No. 845,733. PATENTED FEB. 26, 1907.

G. W. FITZ.

MASSAGE APPARATUS.

APPLICATION FILED MAR. 3, 1906.

2 SHEETS—SHEET 1.

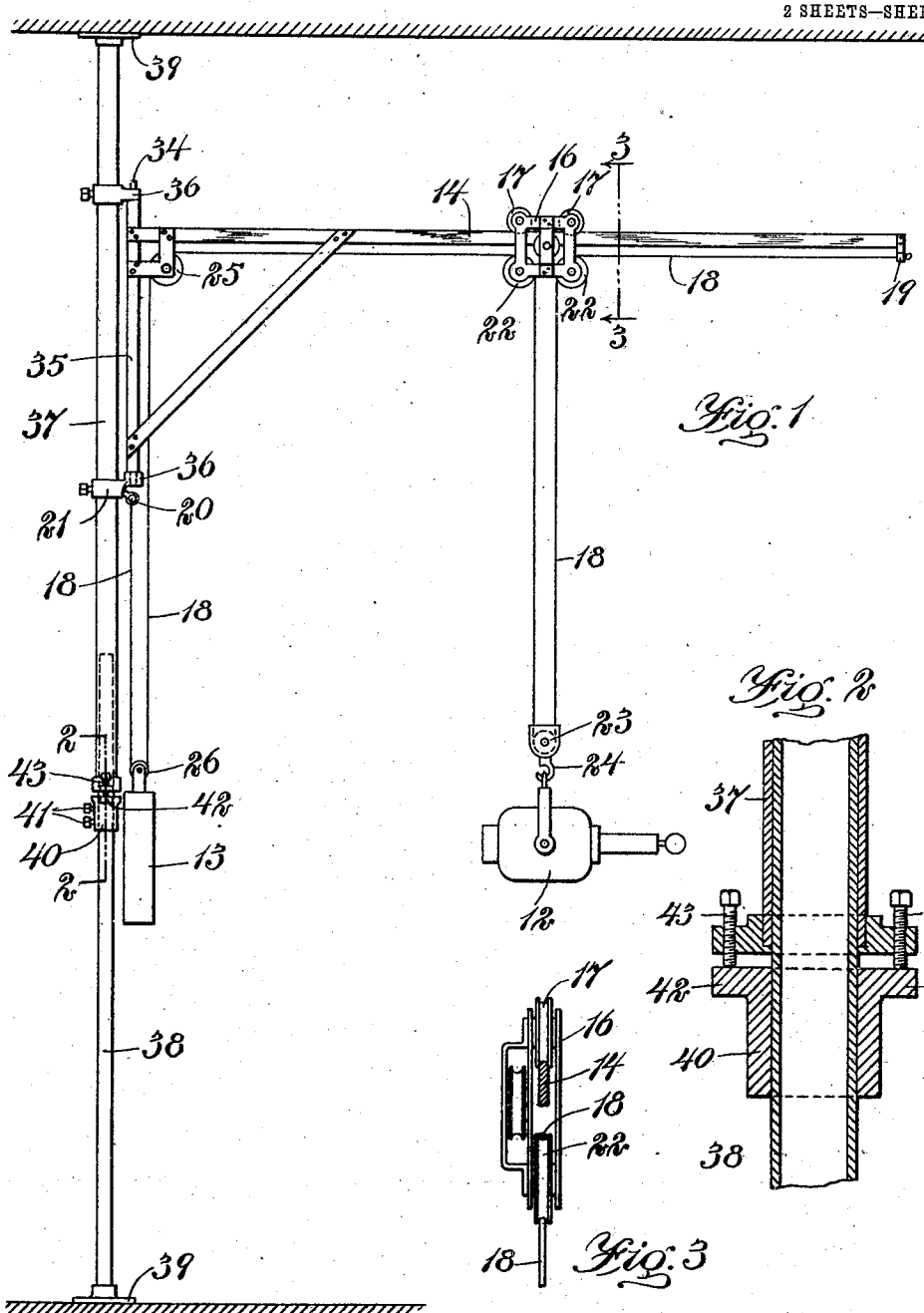

Fig. 1

Fig. 2

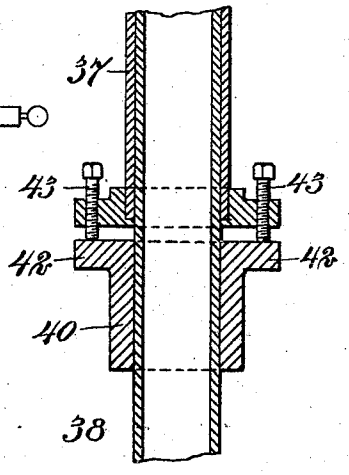

Fig. 3

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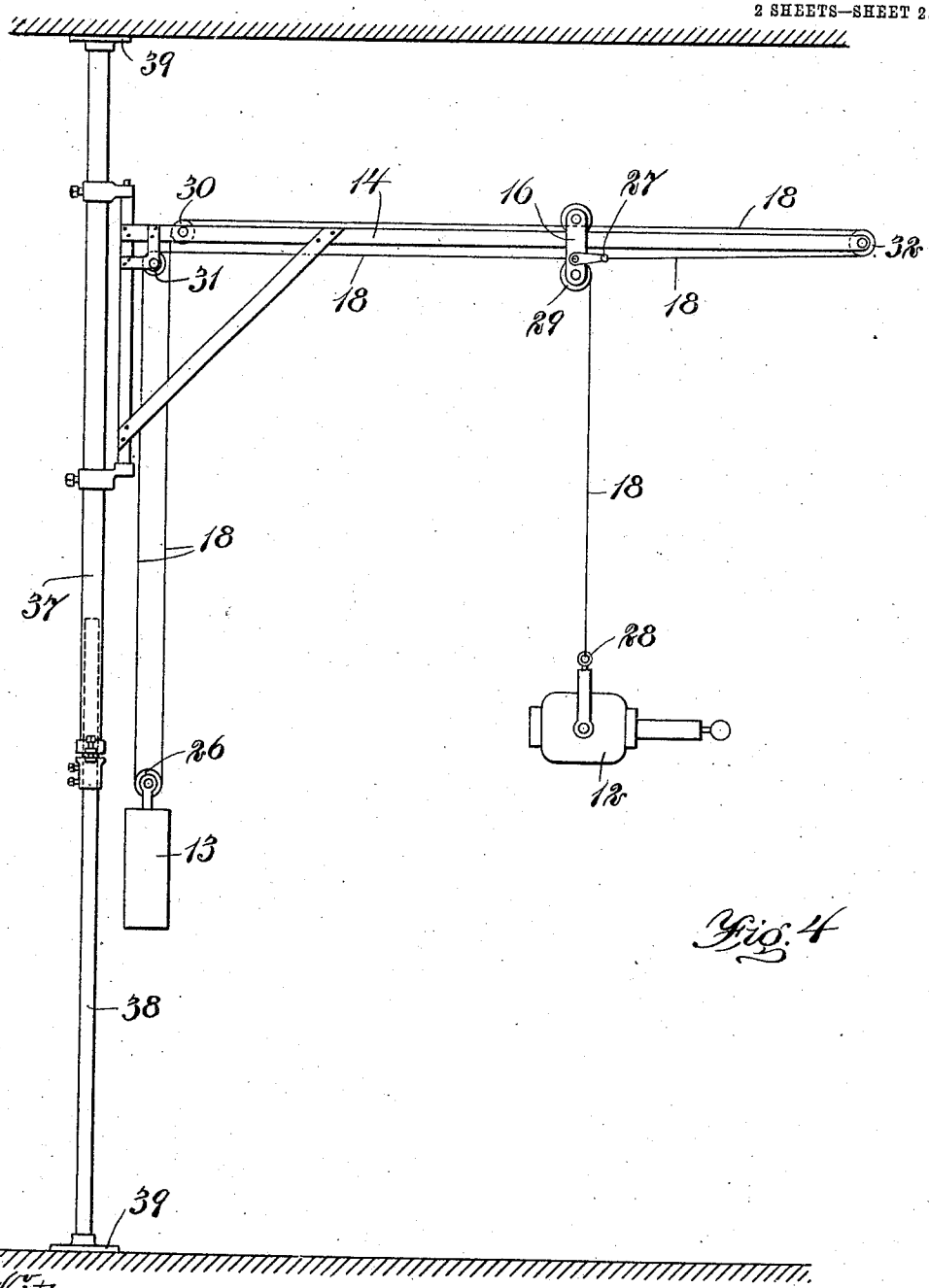

Fig. 4

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UNITED STATES PATENT OFFICE.

GEORGE W. FITZ, OF BOSTON, MASSACHUSETTS.

MASSAGE APPARATUS.

No. 845,733. Specification of Letters Patent. Patented Feb. 26, 1907.

Application filed March 3, 1906. Serial No. 304,115.

To all whom it may concern:

Be it known that I, GEORGE W. FITZ, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Massage Apparatus, of which the following is a specification.

This invention relates to adjustable supports for pendently supporting devices, such as massage apparatus, in such manner and position as to permit the ready application of the apparatus to any desired portion of the body to be operated upon.

The invention relates particularly to a supporting apparatus in which the object supported, whether a massage or other apparatus, is counterbalanced by a weight in such manner that the flexibly-supported apparatus, which I will hereinafter for convenience refer to as the "load," is capable of being freely raised and lowered and of remaining at any height to which it may be adjusted.

One object of the invention is to enable the load to be adjusted horizontally to any desired extent without vertical movement or change of its vertical position.

Another object of the invention is to locate the counterbalance at such distance from the load that there shall be no possibility of interference between the load and the counterbalance, the latter being well removed from the space in which the load is movable, so that in case the load is a massage apparatus moved about over the body of a recumbent patient the weight will not overhang the patient's body and therefore will not be a source of annoyance or apprehension to the patient.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a supporting apparatus embodying my invention and a massage apparatus supported thereby. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents a section on line 3 3 of Fig. 1 looking toward the left. Fig. 4 represents a view similar to Fig. 1, showing a modification.

The same letters of reference indicate the same parts in all the figures.

In the drawings, 12 represents the load, which is here shown as a massage apparatus, preferably constructed as shown in Letters Patent of the United States No. 795,212, dated July 18, 1905. It is evident, however, that any other form of massage apparatus may be employed and that the thing supported, referred to as the "load," may be of any nature adapted for use with the support constituting my invention.

13 represents the counterbalance, which is a weight adapted, through the flexible connection hereinafter described, to sustain the load at any height to which the latter may be adjusted. The load 12 and counterbalance 13 are adjustably supported by means organized to permit, first, a horizontal movement of the load without a vertical movement thereof and without movement of the counterbalance in any direction, and, secondly, simultaneous vertical movements of the load and counterbalance in opposite directions without horizontal movement or adjustment of the load, the counterbalance having no horizontal movement or adjustment under any conditions, but remaining always at one end of the path of horizontal movement of the load. In the embodiment of my invention shown in Fig. 1 the said supporting means are illustrated as comprising an overhanging arm or track 14, which is substantially horizontal, a carriage 16, having trucks 17, adapted to run upon the arm 14, the carriage being thus horizontally movable, and a cord 18, which pendently supports the load from the carriage and the counterbalance from the arm. The cord 18, which may be made of any suitable material having the desired flexibility, is attached at one end to an eye 19 at the outer portion of the arm 14 and at its opposite end to an eye 20, which may be attached either to the arm 14 or to a support adjacent to the inner end of the arm, the said eye 20 being here shown as attached to a collar 21, secured to the fixed supporting-standard hereinafter described. The carriage 16 is provided with guide-pulleys 22 22, from which depends a portion of the cord 18 in the form of a bight engaged with a pulley 23, connected with a hook 24, with which the load 12 is engaged. The arm 14 is provided with a guide-pulley 25, from which another portion of the cord 18 depends in the form of a bight, which is en-

gaged with a pulley 26 on the counterbalance 13, one end of said bight being the end of the cord which is engaged with the eye 20.

The counterbalance 13 is of substantially the same weight as the load, so that a light vertical pressure on the latter will raise or lower it, the counterbalance moving in the opposite direction and sustaining the load at any vertical position to which it may be adjusted. It will be seen that the described arrangement of the cord and the parts with which it is engaged is such that the carriage may be moved horizontally in either direction to change the position of the load horizontally without vertical change of its position, because when the carriage is moved along the arm the portion of the cord at the advancing end of the carriage is transferred to the load-supporting bight, while at the same time a corresponding portion of the cord is transferred from the said bight to the horizontal stretch of the cord behind the carriage. Hence the operative length of the load-supporting bight remains unchanged.

It will be seen that the counterbalance 13 is at all times located at the inner end of the arm 14 and has no horizontal movement, the said counterbalance being therefore at all times out of the space above the load 12.

In Fig. 4 I show one end of the cord 18 attached at 27 to the carriage 16, the other end of the cord being attached at 28 to the load. The carriage is provided with single guide-pulley 29, and the arm is provided with two guide-pulleys 30 and 31 at its inner portion and with a single guide-pulley 32 at its outer portion. The cord passes from the load over the pulley 29 to the pulley 31, from which it depends in a bight, engaging the pulley 26 on the counterbalance, the cord passing from the pulley 26 over the pulleys 30 and 32 to the part 27 on the carriage to which it is attached. This arrangement or organization permits the same adjustments of the weight and counterbalance that are permitted by the arrangement shown in Fig. 1.

The arm 14 is preferably hinged to a suitable support, so that it is adapted to swing horizontally. The hinge connection is here shown as comprising pintles 34 on a vertical bar 35, affixed to the arm 14, and sockets 36 on a supporting-standard, said sockets engaging the pintles 34. The supporting-standard is preferably of telescopic construction and composed of a tubular member 37 and a member 38 of smaller diameter adapted to slide in the tubular member. Said members are provided with enlarged heads or end pieces 39, one adapted to bear on the floor and the other on the ceiling of a room. The member 38 is provided with a collar 40, which is adjustably secured to said member by set-screws 41. The upper end of said collar is provided with outwardly-projecting ears 42, constituting seats for bearing-screws 43, engaged with ears or lugs affixed to the standard member 37 and adjustable lengthwise of the standard. When it is desired to install the apparatus in a room, the set-screws 41 are loosened and the standard is extended until its heads bear the one against the floor and the other against the ceiling. The set-screws 41 are then tightened and the bearing-screws 43 are given a few turns to impart a slight final elongation to the standard and bring its upper head to a firm bearing on the ceiling.

It will be seen from the foregoing that the described apparatus is adapted to be installed in any desired part of a room, so that the arm 14 may project over a bed, and thus permit the ready application of the applicator of the massage apparatus to the body of a patient on the bed.

I claim—

1. In combination, a load or working agent, a counterbalance therefor, and adjustable supporting means, comprising a substantially horizontal overhanging arm or track, a carriage movable thereon and a flexible cord which pendently supports the load from the carriage and the counterbalance from the arm, the said supporting means having provisions for permitting horizontal movement of the carriage and load without vertical movements of the load and counterbalance, and vertical movements of the load and counterbalance without horizontal movement of the carriage and load.

2. In combination, a substantially horizontal hinged arm or track, a carriage movable on the arm, a load or working agent, and a flexible cord which pendently supports the load from the carriage and the counterbalance from the inner portion of the arm, the arm carriage and cord comprising supporting means having provisions for permitting horizontal movements of the carriage and load without vertical movements of the load and counterbalance, and for permitting vertical movements of the load and counterbalance without horizontal movement of the carriage and load.

3. An apparatus of the character stated, comprising a telescopic standard having an adjustable support or seat on one of its members, and bearing devices adjustably connected with the other member to coact with said seat in imparting a final elongation to the standard, said bearing devices being movable lengthwise of the standard, an arm hinged to said standard, and a working device adjustably suspended from said arm.

4. An apparatus of the character stated, comprising a substantially horizontal arm, or track, having a guide-pulley at its inner portion, a carriage movable on the arm, and having a pair of guide-pulleys, a flexible cord

attached at one end to the outer portion of the arm, and at its other end to a support adjacent to the guide-pulley on the arm, intermediate portions of the cord passing over the said guide-pulleys on the arm and carriage, and depending in bights therefrom, a load or working agent engaged with the bight depending from the carriage, and a counterbalance engaged with the bight depending from the arm.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE W. FITZ.

Witnesses:
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E. BATCHELDER.