July 1, 1958 A. R. TARR 2,841,139

COMBINED EXERCISING AND MASSAGING LOUNGE

Filed March 23, 1956 2 Sheets-Sheet 1

FIG. 1

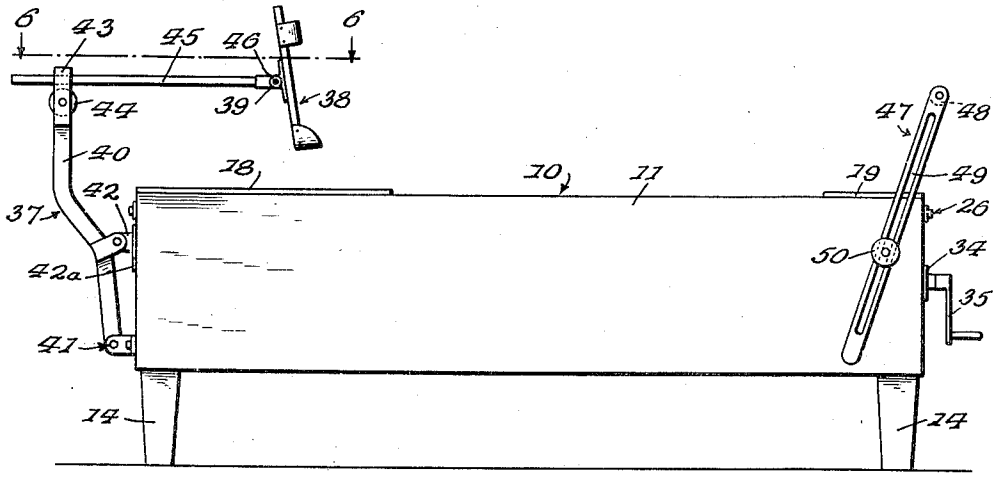


FIG. 2

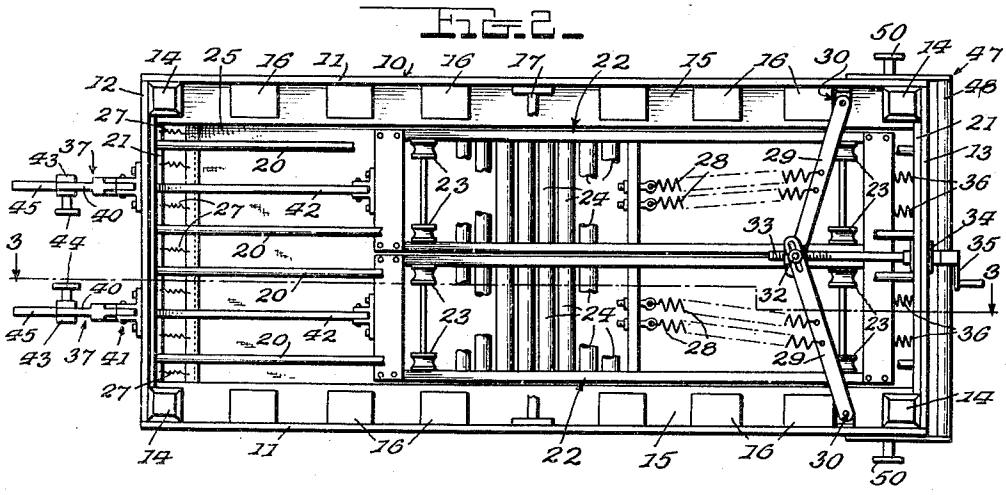
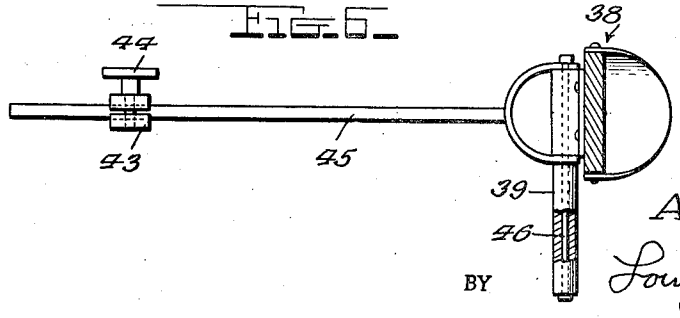


FIG. 6



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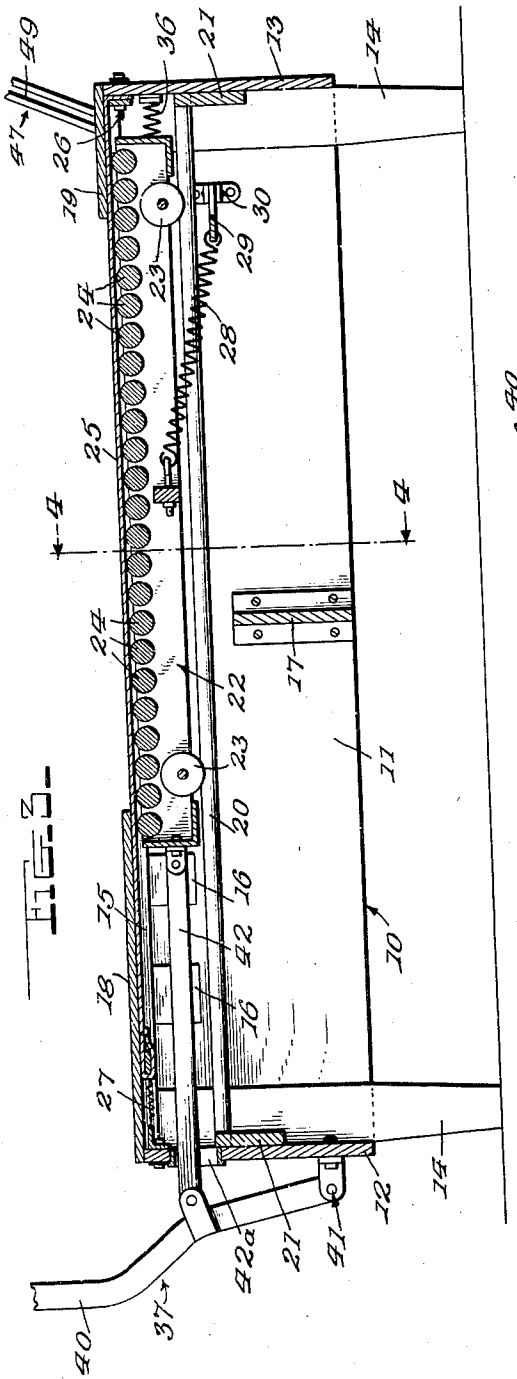


FIG. 2

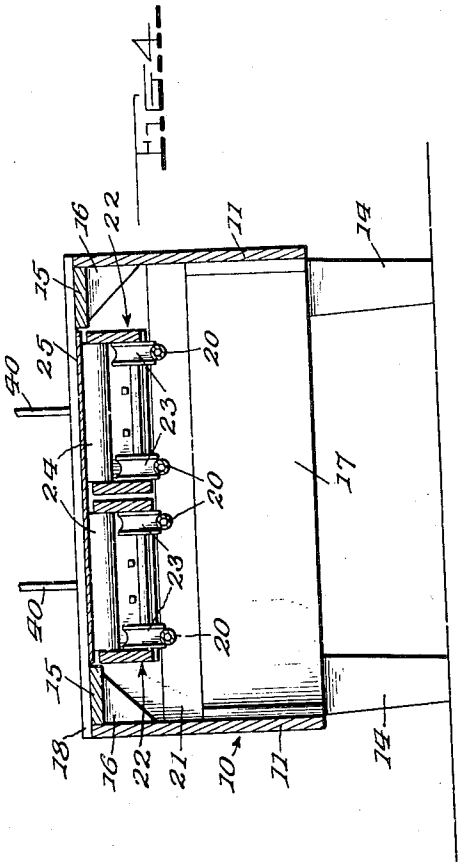


FIG. 4

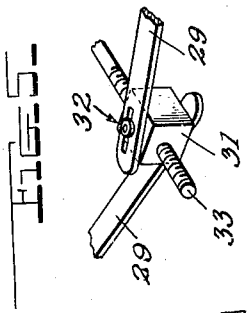


FIG. 5

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United States Patent Office 2,841,139 Patented July 1, 1958

2,841,139

COMBINED EXERCISING AND MASSAGING LOUNGE

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Application March 23, 1956, Serial No. 573,484

10 Claims. (Cl. 128—25)

This invention is designed to provide a novel and advantageous lounge operable by a patient lying thereon to produce simultaneous massage and exercise, for weight reduction or other beneficial purposes.

It has been found by the inventor that a substantial advance in the art of physical conditioning and physical therapy lies in the exercise of a given group of body muscles, accompanied by simultaneous massage thereof. It is critical to the effectiveness of this treatment that there be a sequential contraction and relaxing of said muscles, and that the massage be simultaneous and comprise the true massage movement of applying rubbing pressure in opposite directions. Massage devices have been known in the art wherein massaging rollers, motor driven, have been applied to a body area. Mechanical exercising devices have been well known in the art. It is an object of the present invention to provide a machine capable of effectively applying the new method above described and wherein the treatment is completely accomplished by the patient without the aid of attendants of professional masseurs.

Another object of the invention is to provide a lounge having two longitudinal independently reciprocable carriages provided with massaging rollers which support the patient when lying on the lounge, and to provide independent actuators for said carriages, said actuators being operable by movements of the legs to reciprocate the carriages independently or in unison, thereby providing for simultaneous exercise and roller-massage.

A further object is to provide a structure wherein the parts engaged and actuated by the patient are adjustable to various body sizes and structure, whereby a full exercising stroke may be obtained by each patient with maximum extension and contraction of the muscles being massaged.

The construction is such that movement of the actuators by leg-straightening movements of the patient's legs will move the carriages toward the foot of the lounge, and another object of the invention is to provide spring means for returning the carriages toward the head of the lounge. Thus, the patient must push not only against the resistance set up by engagement of the massaging rollers with the body, but against the resistance of said spring means, thus providing for vigorous exercise of the muscles coupled with simultaneous massage, the spring means providing for an active effort followed by a passive return.

A further object is to make novel provision for easily varying the effective strength of the above mentioned spring means as desired.

Another object is to provide the above mentioned actuators in novel form, to cause efficient operation and to permit the convenient adjustments of said pedals according to the position in which the patient is to lie, whether the patient be lying on the back, or upon one side or the other.

A still further object is to provide a lounge of the above-mentioned type in which the carriage actuators

may be operated by arm movements if it is desired to treat muscles of the upper body.

Still another object is to provide a rather simple and inexpensive yet a highly effective, durable and trouble-free construction.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings, and particularly claimed.

In the drawings:

Fig. 1 is a side elevation of the lounge;

Fig. 2 is a bottom plan view, partly broken away and omitting some of the massaging rollers;

Fig. 3 is a vertical longitudinal sectional view substantially on line 3—3 of Fig. 2;

Fig. 4 is a vertical transverse sectional view on line 4—4 of Fig. 3;

Fig. 5 is a fragmentary perspective view showing a portion of the spring adjusting means; and

Fig. 6 is a detail sectional view on line 6—6 of Fig. 1.

The construction disclosed in the drawings will be rather specifically described but it is to be understood that variations may be made within the scope of the invention as claimed.

A supporting frame 10 is provided, said frame having parallel longitudinal walls 11, one end wall 12 at the foot end of the frame, and another end wall 13 at the head end. The corners of the frame are provided with supporting legs 14, and the upper edges of the side walls 11 have inwardly projecting longitudinal flanges 15. These flanges are braced to the side walls 11 by bracing blocks 16, and a transverse tie member 17 connects the lower portions of said side walls. One top plate 18 is secured upon the side walls 11 and flanges 15 at the foot end of the frame, and another top plate 19 is secured upon said side walls and flanges at the head end. All of the elements 11 to 19 may well be formed from wood.

Two pairs of longitudinal tracks 20 are spaced downwardly from the top plates 18 and 19 and extend from the end wall 12 to the end wall 13. The ends of the tracks 20 are suitably supported by the end walls and in the present disclosure, cleats 21 are secured to said end walls and are notched in their upper edges to receive the ends of the tracks.

Two longitudinal patient-supporting carriages 22 overlie the tracks 20 and extend under the top plates 18 and 19, said carriages being disposed side-to-side between the inner edges of the flanges 15. Suitable supporting wheels 23 are provided for the carriages 22, said wheels resting on the tracks 20 and coacting with the latter in mounting said carriages for independent reciprocation. Each carriage is in the form of a rectangular frame and this frame is spanned by a series of transverse patient-supporting and massaging rollers 24.

A flexible sheet 25 rests on the rollers 24 and extends under the top plates 18 and 19. One end of this sheet is suitably secured at 26 to the frame end wall 13 and the other end is secured to the end wall 12 by suitable means including sheet-tensioning springs 27.

Tension springs 28 are connected at one end with the carriages 22 to pull the latter toward the head of the lounge. The other ends of these springs are anchored to two transverse arms 29, and the outer ends of these arms are pivotally mounted at 30 on the side walls 11. The inner ends of the arms 29 are in overlapping relation and a nut 31 is interposed between these ends, the arms and nut being pivotally and slidably connected at 32. An adjusting screw 33 is threaded through the nut 31

and is mounted in a bearing 34 carried by the frame end wall 13, the outer end of said screw being provided with a hand crank 35. Operation of this crank causes movement of the arms 29 to vary the tension of the springs 28 as desired. Bumper springs 36 are suitably mounted on the frame end wall 13 to limit the movements of the carriages 22 under the influence of the springs 28.

Two independent actuating devices 37 are mounted at the foot of the lounge and are connected with the carriages 22, said actuating devices having pedals 38 for engagement by the feet of a patient lying upon the roller-supported sheet 25. By thrusting on the pedals 38, the patient causes movement of the carriages 22 toward the foot of the lounge and when such thrusts are relieved, the springs 28 return the carriages toward the head of the lounge. Thus it will be seen that these carriages may be reciprocated in opposite directions by alternate and simultaneous movement of the legs, that such reciprocation requires exercise and that it causes the rollers 24 because of the close side-to-side relationship of the carriages and the rollers carried thereby to perform a massaging operation duplicating the basic hand massage movement.

Both pedals 38 are used by a patient lying upon his back and supported by the rollers of both carriages 22. However, if the patient lies upon one side or the other, the then lowermost leg should be employed to operate only one or the other of said pedals. To conveniently permit this, provision is made whereby the pedals 38 may be adjusted from the vertical positions shown to horizontal positions, as hereinafter described. Also, to permit the patient to lie upon the stomach and operate the exercising and massaging means by arm movement, the actuators preferably have hand grips 39. The bar 48 then serves to hold the legs down in proper position.

The actuators 37 include substantially upright levers 40 having their lower ends fulcrumed at 41 to the frame end wall 12. Between their ends, the levers 40 are individually connected to the carriages 22 by pivoted links 42 extending through suitable guides 42*a* carried by the frame end wall 12. The upper ends of the levers 40 have clamps 43 operable by clamping screws 44. Longitudinal rods 45 have their outer end portions clamped in the clamps 43 and the inner ends of said rods carry the pedals 38 and hand grips 39. By loosening the screws 44, the rods 45 may be slid to place the pedals 38 according to the patient's convenience, and said rods may be rotated to position said pedals either vertically or horizontally, as dictated by the position in which the patient is to lie.

The pedals 38 are preferably pivoted to the rods 45 and the pivot pins or the like 46, one of which is shown in Fig. 6, may well carry the hand grips 39.

An arched frame 47 is preferably provided at the head of the couch in order that the patient may grip the crown bar 48 of said frame with his hands when operating the actuators 37 by leg movements. The legs of the frame 47 are slotted at 49 and engaged with clamping bolts or the like 50, for adjustment. This adjustment is of further importance in obtaining posture adjustment and correction, since the proper position of the hands and arms relative to the body during the exercise and massage operation forces good posture with minimum discomfort to the patient.

From the foregoing, it will be seen that novel and advantageous construction has been provided for exercising various muscles and for simultaneously massaging muscles brought into play by the exercise. Very beneficial results are thus attainable.

What is claimed is:

1. A combined exercising and massaging lounge having two longitudinally and independently reciprocable patient-supporting carriages, each of said carriages having a set of transverse patient-supporting rollers, the sets of rollers being in immediately adjacent side-by-side relationship whereby reciprocation of said carriages in opposite directions will duplicate the basic hand massage movement, two leg-operated actuators movably mounted at the foot end of the lounge and having pedals to be engaged by the patient's feet, means operatively connecting one of said actuators with one of said carriages, means operatively connecting the other of said actuators with the other of said carriages, said actuators being operable to move said carriages toward the foot of the lounge, and spring means operatively connected with said carriages for biasing the latter toward the head of the lounge, whereby the patient may simultaneously reciprocate said carriages in opposite directions by alternate pushing movements of the legs to create cyclic sequential active and passive exercise in the muscles contacted by said rollers coupled with simultaneous massage.

2. A structure as specified in claim 1; together with fixed means at the head of the lounge to be gripped by the patient's hands.

3. A structure as specified in claim 1; together with an adjustable arched frame at the head of the lounge to be gripped by the patient's hands.

4. A structure as specified in claim 1; said spring means being adjustable to vary the tension of said springs.

5. A structure as specified in claim 1; said pedals being mounted for movement from one position for engagement by the feet when the patient is sitting or lying upon the back, to another position for engagement by the feet when the patient is lying upon one side or the other.

6. A combined exercising and massaging lounge having two longitudinally and independently reciprocable patient-supporting carriages, each of said carriages having a set of transverse patient-supporting rollers, the sets of rollers being in immediately adjacent side-to-side relationship whereby reciprocation of said carriages in opposite directions will duplicate the basic hand massage movement, spring means biasing each of said carriages toward the head of said lounge, two substantially upright laterally spaced levers fulcrumed at their lower ends to the foot of the lounge for movement in longitudinal planes, two longitudinal links connecting said levers with said carriages respectively, two longitudinal rods overlying the foot of the lounge and having pedals at their inner ends for engagement by the patient's feet, and means adjustably securing the outer end portions of said rods with the upper ends of said levers respectively, said means permitting longitudinal and rotary adjustment of said rods.

7. A structure as specified in claim 1; together with a flexible sheet lying upon said rollers and fixed with respect to the travel thereof, and spring means connected to said sheet for tensioning the same.

8. A combined exercising and massaging lounge comprising a supporting frame having two longitudinal side members and two transverse end members, one top plate secured upon said side members at the foot of the lounge, another top plate secured upon said side members at the head of the lounge, two pairs of fixed longitudinal tracks spaced downwardly from said top plates and extending from one of said end members to the other, two elongated carriages over said pairs of tracks respectively and having supporting wheels engaging the same to reciprocably mount said carriages, said carriages extending under said top plates and each having a set of transverse patient-supporting rollers, the sets of rollers being in immediately adjacent side-to-side relationship whereby reciprocation of said carriages in opposite directions will duplicate the basic hand massage movement, two longitudinal links connected to said carriages respectively, said links extending movably through the frame end members at the foot of the lounge, two substantially upright levers to which the outer ends of said links are pivoted respectively, said levers being fulcrumed at their lower ends to said frame end member for movement in longitudinal planes, rods extending from the upper ends of said levers

over said one top plate and having pedals at their inner ends to be engaged by the patient's feet, and spring means acting on said carriages and reacting on said frame for moving said carriages toward the head of the lounge.

9. A combined exercising and massaging lounge comprising a supporting frame having two longitudinal side members and two transverse end members, one top plate secured upon said side members at the foot of the lounge, another top plate secured upon said side members at the head of the lounge, two pairs of fixed longitudinal tracks spaced downwardly from said top plates and extending from one of said end members to the other, two elongated carriages over said pairs of tracks respectively and having supporting wheels engaging the same to reciprocably mount said carriages, said carriages extending under said top plates and having a set of transverse patient-supporting rollers, the sets of rollers being in immediately adjacent side-to-side relationship whereby reciprocation of said carriages in opposite directions will duplicate the basic massage movement, two longitudinal links connected to said carirages respectively, said links extending movably through the frame end members at the foot of the lounge, two substantially upright levers to which the outer ends of said links are pivoted respectively, said levers being fulcrumed at their lower ends to said frame end members for movement in longitudinal planes, rods extending from the upper ends of said levers over said

one top plate and having pedals at their inner ends to be engaged by the patient's feet, tension springs connected at one end to said carriages respectively for moving said carriages toward the head of the lounge, two transverse arms to which the other ends of said spring are anchored, said arms being pivotally mounted on said frame side members and having their inner ends disposed in overlapping relation, a nut between and operatively connected with said overlapped inner ends of said arms, and a longitudinal adjusting screw threaded through said nut, the frame end member at the head of the lounge being provided with a bearing through which said screw extends, the outer end of said screw being provided with a hand crank for rotating it to swing said arms and vary the tension of said springs.

10. A structure as specified in claim 1; wherein each of said leg operated actuators is provided with a hand grip wherein the user may reverse the direction of his body end to end on said lounge for treatment of upper body areas.

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