

DE FOREST B. CATLIN.
 MASSAGE APPARATUS.
 APPLICATION FILED OCT. 25, 1912.

1,059,594.

Patented Apr. 22, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

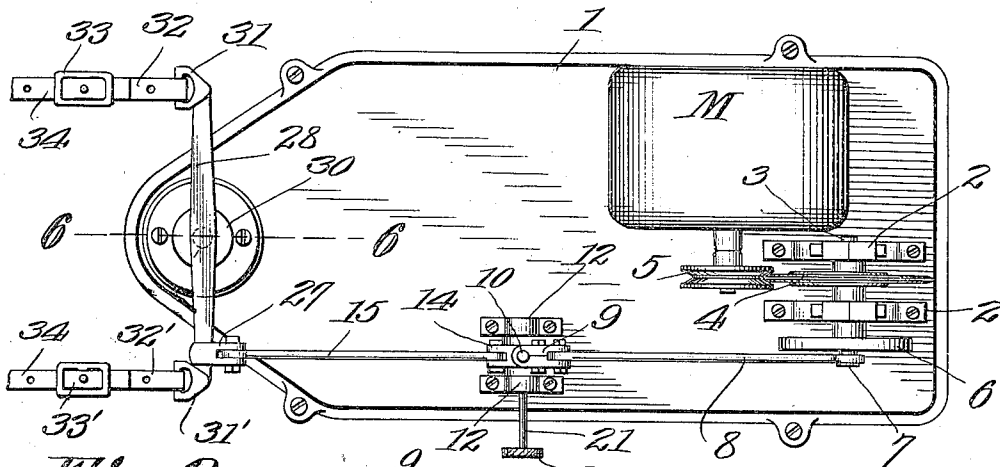
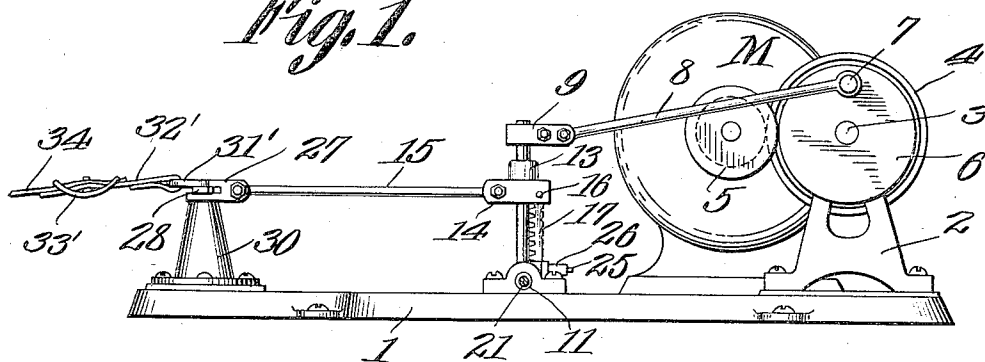


Fig. 2.

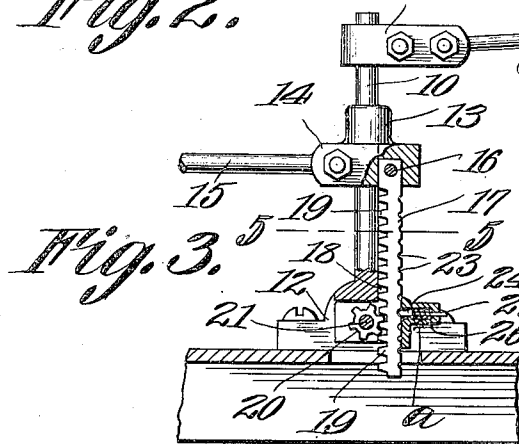


Fig. 3.

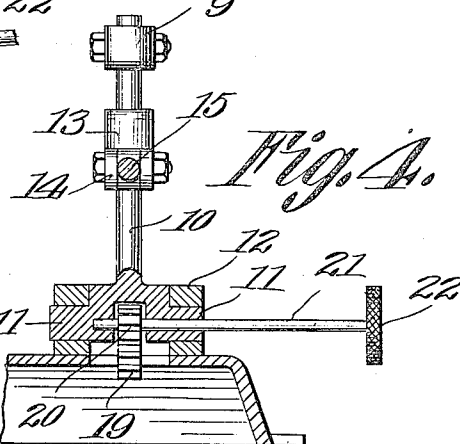


Fig. 4.

Witnesses
H. B. Woodew.
L. Wilson.

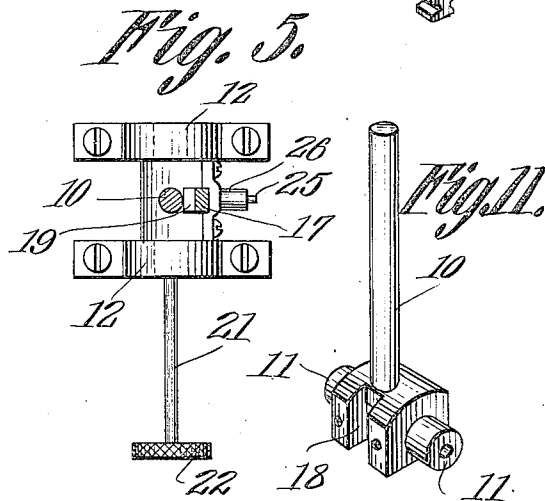
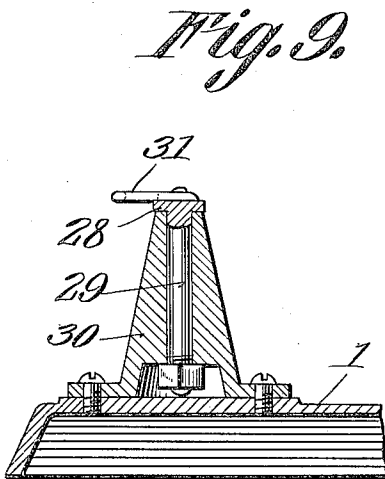
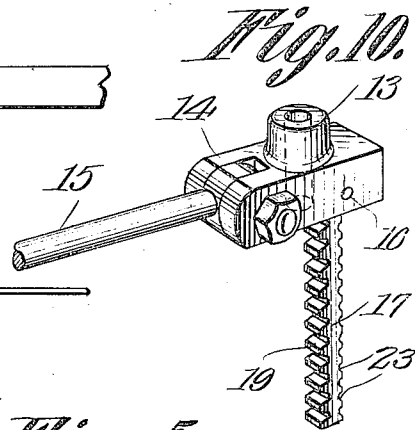
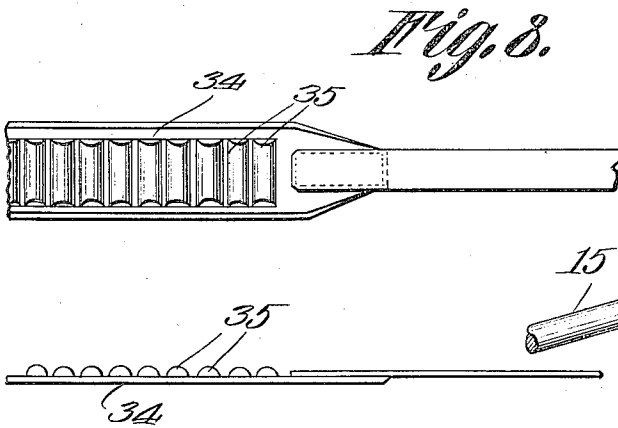
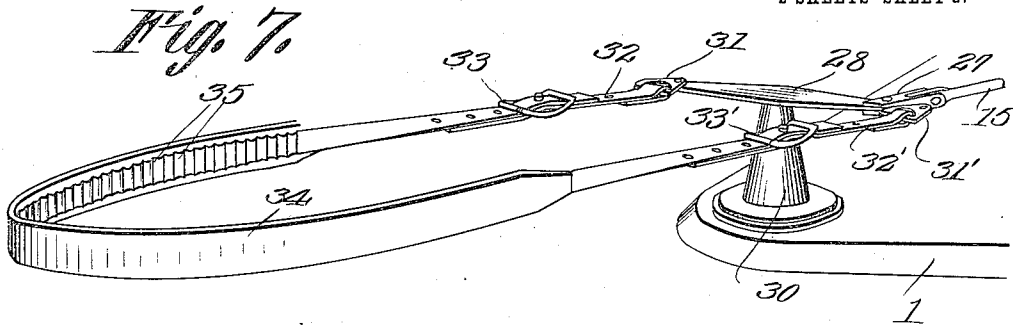
DeForest B. Catlin
 Inventor,
 by *Cashow & Co.*
 Attorneys.

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2 SHEETS—SHEET 2.



De Forest B. Catlin

Witnesses
F. B. Woodew.
L. H. Wilson.

Inventor,
 by *C. A. Snow & Co.*
 Attorneys.

UNITED STATES PATENT OFFICE.

DE FOREST B. CATLIN, OF MANKATO, MINNESOTA.

MASSAGE APPARATUS.

1,059,594.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed October 25, 1912. Serial No. 727,706.

To all whom it may concern:

Be it known that I, DE FOREST B. CATLIN, a citizen of the United States, residing at Mankato, in the county of Blue Earth and State of Minnesota, have invented a new and useful Massage Apparatus, of which the following is a specification.

The present invention relates to improvements in massage apparatus.

10 The primary object of this invention is the provision of a massage apparatus in which a flexible rubbing surface is operated through a peculiar mechanism so that the length of the reciprocations imparted to such rubbing member may be varied at will thus 15 imparting a long or a short stroke to the rubbing member during the manipulation of the patient.

20 A further object of the present invention is the provision of a walking beam attachment adapted to be connected to the respective ends of a rubbing massage belt and operated by a motor through an adjustable mechanism, whereby the stroke of the walking beam 25 may be varied to consequently affect the distance of movement of the rubbing belt, the motor being operated at a fixed speed so that the rubbing belt is reciprocated at the same speed regardless although the length 30 of the stroke thereof may be varied.

35 With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood 40 that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

45 In the drawings—Figure 1 is a side elevation of the complete machine with only a portion of the massage belt shown. Fig. 2 is a top plan view of the machine as illustrated in Fig. 1. Fig. 3 is an enlarged detail view of the means for varying the stroke of the massage belt. Fig. 4 is a detail view thereof, showing the mounting of 50 the means for varying the stroke. Fig. 5 is a cross section taken on line 5—5 of Fig. 3. Fig. 6 is a section taken on line 6—6 of Fig. 2. Fig. 7 is a perspective view of the massage belt operably connected to the walking beam of the operating mechanism, 55 Figs. 8 and 9 are detail views of the mas-

sage belt. Fig. 10 is a detail perspective view of the adjustable member, whereby the distance of movement of the walking beam is controlled. Fig. 11 is a similar view of 60 the rod carrying the same.

Referring to the drawings, the numeral 1 designates a hollow base preferably made of cast metal, and which may be rigidly secured to a proper support or mounted upon 65 casters to insure the portability thereof.

70 Preferably an electric motor M is mounted upon the base, although any operating mechanism may be employed. Mounted upon the base 1 adjacent to the motor M are the two posts or standards 2 in which is journaled the shaft 3 which has keyed thereon between the posts or standards the friction disk 4 which is in frictional contact with the grooved friction disk 5 keyed upon the 75 motor shaft. By this means the shaft 3 is rotated.

Keyed upon one free end of the shaft 3 is a circular disk 6 which has connected thereto and eccentrically thereof the pin 7 which 80 forms a pivotal connection for one end of the connecting rod 8, the other end of the connecting rod 8 being connected pivotally to the clamp 9 which is adjustably mounted upon the upper end of the swinging arm or 85 rod 10.

The lower end of the rod 10 is provided with the oppositely extending pintles 11 which fit within the journals 12 connected to and carried by the base 1, such journals 90 12 and pintles 11 forming the pivoting means for the arm 10.

95 Slidably mounted upon the cylindrical arm 10 between its lower end and the clamping sleeve 9 is a sleeve 13, in whose spaced lug 14 is pivotally connected one end of the second connecting rod 15. In order to impart the desired sliding movement to the sleeve 13 and thereby adjust the lugs 14 relatively to the pivotal point of the arm 10, a pin 16 100 connects the upper end of the bar 17 thereto. This bar 17 projects downwardly and parallel to the rod 10 through the slot 18 formed at the base of the rod 10, the same being provided with the rack teeth 19 which 105 are in engagement at all times with the toothed pinion 20 keyed upon and rotatable with the shaft 21 journaled, as shown, concentrically of the pintles 11 and extending exteriorly thereof and provided with the operating disk 22. By this means the shaft 21 110 may be rotated and imparting an elevating

or lowering movement to the sleeve 13, thus regulating the distance of the lugs 14 with relation to the pintles 11 and consequently regulating the distance of movement or throw of the connecting rod 15. In order to maintain the bar 17 in the desired adjusted position, the small recesses 23 are provided upon the opposite side to the teeth 19 and are disposed in the path to be engaged by the stud 24 whose stem 25 is mounted within the casing 26 and is held by means of the spring *a* outwardly and in engagement with the bar 17.

The free end of the connecting rod 15 is pivoted in the strap 27, which as shown is pivotally connected to one end of the walking beam 28, whose rod 29 is mounted within the standard 30 connected to and supported by the base 1.

By this construction it will be seen that the rotation of the motor *M* will impart a reciprocation to the walking beam 28, the speed of such reciprocation being maintained according to the speed of the motor, but the throw of the walking beam being made adjustable at will by means of the pinion 20 and rack bar 17, such stroke being regulated by the position of the sleeve 13 upon the swinging rod 10.

Pivotally connected in the free ends of the walking beam 28 are the pivoted plates 31 and 31', to which are connected the free strap ends 32—32', these ends being connected to the buckles 33—33' of the flexible rubbing or massage belt 34. This massage belt 34 is preferably provided with the flesh engaging corrugated or serrated portions 35, all as clearly shown in Figs. 7, 8 and 9.

By means of the flexibility of the member 34, the same will readily accommodate itself to various portions of the patient's body, while with the means for reciprocating the same, the stroke of the belt member 34 may be regulated or varied at will so that a long stroke or a short stroke at a fixed speed will be imparted thereto.

Although an electric motor is here shown for actuating this mechanism, it is evident that the same may be operated by hand or by other power without departing from the spirit of the invention.

What is claimed is:

1. A massage apparatus, including a base, a vertically swinging arm mounted

upon said base, a block slidably mounted upon said arm, a rack bar depending from said block and disposed to parallel the arm, means carried by the arm and operably engaging the rack bar to slide the block upon the arm and maintain the same at the desired adjustment thereupon, a standard; a horizontally swinging walking beam mounted in said standard, and a link pivotally connected to the walking beam and the sliding block.

2. A massage apparatus, including a base, a vertically swinging arm mounted upon said base, a block slidably mounted upon said arm, a rack bar depending from said block and disposed to parallel the arm, means carried by the arm and operably engaging the rack bar to slide the block upon the arm and maintain the same at the desired adjustment thereupon, a standard, a horizontally swinging walking beam mounted in said standard, a link pivotally connected to the walking beam and the sliding block, said rack bar being provided with teeth upon the opposite side to its rack, and spring actuated means carried by the lower end of the arm for operably engaging the teeth to maintain the bar and block in adjusted position.

3. A massage apparatus, including a base, a pair of spaced journals mounted thereupon, a cylindrical arm, a block disposed upon the lower end of said arm and mounted in said journals to connect the arm for vertical swinging movement, said block being provided with a vertical slot there-through parallel with the rod, a block slidably upon the rod, a toothed bar carried by the block and projecting through the slot of the arm carrying block, a manually rotatable toothed wheel mounted in the block carrying the arm and operably engaging the teeth of the bar to slide the bar carried block upon the arm, and a swinging walking beam operably connected to the bar carried block.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

DE FOREST B. CATLIN.

Witnesses:

L. J. GAULT,

W. G. LARMANN.