Feb. 24, 1970 F. J. MUELLER ET AL 3,496,943

MAGNETIC MUSCLE STIMULATING AND ARTHRITIS THERAPY MACHINE

Filed May 4, 1966

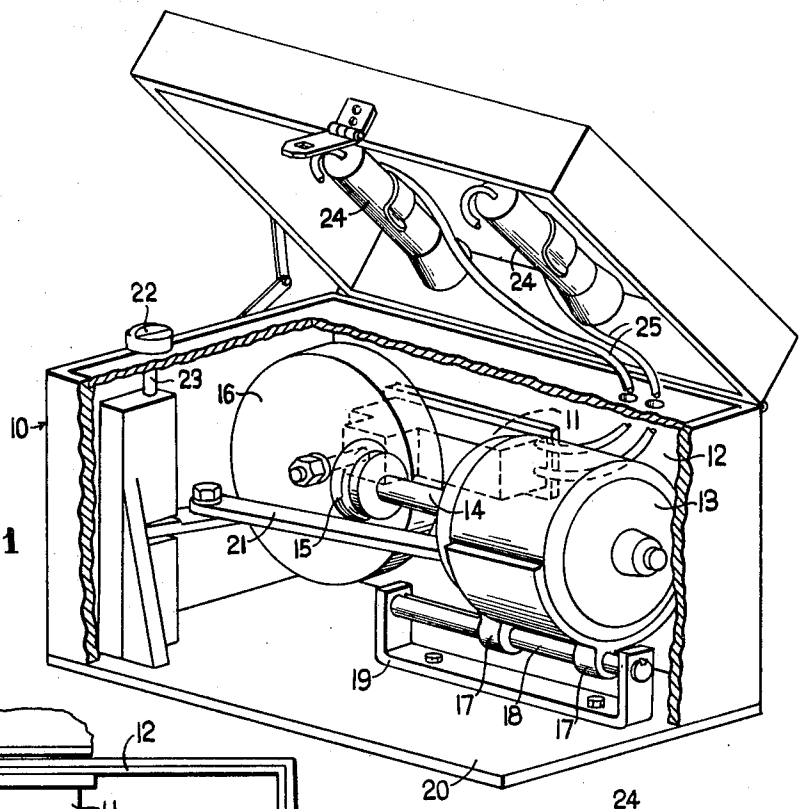


Fig. 1

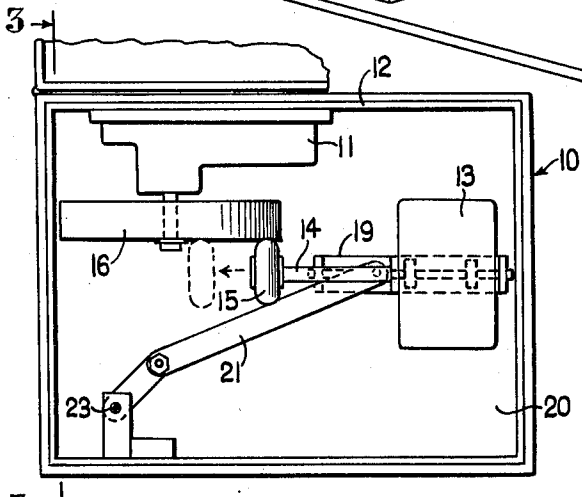


Fig. 2

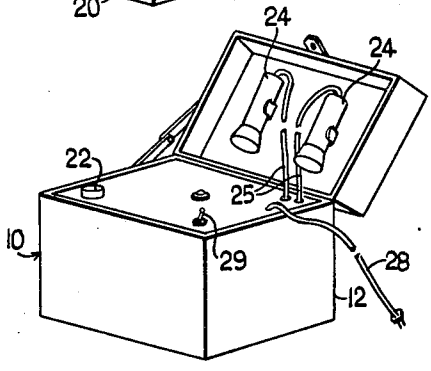


Fig. 4

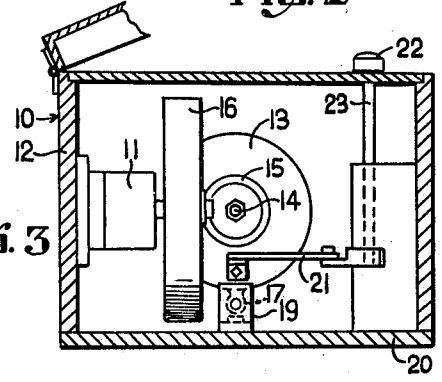


Fig. 3

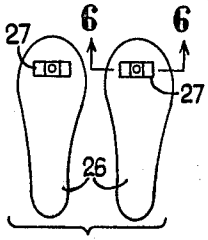


Fig. 5



Fig. 6

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MAGNETIC MUSCLE STIMULATING AND ARTHRITIS THERAPY MACHINE

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U.S. Cl. 128—419 2 Claims

ABSTRACT OF THE DISCLOSURE

An electrical discharge physical therapy machine to pass electricity generated to a person being treated, having a magneto being driven by an electric motor through use of friction gearing and having control means operable to move the motor to vary the relative speed of the magneto thereby changing the electrical discharge from the machine through therapy applicators to be applied to one's body.

Any one of four different types of electric discharges or currents is used in electrical therapy, which is the form of therapy the treatment or relief takes when electricity is the source of power. The four types of discharges or currents are static discharge, galvanic current, faradic current, and diathermic. It is the second of the four mentioned types of electric discharges or currents that is utilized in this invention. Although many different types of therapy machines have been invented from time to time, some of which may have even used a galvanic current in the operation thereof, none have been found to be completely satisfactory.

It is therefore the main purpose of this invention to provide an electric therapy machine, which we personally call a magnetic muscle and arthritis therapy machine, that provides relief from aching muscles and/or arthritis by means of electricity generated by an electrically motor rotated magneto.

Another object of this invention is to provide a magnetic muscle stimulating and arthritis therapy machine that contains a minimum number of components, all of which are enclosed in a case, thereby providing a lightweight, portable machine that can be carried with ease from one place to another.

Still another object of this invention is to provide a magnetic muscle stimulating and arthritis therapy machine having a variable output of electricity that is manually, adjustably controlled by means of friction gears.

Other and further objects of this invention will become apparent as the reading of the description of the invention proceeds and the appended drawing is examined.

In the drawing:

FIG. 1 is a pictorial view of this invention with its case broken open in order to show the mechanism of the machine.

FIG. 2 is a top view of this invention with the top panel removed.

FIG. 3 is a sectional view of this invention taken substantially along line 3—3 of FIGURE 2 and viewed in the direction indicated by the arrows.

FIG. 4 is a pictorial view of this invention ready for use.

FIG. 5 is a top view of the foot plates used with this invention.

FIG. 6 is a sectional view of one of the foot plates of this invention taken substantially along line 6—6 of FIGURE 5 and viewed in the direction indicated by the arrows.

Looking at the first three figures of the appended drawing, it will be seen that this invention consists of a case **10** that is preferably made of highly polished wood

or Bakelite or the equivalent thereof. A magneto **11** is secured to the vertically disposed inward side **12** of the aforesaid case **10** in which is also located the electric motor **13** having a drive shaft **14**, on the outer end of which is secured the small friction gear **15** that is in rotational contact with the large or first frictional gear **16** which is mounted on the outer end of the rotating shaft of the aforesaid magneto **11**.

Directing one's attention to FIGURE 1 of the appended drawing, it will be seen that the aforesaid electric motor **13** is provided with a pair of longitudinally spaced bearings **17** on the underside thereof through which passes the motor support rod **18** that has each end secured in one of the upper ends of the U-shaped member **19** that is bolted or otherwise secured to the bottom **20** of the aforesaid case **10**. A hinge type of lever **21** is so connected to both the inside of the aforesaid case **10** and the electric motor **13** that by rotating the knob **22** that is located on the upper end of the vertically disposed shaft **23** that has its lower end secured to the aforesaid lever **21** that by rotating the knob one will move the aforesaid electric motor **13** either towards or away from the large friction gear **16**, thereby either speeding up or retarding the speed of the magneto **11** to which the gear **16** is secured since the small friction gear **14** that is in rubbing contact with the gear **16** is secured to the shaft of the electric motor **13**, as has been previously described in this specification.

A pair of hand electrodes **24** is connected by the electric wires **25** to the magneto **11**. These hand electrodes may be replaced by the foot-plates **26** if it is so desired. The footplates are provided with clips **27** as one can clearly see by looking at FIGURES 5 and 6 of the appended drawing.

It is obvious to those experienced in the art of electrical therapy that we have herein provided a machine that when its hand electrodes **25** are either held in one's hands or they are placed in direct contact with various parts of the body and the electric motor **13** is connected to a source of current by means of the electric cord **28**, and the switch **29** is placed in the "on" position, the electric motor will rotate the magneto, thereby generating electric current that is helpful to the human body in the easing of pain in the muscles and relief to the sufferers of arthritis and the like. The amount of electric current one receives is controlled by the previously described knob **22** of this invention. One or both of the hand electrodes **25** may be replaced by the foot-plates **26**, if it is so desired. The foot-plates are of course connected to the magneto **11** by the same wires **25** and clips **27** which can connect hand electrodes **24** to foot plates **26**.

The wiring diagram of this machine is well understood by those experienced in the art and for this reason is not shown in the appended drawing.

It is to be understood that this invention is subject to any changes and/or modifications that may fall within the scope and intent of the appended claims.

What we now claim is:

1. A magneto muscle stimulating arthritis therapy machine of the character described, comprising a support, a magneto mounted on said support, a motor mounted on said support, means connecting said magneto and said motor comprising, a first friction gear secured to said magneto and smaller friction gear secured to said motor, the rim of said smaller gear being in direct contact with the flat surface of said first friction gear, motor mounting means mounted on said support, said electric motor slidably mounted on said motor mounting means and said motor and said smaller friction gear movable thereon as a unit relative said first gear to regulate speed of said magneto, means to control the speed of the said magneto by moving said smaller friction gear near to or away

from the center of the said first friction gear comprising, a hinge-type lever having one end portion pivotally connected to said motor and the other end portion pivotally secured to said support, and a shaft projecting upward from said end portion of said lever secured to said support, said shaft having means in its outer end portion by which to rotate same to move said lever, motor, and said smaller gear, thereby providing a means of moving the said electric motor to thereby control the speed of said magneto, and a pair of electrodes connected to said magneto, said electrodes adapted to be placed in direct contact with the body of the person to be treated with the said therapy machine when the said magneto is activated by connecting said electric motor to a source of current.

2. The therapy machine of claim 1 wherein said support is a case, and said means mounting said motor is a

shaft rigidly mounted in said case horizontally and positioned substantially parallel to the flat surface of the said first gear, said motor being slidably mounted on the top of said shaft.

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WILLIAM E. KAMM, Primary Examiner

U.S. Cl. X.R.

74—194, 207, 213; 310—83, 153; 322—41