

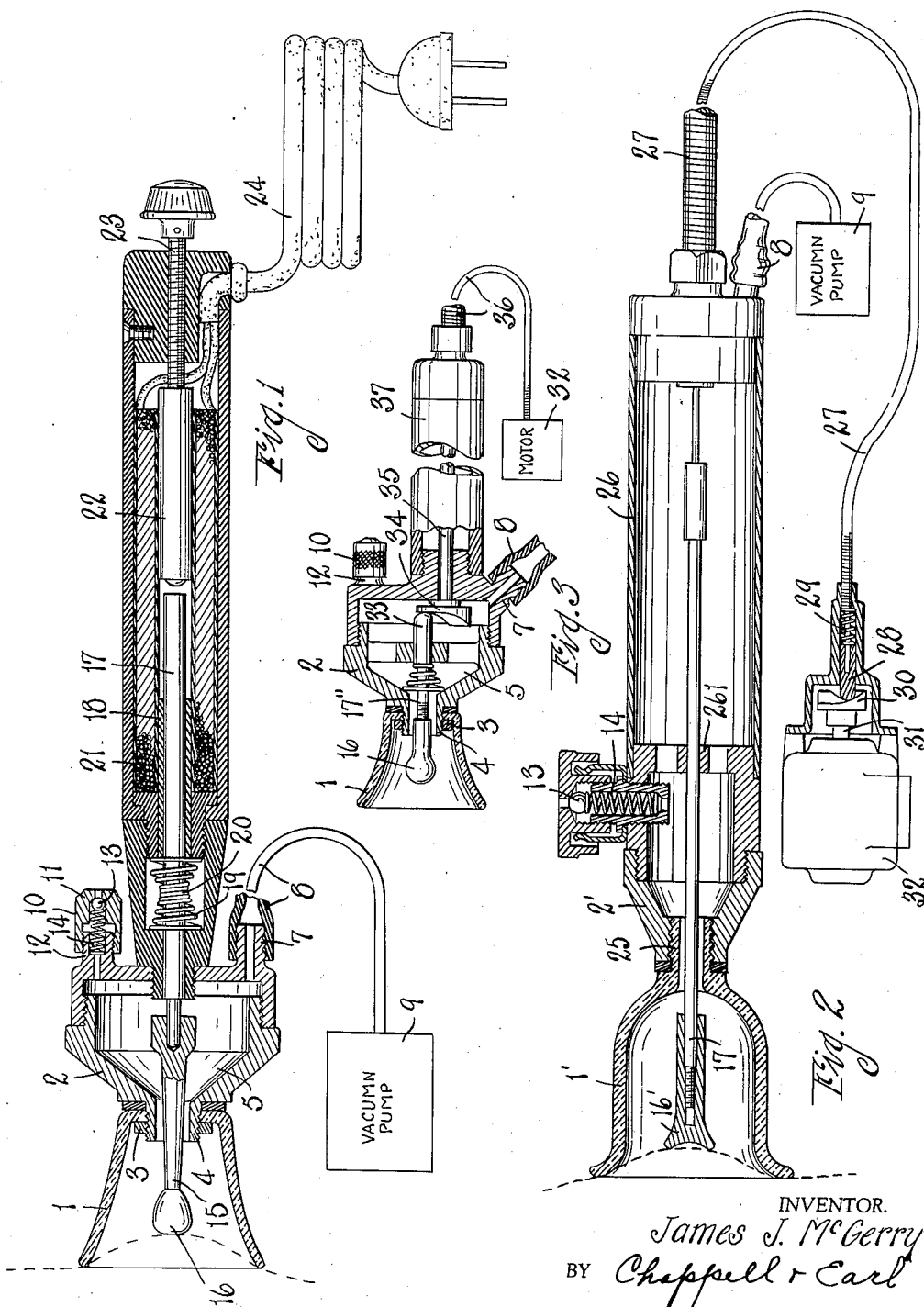
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MASSAGE INSTRUMENT

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MASSAGE INSTRUMENT

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2 Claims. (Cl. 128—55)

This invention relates to improvements in
massage instruments and process of massaging.

The objects of the invention are:

First, to provide a massage appliance for the
5 holding of the skin surface suitably cupped and
applying a massage locally to any degree desired.

Second, to provide such a structure which is
under complete control of the manipulator.

Third, to provide such a structure which is con-
10 venient to handle.

Fourth, to provide an improved massage in-
strument with an improved cupping and applica-
tor means.

Fifth, to provide an improved method of
15 massaging.

Further objects, and objects relating to details,
will appear in the following specification and
claims.

Preferred embodiments of my invention are
20 illustrated in the accompanying drawing, in
which:

Fig. 1 is a longitudinal sectional elevation with
the vacuum pump indicated diagrammatically.

Fig. 2 is a similar longitudinal detail sectional
25 view of a modified form with a massaging motor,
electrical or otherwise, external of the instru-
ment, the instrument having an enlarged vacuum
chamber in the handle.

Fig. 3 is a similar sectional view, the handle be-
30 ing shown in section, and the mechanical actu-
ator for the applicator contained in the instru-
ment head, the handle being in broken section.

The parts will be identified by their numerals
of reference which are the same in all the views.

1 is a transparent glass cup for cupping the
35 skin surface. This is carried by the head 2, be-
ing suitably retained thereon by a screw nut 3
on the central tubular nipple part 4 which con-
nects the exhaust chamber 5 with the cup. The
40 exhaust chamber is formed by a cap screw-
threaded onto a suitable flange on the hollow
head 2. 7 is the nipple connection for the edu-
cation tube 8 for connection to the vacuum pump
9 here illustrated diagrammatically.

A check valve 10 is provided consisting of a
45 tubular casing 11 screw-threaded onto the nipple
12. This is provided with check ball valves 13
which are held under adjustable tension by the
spring 14, the tension being varied by screwing
50 the cap 11 out and in. It is knurled for that
purpose.

Extending centrally through the tube 4 is the
applicator 15 with a suitable applicator head 16
55 which may be of any desired form. I show two,

one presenting a spherical face and the other a
cupped or concave face. This is reciprocated
centrally of the vacuum cup and affords means
for manipulation of the skin surface to any ex-
tent desired. The skin surface is drawn up as in-
dicated by dotted lines in Figs. 1 and 2, and the
applicator is controlled to either gently touch the
skin and repeatedly tap it or to operate upon the
same with a violent action whichever the condi-
tion seems to require or is in accordance with
10 the best practice. The applicator 15 is sup-
ported on a central plunger 17 which reciprocates
in a suitable sleeve 18 and is provided with a
helical compression spring 19 secured to the
plunger at 20.

In the construction of Fig. 1, I provide a sole-
noid 21 adapted to act upon the core 22 which is
adapted to act upon the plunger 17, the stroke
being adjusted by the axial set screw 23 suitably
threaded into the end of the solenoid casing. 24
is an electric connection to the solenoid which
may be of any approved form, the solenoid itself
being an article of commerce. When alternating
current is used, a very high rate of vibration is
secured without further provision. If only direct
25 current is obtainable, it may be controlled by
rapidly opening and closing a switch or by any
suitable vibrator.

In Fig. 2, the cup 1' is of slightly different form.
The applicator 16' is shown with a cupped end
30 and screw-thread adjustment on the end of the
plunger 17'. A nipple 25 is screw-threaded into
the head 2'. The plunger 17' is reciprocatingly
mounted in the bearing 26 of the hollow handle
26. This plunger is connected to a flexible wire
35 connection 27 terminating in a cam follower 28
held yieldingly outward by spring 29 and operated
upon by the cam 30 on the arbor 31 of the motor
32. In this way, the vibration of the plunger is
secured by mechanical action of the electric mo-
tor and not by pulsations or variations of the
current.

In Fig. 3, I show the vacuum chamber like
that illustrated in Fig. 1. The applicator 16
45 is carried on a short plunger 17''. This is provided
with a cam follower 33 acted upon by the cam
34 on the shaft 35, the motor 32 being con-
nected by the flexible shaft 36 (see Fig. 3). The
shaft 35 extends longitudinally through the
50 handle 37. The same vacuum producing means
is here used precisely as that appearing in Fig. 1.

The operation of the device will be given in
general terms applicable to all forms and indi-
cating in this connection, the process. I intend
55

to define the process so that if a vacuum cup and applicator were manipulated in any way, they would produce the result. The surface of the skin is suitably lubricated to secure a sealed joint and also to permit of the moving of the instrument over the surface which is especially desirable for a light treatment over an extensive area. The treatment, however, can be intensified to any degree desired. When the cup is applied to the skin of the face or neck, for instance, vacuum is immediately created which tends to bring blood to the surface throughout the entire area cupped. The skin is then acted upon by the vibrating applicator within the vacuum and thereby enhances and increases the action and develops to the fullest extent the circulation of blood in the area being treated. The tension, owing to the manipulation and vacuum action, evacuates all pores, and by the effective blood circulation, rejuvenates the skin, and the skin, being under slight tension, wrinkles are eliminated and the action tends to restore the skin to its full functioning condition. By periodic manipulations in this way, the skin is greatly benefited on the entire surface treated. The capillaries are especially distended and the circulation therethrough made active which secures the beneficial effect of complete and thorough circulation in the part being treated. This is done with a minimum of inconvenience and without pain and by causing the thorough circulation with a minimum of application to the ex-

terior secures the flexibility and softness of skins so much desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a structure of the class described, a transparent vacuum cup, a vacuum chamber connected thereto with pump to induce the vacuum, an adjustable relief check valve for controlling the extent of the vacuum comprising a cup with a ball valve and spring for holding the same to its seat, a vibrating applicator centrally disposed within the cup, a plunger for supporting the same for axial reciprocation and vibration, a hollow handle connected to the said vacuum chamber, the plunger being disposed and supported axially in the said handle, a flexible extension to the said plunger, a cam with cam follower for vibrating the same, and an electric motor for driving the same.

2. In a structure of the class described, a transparent vacuum cup, a vacuum chamber connected thereto, a vibrating applicator centrally disposed within the cup, a plunger for supporting the same for axial reciprocation and vibration, a hollow handle connected to the said vacuum chamber, the plunger being disposed and supported axially in the said handle, a flexible extension to the said plunger, a cam with cam follower for vibrating the same, and an electric motor for driving the same.

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