T. H. MIDGLEY.

MASSAGE DEVICE.

APPLICATION FILED OCT. 29, 1908.

912,708. Patented Feb. 16, 1909.

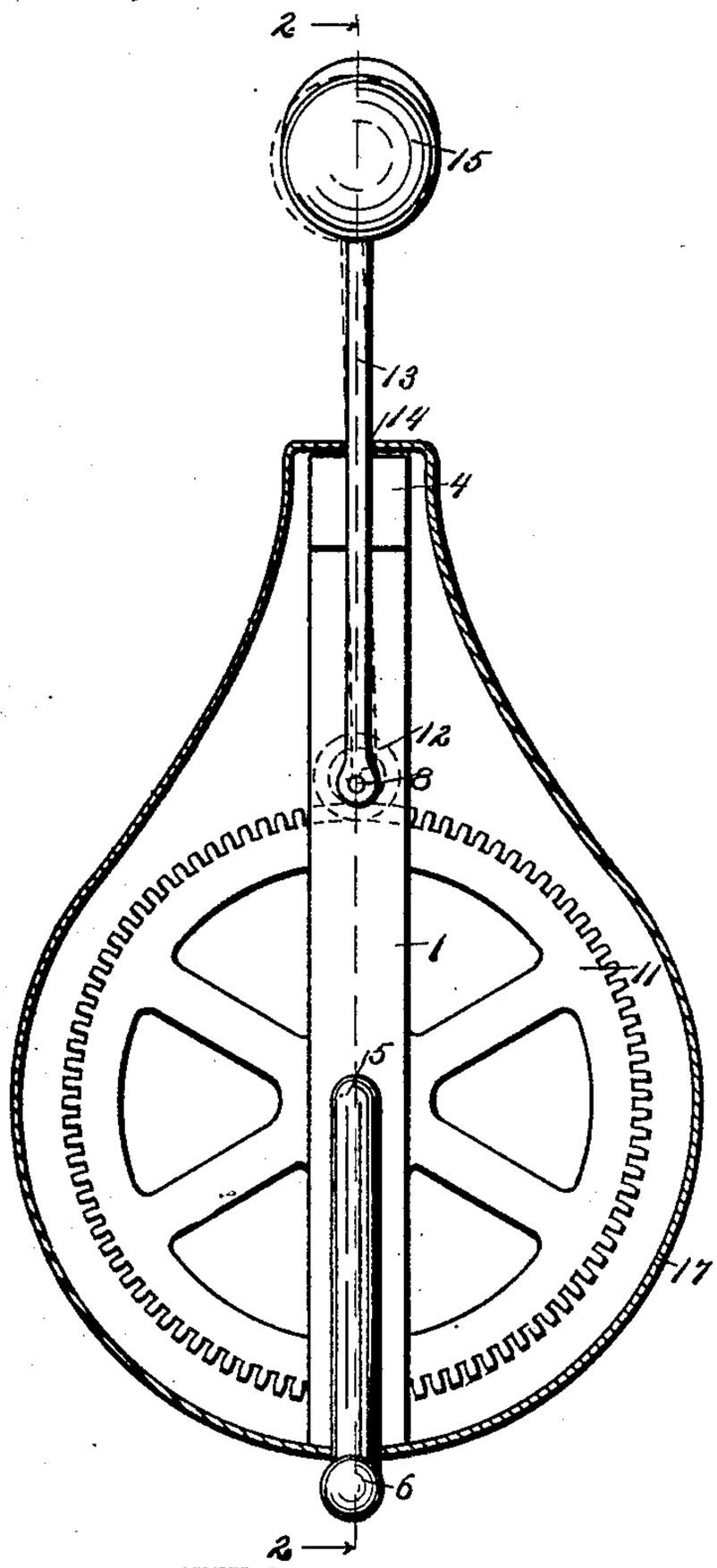

Fig. 1.

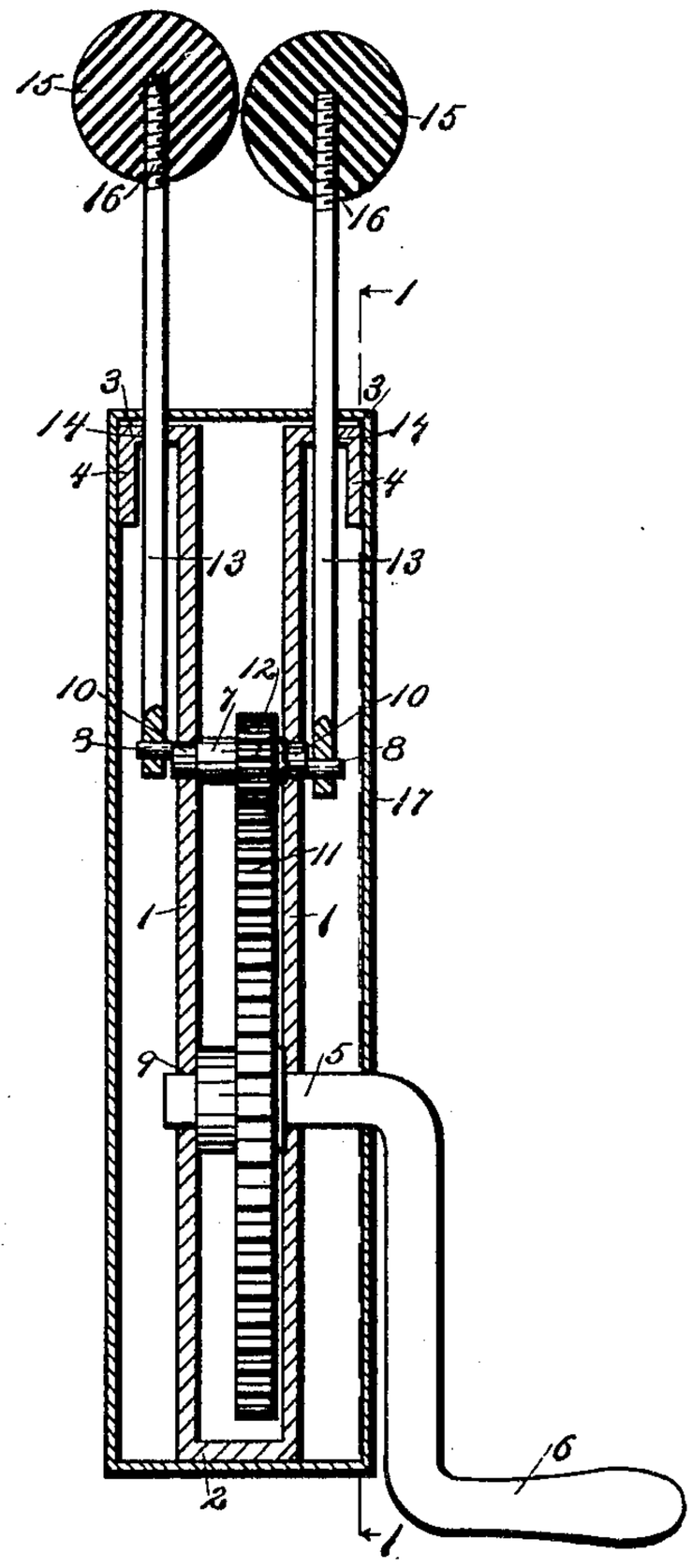

Fig. 2.

Witnesses
Frances G. Fallman
Clara E. Braden

Inventor
Thomas H. Midgley
By Chappell & Earl
Attorney

UNITED STATES PATENT OFFICE.

THOMAS H. MIDGLEY, OF KALAMAZOO, MICHIGAN.

MASSAGE DEVICE.

No. 912,708. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed October 29, 1908. Serial No. 460,058.

To all whom it may concern:

Be it known that I, THOMAS H. MIDGLEY, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Massage Devices, of which the following is a specification.

This invention relates to improvements in massage devices.

The main object of this invention is to provide an improved massage device adapted to be manually driven and used as a hand instrument which is easily operated, and, at the same time, is very effective.

A further object is to provide an improved massage device which is very economical to produce and simple in structure and one which is not likely to get out of repair in use.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a side elevation of a structure embodying the features of my invention, the casing being shown in vertical section. Fig. 2 is a vertical cross section thereof, taken on a line corresponding to line 2—2 of Fig. 1, looking in the direction of the little arrows at the ends of the section line.

In the drawing, similar reference numerals refer to similar parts in both views.

Referring to the drawing, the frame preferably comprises side pieces 1 connected by a cross piece 2 at their lower ends, the upper ends of the side pieces being turned outwardly at 3, 3, and downwardly at 4, 4, the object of which will appear as the description proceeds. This frame is preferably formed of a single strip or piece of metal for convenience and economy in manufacture.

The driving shaft 5 is provided with a crank 6. This driving shaft and the driven crank shaft 7 are arranged in suitable bearings, as 9 and 10, respectively, provided therefor in the side pieces of the frame. The crank shaft 5 is provided with a gear 11, and a pinion 12 on the shaft 7 is arranged to mesh with this gear 11. These gears are preferably arranged between the side pieces of the frame, as illustrated.

A pair of plungers 13 are mounted on the cranks 8 to be reciprocated thereby. These plungers 13 are provided with suitable bearings 14 in the out-turned ends 3 of the side pieces, the plungers being arranged on the outside of the side pieces, as illustrated. The plungers are provided with applicators, as 15, formed of rubber or other suitable material, the same being preferably detachably secured to the plungers by threading thereon, as is illustrated in Fig. 2.

The casing 17 is preferably formed of sheet metal, and is secured at its lower end to the lower end of the frame, and its upper end to the down-turned portions 4 on the out-turned ends 3 of the side pieces of the frame. This casing is shown in the accompanying drawing as being seamless. In practice, it is made up of pieces and duly assembled. As this assembling, however, would be readily understood by one skilled in this art, it is not here illustrated or described. The casing is preferably pear-shaped, being tapered towards its upper end, so that it is as small as possible to receive the frame and gear, and forms an effective hand piece for the user.

In use, the instrument is held in one hand with the applicators against the part to be treated, and the crank turned with the other hand. As the applicators are alternately moved, the part to be treated is given a very effective massaging.

My improved massage device is well adapted for private use and is especially designed by me for such use. It is also compact and light in weight so that it can be readily transported or packed away when not in use, thus making it available for the use of travelers. The frame, although very simple in construction, is, as will be obvious, very strong and rigid in comparison to its weight as the parts are arranged and disposed to support the parts and to receive the strain most effectively.

I have illustrated and described my improved device in detail in the form preferred by me on account of its structural simplicity and economy, although I am aware that it is capable of very considerable variation in structural details without departing from my invention, and as these details will be readily understood by those skilled in the art

to which this invention relates, I do not here attempt to illustrate or describe them.

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

1. In a massage device, the combination with a frame formed of a single piece of metal bent into a loop to form side pieces, the ends of said side pieces being turned outwardly; a driving shaft provided with a driving crank and a crank shaft having oppositely-arranged cranks arranged in suitable bearings in the side pieces of said frame; a gear on said driving shaft and a pinion on said crank shaft meshing therewith, arranged between the side pieces of said frame; a pair of plungers connected to said crank shaft arranged in bearings in the outwardly-turned ends of the side pieces of said frame; applicators for said plungers; and a casing secured to the lower end and to the out-turned arms of said frame, said casing being pear-shaped in cross section and being adapted to serve as a handle.

2. In a massage device, the combination with a frame formed of a single piece of metal bent into a loop to form side pieces, the ends of said side pieces being turned outwardly; a driving shaft provided with a driving crank and a crank shaft having oppositely-arranged cranks arranged in suitable bearings in the side pieces of said frame; a gear on said driving shaft and a pinion on said crank shaft meshing therewith, arranged between the side pieces of said frame; a pair of plungers connected to said crank shaft arranged in bearings in the outwardly-turned ends of the side pieces of said frame; applicators for said plungers; and a casing.

3. In a massage device, the combination with a frame comprising a pair of side pieces; a driving shaft provided with a driving crank and a crank shaft having oppositely-arranged cranks arranged in suitable bearings on the side pieces of said frame; driving connections for said driving and crank shafts; a pair of plungers connected to said crank shaft bearings for said plungers carried by said side pieces; applicators for said plungers; and a casing secured to said frame, said casing being pear-shaped in cross section and being adapted to serve as a handle.

4. In a massage device, the combination with a frame comprising a pair of side pieces; a driving shaft provided with a driving crank and a crank shaft having oppositely arranged cranks arranged in suitable bearings on the side pieces of said frame; driving connections for said driving and crank shafts; a pair of plungers connected to said crank shaft; bearings for said plungers carried by said side pieces; applicators for said plungers; and a casing secured to said frame.

5. In a massage device, the combination with a frame; a driving shaft provided with a driving crank and a crank shaft arranged in suitable bearings on said frame; driving connections for said driving and crank shafts; a pair of plungers on said crank shaft; bearings for said plungers; applicators for said plungers, said plungers being arranged side by side and so that their movements are alternated; and a casing secured to said frame, said casing being pear-shaped in cross section and being adapted to serve as a handle.

6. In a massage device, the combination with a frame; a driving shaft provided with a driving crank and a crank shaft arranged in suitable bearings on said frame; driving connections for said driving and crank shafts; a pair of plungers on said crank shaft; bearings for said plungers; applicators for said plungers, said plungers being arranged side by side and so that their movements are alternated; and a casing secured to said frame.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

THOMAS H. MIDGLEY. [L. S.]

Witnesses:

CLARA E. BRADEN,

F. GERTRUDE TALLMAN.