United States Patent [19]

Johnson

[11] **3,843,117**

[45] **Oct. 22, 1974**

[54] **EXERCISING METHOD FOR REDUCING VOLUME OF HUMAN TISSUE IN REGIONS OF THE ABDOMEN**

[76] Inventor: **Lorene M. Johnson,** Rt. 4, Hereford, Tex. 79046

[22] Filed: **July 16, 1973**

[21] Appl. No.: **379,255**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 196,958, Nov. 9, 1971, Pat. No. 3,756,592.

[52] **U.S. Cl.** ..... **272/57 R,** 272/84

[51] **Int. Cl.** **A63b 23/02**

[58] **Field of Search** ..... 272/57 R, 81, 84

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Primary Examiner—Anton O. Oechsle
Assistant Examiner—R. T. Stouffer
Attorney, Agent, or Firm—Ely Silverman

[57] **ABSTRACT**

Volume of excess semi-fluid tissue in hypogastric and umbilical and related regions of the human operator's abdomen is selectively reduced by manipulation of operator-powered impact producing apparatus to selectively develop forced oscillations in such tissue and express liquid therefrom. The apparatus comprises an elongated container having rigid end walls and an interemdiate wall forming a closed chamber. The inside of the chamber is partially filled with a fluent material. On the end walls of the container are located rigid handles, each of which extends laterally from the end wall to which it is attached. By these handles, a user holds the device with his or her hands in order to perform the above mentioned manipulation.

6 Claims, 25 Drawing Figures

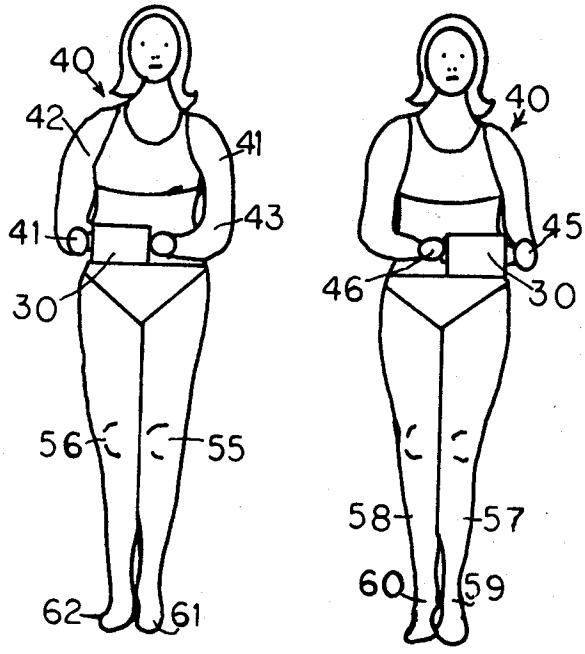


FIG. 1

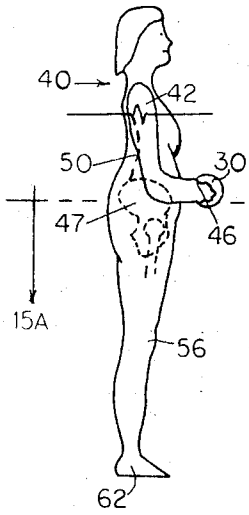


FIG. 2

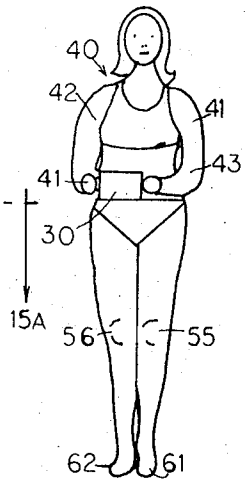


FIG. 3

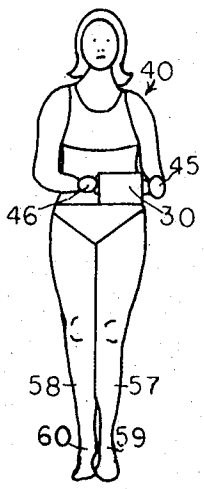


FIG. 4

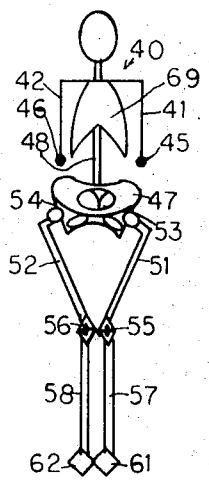


FIG. 5

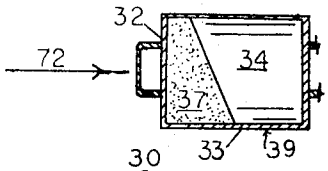


FIG. 6

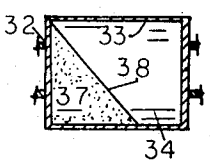


FIG. 7

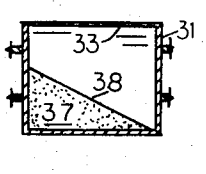


FIG. 8

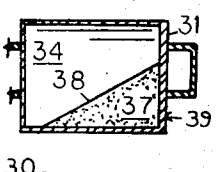


FIG. 12

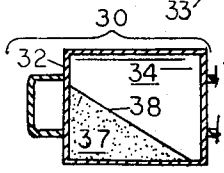


FIG. 11

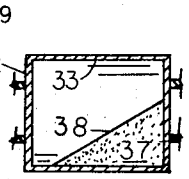


FIG. 10

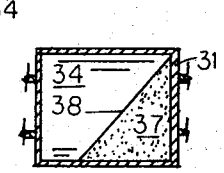


FIG. 9

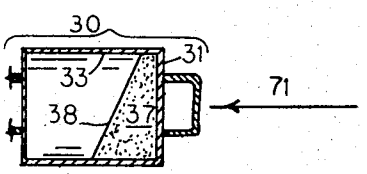


FIG. 13

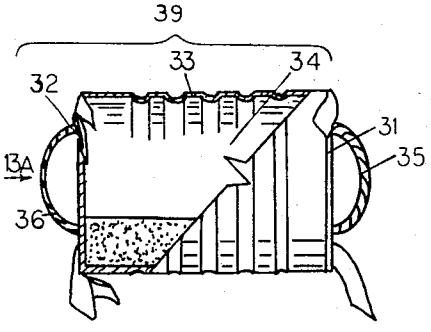


FIG. 14

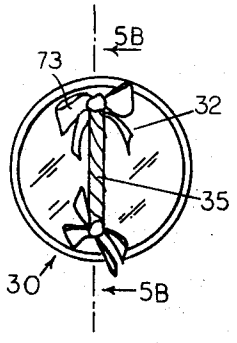


FIG. 18

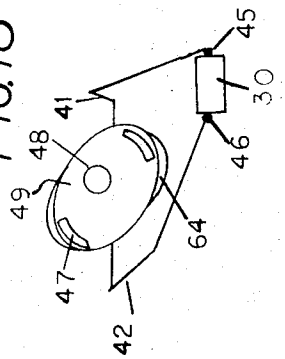


FIG. 17

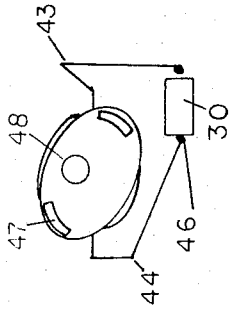


FIG. 19

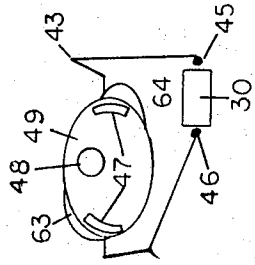


FIG. 16

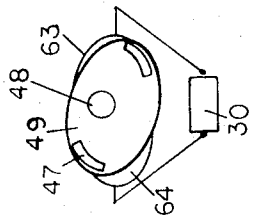


FIG. 20

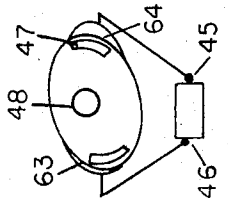


FIG. 15

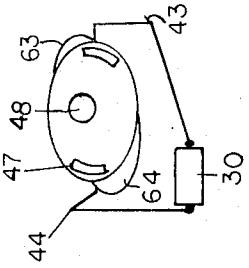


FIG. 21

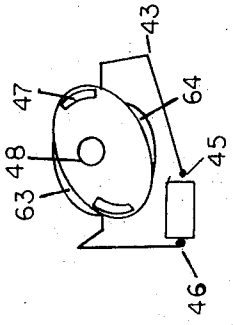
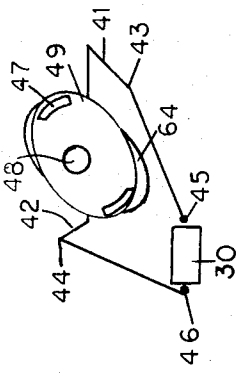


FIG. 22



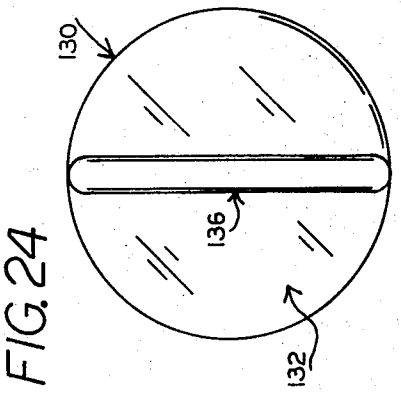


FIG. 24

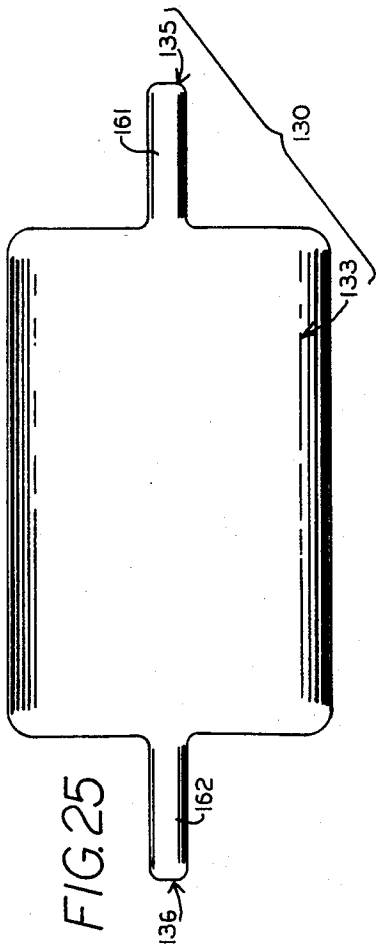


FIG. 25

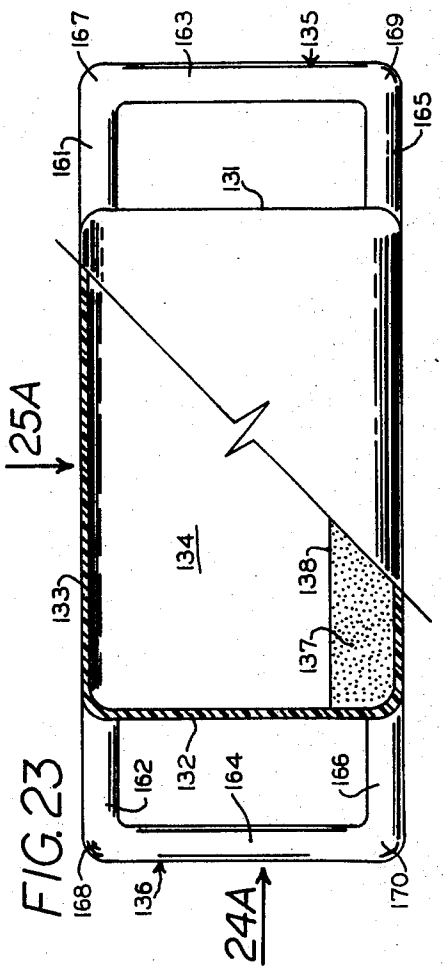


FIG. 23

EXERCISING METHOD FOR REDUCING VOLUME OF HUMAN TISSUE IN REGIONS OF THE ABDOMEN

REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part of my copending U.S. Pat. application Ser. No. 196,958, filed Nov. 9, 1971, entitled EXERCISING APPARATUS AND METHOD as filed now U.S. Pat. No. 3,756,592 issued Sept. 4, 1973, entitled CONTAINER FOR USE AS EXERCISING APPARATUS HAVING FLUENT MASS THEREIN.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The field of art to which this invention pertains is exercising apparatuses.

2. Description of the Prior Art

A mass of semi-fluid tissue frequently develops and accumulates in women after childbirth and in middle age in both men and women below the skin and external to the muscle layers in the anterior umbilical and hypogastric or pubic regions of the abdomen and, also, in the anterior lumbar and inguinal regions of the abdomen and, in the back, between the muscles and the skin in the lumbar region (the region of the lumbar vertebrae). This mass of semi-fluid tissue is substantially unresponsive to all prior attempts at removal by massage, known exercises or diet although diuretics effect reduction in its volume. The instant apparatus and its process of use is successfully directed at safely, conveniently and efficiently selectively reducing the volume of such tissue.

SUMMARY OF THE INVENTION

This apparatus and method selectively causes the mass of semi-fluid tissue in the umbilical and hypogastric regions of the anterior abdomen of an operator of the apparatus and method to oscillate at a sufficiently rapid frequency to express fluid from such tissue. Such oscillation is effected by applying sufficiently rapidly repeated sharp impacts to such tissue to express liquid from such tissue and thus deplete such tissue of its liquid content and, accordingly, reduce the bulk thereof.

The impacts are provided by the method using synergistic combination of the impact producing apparatus with the skeleton and musculature of the operator to substantially selectively apply impulses to such tissues.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a side view of an operator using one apparatus **30** of this invention; this figure is shown broken away to show some of the relationships of the pelvic girdle of the skeleton to the remainder of the body of the operator during use of the apparatus.

FIGS. **2** and **3** are front views of an operator **40** in two different stages of operation of the apparatus **30** at the two most lateral extents of its motion; FIG. **2** shows the apparatus **30** at the right side of the operator; FIG. **3** shows the apparatus **30** at the left side of the operator.

FIG. **4** diagrammatically shows the skeleton of an operator to show some of the relations of joints and bony

structures referred to in the following description of the use of the apparatus **30.**

FIGS. **5–12** are each a diagrammatic view on vertical longitudinal section **5B—5B** of FIG. **14** to show the position of the fluent mass **37** in the interior of apparatus **30** at each of several sequential stages in the process of operation of the apparatus **30** according to the process of this invention.

FIG. **13** is a front view of apparatus **30,** partly broken away, to show the interior thereof.

FIG. **14** is an end view along direction of arrow **13A** of FIG. **13** to show a side view of apparatus **30.**

FIGS. **15** through **22** are diagrammatic showings of horizontal transverse sections through the plane **15A—15A** of FIG. **1** and show, with some diagrammatic exaggeration, the position of the torso **39** and semi-fluent tissues **64** and **63** of operator **40** during the operation of the apparatus **30** at various positions of the apparatus **30** relative to the operator **40.**

FIG. **23** is a front view of apparatus **130** partly broken away to show the interior thereof.

FIG. **24** is an end view along direction of arrow **24A** of FIG. **23.**

FIG. **25** is a top view along direction of arrow **25A** of FIG. **23.**

In reference to all the figures herein right and left are the right and left of the figure as the figure faces the reader hereof rather than the right and left of the reader viewing the figures.

The definitions of regions of the abdomen as used herein are set out at page 3 of column 3 of Webster's New International Dictionary — Merriam Co. Publishers, 1961, Second Edition Unabridged and Gray's Anatomy, page 1,136 and 1,138, 23rd Edition, Lea and Ferbiger, Philadelphia, 1936.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The apparatus **30** comprises a flat imperforate rigid left end wall **31,** a flat imperforate rigid circular right end wall **32** and an imperforate rigid intermediate wall of right cylindrical shape **33** therebetween and firmly and rigidly joined at its ends to the walls **31** and **32.**

The end walls **31** and **32** are parallel to each other and, with the wall **33,** encompass a right cylindrical chamber **34.**

A rigid left U-shaped handle **35** is firmly and rigidly attached at its central upper and lower ends to outside of the left end wall **31** and a rigid right U-shaped handle **36** is firmly and rigidly attached at its central upper and lower ends to the outside of right end wall **32.** Both handles have the same size, shape and weight; each handle extends in the vertical plane; i.e., parallel to each other, and extends laterally in direction of length of central longitudinal axis of the intermediate wall **33** and perpendicularly to the end wall to which attached. Each handle is symmetrical about the central longitudinal axis of wall **33.**

A mass of sand **37** is located within the chamber **34.** Its upper surface **38** does not reach to the middle diameter of the chamber **34.** Walls **31, 32** and **33** form an air-tight rigid container **39**: the handles extend transversely to the length of said container.

In the particular embodiment shown the container **39** has a length left to right as shown in FIG. **13** of 6½ inches and a height of 5 inches. The handles are made of ⅛ inch steel with ribbon therearound to a total thick-

ness of ¼ inch. The walls **31** and **32** are 0.010 inch thick, the wall **33** is 0.015 inch thick and the container itself weighes 10 ounces and has an interior volume of 125 cubic inches.

The sand has a volume of 32½ cubic inches and weighs 64 ounces. The particle size is about +0.005 inch to −0.020 inch, and free flowing and chemically inert and non-powdery.

An erect female operator **40,** shown in FIGS. **1–3** in front view, standing erect with clothing loose around the abdominal region holds the apparatus **30** by its handles **35** and **36.** In this operation the lady operator **40** stands flatfooted and erect facing forward, with shoulders parallel to a line across the side-to-side width of her head and parallel the floor with left foot **61** and right foot **62** touching. The left ankle **59** and right ankle **60** are also close or touching each other and the two feet **61** and **62** are parallel and pointed straight forward at right angles to a line between the shoulders of the operator. In this position also the left and right knees **55** and **56,** respectively, of the operator also are in contact or within ½ inch of each other. The upper left and right arms, **41** and **42,** of the operator **40** are vertical and her elbows **43** and **44** are at her waistline. The operator's hands **45** and **46** hold the handles **35** and **36,** respectively with hands **45** and **46** at vertical level of the elbows **43** and **44.** The operator then shakes the apparatus **30** by rapidly and repeatedly moving it from the right side of the body at the same height, as shown in FIGS. **2** and **22,** along a horizontal line spaced forward of the operator's abdomen to the left side of operator's body as shown in FIGS. **3** and **18.**

More particularly, on repeated cycles of movement of apparatus **30** and operator **40** from the position shown in FIGS. **2** and **22** to the position shown in FIGS. **3** and **18** and back again to the position of FIGS. **2** and **22** at a frequency of 19 to 20 times in 5½ to 6 seconds the semi-fluent tissue **64** of the torso **49,** which tissue is located exteriorly of the muscles that encompass the umbilical and hypogastric regions of the abdomen is rapidly moved and jolted in such manner and degree as to provide for reduction in the volume of such tissue, as is more fully described herebelow. Such reduction is effected without chafing or bruising the skin and safely by this method and apparatus.

In operation the operator **40** repeatedly moves the apparatus **30** leftwards from the position shown in FIGS. **2** and **22** and **12** to the position shown in FIGS. **3** and **18** and **8,** then back rightwardly to the position shown in FIGS. **2** and **22.** As seen from the front and diagrammatically shown in FIGS. **8** and **12** the contents of the chamber **34** are vigorously thrown with some impact so that the upper surface **38** of the mass **37** in the apparatus **30** flows first (on leftward motion) against the left wall **31** in the position of the apparatus **30** shown in FIGS. **3** and **8** and **18.** The movement of the apparatus in a direction toward the right side of the operator, i.e., a movement in the direction of the arrow **71** of FIG. **18,** moves the apparatus **30** toward the operator's right and the fluent mass of sand **37** in the chamber **34** develops momentum in the sand resulting from such motion from the position shown in FIGS. **3** and **8** and **18** to the position shown in FIGS. **2** and **12** and **22.** That motion of the apparatus **30** in the direction of arrow **71**; i.e. from the left of the operator to the operator's right initiates a piling up of such material in a vertically extending column at wall **32** (c.f. FIG. **12**). Subsequent motion toward the operator's left as shown in FIGS. **15-17** moves apparatus **30** and provides impact against wall **31.**

As the apparatus **30** moves to the left and the operator reduces the speed of the apparatus **30** in a direction toward the operator's left the fluent mass slides toward the left hand end **31** and upper surface thereof assumes the shape as shown in FIGS. **6** and **7.** Still further motion to the left of the operator with a deceleration concommitant on imminent reversal of motion causes the sandy mass **37** to shift very dramatically from the higher portion on the righthand side as in FIG. **7** to the lefthand side **31** of the container. On initial movement of the operator's left hand **45** toward the operator's right the fluent mass **37** continues its motion toward that wall due at least in part to the momentum of the mass **37** resulting from its motion from the position thereof in FIGS. **5, 6** and **7** as well as the prior motion to the left of the operator's hands **46** and **45.** Position in FIGS. **2, 12** and **22** is a point of high acceleration with the mass **37** piled up against the right hand wall **32.** Continued motion of the operator's hands **46** and **45** toward the operator's left with a greater velocity (but less acceleration) than at the position of FIG. **5** to the position of maximum velocity toward the left as shown diagrammatically in FIG. **6** provides orientation of the mass **37** as shown in FIG. **6** wherein the surface **38** is less steeply sloped than in FIG. **5** because of the lowered rate of leftward acceleration during such movement and the influence of gravity to level the surface **38** to a horizontal position. Further motion of the apparatus **30** toward the operator's left as shown in FIG. **7** provides that the mass **37** is more evenly distributed over the bottom of the container **33** because the acceleration then has a minimum value. Fluent mass **37** then moves from the position shown in FIGS. **7** and **17** to that shown in FIGS. **8** and **18.** With such further motion of the apparatus **30** toward the position of the operator **40** and the apparatus **30** shown in FIGS. **3** and **18** with a definite deceleration of the container of apparatus **30** to the left or acceleration to the right the mass **37** shifts strongly within container **35** to the lefthand side of the container **35** and the surface **38,** due to the momentum of the mass **37** (because of the motion of the apparatus **30** from the position shown in FIGS. **2** and **22** to the position shown in FIG. **17**) urges the mass **37** against lefthand wall **31,** forming an impact against the wall **31** as shown in FIGS. **8** and **18.**

Following this position of the apparatus **30** and operator **40** the operator's left hand then moves the container **35** toward the right of the operator and this in turn, due to the momentum of the mass **37** moving from the position shown in FIGS. **7** (and **17**) with the motion of the wall **31** from the lefthand side of the operator toward the right continues an impact by and concentration of the mass **37** against that lefthand wall **31.**

As shown in FIGS. **1** and **4** the human female anatomy is arranged so that the spine **48** is attached to the hip bone **47** with the most forward or anterior part **50** of the spine close to but above the hip bone in a vertical line substantially over the straight line joining the joints in which the L-shaped femurs or thigh bones **51** and **52** are seated in the seats (acetabulums) therefor as **53** and **54** in the hip bone **47.** Accordingly the bone structure and ligaments of the knees and hips provide for a relatively easily effected rotating action of the hips **49**

of the operator about a vertical axis passing through the anterior portion **50** of the spine during this operation.

On initiation of operation of this process by the operator **40** the head and neck and collarbone and shoulderblades of the operator are held in a fixed location and position, mainly facing straight ahead and level as shown in FIGS. **1, 2** and **3.** Starting at position of FIGS. **2** and **22** with the shoulders at such fixed location and position the muscles on the right side of the operator's chest draw the right arm **42** toward the operator's left; at the same time the muscles on the left side of the back draw the left arm to the left of the operator (generally as shown in FIG. **15**). Such movement causes a slight rotation of the hips, (as seen from above) in a clockwise direction as shown sequentially in FIGS. **22, 15** and **16** with some exaggeration to more effectively illustrate such movement.

At and near the left end of travel of the apparatus **30,** while the head, neck and shoulderblade and the collarbone are still in the same fixed position, as at the initiation of the operation, and when the hipbones are in and near their most clockwise position, as shown in FIGS. **3** and **18** the muscles of the left side of the operator's chest then draw upon and move the left arm and hand toward the right side of the operator and the muscles on the right side of the back draw upon and move the right arm **42** and hand toward the right side of the operator **40** and the operator's hips begin to and do turn counterclockwise (as seen from above) as shown in FIGS. **19, 20** and **21.**

This clockwise and counterclockwise rotation of the hipbone **48** (or pelvis) is a result of the above described arm movements and resistance due to inertia of fluent mass **37** in chamber **34** to such movements and that the bones of the chest are relatively firmly attached to the spine, as are the muscles of the back; hence such movements of the arms and apparatus **30** in each direction causes the chest bones and spine and hip bone or pelvic girdle **47** to move in the opposite direction. Such tendency to move the chest bones, spine and pelvic girdle effects such movement because of the relatively free rotation of the hip or pelvic girdle on the ball and socket joints **53** and **54** for the thighbones **51** and **52** and the back and forth pivotal motion of shin bones **57** and **58** at anklejoints **59** and **60** in the erect posture of the operator **40,** in combination with the fixed position of the operator's feet **61** and **62** on the floor and the fixed position of the head and neck and collarbone and the elastic pivoting about a vertical axis permitted the pelvic girdle by the bones and joints and muscles near the spine and pelvic girdle of the operator.

The impulse applied to the apparatus **30** by the fluent mass **37** is applied to the skeletal frame of the operator **40** at each extreme position; i.e., at each extreme position as in FIG. **2** and FIG. **22** and the opposite positions of FIGS. **3** and **18.** Impulse provided by such impact applied to the ends of the apparatus **30** is transmitted to the semi-fluent tissue at front zone **64** and rear zone **63** which are the movable members of a connected series of elastically deformable yet relatively rigid elements; i.e., the arm bones, the chest bones **69,** back bone or spine **48** and the muscles attached to the backbone, with flesh at zones **63** and **64** supported at the exterior of the muscles being relatively freely movable. Thereby the semi-fluid tissues at zones **63** and **64** are rapidly jolted as if the impact developed in the apparatus **30** was directly applied to such tissues. Such impact depends upon the velocity of the mass **37.** It is not necessary that the mass **37** be large enough to effect the position of the torso to the degree as is diagrammatically shown in FIGS. **15** through FIG. **22** although such movement of the torso does occur to a slight degree. Accordingly, the operation of the apparatus **30** provides that there is a transmittal of kinetic energy from the impulse of the moving mass **37** to the masses of semi fluent tissue in generally the same manner as when there is a square or full impact between one moving billiard ball and a series of stationary and adjacent billiard balls arrayed in a straight line when the impulse of the moving ball imparts its energy through the elastically deformable series of elements to the movable body at the end of such series.

More particularly, the impulse of the fluent mass **37** in apparatus **30** against the left hand **45** of the operator is transmitted to the right elbow, right arm, shoulder and then the spine **48** of the operator and thence to the muscles in the zone of the umbilical and right and left lumbar regions of the operator. These are tense and elastic tissues and transmit the energy of the impact to a mass of movable tissue at zone **64** and give such tissue an equal impulse in the direction that the mass **37** has been theretofore traveling. When the mass **37** moves to the operator's right as shown in FIGS. **18–22** the fluent mass provides a substantial impulse and impact in the direction rightwards of the operator **40;** the movable tissue **64** is then moved sharply in the rightward direction as shown in FIG. **22.** There is superimposed upon this rapid vibrational movement of the mass **64** the slight twisting of the torso as is shown in FIGS. **15** through **22.** This twist motion of the torso is measured by the movement of the superior iliac spine of the pelvis **47**: such twisting of the hips provides only for a motion of about ½ inch backwards and forwards from the position shown in FIG. **22** to the position shown in FIG. **18.** In the operation provided herein the slight mass of the apparatus **30** has no great momentum developed yet the impact is effectively applied through the rigid and elastic portions of the body to the freely movable tissues supported in the region of the hip bones, as **64** (and **63**).

The leftward impact of the mass **37** at the left hand end of travel as shown in FIGS. **3** and **18** is thus applied to the operator's hands and arms and skeletal frame (including chest bones and spine and pelvic girdle). Such members of the skeletal frame elastically change their position and then elastically return to their position and thereby transmit the elastic deformation due to such impact to the umbilical semi fluent tissue: such impact is so effected to rapidly as to so rapidly shift or jolt such semi fluent tissue at zone **64** still further to the operator's left that the skin of the operator immediately overlying such semi fluent tissue is distended and protrudes outwardly and laterally of its normal position. Such protrusion shows and is palpable as showing a shifting of liquid from one portion of such umbilical and hypogastric semi-fluent tissue to another zone of such tissue normally laterally leftward thereof. The pulse of tissue is particularly palpable and noticeable at the left inguinal and left lumbar regions of the abdomen.

The rightward impact of the mass **37** at the right hand end of travel as shown in FIGS. **2** and **22** is applied to the operator's hands and arms and skeletal frame (in-

cluding chest bones and spine and pelvic girdle). Such members of the skeletal frame elastically change their position and then elastically return to their position and thereby transmit the elastic deformation due to such impact to the umbilical semi-fluent tissue: such impact is so effected (as above) as to so rapidly shift or jolt such semi-fluent tissue at zone **64** still further to the operator's right that the skin of the operator immediately overlying such semi-fluent tissue is distended and protrudes outwardly and laterally of its normal position. Such protrusion shows and is palpable as showing a shifting of liquid from one portion of such umbilical and hypogastric semi-fluent tissue to another zone of such tissue normally laterally rightward thereof. The pulse of tissue is particularly palpable and noticeable at the right lumbar and right inguinal regions of the abdomen.

The motion of the operation of the preferred embodiment of apparatus **30** above described requires only a total of 8 inches movement of the operator's hands from the position of the apparatus **30** in FIG. **2** to its position shown in FIG. **3**. FIGS. **2** and **3** are to scale. Generally the width of the apparatus **30** is about one half the width of the hips of the user and the movement is about one and one half times the right to left length of the chamber **34.** The length of the movement should be greater than the length of the apparatus but the total movement of the apparatus should be no greater than movement concomitant on the operator moving her left hand no further left than the lateral extent of the leftmost extent of the body, and moving the right hand no further right than the lateral extent of the rightmost extent of the body with a length of movement in excess of the length of the chamber across which the fluent mass travels to create the impact that is applied to the semi-fluent tissue in the hypogastric and umbilical regions of the abdomen.

While principal interest is in reducing the bulk of the mass of the semi-fluent subcutaneous tissues exterior to the muscles at the front of the abdomen in the umbilical and hypogastric zones (**64**), extra-muscular subcutaneous semi-fluent tissue at rear of the operator's body near to the top of the pelvic girdle is also similarly acted upon as shown in FIGS. **15–22** and reduced size as above described for zone referred to as **63.**

In the preferred embodiment about 5 minute periods of operation as above described in relation to FIGS. **5–12** and **15–21** are preferred once a day with clothing loose about the waist and hips. Such a program of use with a female operator 5 feet 5 inches tall in stocking feet weighing 149 pounds reduced her weight to 135 pounds during a one-month period of usual diet and absence of stress. The operator usually experiences passage of larger amounts of water following the use of apparatus **30** above described. In the above described program of use the operator experienced a reduction in measurement around the body between the crest of the pelvic girdle and the hip joint **53** and **54**; i.e., at the section shown as **15A—15A** in FIG. **1**, of 3 to 4 inches.

While the particular size and shape of container are a preferred embodiment, similarly functioning apparatuses may also be used, with the fluent mass formed of sufficiently large particles as to not escape from the container therefor, thus the container should be imperforate where a liquid or a liquid slurry is used but a perforated container may be used where only solid particulate material is used so long as the particles of the fluent mass have, like the mass of sand **37,** substantially no elasticity as a mass so that as much as possible of the kinetic energy of motion of the fluent mass **37** shown in FIGS. **5–12** is converted to impact and the particles are of a sufficiently large size to not pass through the perforations. The material used should be sufficiently mechanically stable to not break down during the above described motion shown in FIGS. **5–12.** The container **39** should have a weight of less than 1 pound to minimize the momentum aspects of the oscillation of the apparatus and accentuate the impact forces. If it is air-tight as in container **39** changes in humidity do not change the fluidity of the mass **37.**

Other materials of similar total weight and rigidity may be used for the container; e.g., plastic and glass with rounded edges but metal is preferred for weight and safety means.

The mass **37** should be within the range of 25 percent to 200 percent of the weight of the semi-fluent tissue **64** for the reduction of which the apparatus **30** is used. The amount of travel of the apparatus **30** (position of FIG. **2** to position of FIG. **3**) provides that the center of gravity of the fluent mass **37** moves a lateral distance less than the width of the operator's hips, and a greater distance than one-third of such distance.

As shown in FIGS. **13** and **14** a ribbon, as **73,** may be attached to both of the handles to render the appearance of apparatus **30** more appealing and the exterior of the container colored in pastel shades.

The apparatus **130** comprises a flat imperforate rigid left end wall **131,** a flat imperforate rigid circular right end wall **132** and an imperforate rigid intermediate wall of right cylindrical shape **133** therebetween and firmly and rigidly joined at its ends to the walls **131** and **132.**

The ends walls **131** and **132** are parallel to each other and, with the wall **133,** encompass a right cylindrical chamber **134.**

A rigid left U-shaped handle **135** is firmly and rigidly attached at its central upper and lower ends to outside of the left end wall **131** and a rigid right U-shaped handle **136** is firmly and rigidly attached at its central upper and lower ends to the outside of right end wall **132.** Both handles have the same size, shape and weight; each handle extends in the vertical plane; i.e., parallel to each other, and extends laterally in direction of length of central longitudinal axis of the intermediate wall **133** and perpendicularly to the end wall to which attached. Each handle is symmetrical about the central longitudinal axis of wall **133** and is composed of a top straight portion **161** on handle **135** (and **162** on handle **136**), a middle straight portion **163** on handle **135** (and **164** on handle **136**) and a bottom straight portion **165** on handle **135** (and **166** on handle **136**); each handle is symmetrical about the central longitudinal axis of wall **33.** The top portion of each handle **135** and **136** is firmly joined to an end wall **131** and **132** respectively with the top of the upper portions **161** and **162** and the bottom of the lower portions **165** and **166** tangent to the outer surface of wall **33.** The top portion **161** of handle **135** is joined by a curved portion **167** of ¾ inch outside diameter to the vertical extending rigid cylindrical portion **163**; the portion **163** is firmly joined by a curved portion **169** to the bottom straight portion **165.**

A mass of sand **137** is located within the chamber **134.** Its upper surface **138** does not reach to the middle

diameter of the chamber **134.** Walls **131, 132** and **133** form an air-tight rigid container **139.**

The top portion **162** of handle **136** is joined by a curved portion **168** of ¾ inch outside diameter to the vertical extending rigid cylindrical portion **164**; the portion **164** is firmly joined by a curved portion **170** to the bottom straight portion **166.**

In embodiment **130,** the container **139** (not including the handles **131** and **132,** as is also the case in above description of embodiment **30**) has an overall outside length, left to right, of 7-⅛ inch and an overall outside height (as shown in FIG. **23**) of 4-½ inches. The handles **135** and **136** are made of 3/32 inch thick solid plastic tubing of ½ inch outside diameter and project 2 inches laterally of the walls **131** and **132,** respectively. The walls **131** and **132** are each 0.045 inches thick and smooth interiorly and exteriorly; the wall **133** is 0.040 inch thick and also smooth inside and out. The empty container **139,** with handles **131** and **132** thereon, weigh a total of 4-½ ounces without the sand **137.**

The material used for walls **131, 132,** and **133** and handles **135** and **146** is high density polyethyene.

The chamber **134** of the container **139** (the volume within walls **131, 132,** and **133**) has a volume of 111 cubic inches. The sand **137** has a volume of 32 cubic inches (29 percent of volume of container **139**) and weighs 32 ounces. The diameter of the sand grains forming the mass **137** ranges from 0.010 to 0.040 inch and the particles of that particulate mass **137,** like **37,** are free-flowing and chemically inert.

The apparatus **130** also provides, according to the process of use set out above for apparatus **30** as above described, sharp impact development and passage of such impact to the operator's tissues, as **64** and **63,** that are, as above described, pivotally rotatable about the operator's spine as the axis of rotation. Apparatus **130** depends, as does apparatus **30,** for such impact action on the amount of area of the end walls **131** and **132** and the impact of the semifluent mass **137** on such walls, as is above described for the action of the mass **37** on end walls **31** and **32** in embodiment **30.**

I claim:

1. Process for reducing the volume of human subcutaneous extramuscular semi-fluid tissue in umbilical and hypogastric regions of the abdomen which comprises the steps of repeatedly and continuously applying to the hands at elbow level with the forearms bent inwardly at an angle to their respective upper arms and the hands at elbow level alternating leftward and rightward sharp impact while the feet and neck and collarbone are fixed in position and causing the hips to rotate and said semi-fluid tissue to jolt in alternating leftward and rightward direction with sufficient impulse to distend and produce a palpable protrusion in the skin immediately overlying such semi-fluent tissue and express liquid from such tissue.

2. Process as in claim **1** wherein the operator's feet are touching each other and said operator is a female.

3. Process as in claim **2** wherein said oscillation of said container is continued for a period of time from 3 to 10 minutes at a rate of 20 oscillations each 6 to 10 seconds.

4. Process as in claim **3** wherein the weight of the fluent mass is within the range of 25 percent to 200 percent of the weight of the said semi-fluent tissue.

5. Process as in claim **4** wherein between impacts center of gravity of the fluent mass moves a lateral distance less than the width of said operator's hips, and a greater distance than one-third of such distance.

6. Process as in claim **1** wherein an erect operator holds and oscillates a fluent mass within a container therefor to alternately produce said leftward and rightward sharp impacts on said operator's subcutaneous semi-fluid tissue in umbilical and hypogastric regions of the abdomen of said operator.

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