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J. H. AHLGREN
MASSAGING APPARATUS
Filed April 1, 1925

Fig. 1.

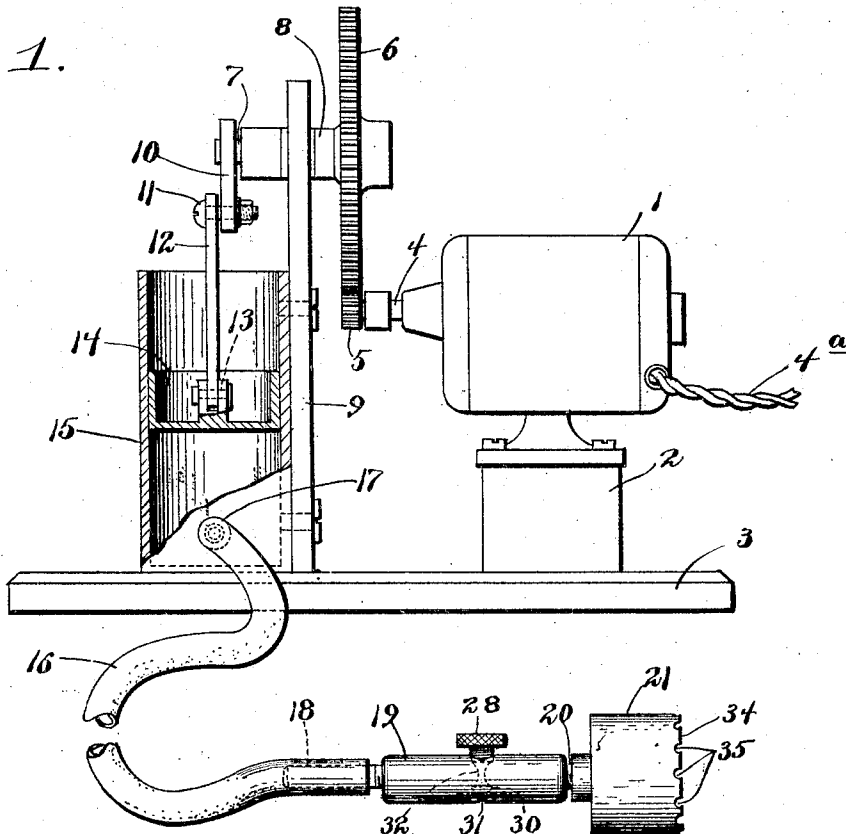
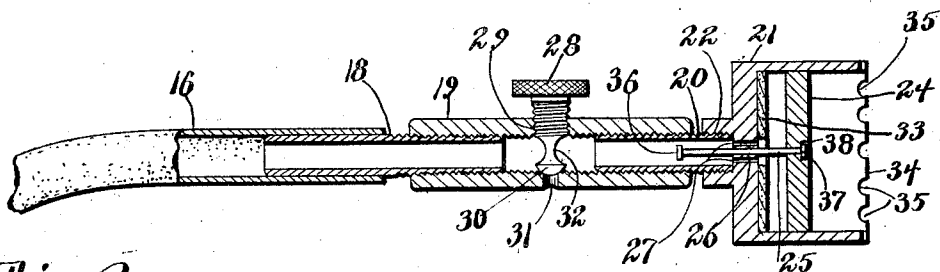


Fig. 2.



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MASSAGING APPARATUS.

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This invention relates to massaging apparatus, and is more particularly directed to an apparatus for the reduction of flesh and for the treatment of the skin, and this machine operates through an intermittent suction directed through a pounding or striking apparatus which is designed to be drawn over the surface to be massaged.

An object of this invention is to provide a simple and inexpensive construction of apparatus for massaging by rapid striking of the surface to be massaged.

Another object of this invention is to provide an apparatus for massaging through the striking of the surface in which means are provided for adjusting the striking stroke and force with which the striking means is applied to the surface.

Other objects and advantages of this invention will be apparent from the following detailed description of a preferred embodiment thereof, as illustrated in the accompanying drawings.

In the drawings:

Fig. 1 is a side elevation illustrating the driving cylinder and plunger in section of the apparatus embodying this invention.

Fig. 2 is a central sectional side elevation of the slapping or striking cylinder and control for adjustment mechanism embodied in this invention.

In the preferred embodiment of this invention illustrated in the drawings, 1 indicates an electric motor which is mounted upon a stand 2 secured to the base 3. The electric motor is supplied with the requisite current through the leads 4^a from a source, not shown. The drive shaft 4 of the motor is connected by means of a gear 5 to a pinion 6 which pinion 6 is secured to a shaft 7. The shaft 7 is journaled in a bearing 8 supported in a standard 9. A link 10 is secured to the shaft 7 at one end and at its opposite end is secured by means of a pin 11 to a piston rod 12. The piston rod 12 is connected at a pin 13 to a piston 14 mounted to reciprocate within a cylinder 15. The cylinder 15 is connected to a flexible hose 16 as illustrated at 17 and the flexible hose 16 is connected by means of a member 18 to a coupling 19 which coupling 19 is screw threaded to a nipple 20 which nipple 20 is screw threaded to a cylinder 21 as illustrated at 22.

The plunger 24 is fitted within the cylinder 21 and is guided by means of a piston

rod 25 which passes through a bore 26 formed in the end of the cylinder 21.

A plurality of ports 27 are provided in the end of the piston 21 and the suction and pressure strokes of the piston 13 are transmitted through the ports 27 and act upon the plunger 24 to cause the same to reciprocate within the cylinder 21. As the piston 13 is reciprocated rapidly the plunger 24 is likewise rapidly reciprocated. Means are provided in the coupling 19 for varying the force of the reciprocation of this plunger, which means preferably comprise a member 28 screw threaded within the member 19, as illustrated at 29 and having at its lower end a head 30 adapted to seat on and close the port 31. The stem connecting the head 30 to the member 28 is cut away as illustrated at 32 and permits the passage or free communication of the fluid pressure through the member 19. The washer 33 of soft rubber, felt, or like material, is mounted within the rear end of the cylinder 21 so as to prevent the plunger 24 hammering against the rear wall of the cylinder 21. The forward end of the cylinder 21 is open so that the plunger 24 is free to reciprocate a slight distance beyond the forward edge 34 thereof and to strike the flesh which it is desired to massage.

In order to permit free reciprocation of the plunger 24 and to prevent the drawing or sucking of the skin into the cylinder 21, a plurality of recesses 35 are formed along the forward edge 34 of the cylinder 21 so that a free and unrestricted passage of air into and from the cylinder 21 will be permitted when the same is applied to the surface to be massaged. The end of the piston rod 26 is provided with a head 36 which strikes the walls of the bore 27 through which the rod 26 reciprocates so as to limit the length of the stroke of the plunger 24. The piston end of the plunger 26 is provided with a head 37 which fits closely within a recess 38 formed in the forward surface of the plunger 24 so that the forward surface of the plunger 24 is smooth throughout.

I have discovered that such an apparatus as herein described is extremely suitable for the purpose of reducing surplus flesh and for the treatment of skin and the like, due principally to the combined action of such a plunger 24 and the intermittent suction and blowing drafts provided thereby when

the same is applied to the surface to be massaged.

Having fully described a preferred embodiment of my invention, it is to be understood that I do not wish to be limited to the exact construction herein set forth, which may obviously be varied in detail without departing from the spirit of my invention as set forth in the appended claims.

10 I claim:

1. In an apparatus of the class described, the combination of a cylinder open at one end, a piston mounted to reciprocate in the cylinder, means mounted in the rear of the cylinder to prevent hammering of the piston against the wall of the cylinder, means for supplying intermittent suction and pressure to the piston, means for regulating the suction and pressure supplied, the said piston being adapted to be applied directly to the surface to be massaged so as to intermittently hammer the surface, and means formed in the cylinder for preventing the drawing of the surface into the said cylinder on return movement of the said piston.

2. In an apparatus of the class described, the combination of a cylinder open at one end, a piston mounted to reciprocate in the cylinder, means mounted in the rear of the cylinder to absorb the impact of the piston against the rear wall of the cylinder, means secured to the piston and extending through

the rear wall of the cylinder for guiding the piston during the reciprocation thereof, means for supplying intermittent suction and pressure to the said piston, means secured to the said cylinder and interposed between the said suction and pressure means for regulating the suction and pressure applied to the said piston, the said cylinder being adapted to be applied directly to the surface to be massaged so that the said piston intermittently engages the said surface, and means formed in the wall of the said cylinder for preventing the application of suction to the surface massaged.

3. In an apparatus of the class described, the combination of a cylinder open at one end, a piston mounted to reciprocate in the cylinder, means for supplying intermittent suction and pressure to the piston, the said cylinder being adapted to be applied directly to the surface to be massaged at the open end thereof so that the said piston intermittently hammers the said surface, and the said cylinder having a plurality of cut away recesses formed at its engaging open end through which air is adapted to be drawn to prevent the application of suction to the surface being massaged.

Signed at Los Angeles, California, this 26th day of March 1925.

JOHN H. AHLGREN.