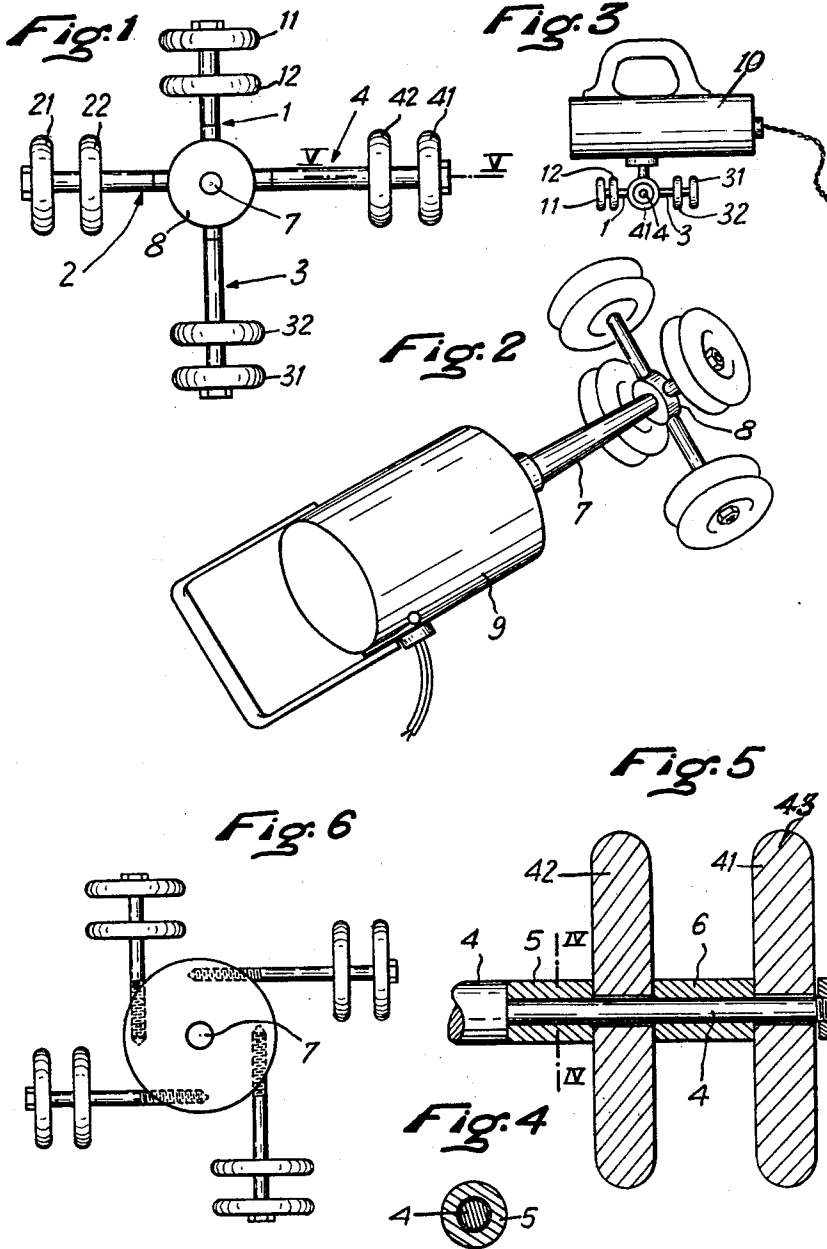


July 2, 1963

I. J. FRAJDENRAJCH
ROTARY MASSAGING APPARATUS

3,095,874

Filed June 19, 1961



INVENTOR

ISRAEL JEAN FRAJDENRAJCH

By *Irwin J. Thompson*

ATTORNEY

1

3,095,874

ROTARY MASSAGING APPARATUS
Israel Jean Frajdenrajch, 21 Rue St.-Rome,
Toulouse, Haute-Garonne, France

Filed June 19, 1961, Ser. No. 117,884

Claims priority, application France June 25, 1960
6 Claims. (Cl. 128—57)

My invention has for its object a massaging apparatus adapted to be driven by an electric motor, a clockwork mechanism or by hand.

The actual massaging section of the apparatus is constituted by a rotary star-shaped carrier provided with rollers fitted at predetermined points of the different arms of the star according to the type of massage which is to be performed.

The accompanying drawings illustrate, by way of example, a preferred embodiment of my invention. In said drawings:

FIG. 1 is a plan view of the star-shaped carrier of said embodiment,

FIG. 2 is a perspective view of the complete massaging apparatus including its driving motor,

FIG. 3 is a side elevational view of a modification,

FIG. 4 is a sectional view of an arm,

FIG. 5 is an axial sectional view of an arm, and

FIG. 6 is a plan view of another modification of FIG. 1.

My improved massaging apparatus includes chiefly a rotary star-shaped operative section constituted by four arms 1, 2, 3, 4 of unequal lengths, the lengths of which increase uniformly in a predetermined clockwise or anticlockwise direction round their common apex forming the center of the star. The distance between the wheel nearest the center of the star on each arm and said center increases uniformly from one arm to the next in a predetermined direction around the star. The arms 1-4 may, in fact, have equal lengths. Each arm carries one, two or more small wheels or rollers such as 11 and 12 on arm 1; 21 and 22 on arm 2, and so on, the spacing of which with reference to the center of the star or with reference to one another may be maintained by tubular spacers or like suitable means such as 5 and 6 shown in FIGS. 4 and 5.

The number of arms is selected in accordance with the type of massaging which is to be performed and may be equal to two, three, four, five or even more.

The spacing between the wheels and the center of the star-shaped section and the spacing between the wheels on the same arm may be adjusted by resorting, for instance, to different sets of stays, or like means.

The size of the wheels and the material from which they are formed may be selected, as required. Thus, the operator may resort to wheels of wood, metal or plastic material and the rims of said wheels may be bare, or else, lined with more or less yielding material, while the contacting surfaces 43 may be smooth, or recessed, or provided with suction cups, or again, they may show small flat or concave areas or the like as already known.

The number of wheels on each arm of the star-shaped section may vary; said number may be equal to one, two, three or more. The arms of the star-shaped member may be connected with the rotary hub 8 forming the center of the star-shaped section, rigidly or in a yielding manner as when the arms are made of yielding material such as wood or plastic. The spacing between the wheels on the different arms may be equal, or otherwise.

It is also possible to design the star-shaped section in a manner such that the different arms have their axes all tangent to a circle coaxial with the hub-driving shaft (FIG. 6).

In this case, besides the pressure action, there is a friction action of each wheel on the skin because of the

2

obliquity of the plane of the wheel, in respect to the line joining the center of the hub to the center of the wheel.

The hub or central part of the star-shaped section is secured to the driving shaft through any conventional means such as a screw, a four-sided end, a key or the like.

FIG. 2 shows, by way of example, the endwise fitting 8 of my improved massaging apparatus on the shaft of a portable electric motor 9; in most cases the electric motor sold in trade rotates at a speed which is much too high for them to drive the massaging apparatus directly; it is therefore often necessary to insert between said motor and apparatus a speed reducer with a constant speed-reduction ratio, or else, a change speed gear providing various combinations.

Lastly, FIG. 3 shows an example of a lateral support for the star-shaped section connected to motor 10, the said lateral support being preferred in various cases, the drive being then transmitted through a bevel gear, for instance as already known.

In all cases where it may be required, shielding means such as a flexible membrane should be positioned so as to protect the patient against unpleasant or dangerous friction.

In the case where the apparatus is to serve in areas which are not provided with electric current, or where the feeding with a battery or a storage battery is not convenient, it is possible to drive the star-shaped section by a clockwork mechanism which has to be wound from time to time, or else, by means of a hand-operated mechanism of the type used for hand-operated drills, or for those beaters which serve for culinary purposes, or like means.

It is also possible to provide fluidtight apparatus according to my invention for massaging under water or like liquid.

Furthermore, the planes of the wheels may slope with reference to the axis of the corresponding arm and the wheels may be provided with a uniform warping or otherwise, the massaging action being, however, different from the action of friction in the direction of the center of the hub or in the opposite direction, given by the apparatus of FIG. 6.

What I claim is:

1. A massaging apparatus comprising a hub, a plurality of substantially radial arms rigid with said hub, means rotatably driving said hub, and a plurality of massage wheels carried by each of said arms at predetermined distances from the point of attachment of said arm on said hub, the distance between the wheel nearest the center of the hub on each arm and said center increasing uniformly from one arm to the next in a predetermined direction around the hub.

2. A massaging apparatus comprising a hub, a plurality of substantially radial arms rigid with said hub, means rotatably driving said hub, said arms extending tangentially to at least one circle coaxial with the axis of rotation of the hub, and a plurality of massage wheels carried by each of said arms at predetermined distances from the point of attachment of said arm on said hub, the distance between the wheel nearest the center of the hub on each arm and said center increasing uniformly from one arm to the next in a predetermined direction around the hub.

3. A massaging apparatus comprising a hub, a plurality of substantially radial arms rigid with said hub, means rotatably driving said hub, and a plurality of massage wheels carried removably by each of said arms at predetermined distances from the point of attachment of said arm on said hub, the distance between the wheel nearest the center of the hub on each arm and said center increasing uniformly from one arm to the next in a predetermined direction around the hub.

4. A massaging apparatus comprising a hub, a plurality of substantially radial arms rigid with said hub, means

3

rotatably driving said hub, and a plurality of massage wheels carried by each of said arms at predetermined distances from the point of attachment of said arm on said hub, the distance between the wheel nearest the center of the hub on each arm and said center increasing uniformly from one arm to the next in a predetermined direction around the hub.

5 5. A massaging apparatus comprising a hub, a plurality of substantially radial arms rigid with said hub, means rotatably driving said hub, and a plurality of twin massage wheels regularly spaced on each arm carried by each of said arms at predetermined distances from the point of attachment of said arm on said hub, the distance between the wheel nearest the center of the hub on each arm and said center increasing uniformly from one arm to the next in a predetermined direction around the hub.

15 6. A massaging apparatus comprising a hub, a plurality of substantially radial arms rigid with said hub, means

4

rotatably driving said hub, said arms extending tangentially to at least one circle coaxial with the axis of rotation of the hub, and a plurality of twin massage wheels regularly spaced on each arm, carried by each of said arms at predetermined distances from the point of attachment of said arm on said hub, the distance between the wheel nearest the center of the hub on each arm and said center increasing uniformly from one arm to the next in a predetermined direction around the hub.

References Cited in the file of this patent

UNITED STATES PATENTS

1,631,792 Burnley ----- Jan. 17, 1925

FOREIGN PATENTS

181,847 Germany ----- Mar. 9, 1907

1,197,963 France ----- June 8, 1959

251,124 Germany ----- May 24, 1911