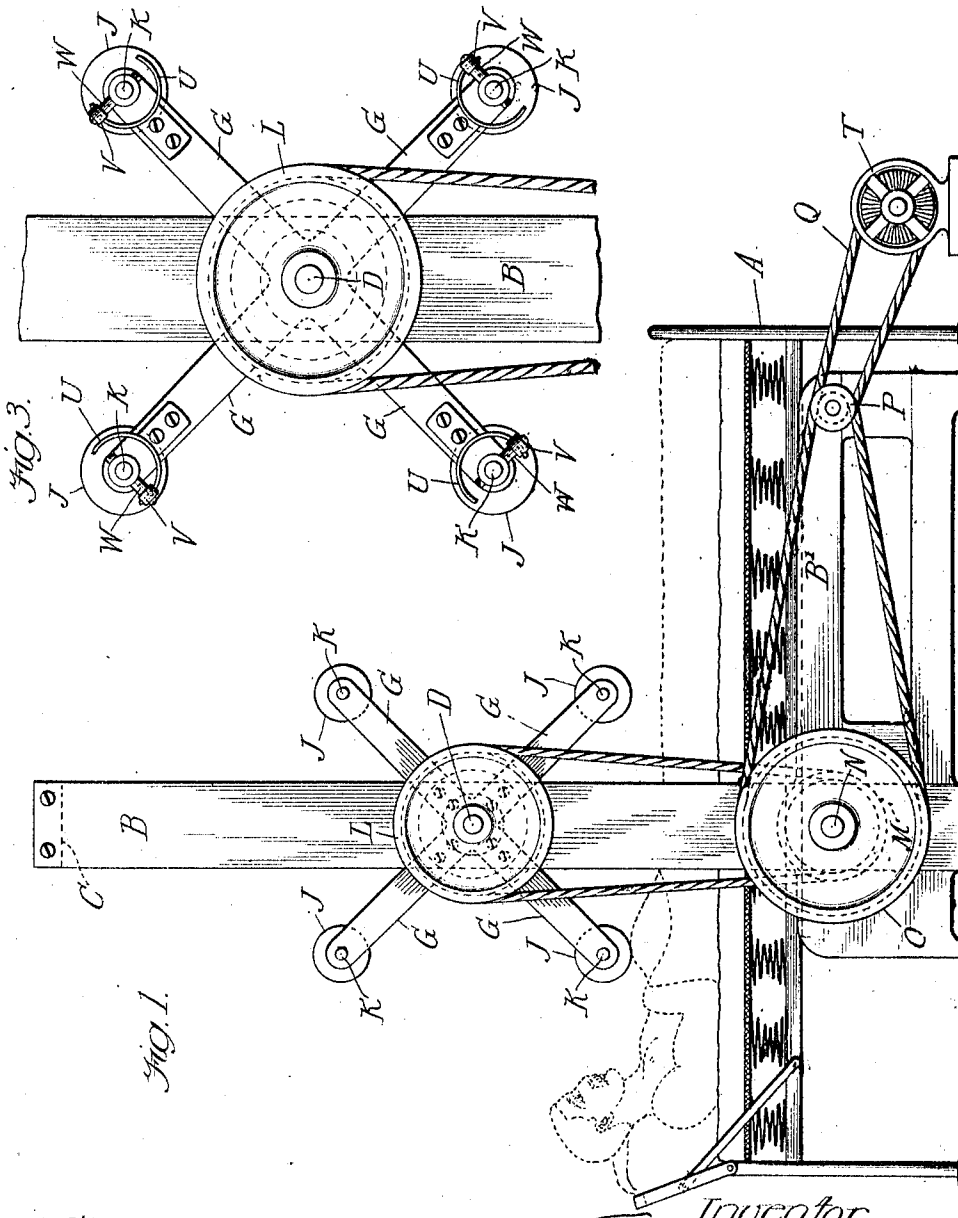


F. POPE.
 MASSAGE APPARATUS.
 APPLICATION FILED DEC. 16, 1910.

1,004,300.

Patented Sept. 26, 1911.

2 SHEETS—SHEET 1.



Witnesses
 Martin H. Olsen.
 Robert Dobbermann.

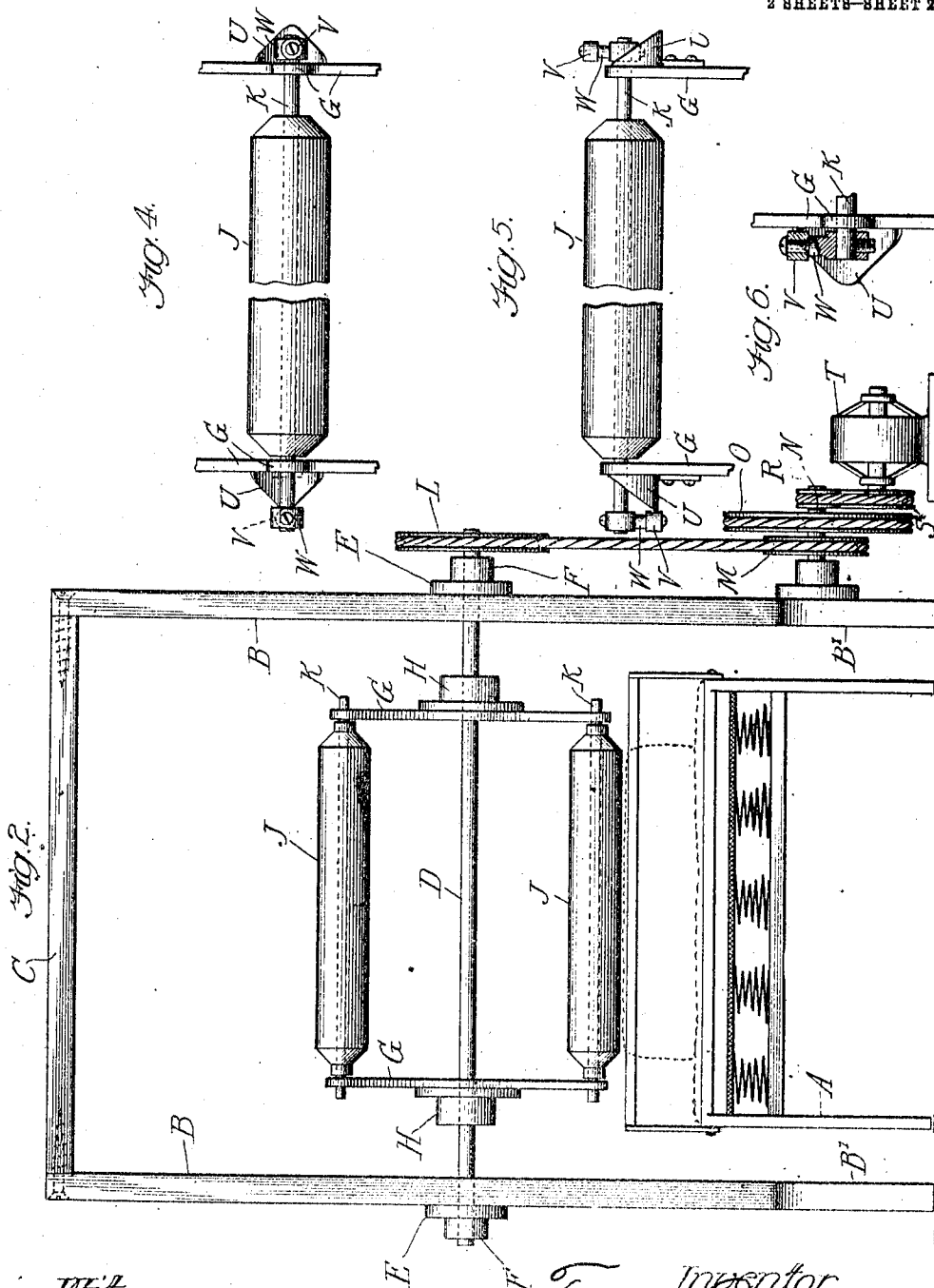
Inventor
 Frank Pope
 By Rector Hibbard Davis, Attorney.

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UNITED STATES PATENT OFFICE.

FRANK POPE, OF KANKAKEE, ILLINOIS.

MASSAGE APPARATUS.

1,004,300.

Specification of Letters Patent. Patented Sept. 26, 1911.

Application filed December 16, 1910. Serial No. 597,605.

To all whom it may concern:

Be it known that I, FRANK POPE, a citizen of the United States, residing at Kankakee, Illinois, have invented certain new and useful Improvements in Massage Apparatus, of which the following is a specification.

The beneficial effects of massage as a means for increasing muscle development, reduction of corpulency, equalization of the circulation and removal of disorders of the digestive system, has long been recognized. Heretofore, however, where more than a substantially surface treatment was desired, it has been necessary to call in the services of a masseur, for, though a number of devices have been proposed for mechanical massage, they have been, so far as known to me, unadapted for treatment where it is necessary that the effect thereof should extend materially into the interior of the body.

The apparatus devised by me, which forms the subject matter of the present application, is adapted to perform all the operations substantially which are within the capacity of a masseur, whether the treatment is to be superficial or more deep-reaching.

In the accompanying drawings I have illustrated two preferred forms of my apparatus which are each capable of securing the desired result, but it will be understood that my invention is not confined to the precise forms shown, but extends to all equivalent forms thereof coming within the scope of the appended claims.

Figure 1 is a side elevation of one form of my apparatus showing it as it appears in operation; Fig. 2 is an end elevation thereof; Fig. 3 is an elevation of a modification, the view being similar to Fig. 1 but with part omitted; Figs. 4, 5 and 6 are details showing the operation of the modified form of machine shown in Fig. 3.

In Figs. 1 and 2 the simpler form of massage apparatus is shown in the position which it occupies with relation to a couch on which the patient to be treated reclines, during certain of the operations which my machine is capable of performing, the couch being indicated by the letter A. The latter may be of any other or preferred form provided it be of not too great width to enter between the upright supports B B and presents no obstruction to the motion of the moving parts. In the particular form shown in Figs. 1 and 2, the uprights B are

connected by a cross-piece C and perforated or bored at a suitable height for the reception of a revoluble shaft D which is journaled therein. The bearings of the shaft if desired may be increased in length by the circular bosses E E and the shaft held against longitudinal displacement by the collars F F. Upon the rotary shaft is mounted a pair of spiders G equally spaced from the adjacent supports and in order to secure greater strength and rigidity the spiders are provided with bosses H surrounding the shaft. In the particular form of device shown the spiders are provided each with four arms and extending between the corresponding arms of the respective spiders are mounted rollers J which are journaled in the arms at K for easy revolution. It will be apparent that the number of rollers and consequently the number of arms on the spiders may be varied at pleasure. The precise means for driving the rotary shaft is not material and a number of suitable means for the purpose will suggest themselves. In the present instance I have shown a pulley L mounted upon one end of the revoluble shaft which is connected for revolution to a smaller pulley M on a stub-shaft N which likewise bears a larger pulley O connected to a pulley P on a second stub shaft. The latter is turned by an endless band Q which embraces a second pulley R on the latter stub-shaft and a pulley S upon the armature shaft of a motor T. The stub shafts are mounted in a pair of extended base portions B' secured to the uprights B for the purpose of giving them greater stability. It will now be apparent that when the motor is in operation it will drive the rotary massage instrument but at a lower speed than that of the motor shaft by reason of the intermediate reducing pulleys.

In making use of the apparatus the patient reclines upon the couch and presents that part of his anatomy which is to be treated within the path of the rollers. The latter, by their revolutions and rotation, roll upon and knead or massage the part to be treated. It will be apparent that the patient may by changing his position bring any part of the body which is to be treated into the path of the rollers, and for operations upon certain parts such as the arms the presence of the couch is not essential.

In the modification shown in Figs. 3, 4, 5

and 6 the rollers receive not only motions of revolution and rotation but further an end-wise movement which accompanies and depends upon the movement of rotation. In this form of the apparatus the support, driving apparatus and spiders are similar to those already described except in the particulars to be now noted. Each of the spider arms carries a cam track U with which engages a roller V mounted upon a stub shaft projecting from the journal of the roller journaled in said arm. Each massage roller is provided with a pair of these cam rollers, one at each end of its shaft, and they are mounted at an angle of 180 degrees to each other with reference to the axis of the roller. It will be readily apparent that as the massage roller revolves, the cam roller at one end of its shaft is brought into engagement with its cam and then the roller at the other end of its shaft is brought into engagement with the corresponding cam. The result is that the massage roller as it is revolved is given a longitudinal reciprocation whereby its effect upon the part of the body operated upon is materially increased.

What I claim is:

1. In a device of the class described, a support, an arm pivoted thereto for rotation in a vertical plane carrying a massage device, means for moving the massage device in a direction at an angle to the arm and means for revolving the arm about its pivot.
2. In a device of the class described, a support, a revoluble frame mounted there-

on for rotation in a vertical plane, a plurality of massage devices and means for revolving the frame and means for reciprocating the massage device at an angle to its path of rotation.

3. In a device of the class described, a support, a pair of arms pivoted thereto for rotation in a vertical plane and carrying a roller, means for revolving the arms about their pivots, means for reciprocating the roller longitudinally.

4. In a device of the class described, a support, a rotary shaft, spiders secured thereto near its opposite ends, rollers mounted between the spiders, means for rotating the shaft and means for reciprocating the rollers with reference to the spiders.

5. In a device of the class described, a support, an arm pivoted thereto, a roller mounted on the arm for rotation and reciprocation, a cam mounted on the arm, means on the roller engaging the cam for reciprocating the roller.

6. In a device of the class described, the combination of a support, a rotary shaft mounted therein, spiders secured to the shaft at opposite ends thereof, rollers mounted between the spiders, means for rotating the shaft, and cams mounted upon the shaft, means on the journals of the rollers for engaging the cams on the spiders to reciprocate the rollers.

FRANK POPE.

Witnesses:

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FRANK O. SCHNEIDER.