Sept. 7, 1948. G. W. CRISE 2,448,777

MASSAGING APPARATUS

Filed Jan. 19, 1944

Fig. 1.

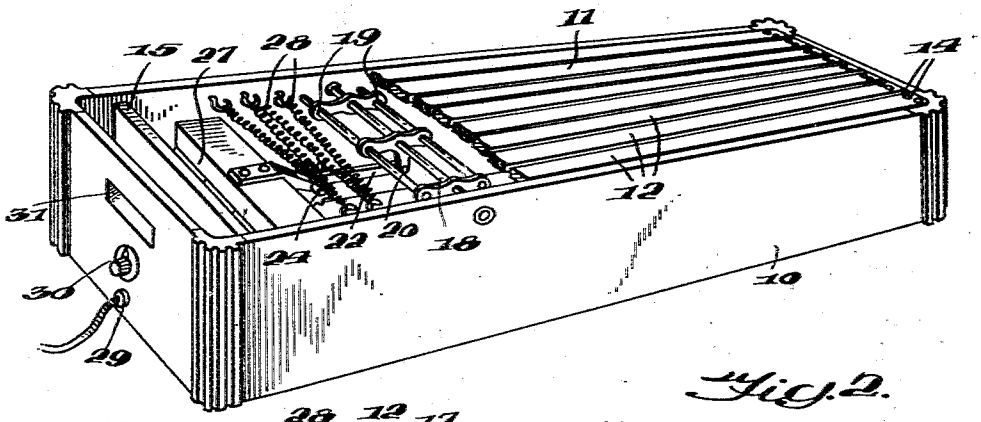


Fig. 2.

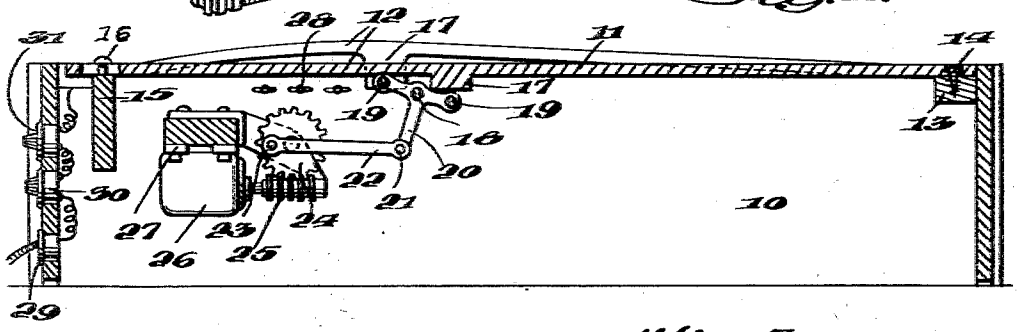


Fig. 3.

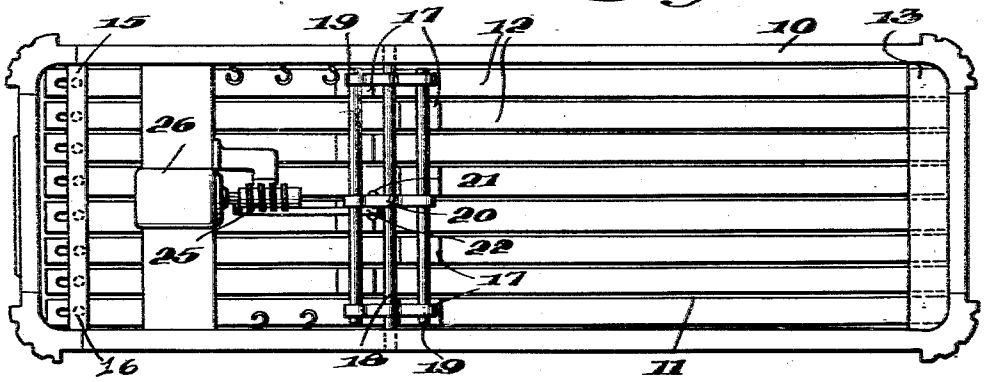
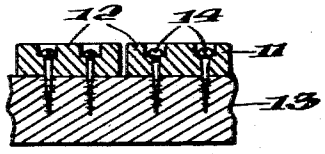


Fig. 4.



Inventor

George W. Crise,

By W. O. McClowell

Attorney

Patented Sept. 7, 1948

2,448,777

UNITED STATES PATENT OFFICE

2,448,777

MASSAGING APPARATUS

George W. Crise, Columbus, Ohio

Application January 19, 1944, Serial No. 519,619

4 Claims. (Cl. 128—33)

1

This invention relates to improvements in massaging apparatus, and, more particularly, to massaging apparatus of the mechanical or motor driven type.

The object of my invention is to provide an improved means for mechanically manipulating or massaging the human body for the purpose of promoting health and removing excess fat.

Such equipment in the past has been limited largely to devices suitable for operation by experts, and then, restricted mostly to small operating surfaces. With the present invention, the weight of the patient is utilized to regulate the pressure of massage application while the patient is lying in a fully relaxed position and, if desired, electrically generated heat is applied to the points of contact by natural radiation and convection of an enclosed heating element disposed beneath the contact surface.

More specifically, my improved device comprises a relatively narrow and elongated bed composed of a plurality of movably mounted longitudinal slats, together with motor driven means for alternately raising and lowering said slats to provide an oscillating bed on which the patient is placed in a reclining position, the oscillating movement of the slats being utilized to secure the desired massaging action. The action produced by my massaging apparatus is to heat and knead simultaneously the flesh, thereby loosening and driving the fatty deposits into the circulation from which the same may be eliminated by normal action.

For a further understanding of the invention, reference is to be had to the following description and the accompanying drawing, wherein:

Fig. 1 is a perspective view of a massaging machine formed in accordance with the present invention, parts of the machine being broken away and shown in section to disclose underlying structure;

Fig. 2 is a vertical longitudinal sectional view taken therethrough;

Fig. 3 is a bottom plan view;

Fig. 4 is a transverse sectional view taken through the secured ends of the massaging slats.

Referring more particularly to the drawing, the numeral 10 designates the substantially rectangular frame of my improved massaging apparatus. Arranged in a horizontal plane at the top of the frame, and extending substantially the full length of the latter is a massaging bed, indicated generally at 11, on which the patient reclines in a prone position. The bed is composed of a plurality of parallel, longitudinally extending slats

2

or bars 12, which may be formed from wood, or any other suitable material, capable of flexing to a limited extent in a longitudinal direction. The frame 10, at the foot thereof, is provided with a stationary transversely extending supporting member 13, on which the adjacent ends of the slats 12 are mounted and firmly secured as by means of countersunk screws 14. Likewise, the head end of the frame 10 is formed with a head support 15 on which the adjacent ends of the slats 12 are received and suitably secured as at 16.

Approximately midway of their lengths, the under sides of the slats 12 are provided with depending cleats 17. These cleats may be formed from any suitable wear-resisting materials and the cleats of immediate adjacent slats are relatively offset or staggered with respect to each other, as disclosed in Fig. 2. In order to alternately arch or vertically flex the slats so that one slat may be flexed upwardly while the slats immediately contiguous thereto remain in a lowered or unflexed condition, the side members of the frame 10 are provided with inwardly disposed bearings for the reception of a rock shaft 18. Fixed to the shaft for rocking motion in unison therewith is a plurality of longitudinally spaced rocker members 19, the outer ends of which have engagement with the under surfaces of the cleats 17. The rock shaft also has depending therefrom a crank arm 20, the lower end of which is pivotally united as at 21 with a pitman link 22, the other end of said link being pivoted as at 23 in an off center position on the side of a worm gear 24, said gear meshing with a worm 25 driven by the shaft of an electric motor 26, the latter being suitably supported as at 27 within the confines of the frame 10 beneath the bed 11.

In the operation of the apparatus, it will be seen that when the motor is energized to rotate the gearing 24 and 25, oscillatory motion will be imparted to the rock shaft 18 and the rocker arms 19 carried thereby. These arms lift and lower alternate slats, producing longitudinal arching or flexure of the lifted slats, so that the movement thereof may be applied effectively to the body of a patient reclining on the bed, and without requiring manual effort or producing fatigue on the part of the patient. The forward ends of the slats 12 may be held in connection with the supports 15 to allow for limited longitudinal movement of the slats while the same are being flexed, thereby reducing strain on the slats.

It is also desirable to provide the frame beneath the bed 11 with a heating means, so that the body of the patient may be heated to facilitate the

massaging action and to obtain more quickly and effectively beneficial results. Such a heating means may take the form of an electric resistor of the type shown at **28**, to which current, obtained from a house circuit, may be supplied, as at **29**.

In the conductors leading to the resistor, there may be provided a control switch **30** and a rheostat **31** for governing the amount of heat developed by the resistor and regulate the same in accordance with the requirements of the patient. The movement of the slats in flexing is comparatively limited so that there is no likelihood of the patient being pinched by the flexing action of said slats. However, if desired, a flexible covering of rubber, fabric or the like may be placed over the upper surfaces of the slats to conceal the latter.

Among the advantages of my improved heated massage bed over previous devices and methods, may be enumerated the following:

The patient can be treated while fully relaxed, thereby avoiding the strain produced on the heart by methods and devices involving various forms of exercise; the bed acts simultaneously on a large area of the body, producing rapid results; heat is applied evenly over the entire area of the body in contact with the moving slats; all parts of the body in contact with the moving slats have a complete cycle of positive pressure and release of pressure, preventing possible restrictions in circulation; the kneading action of the narrow slats under the well-distributed weight of the patient is restricted to the surface of the body where undesirable fat deposits usually exist, and the action does not produce strains on internal body organs; further, the device is entirely safe for home use and does not require the services of an expert attendent.

I claim:

1. Massage apparatus comprising an elongated frame, a horizontal bed provided at the top of said frame composed of a plurality of parallel longitudinally extending relatively flexible slats, means for supporting said slats at their ends in connection with said frame, and means engaging the under sides of said slats for flexing the same longitudinally.

2. Massage apparatus comprising an elongated frame, a horizontal bed provided at the top of said frame composed of a plurality of parallel longitudinally extending relatively flexible slats, means for supporting said slats at their ends in connection with said frame, and means engaging the under sides of said slats for effecting longitudinal flexing in vertical planes of alternately disposed slats.

3. Massaging apparatus comprising an elongated frame, a substantially horizontal patient-supporting bed extending longitudinally of said frame, said bed being composed of a plurality of parallel longitudinally extending flexible slat members, means for supporting said slat members at their ends in connection with said frame, a transversely disposed support placed intermediately of the length of said frame beneath said slat members, rocker arms carried by said transverse support engageable with the under surfaces of said slat members, and motor driven means for imparting oscillating movement to said rocker arms, whereby to cause the latter to alternately flex said members longitudinally of the length thereof.

4. Body-massaging and exercising apparatus, comprising an elongated frame, a substantially horizontal bed provided at the top of said frame for the reception of a patient lying thereon in a prostrate position, said bed being composed of a plurality of parallel longitudinally extending flexible slat members, means for supporting said members at their ends in connection with said frame in a manner to admit of longitudinal flexing of each of said members independently of adjacent members, each of said slat members at one of its ends being immovably fastened to said frame and at its opposite end secured for limited sliding movement on said frame, and motor-driven means carried by said frame and disposed for engagement with the under part of each of said slat members intermediately of the length thereof to alternately flex said members longitudinally of the length thereof.

GEORGE W. CRISE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,173,306	Pool	Feb. 29, 1916
1,276,526	Hardy et al.	Aug. 20, 1918
1,638,025	Everts	Aug. 9, 1927
1,874,286	Gross	Aug. 30, 1932
1,999,956	Chiles et al.	Apr. 30, 1935