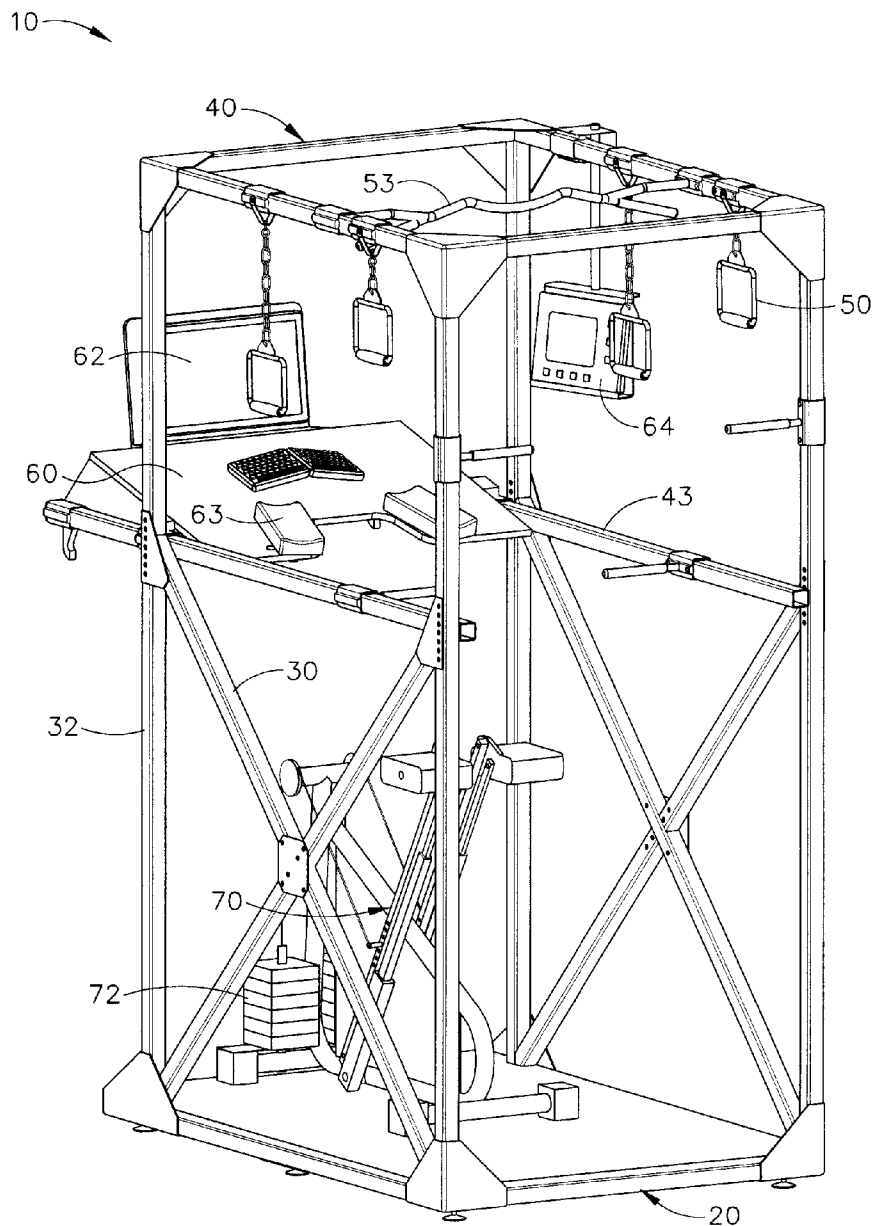
**Publication Classification**

(51) **Int. Cl.**  
**A63B 22/04** (2006.01)  
(52) **U.S. Cl.** ..... **482/52**  
(57) **ABSTRACT**

(21) Appl. No.: **12/573,653**

The present invention comprises a substantially rigid framework that may substantially surround and being used in conjunction with a stair-stepping machine for the lower body. An individual may then exercise the upper body using exercise accessories connected to the substantially rigid framework.

(22) Filed: **Oct. 5, 2009**



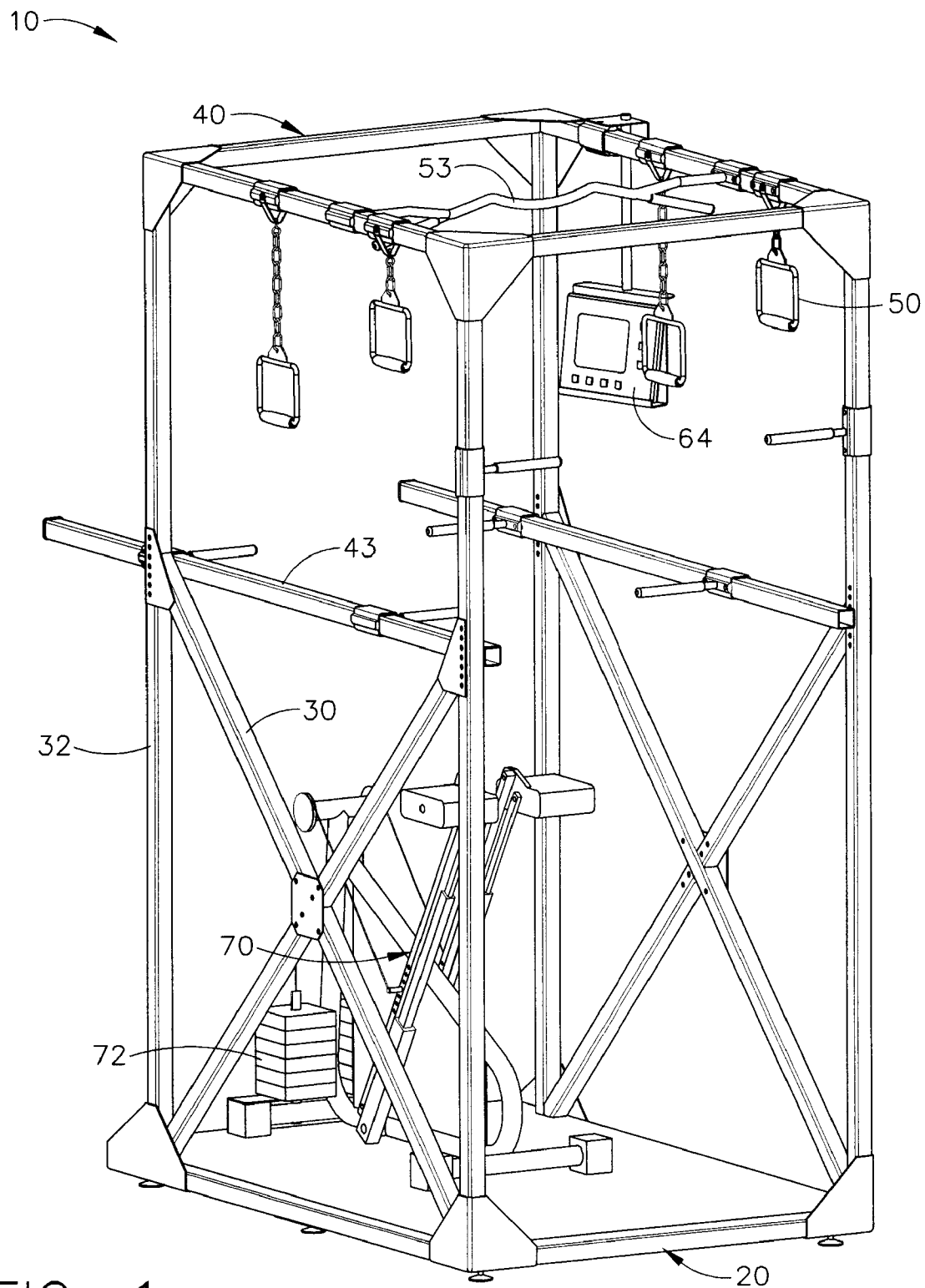


FIG. 1

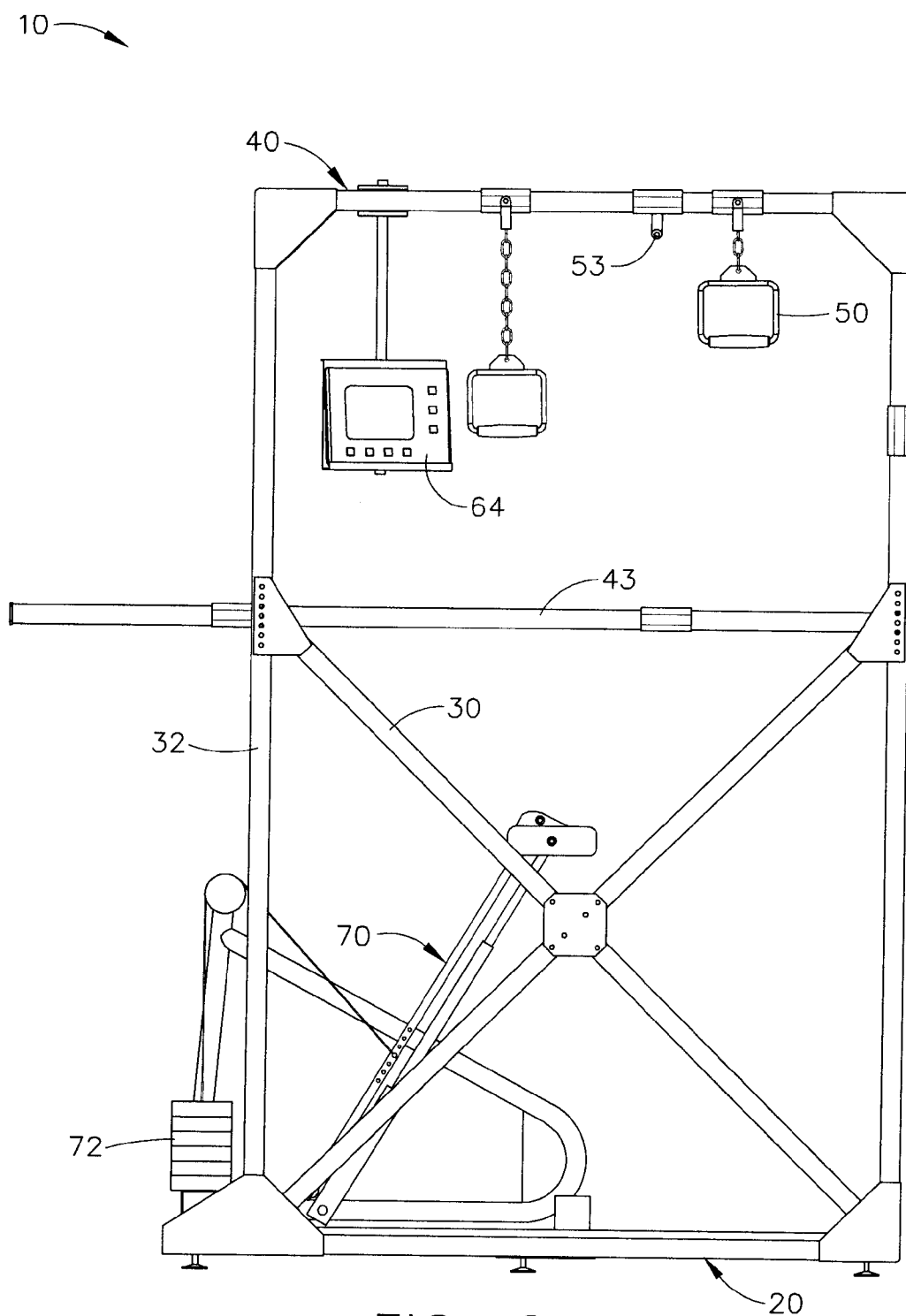


FIG. 2



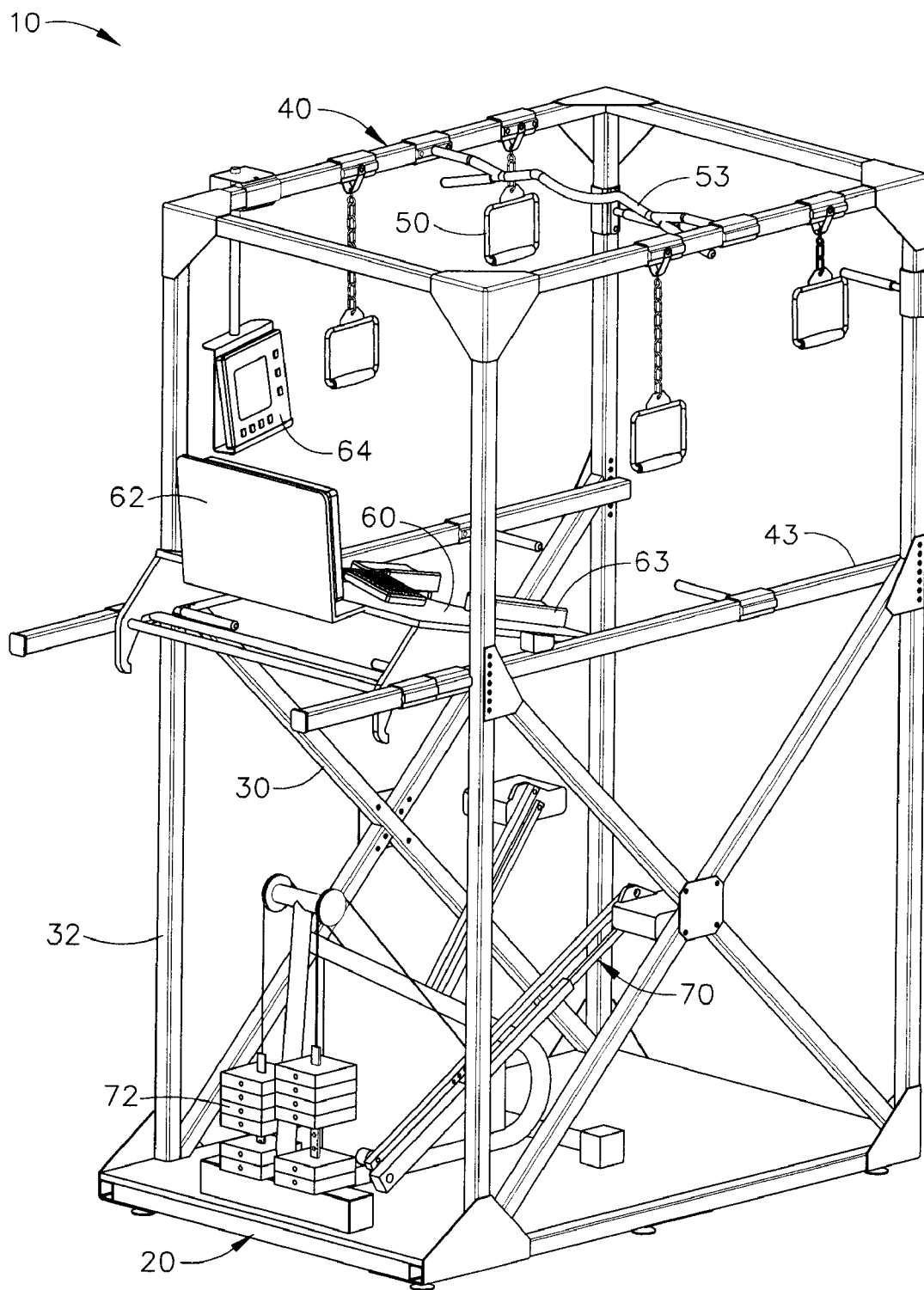


FIG. 4

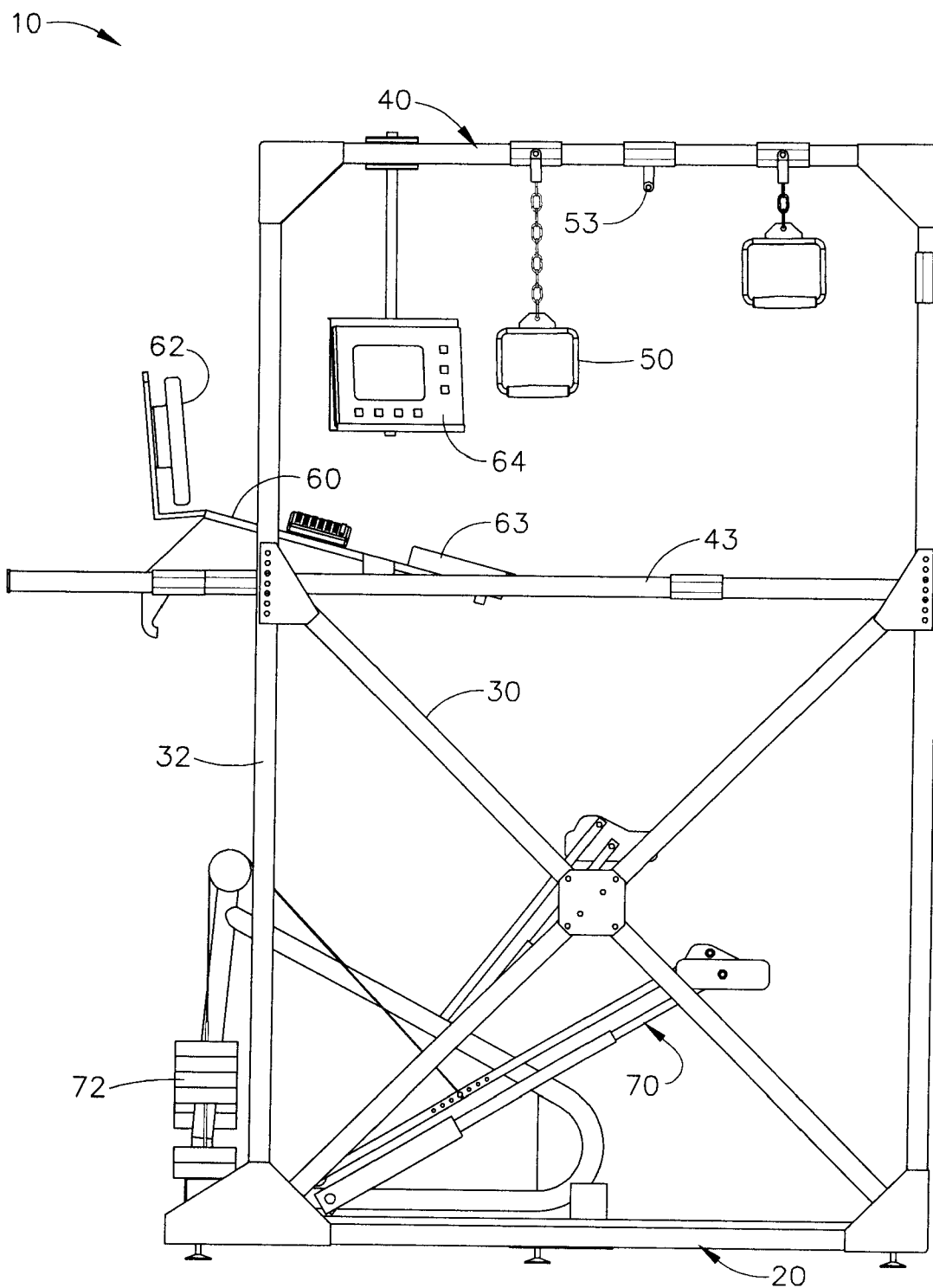


FIG. 5

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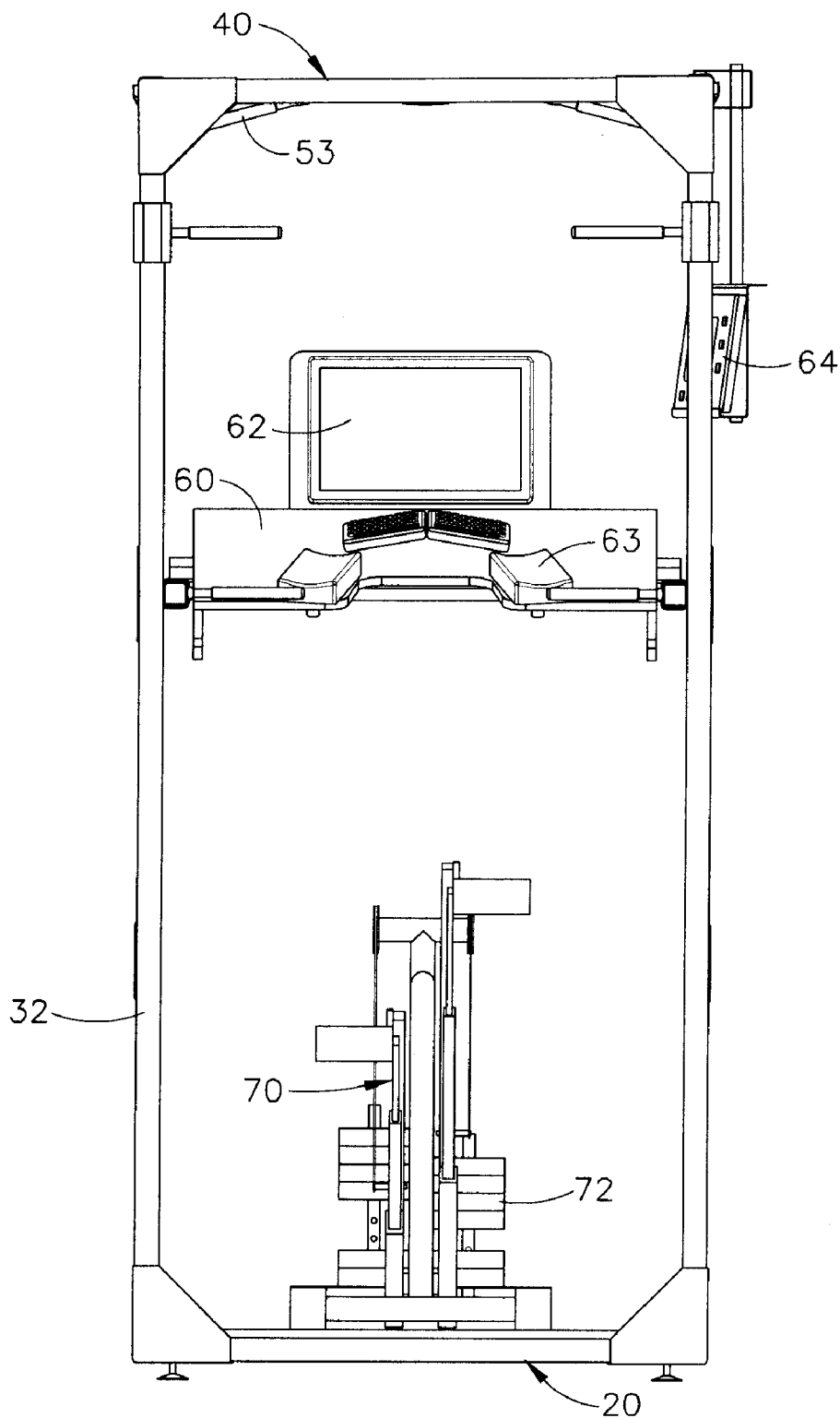


FIG. 6

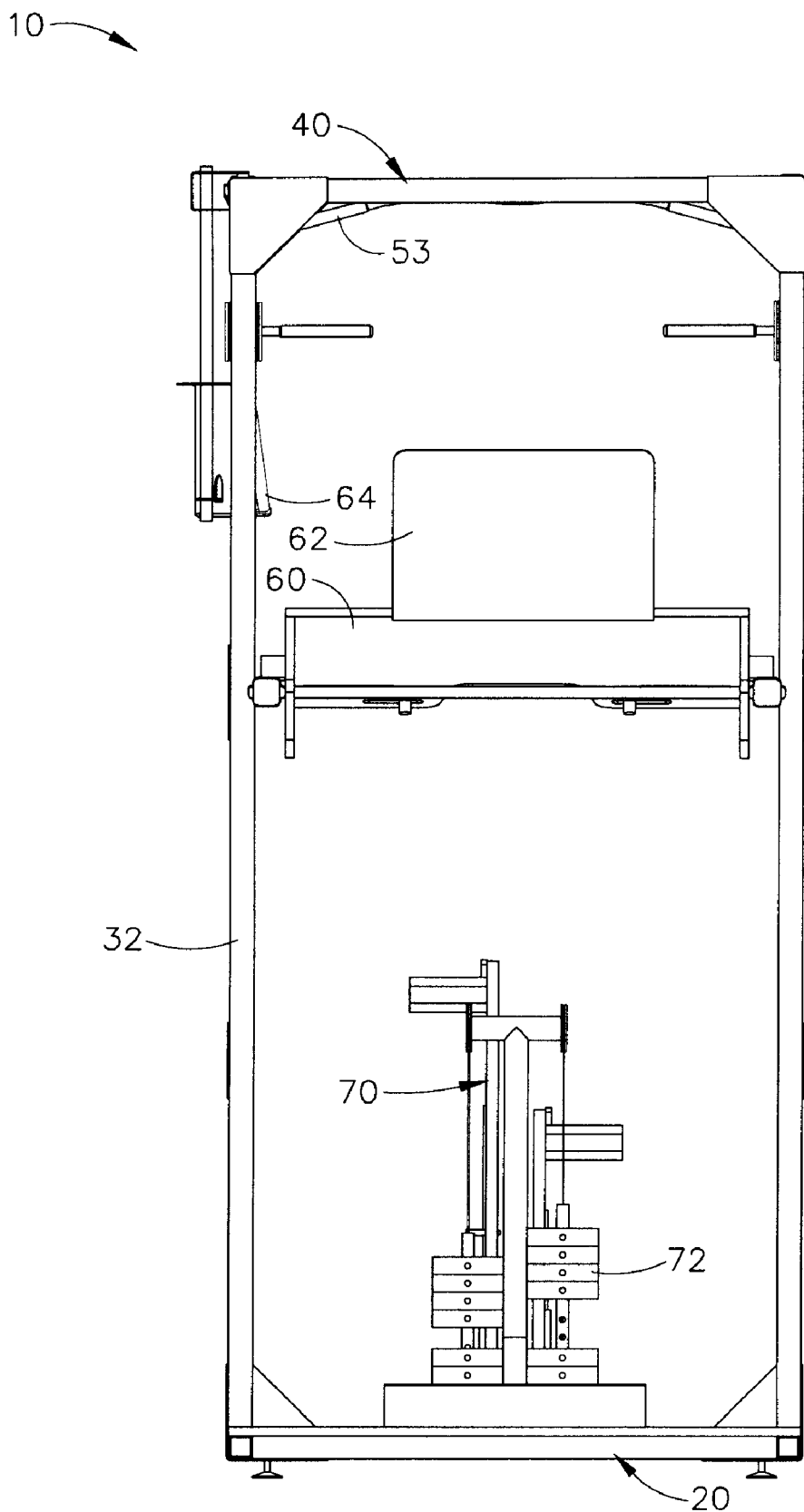


FIG. 7



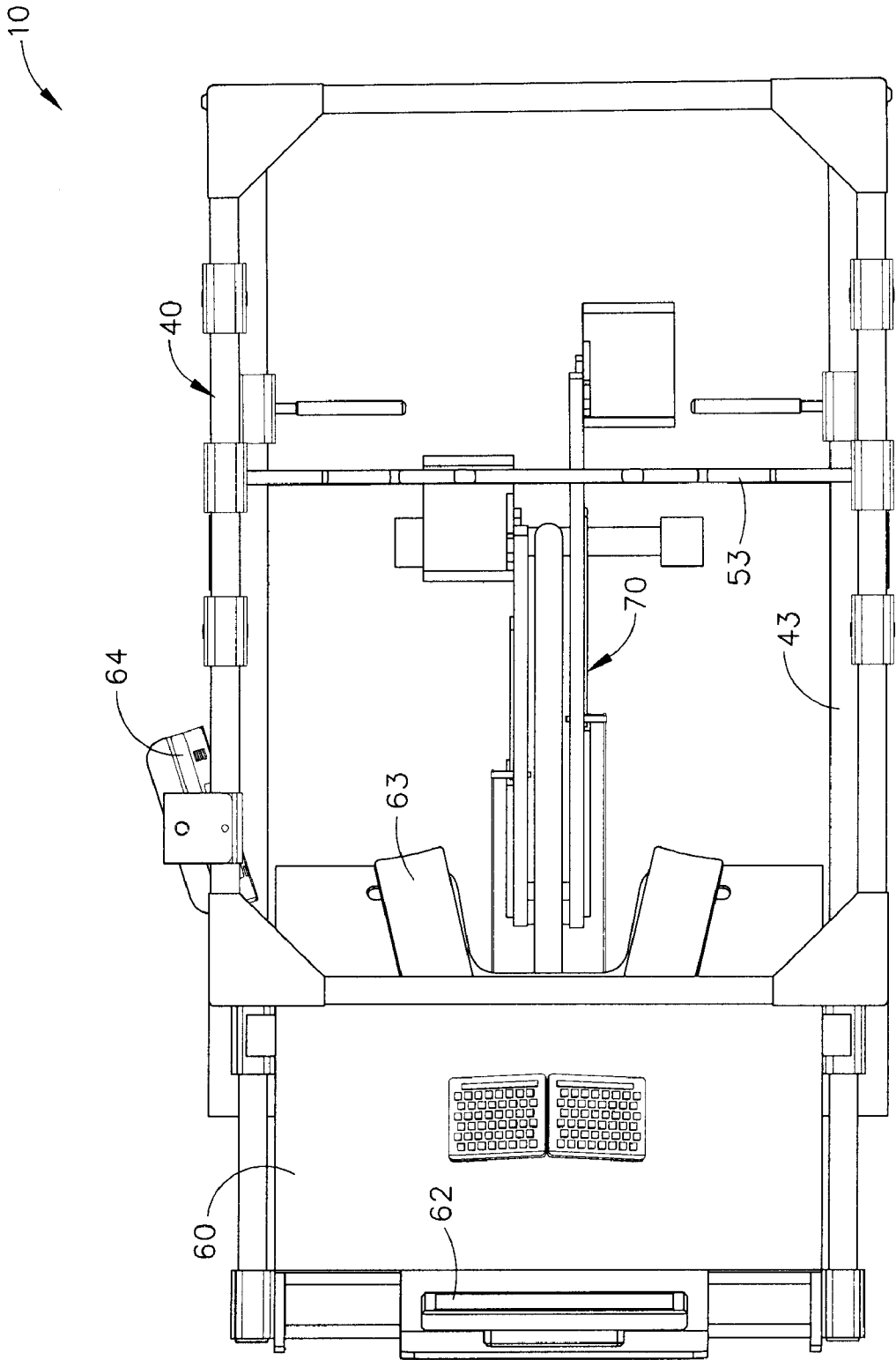


FIG. 8

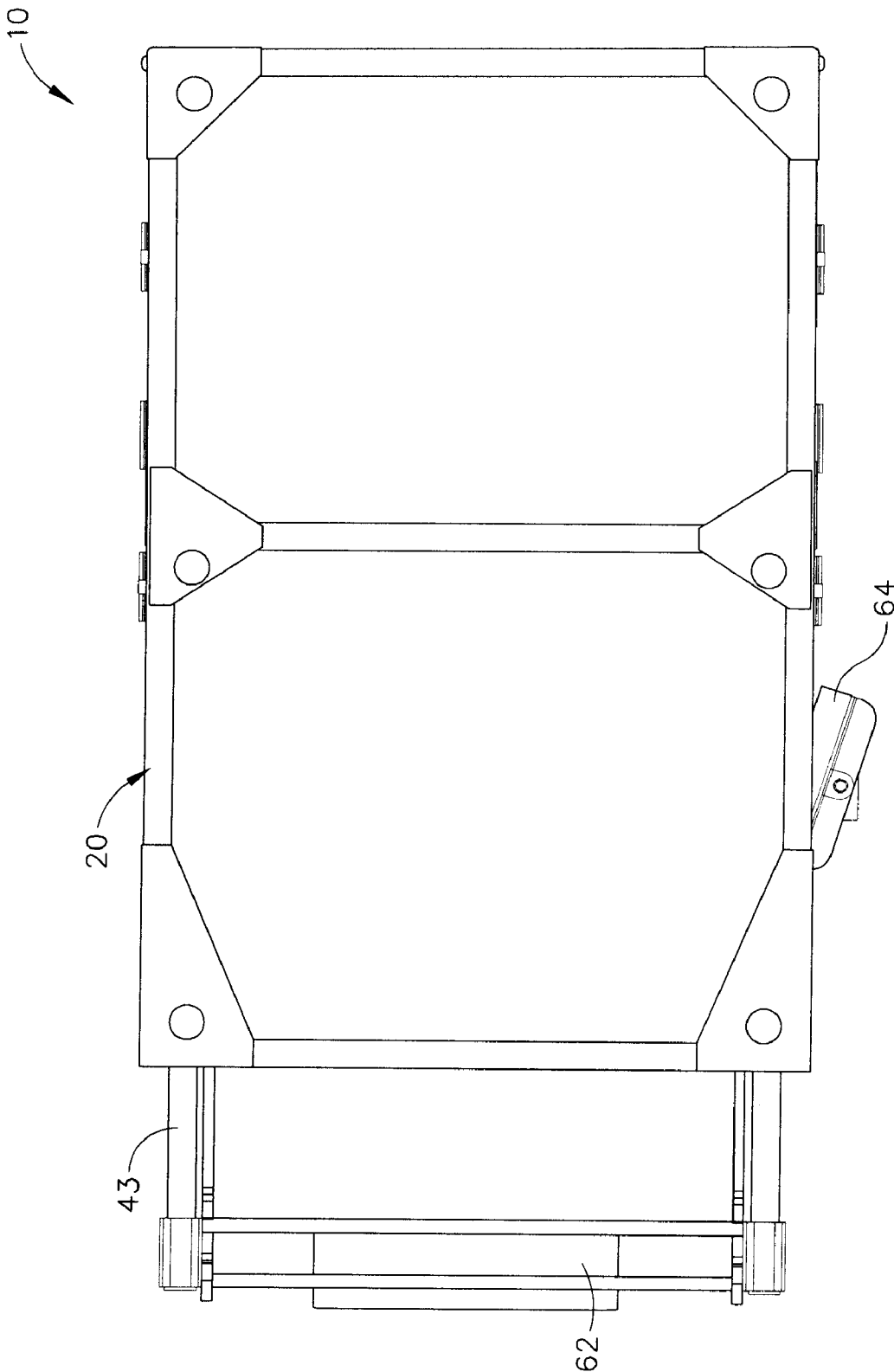


FIG. 9

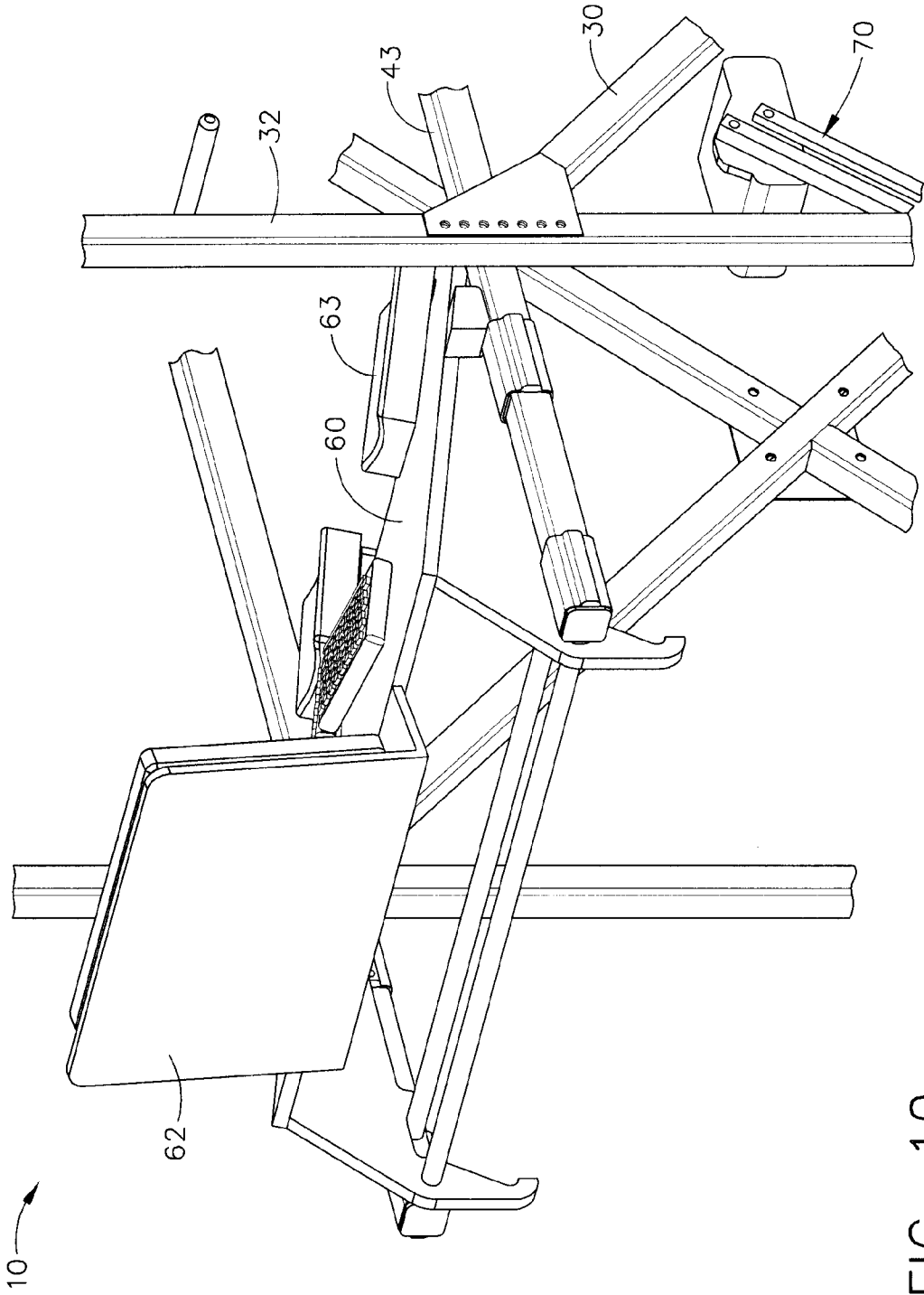
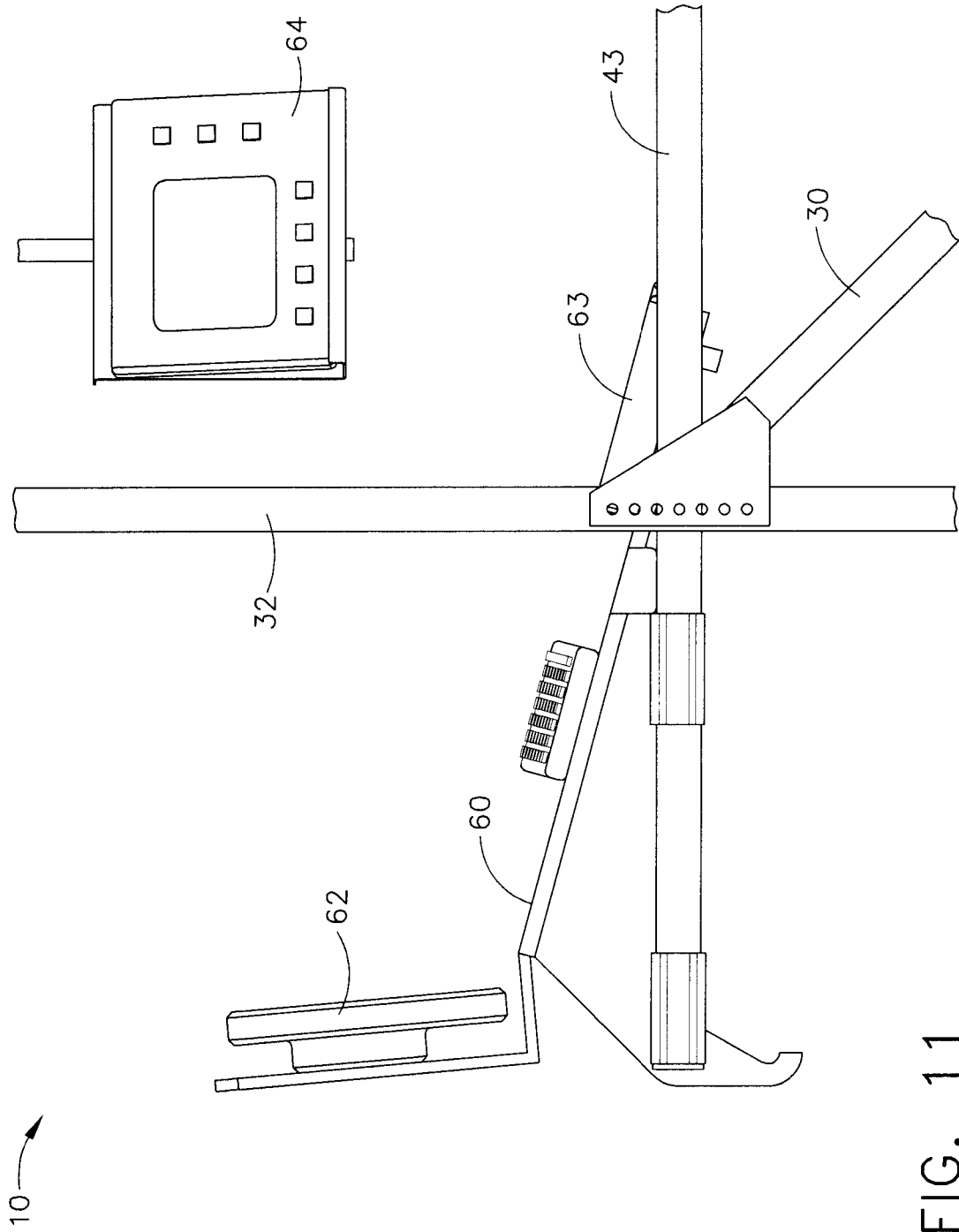


FIG. 10



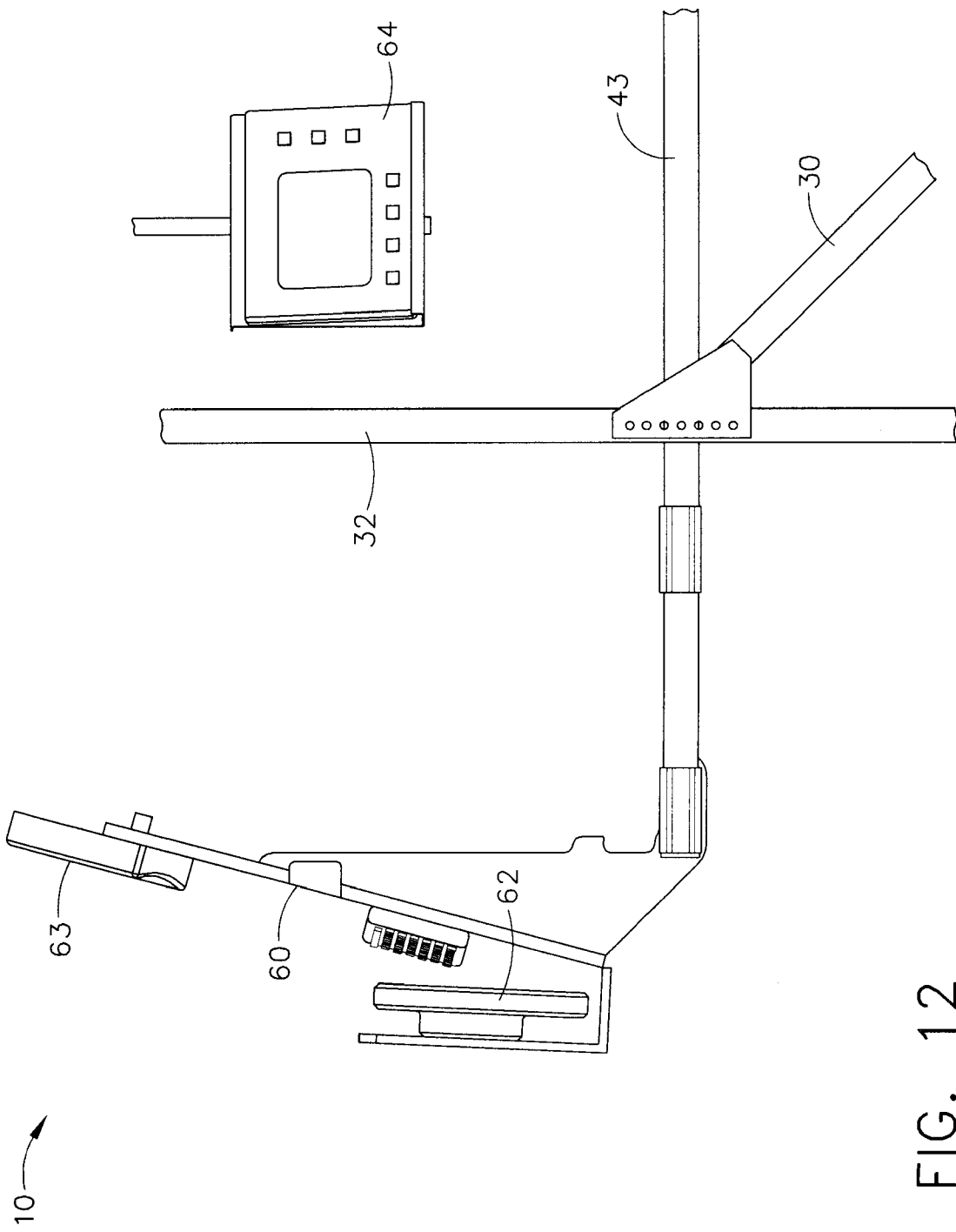


FIG. 12

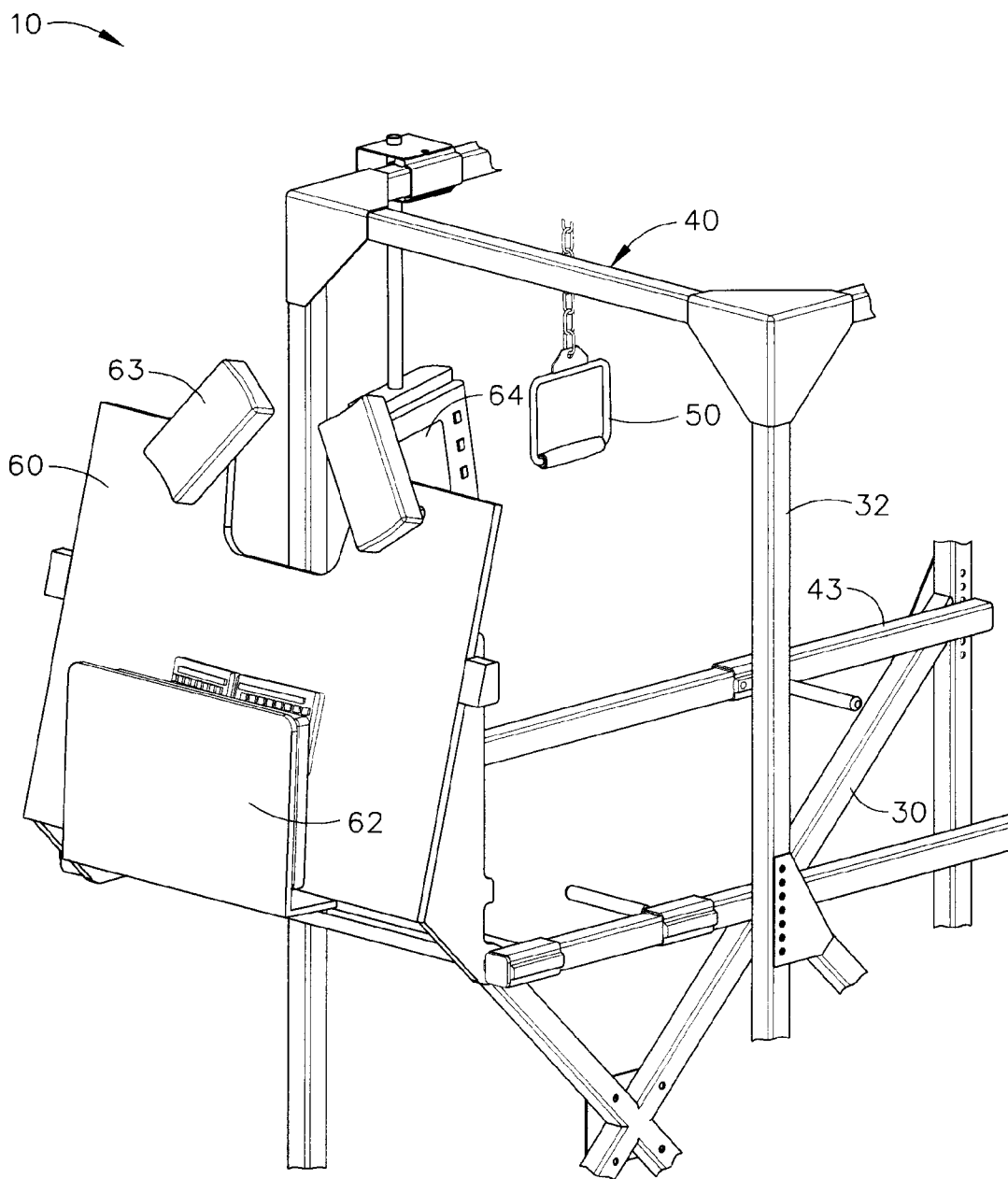


FIG. 13

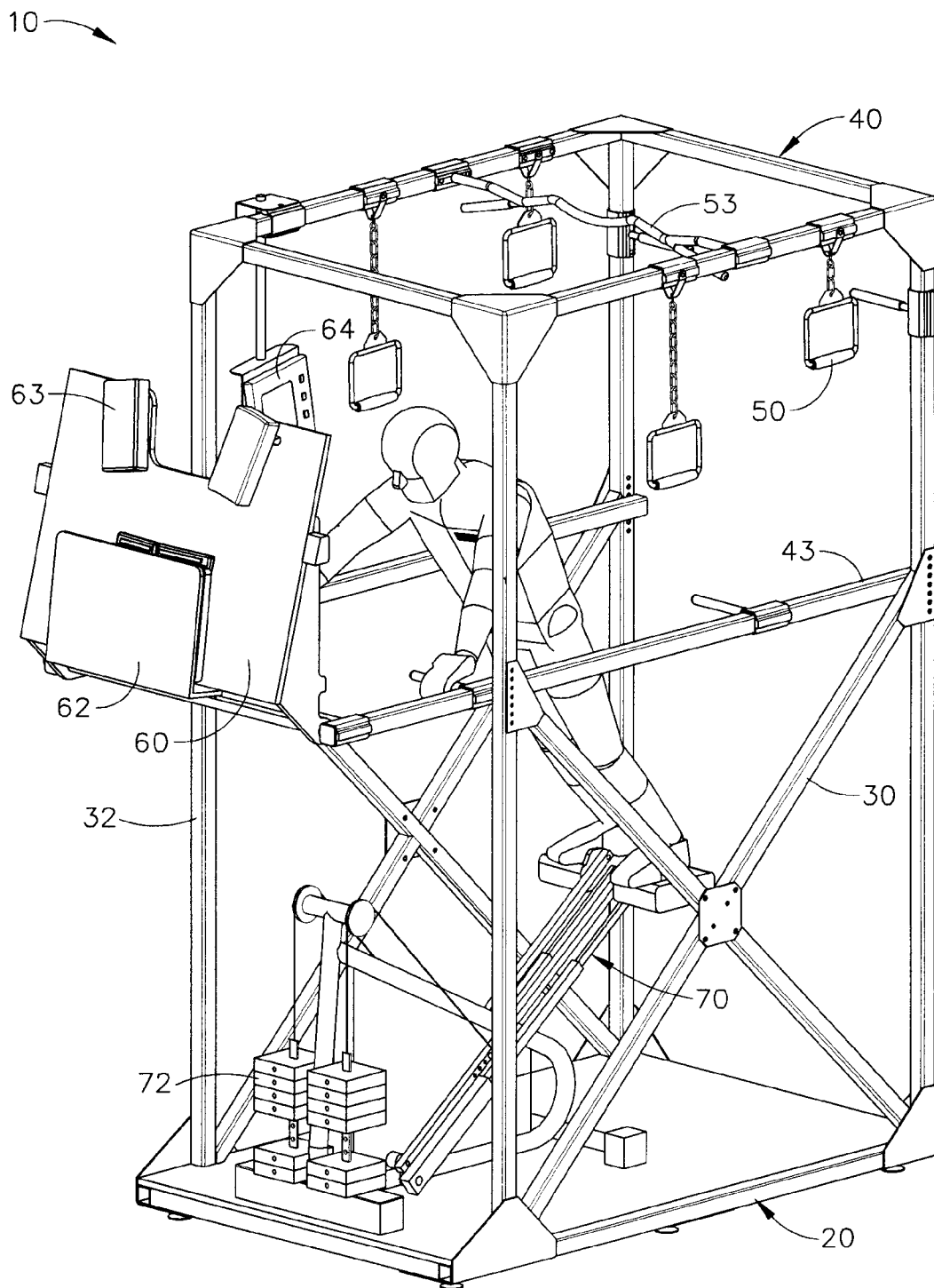


FIG. 14

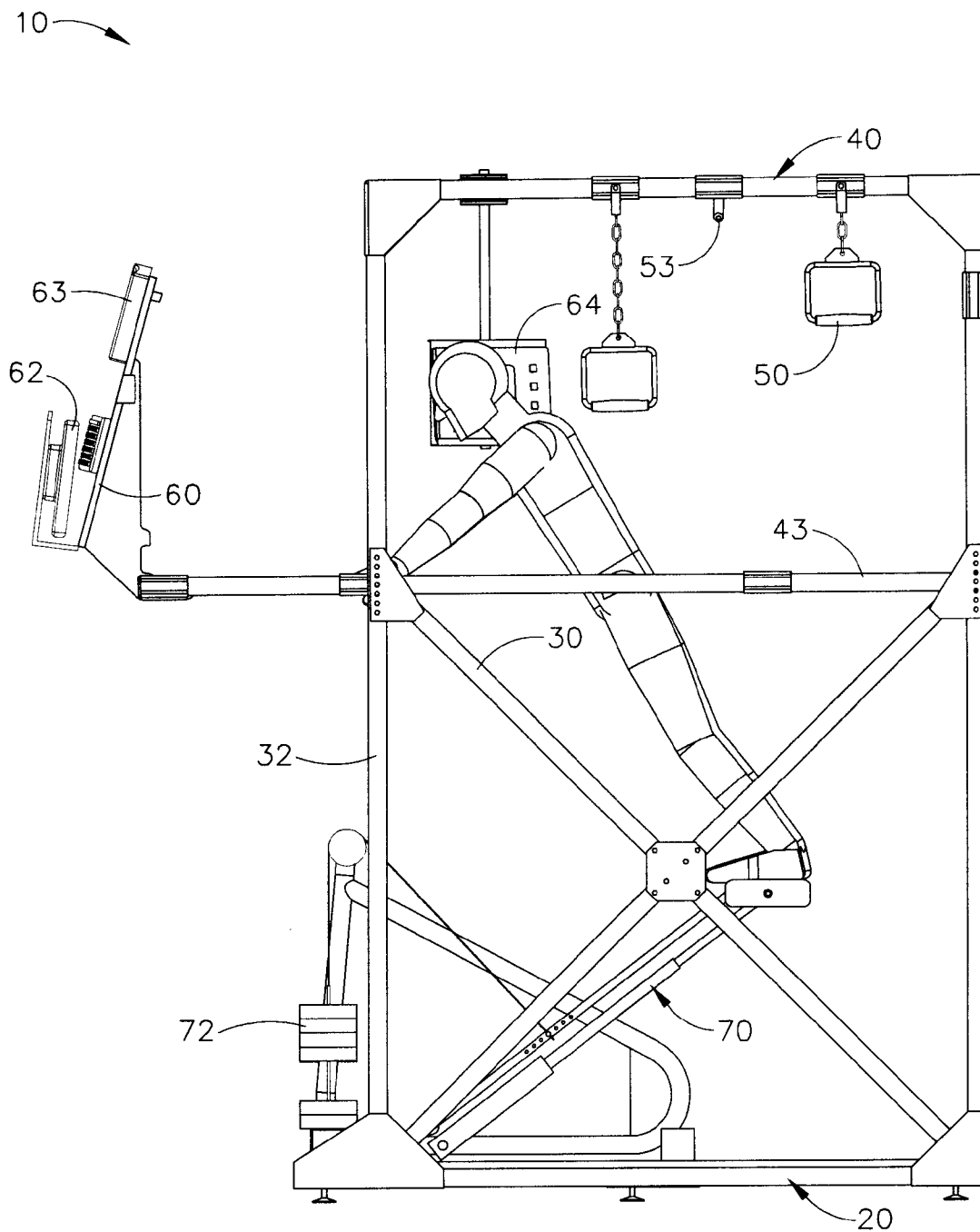


FIG. 15



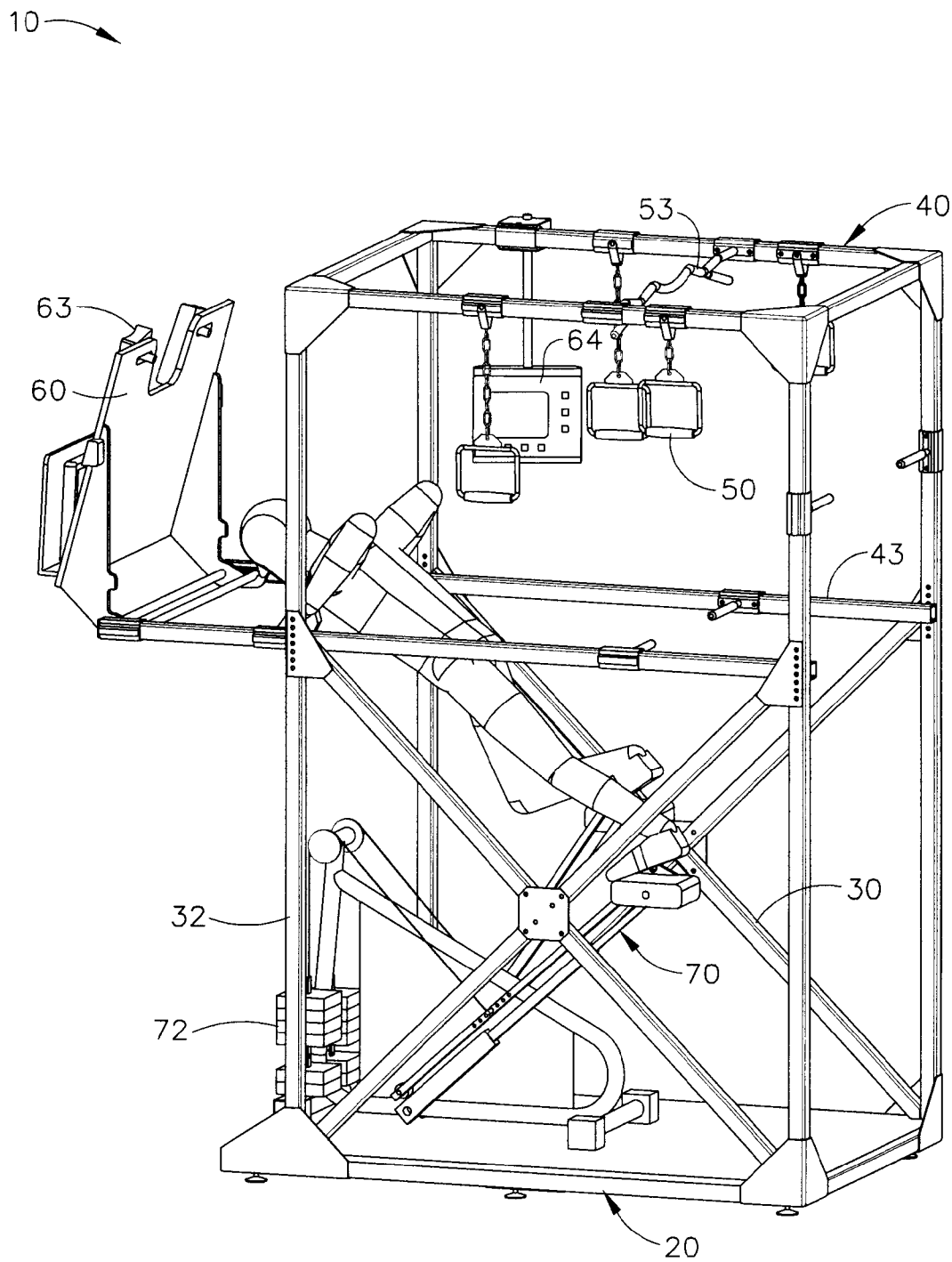


FIG. 16

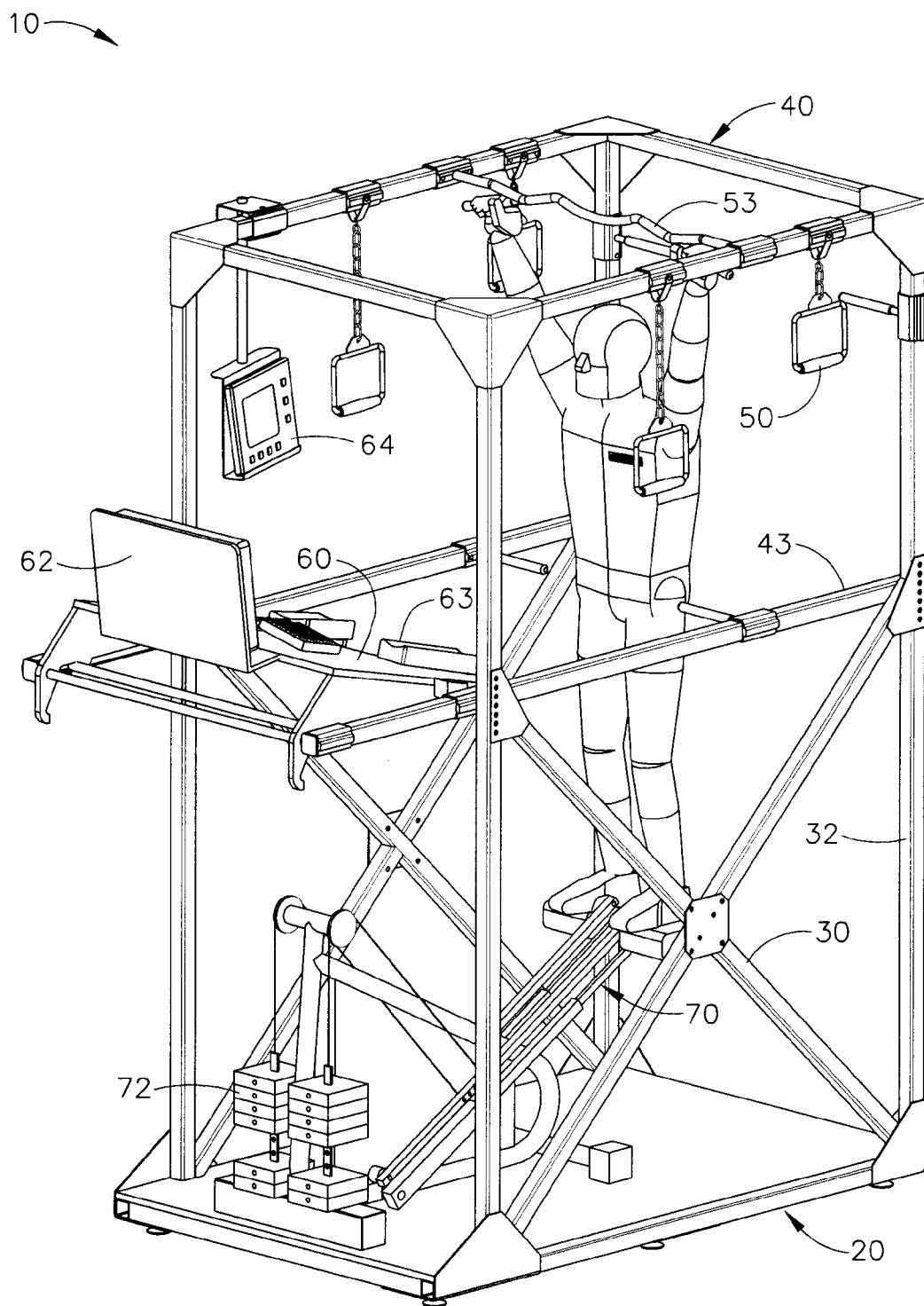


FIG. 17

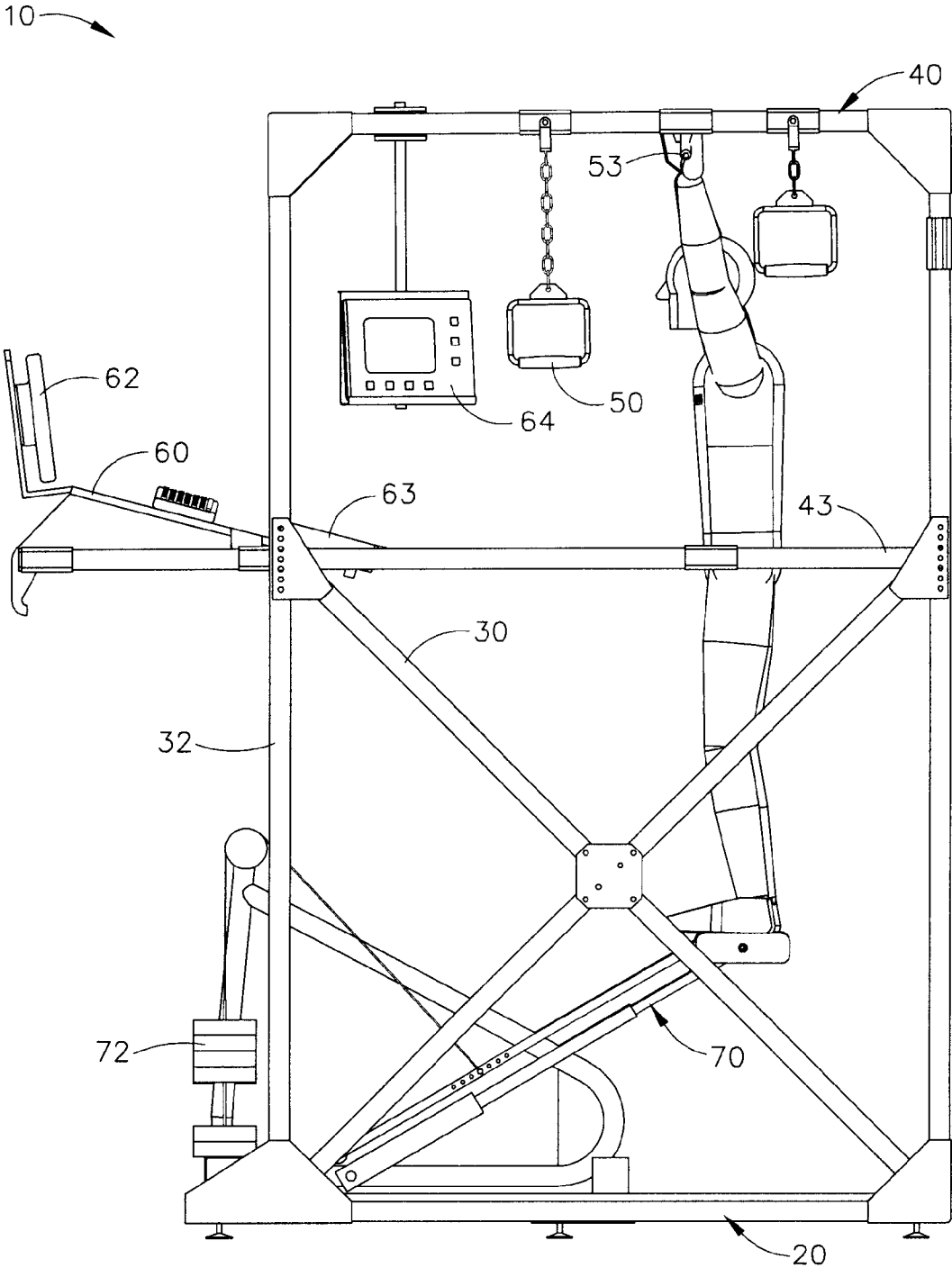


FIG. 18

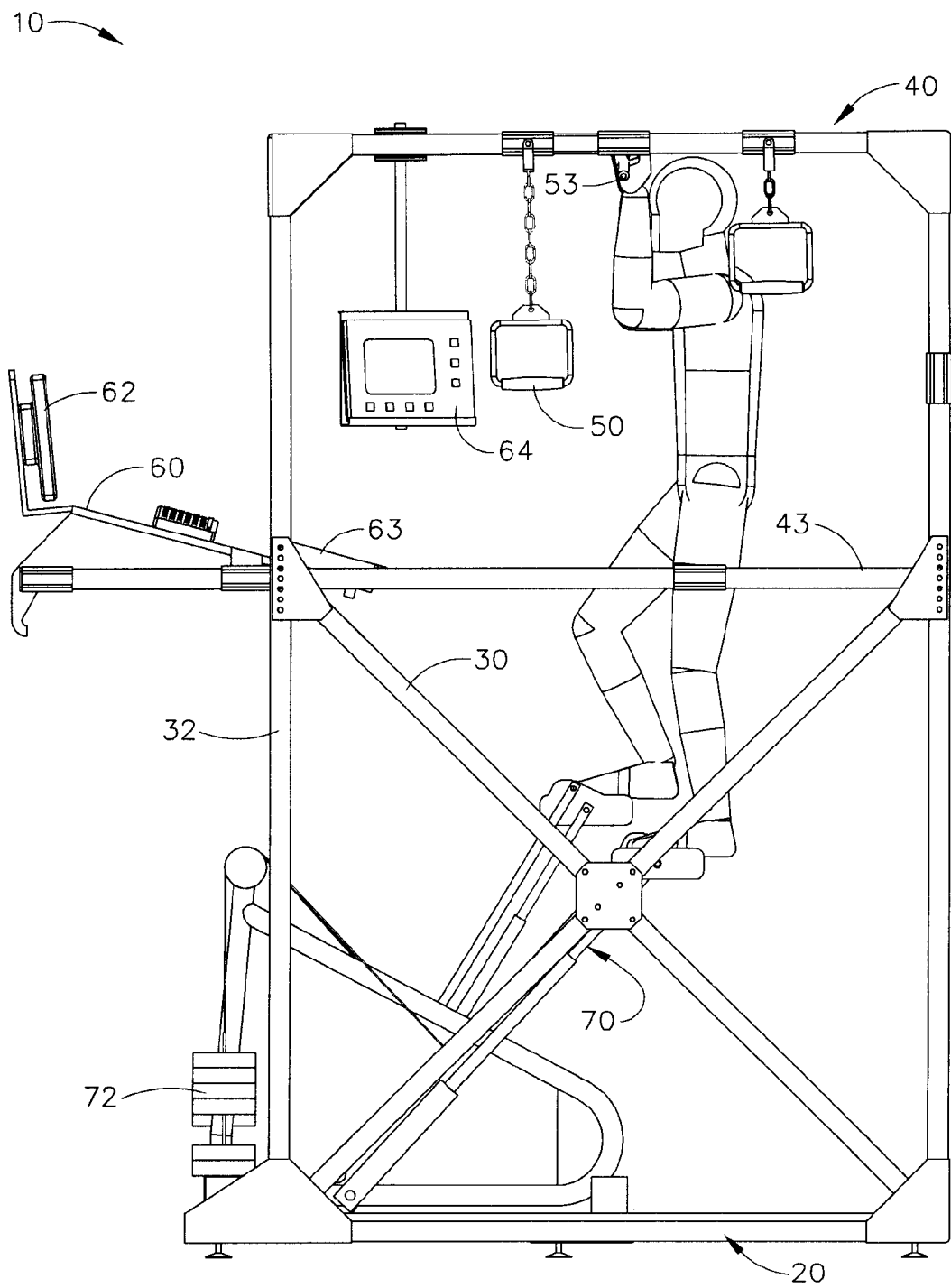


FIG. 19



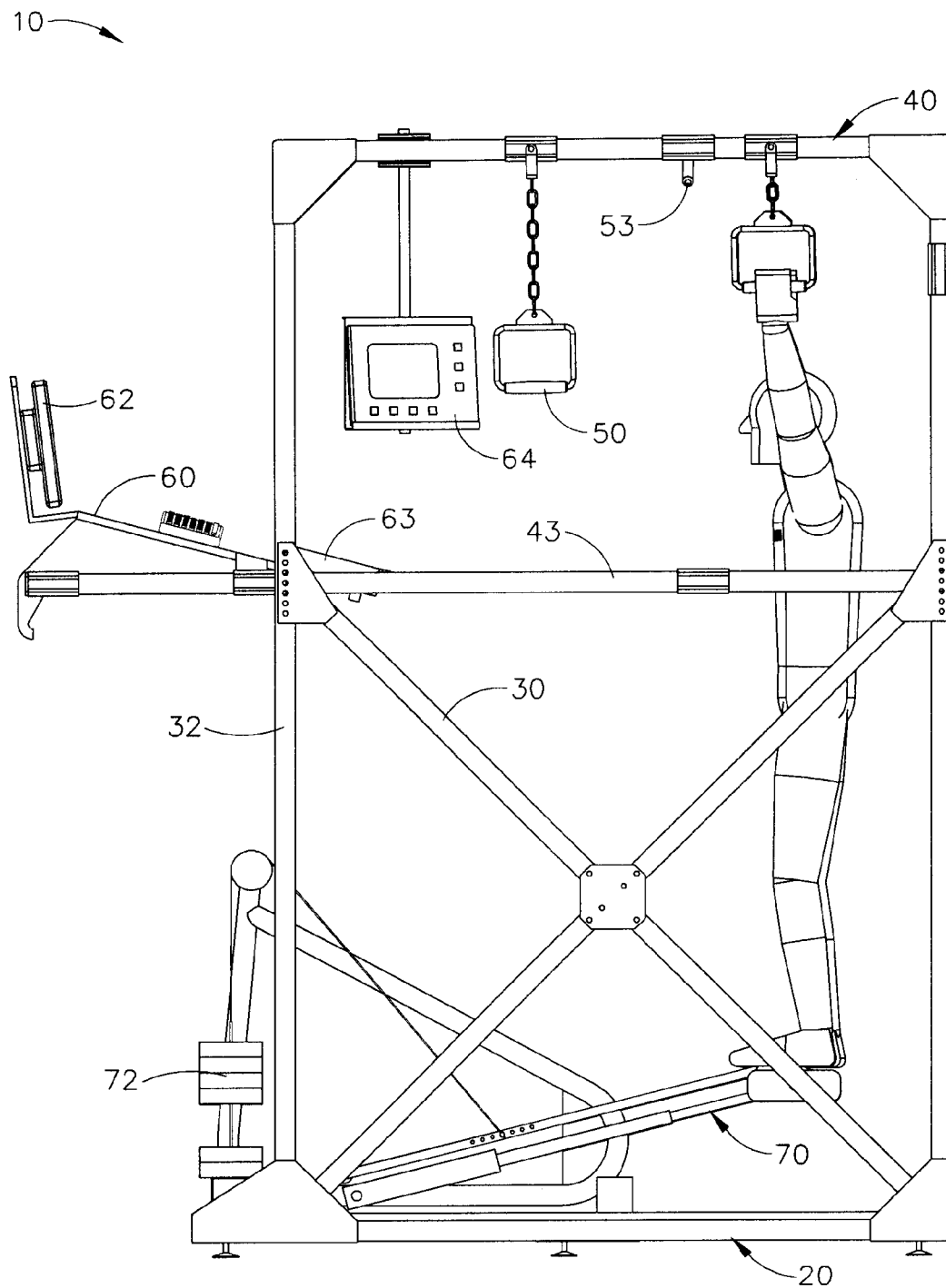


FIG. 21

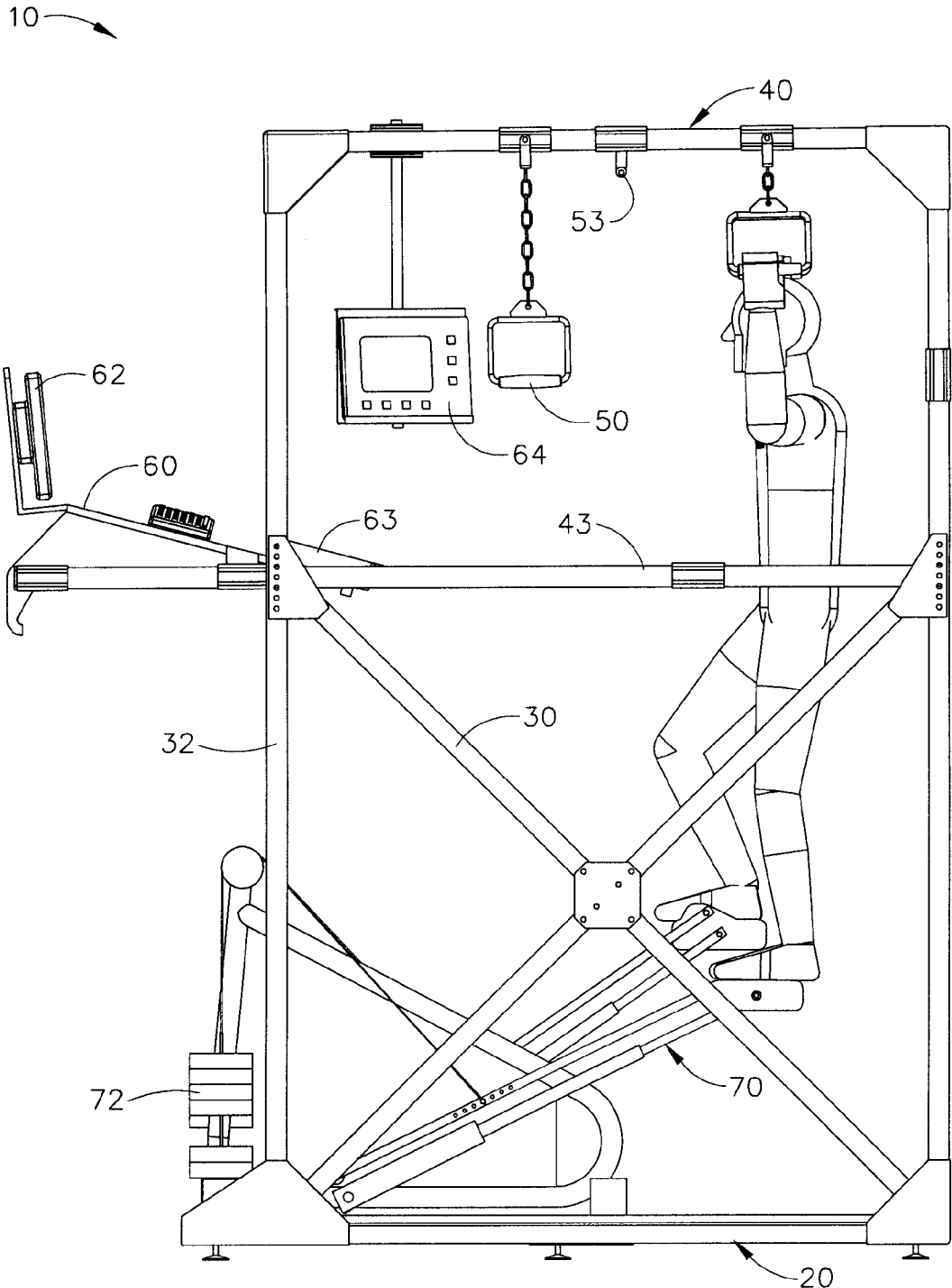


FIG. 22

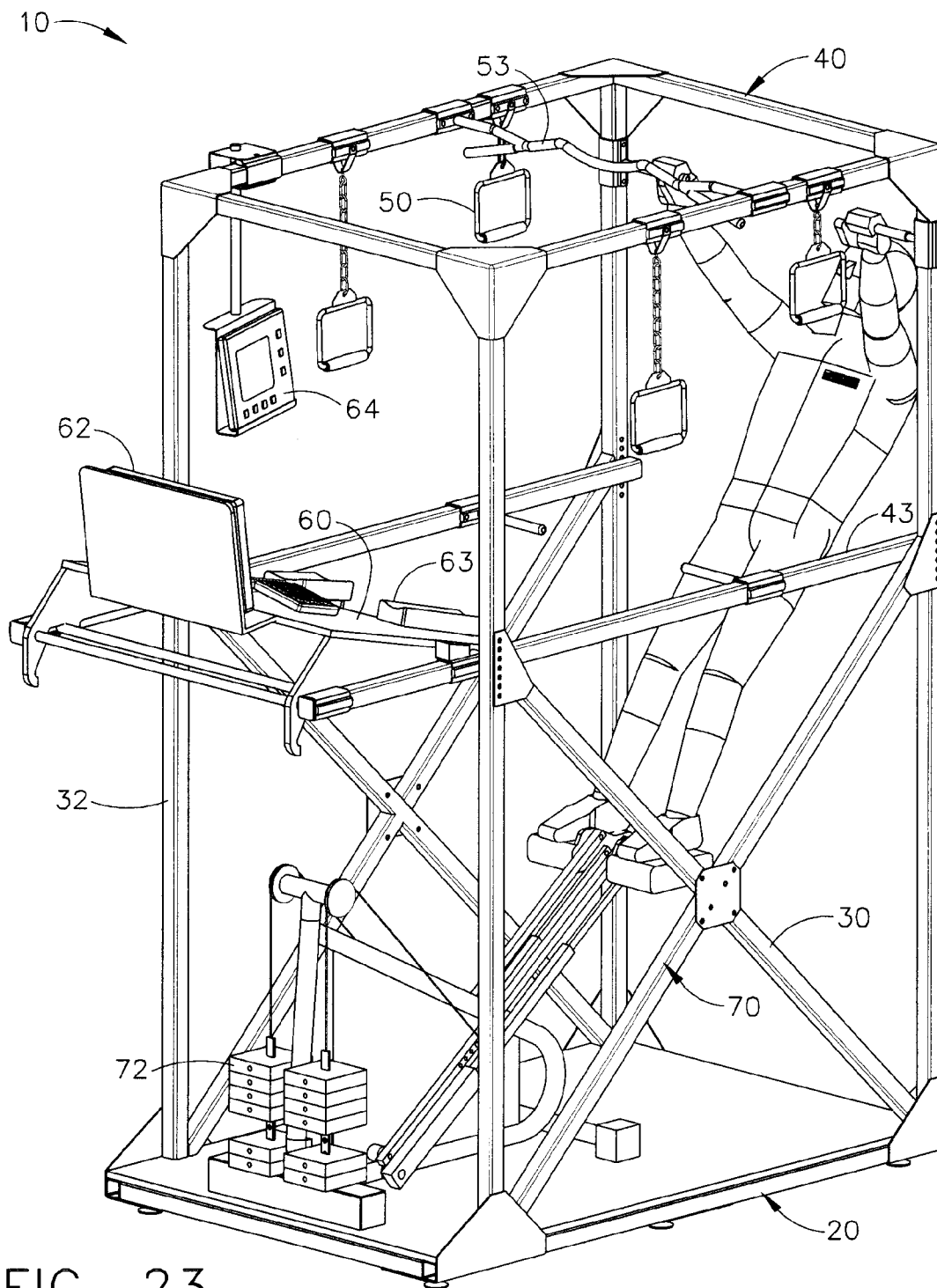


FIG. 23



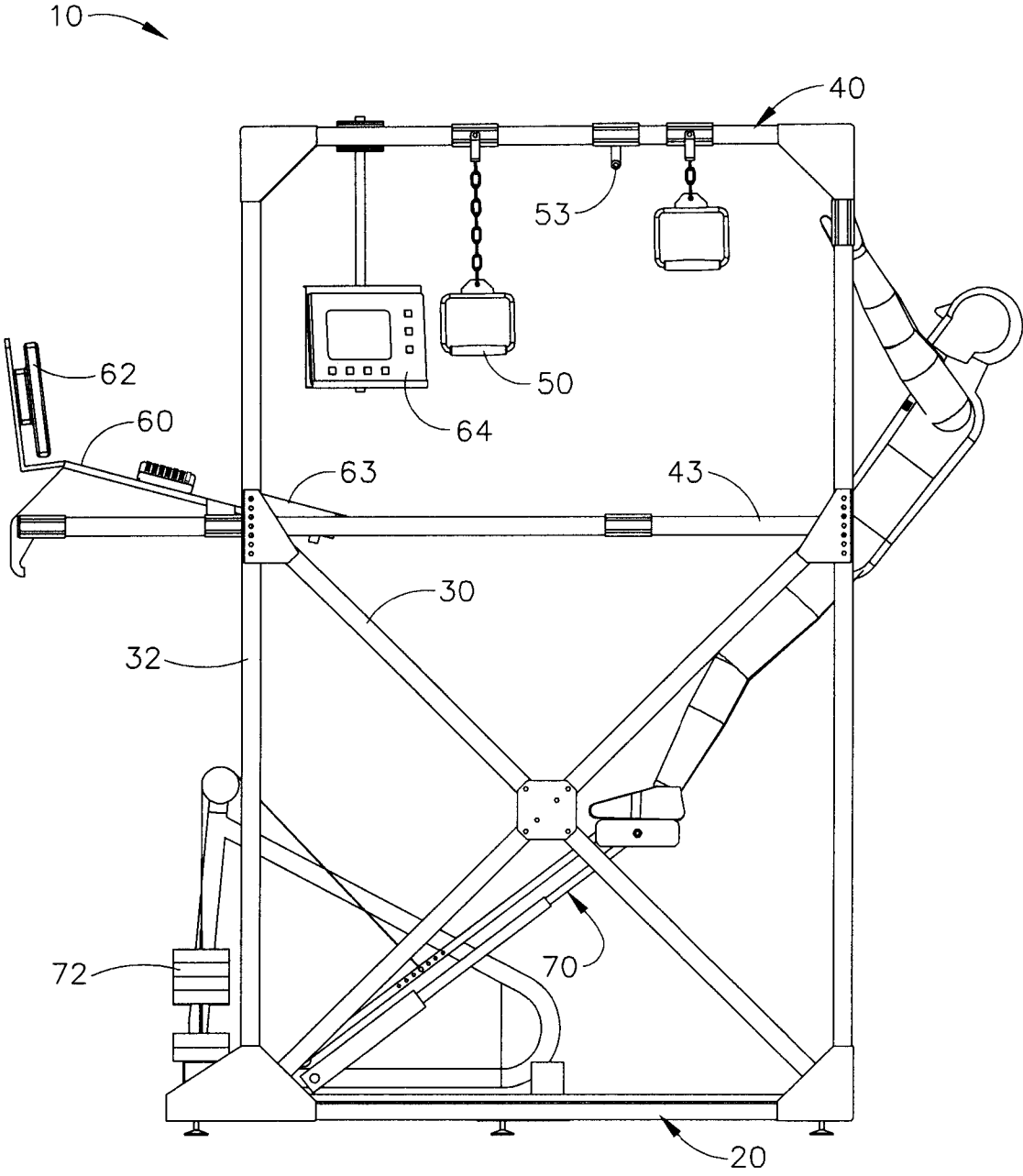


FIG. 24

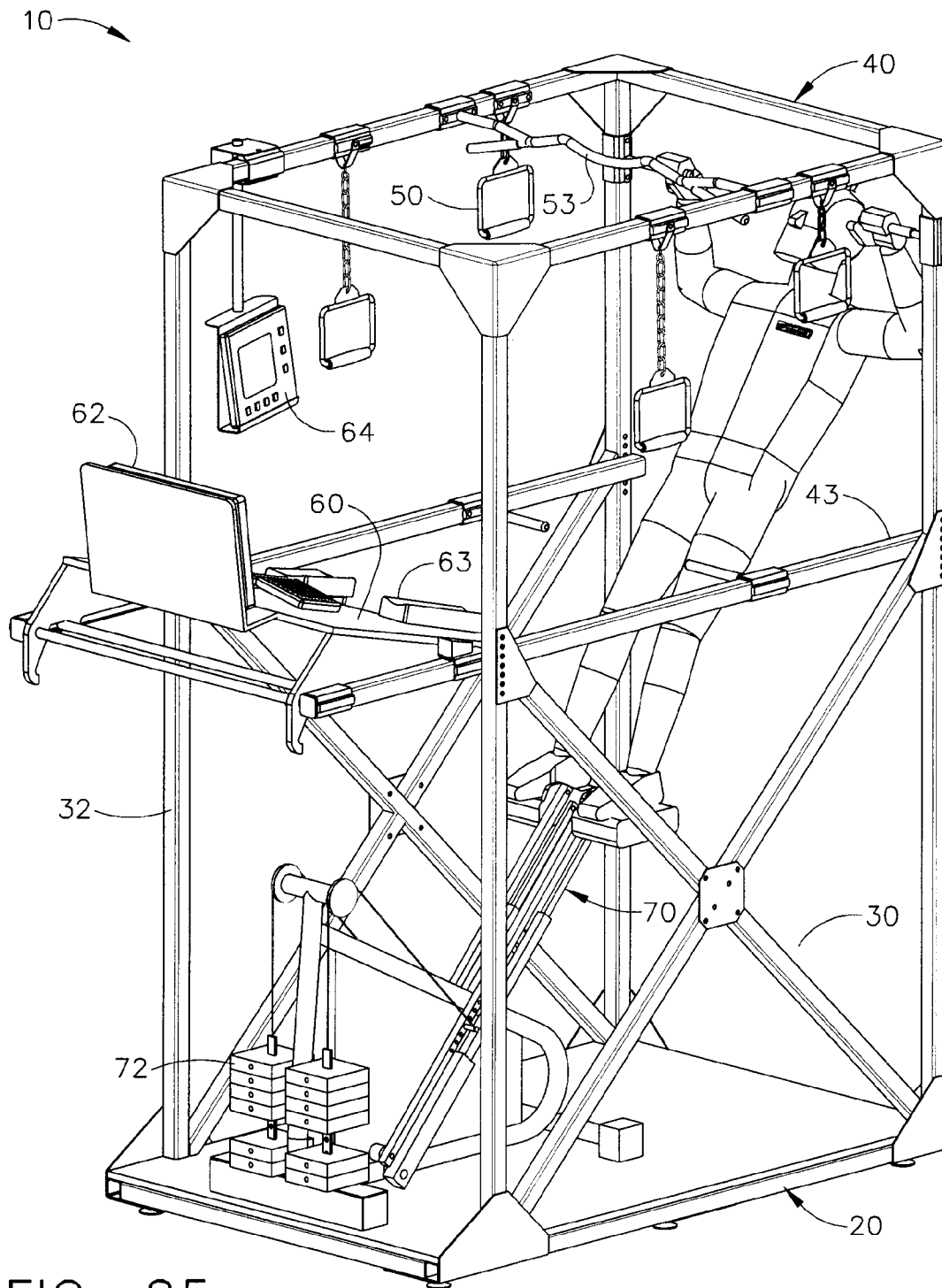


FIG. 25

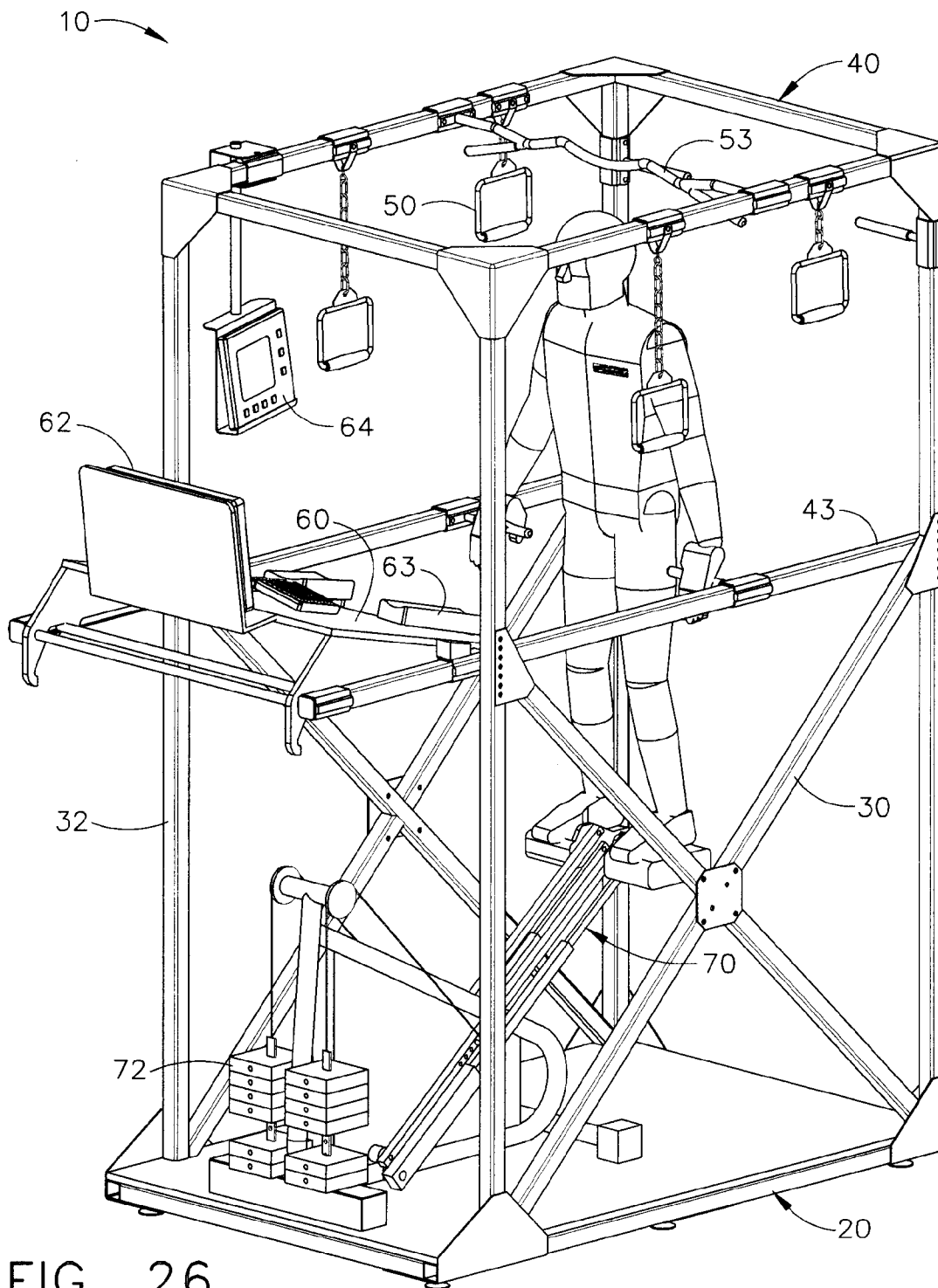


FIG. 26

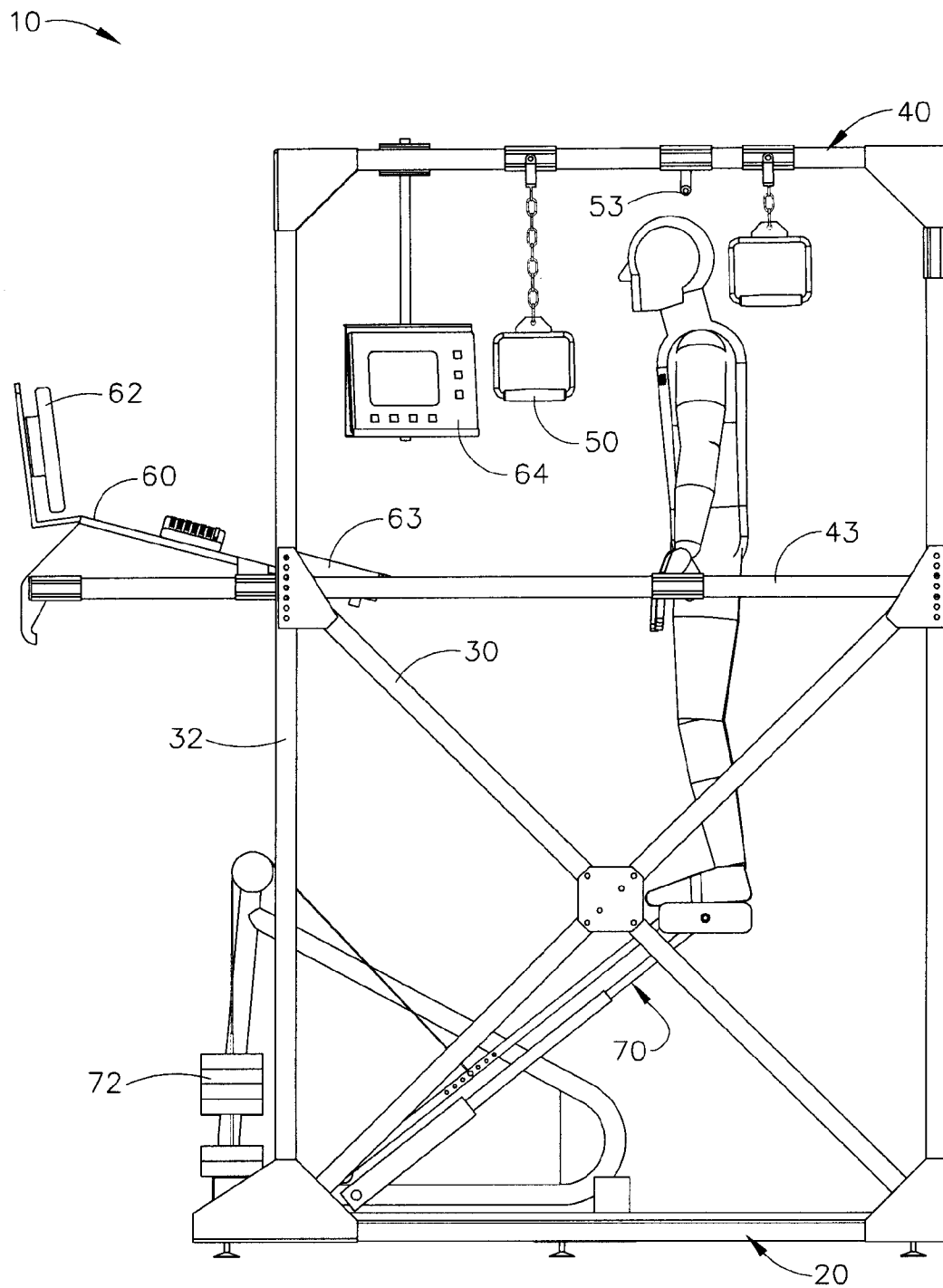


FIG. 27

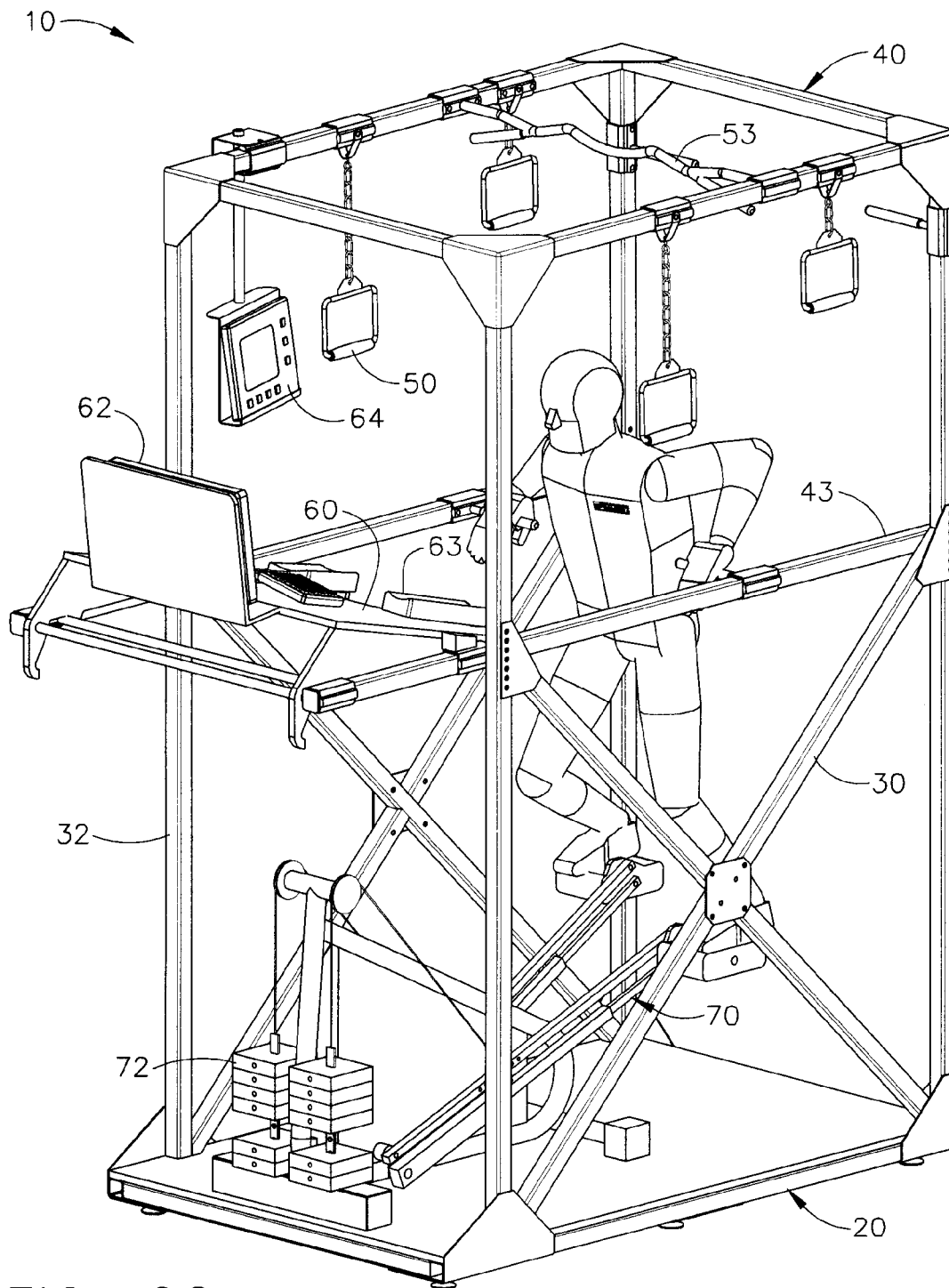


FIG. 28

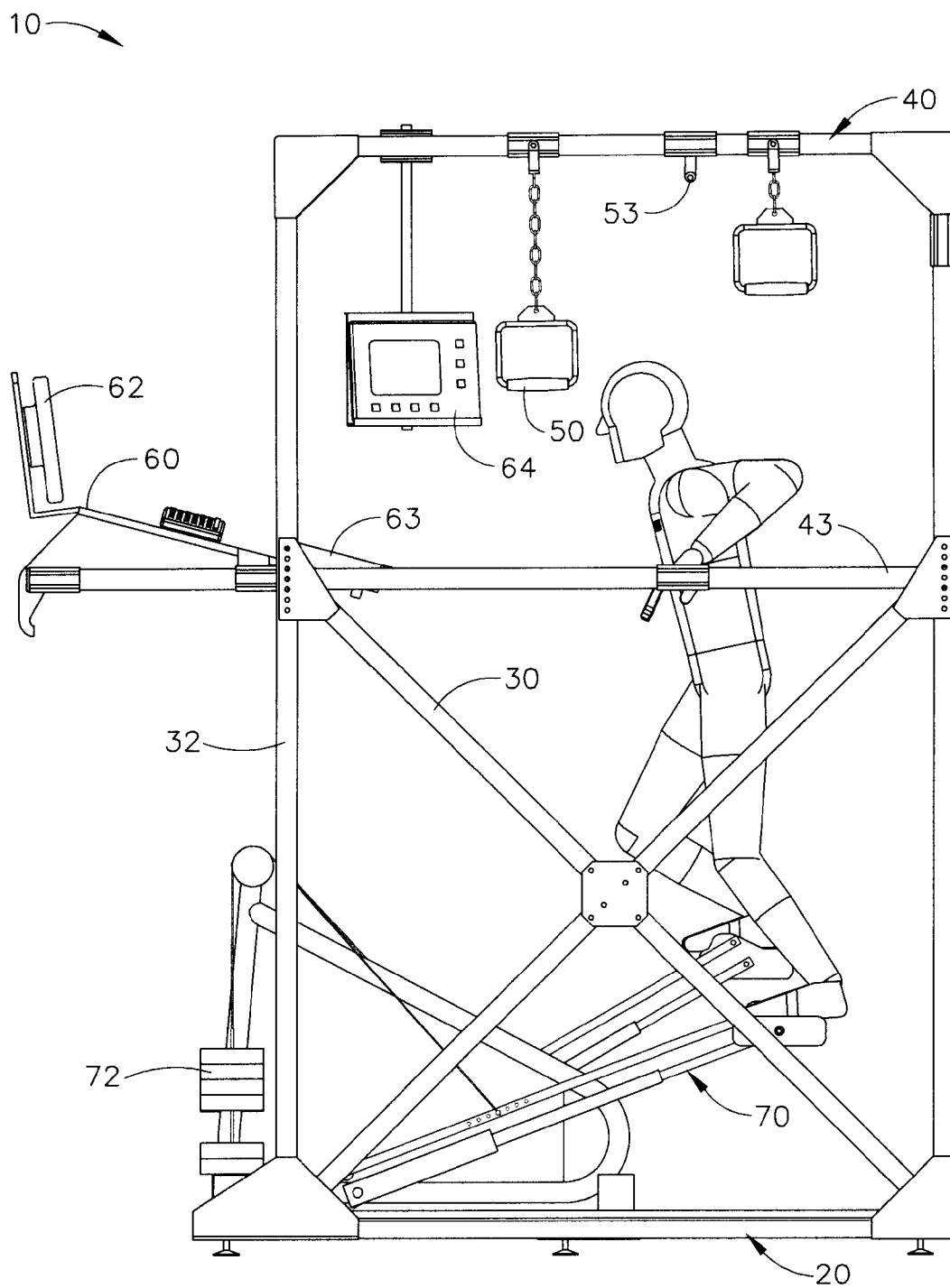


FIG. 29

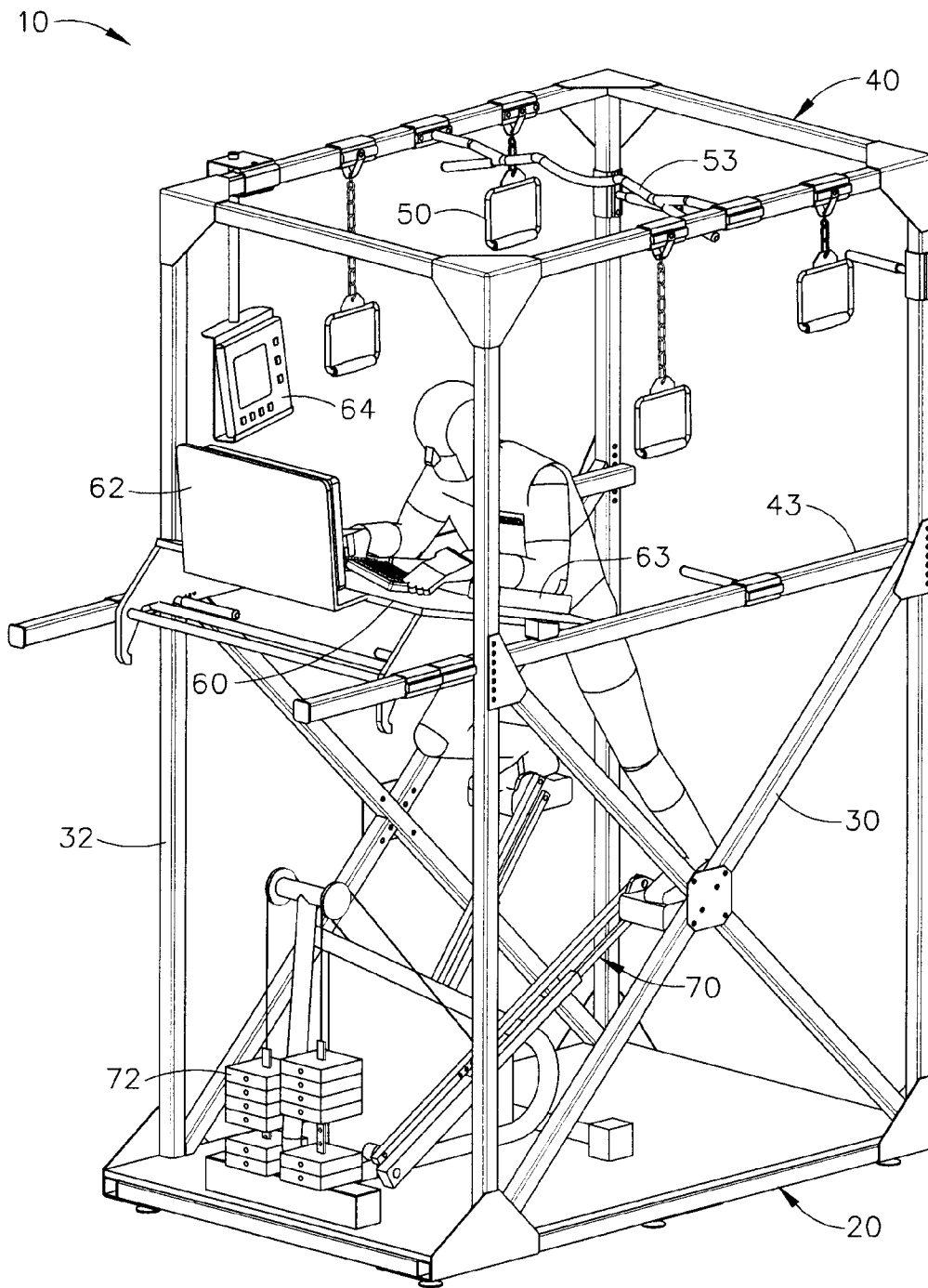


FIG. 30





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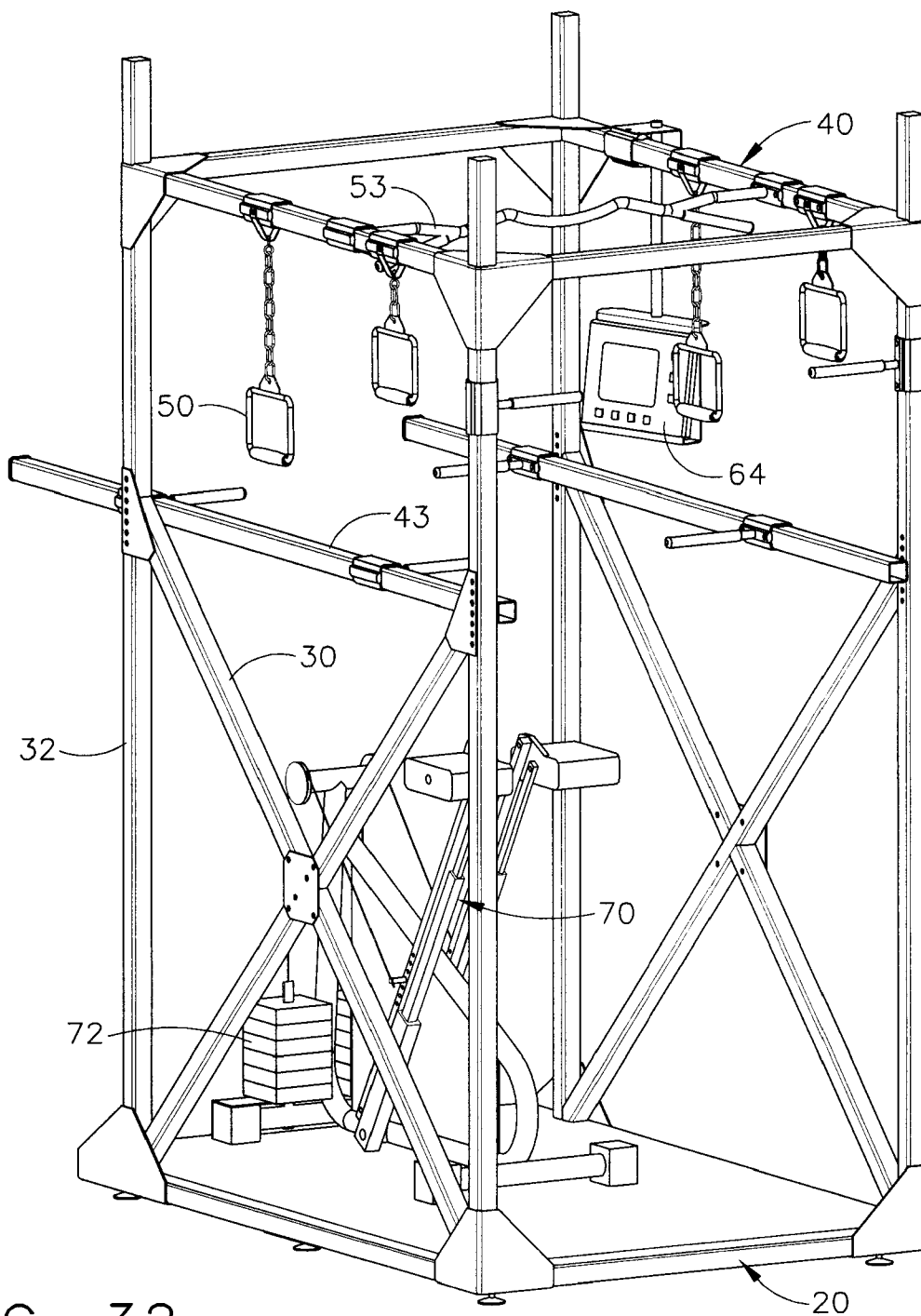


FIG. 32

**EXERCISE FRAMEWORK APPARATUS**

**CROSS-REFERENCE TO RELATED APPLICATION**

**[0001]** The present application claims priority to U.S. patent application Ser. No. 61/103,038 as filed Oct. 6, 2008.

**STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH**

**[0002]** Not applicable.

**NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT**

**[0003]** Not applicable.

**INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC**

**[0004]** Not applicable.

**BACKGROUND ON THE INVENTION**

**[0005]** 1. Field of the Invention

**[0006]** The present invention relates generally to exercise equipment, and more particularly to an exercise framework apparatus used in conjunction with a cardiovascular exercise device to allow for a substantially simultaneous upper-body and lower-body exercise regime.

**[0007]** 2. Description of the Related Art

**[0008]** The amount of time that most individuals are able to devote to physical exercise each day is decreasing due to demands of work, family life, and other activities. As such, many individuals are seeking a means of increasing the effectiveness of an exercise regime while being more efficient in the time devoted to the exercise regime, while also allowing for a lower-impact exercise regime.

**[0009]** Various means of increasing the effectiveness and efficiency of an exercise regime have been proposed. Most of the proposed means include physically working both the upper body, that is, for example, above the waist of an individual, and the lower body, that is, for example, the waist and below on an individual.

**[0010]** For example, U.S. Pat. No. 5,378,209 to Kendrew (hereinafter "Kendrew") describes an apparatus for exercising arms and legs of an individual at the same time. The apparatus of Kendrew exercises the arms and legs of the individual simultaneously in opposition to each other in an upward and downward direction while the individual's body maintains a vertically balanced orientation. The drawback of Kendrew is the repetitive movement of the individual throughout the exercise regime, which tends overwork muscle groups and only target particular muscle groups. Further, such repetitive motion tends to increase boredom on the part of the individual and decrease motivation to actually exercise using the apparatus.

**[0011]** Other examples of means of simultaneously exercising both the upper body and lower body of an individual include U.S. Pat. Nos. 5,171,196 to Lynch, 5,039,088 to Shifferaw, 5,256,117 to Potts et al., 5,662,560 to Svendsen et al., and 7,226,390 to Stearns. Like Kendrew, each of these cited patents is deficient in providing a varied exercise regime that may simultaneously exercise an individual's upper body and lower body.

**[0012]** The present invention provides a substantially rigid framework that may be positioned to substantially surround a stair-stepping machine used by the lower body such that an individual may conduct an upper body workout regime using exercise accessories connected to the substantially rigid framework.

**SUMMARY**

**[0013]** The various exemplary embodiments of the present invention include a substantially rigid framework for use with stair-stepping machines. The substantially rigid framework is comprised of a base, a top portion, and multiple substantially vertical support members connected to the base and directed upward and away from the base and connected to the top portion. The substantially rigid framework substantially surrounds or is adjacent to the stair-stepping machine and allows an individual to conduct lower-body exercises using the stair-stepping machine while simultaneously conducting upper-body exercises using the substantially rigid framework.

**[0014]** In various exemplary embodiments, the user's own body weight provides the resistance for the upper body portion of the workout and can be infinitely changed by varying the pressure on the pedals of the stair-stepping machine.

**BRIEF DESCRIPTION OF THE DRAWINGS**

**[0015]** The various exemplary embodiments of the present invention, which will become more apparent as the description proceeds, are described in the following detailed description in conjunction with the accompanying drawings, in which:

**[0016]** FIG. 1 represents a front view of an exemplary embodiment of the present invention.

**[0017]** FIG. 2 represents a side view of an exemplary embodiment of the present invention.

**[0018]** FIG. 3 represents another front view of an exemplary embodiment of the present invention.

**[0019]** FIG. 4 represents a rear view of an exemplary embodiment of the present invention.

**[0020]** FIG. 5 represents another side view of an exemplary embodiment of the present invention.

**[0021]** FIG. 6 represents another front view of an exemplary embodiment of the present invention.

**[0022]** FIG. 7 represents another rear view of an exemplary embodiment of the present invention.

**[0023]** FIG. 8 represents a top view of an exemplary embodiment of the present invention.

**[0024]** FIG. 9 represents a bottom view of an exemplary embodiment of the present invention.

**[0025]** FIG. 10 represents a rear view of a computer and resting area of an exemplary embodiment of the present invention.

**[0026]** FIG. 11 represents a side view of a computer and resting area in a down position of an exemplary embodiment of the present invention.

**[0027]** FIG. 12 represents another side view of a computer and resting area in an up position of an exemplary embodiment of the present invention.

**[0028]** FIG. 13 represents another rear view of a computer and resting area in an up position of an exemplary embodiment of the present invention.

**[0029]** FIG. 14 represents a view of an up position of an individual conducting a push-up exercise using exemplary embodiments of the present invention.

[0030] FIG. 15 represents another view of an up position of an individual conducting a push-up exercise using exemplary embodiments of the present invention.

[0031] FIG. 16 represents a view of a down position of an individual conducting a push-up exercise using exemplary embodiments of the present invention.

[0032] FIG. 17 represents a view of an individual in a starting position in conducting a pull-up exercise using a top portion of the exemplary embodiments of the present invention.

[0033] FIG. 18 represents another view of an individual in a starting position in conducting a pull-up exercise using a top portion of the exemplary embodiments of the present invention.

[0034] FIG. 19 represents a view of an individual in a mid or half-way position in conducting a pull-up exercise using a top portion of the exemplary embodiments of the present invention.

[0035] FIG. 20 represents a view of an individual in a starting position in conducting a spread pull-up exercise using a top portion of the exemplary embodiments of the present invention.

[0036] FIG. 21 represents another view of an individual in a starting position in conducting a spread pull-up exercise using a top portion of the exemplary embodiments of the present invention.

[0037] FIG. 22 represents a view of an individual in a mid or half-way position in conducting a spread pull-up exercise using a top portion of the exemplary embodiments of the present invention.

[0038] FIG. 23 shows a rear view of an exemplary embodiment of the present invention in which an individual is in a starting position in conducting a bench-pull exercise.

[0039] FIG. 24 shows a side view of an exemplary embodiment of the present invention in which an individual is in a starting position in conducting a bench-pull exercise.

[0040] FIG. 25 shows a rear view of an exemplary embodiment of the present invention in which an individual is in a mid or half-way position in conducting a bench-pull exercise.

[0041] FIG. 26 shows a rear view of an exemplary embodiment of the present invention in which an individual is in a starting position in conducting a dip exercise.

[0042] FIG. 27 shows a side view of an exemplary embodiment of the present invention in which an individual is in a starting position in conducting a dip exercise.

[0043] FIG. 28 shows a rear view of an exemplary embodiment of the present invention in which an individual is in a mid or half-way position in conducting a dip exercise.

[0044] FIG. 29 shows a side view of an exemplary embodiment of the present invention in which an individual is in a mid or half-way position in conducting a dip exercise.

[0045] FIG. 30 represents a view of an individual stair stepping and using a computer positioned on the resting portion of an exemplary embodiment of the present invention.

[0046] FIG. 31 represents another view of an individual stair stepping and using a computer positioned on the resting portion of an exemplary embodiment of the present invention.

[0047] FIG. 32 represents a front view of an exemplary embodiment of the present invention in which the top portion is lowered for a person of smaller stature.

[0049] 10 Substantially rigid framework

[0050] 20 Base

[0051] 30 Substantially diagonal support members

[0052] 32 Substantially vertical support members

[0053] 40 Top portion

[0054] 43 Lateral supports

[0055] 50 Exercise accessories

[0056] 53 Pull-up bar

[0057] 60 Resting portion

[0058] 62 Computer

[0059] 63 Arm rest

[0060] 64 Control panel

[0061] 70 Stair-stepping machine

[0062] 72 Weight stacks

#### DETAILED DESCRIPTION

[0063] Exemplary embodiments of the present invention are represented in the figures. The figures include various aspects of the present invention but should not be construed as representing all limitations of the present invention as described herein.

[0064] The various exemplary embodiments of the present invention include a substantially rigid framework 10 that may be positioned around or adjacent to a stair-stepping machine 70. See, for example, FIG. 1.

[0065] A stair-stepping machine 70, as used herein, is an exercise device that exercises the lower portion of an individual's body. In a preferred embodiment, the stair-stepping machine is connected to two separate weight stacks 72 to allow an individual to control upward force of the pedals. In other exemplary embodiments, this can also be accomplished with springs, bungee cords, power rods, etc.

[0066] The stair-stepping machines may be electronic or manual.

[0067] The substantially rigid framework 10 is comprised of a base 20, multiple substantially diagonal support members 30 and multiple substantially vertical support members 32 both connected to the base and directed upward and away from the base, and a top portion 40 connected to an end of the multiple substantially vertical support members opposite the base. The substantially diagonal support members are connected to the substantially vertical support members.

[0068] The base 20 represented in the figures is substantially rectangular in shape. However, the base may comprise any geometric shape.

[0069] As seen in the figures, there are four substantially diagonal support members and four substantially vertical support members connected to the base. The number of substantially vertical support members and substantially diagonal support members may be increased or decreased as needed. In a preferred embodiment, there are at least four substantially vertical support members and substantially diagonal support members.

[0070] The four substantially diagonal support members illustrated in FIGS. 1-5 and 14-32 cross each other such that one substantially diagonal support member is connected to a back left side of the base and to the substantially vertical support member on a front left side of the substantially rigid framework. Another substantially diagonal support member is connected to the front left side of the base and to the substantially vertical support member on the back left side of the substantially rigid framework. Still yet another substantially diagonal support member is connected to a front right side of the base and to the substantially vertical support mem-

#### DESCRIPTION OF THE REFERENCED NUMERALS

[0048] In reference to the drawings, similar reference characters denote similar elements throughout all the drawings. The following is a list of the reference characters and associated element:

ber on a back right side of the substantially rigid framework. Finally, the fourth substantially diagonal support member is connected to the back right side of the base and to the substantially vertical support member on the front right side of the substantially rigid framework.

[0071] In a preferred embodiment, the substantially vertical support members on the back left side, the front left side, the back right side, and the front right side of the substantially rigid framework connected the base to the top portion. In an exemplary embodiment, and as shown in FIG. 32, a height of the top portion is adjusted by sliding the top portion along a length of the substantially vertical support members. In an exemplary embodiment, the top portion is substantially lockable at various heights along the length of the substantially vertical support members.

[0072] The height of the top portion may be adjusted by using a pin and hole means, and the like. Such adjusting may be conducted via a manual means or automatic mechanical means.

[0073] The top portion represented in the figures is substantially of similar size and shape as the base. The top portion maybe larger or smaller than the base, and further may be of a different shape as the base.

[0074] Lateral supports 43 may connect adjacent substantially vertical support members. Typically, in the embodiments having the lateral supports, the lateral supports are on each of two opposing sides of the substantially rigid framework. Preferably, the lateral supports are positioned to be on the sides, rather than the front or back, of a stair-stepping machine.

[0075] During an exercise regime, an individual may grasp the lateral supports while conducting a lower body exercise using the associated stair-stepping machine.

[0076] Further, exercise accessories 50 may be attached or connected to the lateral supports for upper body exercises while using the associated stair-stepping machine.

[0077] The lateral supports may also be used, for example, to conduct chest dips, as shown in FIGS. 26-29.

[0078] In a preferred embodiment, the lateral supports may be moved towards the base or towards the top portion as needed by an individual. The lateral supports may be moved and positioned by way of, for example, a pin and hole means, a ratcheting means, pressure means, and the like.

[0079] In a preferred embodiment, the top portion may be grasped by an individual to conduct a variety of upper body exercises. In addition, various exercise accessories and/or arm supports/rests may be attached to the top portion.

[0080] For example, an individual may grasp the top portion and conduct pull-ups while also exercising his lower body on the stair-stepping machine. One or more bars (not shown) may be connected between opposing sides of the top portion to permit an individual to conduct chin-ups, behind the head pull-ups, spread pull-ups, and the like. A pull-up bar 53, as shown in use in FIGS. 17-19, may be attached to the top portion to permit an individual to conduct chin-ups.

[0081] In various exemplary embodiments, lateral support extensions may be attached to the substantially vertical support members or the lateral supports. The lateral support extensions preferably are directed away from the rigid support framework. The lateral support extensions may be positioned at a variety of desired angles, including for example, forty five degrees relative to the substantially vertical support member or the lateral support or ninety degrees relative to the substantially vertical support member or the lateral support.

[0082] The lateral support extensions may be used by an individual to perform push-ups while also conducting lower body movement on the associated stair-stepping machine. FIGS. 14-16 show an individual conducting a push-up exercise on an exemplary embodiment of the present invention.

[0083] The substantially rigid framework may further include a resting portion 60 towards a front of the substantially rigid framework. The resting portion preferably allows for placement of a television, computer 62, gaming system, or a combination thereof to allow an individual to watch television or movies, play games, conduct business, search the Internet, or a combination thereof, while also performing an exercise regime on the associated stair-stepping machine. Arm rests 63 may be positioned on the resting portion. In a preferred embodiment, the arm rests are adjustable. See, for example, FIGS. 3-6.

[0084] In a preferred embodiment, each side of the resting portion is connected to the lateral supports. The resting portion may slide forward and rearward to accommodate the individual. The resting portion is slidable along a length of the lateral supports. For example, an individual can slide the resting portion forward to more easily use the computer, as shown in FIGS. 30-31. An individual can slide the resting portion rearward and up to allow more space for exercising.

[0085] In a preferred embodiment, the resting portion can be rotated upward to allow more space for exercising. For example, and as shown in FIGS. 12-16, the resting portion is rotated upward at a ninety degree angle relative to the lateral supports to allow more space for exercising. In an exemplary embodiment, and as shown in FIGS. 12-16, a top of the resting portion is rotated forward to prevent the computer from slipping when the resting portion is rotated upward. The resting portion is rotatable about a bar connecting opposing lateral supports.

[0086] Further, the television, computer, or gaming system in the resting portion may allow an individual to perform an exercise regime associated with a programmed and known regime and/or compare abilities to known athletes.

[0087] For example, if the associated stair-stepping machine is a climbing exercise device, the programmed regime shown on the television, computer, or gaming system may show a portion of a particular mountain or wall. The program may change the resistance on one or both of the foot rests of the climbing exercise device based on the programmed regime. Such programmed regime may be actual filmed footage of the programmed regime, digitally enhanced filmed footage, animation, or digitally created footage, or a combination thereof.

[0088] In an exemplary embodiment, the programmed regime is also programmed into the associated stair-stepping machine such that the associated stair-stepping machine reacts and changes resistance levels based on the programmed regime.

[0089] In a preferred embodiment, the substantially rigid framework may further include a control panel 64. The control panel controls all functions of the stair-stepping machine. The functions controlled by the control panel include, but are not limited to time and speed of descent of each pedal.

[0090] While this invention has been described in conjunction with the specific embodiments outlined above, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, the preferred embodiments of the invention as set forth above are

intended to be illustrative, not limiting. Various changes may be made without departing from the spirit and scope of the invention.

What is claimed is:

1. A substantially rigid framework for use with stair-stepping machines, the substantially rigid framework comprised of:

- a base;
- a top portion;
- multiple substantially vertical support members connected to the base and directed upward and away from the base and connected to the top portion;

wherein the substantially rigid framework substantially surrounds or is adjacent to the stair-stepping machine and allows an individual to conduct lower-body exercises using the stair-stepping machine while simultaneously conducting upper-body exercises using the substantially rigid framework.

2. The framework according to claim 1, further comprising substantially diagonal support members connecting adjacent substantially vertical support members on opposing sides of the substantially rigid framework.

3. The framework according to claim 1, further comprising lateral supports connecting adjacent substantially vertical support members on opposing sides of the substantially rigid framework.

4. The framework according to claim 3, wherein the lateral supports may be moved towards the base or towards the top portion as needed.

5. The framework according to claim 3, wherein exercise accessories may be attached or connected to the lateral supports.

6. The framework according to claim 1, wherein exercise accessories may be attached or connected to the top portion.

7. The framework according to claim 1, further comprised of lateral support extensions attached to the substantially

vertical support members towards the back of the stair-stepping machine and are directed away from the substantially rigid framework.

8. The framework according to claim 7, wherein the lateral support extensions are positioned at a variety of desired angles relative to the longitudinal support.

9. The framework according to claim 1, further comprised of lateral support extensions attached to the lateral supports towards the back of the stair-stepping machine and are directed away from the substantially rigid framework.

10. The framework according to claim 1, further comprised of a resting portion towards a rear of the substantially rigid framework.

11. The framework according to claim 10, wherein the resting portion preferably allows for placement of a television, computer, gaming system, or a combination thereof.

12. The framework according to claim ii, wherein the resting portion further comprises one or more arm rests.

13. The framework according to claim ii, wherein the television, computer, or gaming system includes a programmed exercise regime that shows the regime on a screen and alters the resistance of the associated stair-stepping machine.

14. The framework according to claim 1, wherein the resting portion is connected to the lateral supports, and wherein the resting portion is slidable along a length of the lateral supports.

15. The framework according to claim 14, wherein the resting portion is rotatable about a bar connecting opposing lateral supports.

16. The framework according to claim 1, wherein the top portion is slidable and substantially lockable along a length of the substantially vertical support members.

17. The framework according to claim 1, wherein the stair-stepping machine further comprises two weight stacks.

18. The framework according to claim 1, further comprising a control panel.

\* \* \* \* \*