Feb. 12, 1929. 1,701,956

C. D. McDONALD

FLESH REDUCING MACHINE

Filed Oct. 24, 1927 2 Sheets-Sheet 1

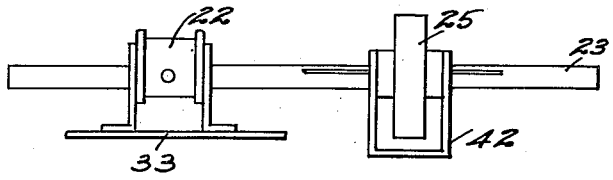


Fig. 4.

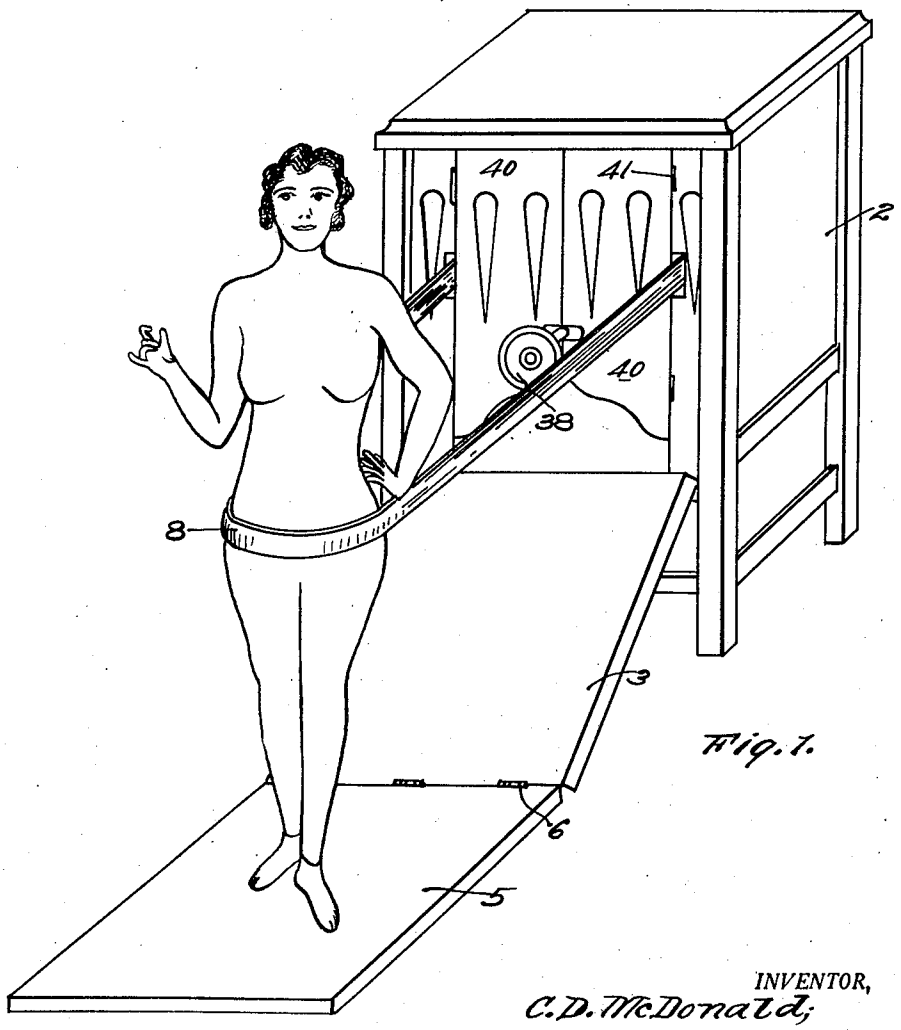


Fig. 1.

INVENTOR,
C. D. McDonald,
BY
F. E. Maynard, ATTORNEY.

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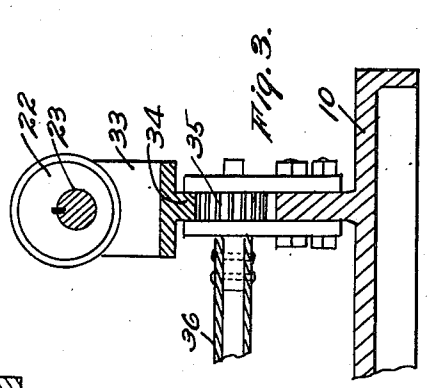


Fig. 3.

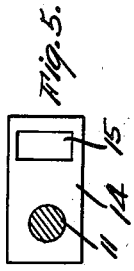


Fig. 5.

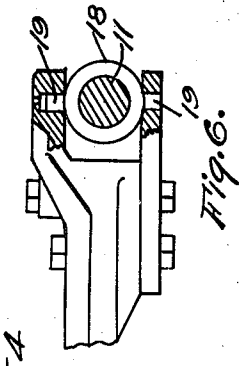


Fig. 6.

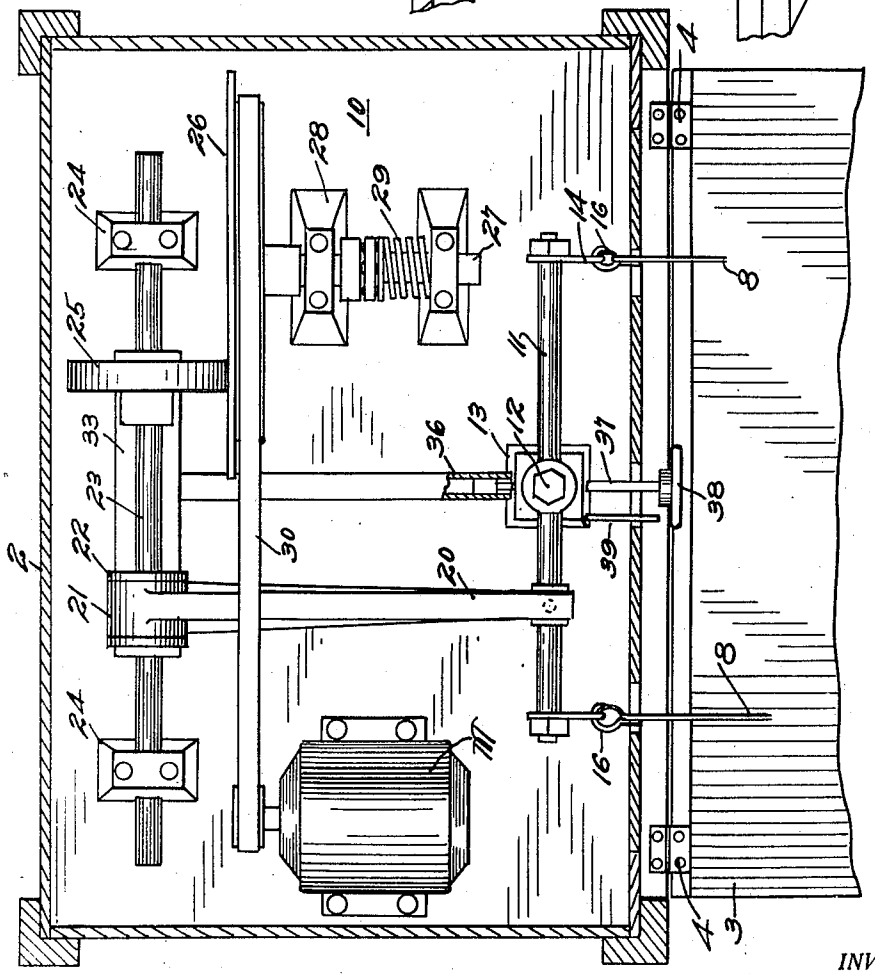


Fig. 2.

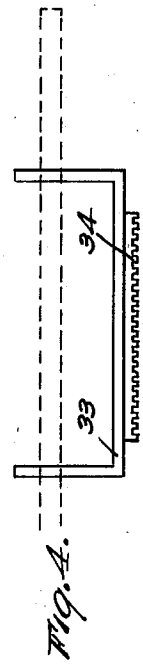


Fig. 4.

INVENTOR,
C. D. McDonald;
BY
F. E. Maynard. ATTORNEY.

Patented Feb. 12, 1929. 1,701,956

UNITED STATES PATENT OFFICE.

CHARLES D. McDONALD, OF LOS ANGELES, CALIFORNIA.

FLESH-REDUCING MACHINE.

Application filed October 24, 1927. Serial No. 228,369.

This invention relates to apparatus of the type employing a vibrating strap applicable to different parts of the human body for the purpose of reducing excess flesh.

An object of the invention is to provide a simple, practicable machine of low cost in construction and in operation.

Another object is to provide an oscillating arm for actuating the strap and provide means whereby the rate of vibration and the length of motion of vibration are concurrently regulated, and in this connection an object is to provide means for concurrently increasing the length of strap motion as the rate of motion is decreased and vice versa.

Another object is to provide a machine of this class which is substantially fool-proof and has but a single control device manually adjustable to regulate both speed and stroke of strap vibration.

An important object is to provide a machine of such design and association of parts that efficient action is assured with a minimum factor of misadjustment of the mechanism by inexpert operatives.

A further object is to provide a reducing machine, in which a treatment strap is extended from a cabinet, and which is provided with a disappearing platform having the function of an anchor for a brace which constitutes a front door for the cabinet when not in use.

There are other objects, advantages and features of construction, combination and details of means which will be made manifest in the following specification of the herewith illustrative embodiment; it being understood that modifications, variations and adaptations may be resorted to within the spirit, scope and principle of the invention as it is more directly claimed hereinafter.

Figure 1 is a front perspective of the apparatus as in use.

Figure 2 is a plan of the mechanism, the cabinet being in horizontal section.

Figure 3 is a detail cross-section of the eccentric drive shaft and of the shift gear rack.

Figure 4 is a side elevation of the shift rack.

Figure 5 is a side view of a strap hitch.

Figure 6 is a detail of the oscillator drive link.

Figure 7 is a plan of a modified form of drive shaft.

The apparatus includes a substantial cabinet 2 having a front door 3 hinged at 4 on its bottom edge so as to swing down from a vertical, front closing position to an inclined position (Fig. 1). The door 3 carries an inner panel 5 hinged at 6 along the top edge of the door so as to fold outward and flat down upon the floor and, in this position, serve as a platform on which the individual to be treated may stand. The loaded platform is designed to operate as an anchor for the opened door 3 while this is inclined in the cabinet bracing position against the tipping tendency of the treatment strap 8 which is extended in front of the cabinet and passed around any portion of the body to be treated to vibrations of strap action.

The strap actuating mechanism is mounted on a solid shelf or base 10 in the upper part of the cabinet and includes a horizontal oscillating lever 11 centrally pivoted on a pin 12 in the head of a pillar 13 on the base 10. On the ends of the lever are pivoted hitch plates 14 having eyes 15 to receive hitch hooks 16 of the strap 8.

Means are here provided to oscillate the lever 11 and to change the length of stroke and the rate of speed of oscillation, and to effect these changes concurrently through a single hand control. Such means includes a collar 18, sliding on an arm of the lever 11 and having opposite pivot pins 19 engaging in a connecting link 20 which has a wide eccentric strap 21 mounted on a flanged eccentric 22 which is keyed on its shaft 23. This shaft is slidably supported in journal blocks 24 on the base 10 and has a fixed friction gear pinion 25 which is slidable radially across the cooperative friction face of a disc 26 set parallel to the shaft 23. The disc is fixed on a counter shaft 27 slidable in boxes 28 under the thrust of a spring 29 which presses the disc snug against the shiftable pinion 25, whose movement toward the disc center decreases the speed of the shaft 23, and vice versa.

The shaft 27 is driven by a suitable transmission means, as a belt 30 from a motor M. The driving link 20 reaches forward through the loop of the belt 30.

The link 20 is so positioned on the shaft 23 as to move toward the pivot 12 of the arm 11 as the pinion 25 moves toward the center of the disc 26. This is done so that as speed of oscillation is reduced the length of stroke (of oscillator 11) is increased and on reverse shift of shaft 23 speed is increased concurrently with a reduction of stroke length.

This makes the apparatus fool proof since over-length stroke cannot be combined with high speed vibrations.

In order to readily effect the changes in strap vibration a yoke 33 has side horns to receive the shaft 23 and bear loosely against the near ends of the eccentric 22 and the pinion 25 and has on its bottom a rack 34 which constantly meshes with a pinion 35 fixed on the near end of a hollow rod 36 ending near the pillar 13 and slidably receiving the near end of a stem 37 having a hand wheel 38 by which the rod 36 may be rotated. The pinion 35 and rack 34 operate between confining bearings on the base 10. When the hand wheel is turned to desired control position it is shifted inward (with the stem) and is interlocked by a holding pin 39; thereby maintaining all operating parts in selected position of operation.

The mechanism chamber of the cabinet is closed by a set of inner wings 40 hinged at 41 to open when necessary. The hand wheel is adjustable to a convenient position in front of the wings 40.

When not in use the apparatus is closed by pushing in the hand wheel 38 and closing up the front platform 5 and its carrying door 3.

In Fig. 7 a form of drive is shown in which the eccentric 22 is fixed on the shaft and the friction pinion 25 is splined thereon and is shiftable by a yoke 42 so that speed of the shaft 23 may be changed independent of the stroke of the oscillator 11.

What is claimed is:

1. An excess flesh reducing machine cabinet, having a front door connected to the cabinet so as to be laid obliquely as a brace, and an anchor part connected to the door and forming a platform for the individual being treated.

2. In an excess flesh reducing apparatus, a cabinet having a front door hinged thereto to fold down and form an oblique brace, and a platform connected to said door to be extended and form an anchor for the brace, said bracing stabilizing the cabinet against the pull of the body on an applied operating strap extended from the cabinet.

CHARLES D. McDONALD.