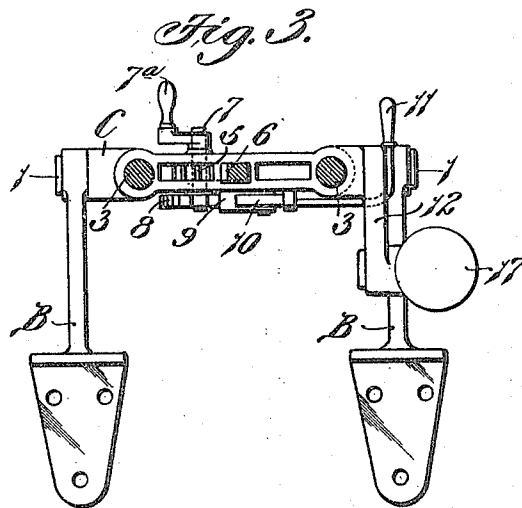
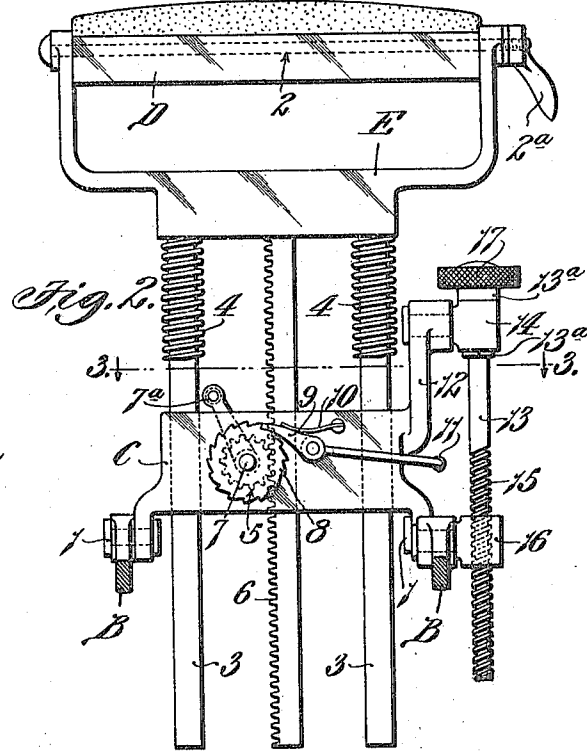
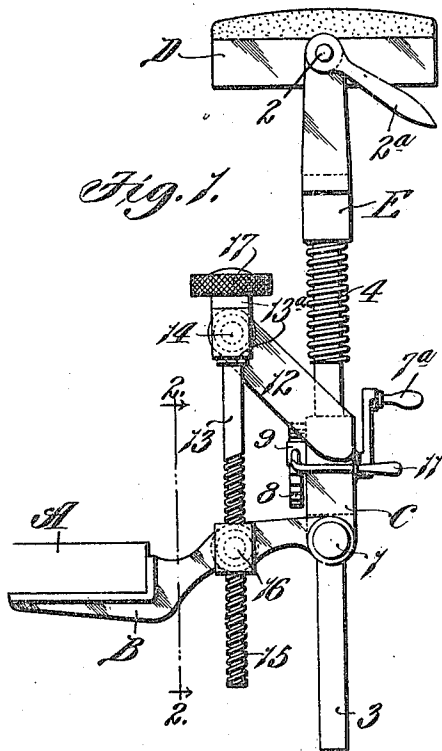


W. F. KOKEN.
CHIROPODY CHAIR.
APPLICATION FILED NOV. 5, 1915.

1,233,249.

Patented July 10, 1917.



Inventor
Walter F. Koken.
By Cakwell Church Attys

UNITED STATES PATENT OFFICE.

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CHIROPODY-CHAIR.

1,233,249.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER F. KOKEN, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Chiropody-Chairs, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to adjustable chairs of the type that are equipped with an elevated foot rest, and has for its main object to provide a chiropody chair in which the supporting means for the foot rest and the mechanism for changing the position of the foot rest are so designed that the foot rest can be adjusted quickly and accurately.

Figure 1 of the drawings is a side elevational view of my improved foot rest.

Fig. 2 is a rear elevational view of same, taken on the line 2—2 of Fig. 1; and

Fig. 3 is a horizontal cross-sectional view taken on the line 3—3 of Fig. 2.

Referring to the drawings, which illustrate one form of my invention, A designates the portion of the chair that carries the foot rest structure, B designates a pair of forwardly-projecting arms on said portion that constitute what I will term the base of the foot rest structure, C designates a swinging frame on said base which is pivotally connected thereto by pins or other suitable devices 1 and D designates the foot rest which is carried by a vertically-adjustable support E on the frame C. The support E preferably consists of a yoke-shaped member whose side pieces embrace the ends of the foot rest D which is preferably adjustably connected to same. It is immaterial, so far as my broad idea is concerned, how the foot rest D is connected to the support E, but I prefer to mount the foot rest on a long bolt 2 that passes transversely through the foot rest and through the side pieces of the support E and which is provided at one end with a handle nut 2^a that can be turned so as to draw the side pieces of the yoke toward each other, and thus cause them to securely clamp the foot rest D in any position in which it may be arranged, the side pieces of the yoke being long enough to permit the foot rest to be turned over or revolved about the bolt 2. The support E is provided with a pair of

through the swinging frame C, and coiled springs 4 are arranged on said guide rods between the frame C and the cross piece of the yoke-shaped support E, so as to absorb the shocks on said support when it drops downwardly, as hereinafter described.

The support E is raised by means of a manually-operable pinion 5 on the frame C that meshes with teeth on a rack bar 6 that projects downwardly from the support E, said pinion being connected to a horizontally-disposed shaft 7 journaled in the frame C and provided at its front end with a crank arm or handle 7^a. On the inner end of the shaft 7 is a ratchet wheel 8 that co-operates with a pivotally mounted pawl 9 on the inner side of the frame C, to hold the support E in its elevated position, after it has been raised by turning the shaft that carries the pinion 5. The pawl 9 is held in engagement with the ratchet wheel 8 by a leaf spring 10 on the frame C, as shown in Fig. 2, and said pawl is provided with an operating handle 11 that extends across the rear side of said frame and then projects forwardly, as shown in Fig. 3, so that it can be actuated easily by the operator when it is desired to lower the foot rest. The foot rest can be raised to any desired height by simply turning the handle 7^a, the pawl and ratchet 9 and 8, respectively, operating to automatically lock the support E in its raised position as soon as the pinion 5 ceases to rotate. To lower the foot rest the operator presses downwardly on the handle 11, so as to release the ratchet 8 from engagement with the pawl 9, and thus release the support E which moves downwardly under the influence of gravity. If it is desired to arrange the foot rest E in its lowermost position the operator keeps the handle 11 depressed until the support E reaches its lower limit of movement, and if it is desired to lower the foot rest only slightly the operator releases the handle 11, after the support E has moved downwardly to the desired position, thereby causing the pawl 9 to engage the ratchet wheel 8 and thus prevent further downward movement of the support.

The foot rest D can be moved toward and away from the seat of the chair by changing the position of the swinging frame C, and while various means may be employed for adjusting the frame C and

holding it in adjusted position, I prefer to use an adjustable toggle which is arranged between the frame C and the base B of the foot rest structure. Said toggle consists of a rigid arm 12 on one end of the frame C that projects rearwardly and upwardly from same, as shown in Fig. 1, and a link pivotally connected to the arm 12 and to the base B and constructed in such a manner that it can be shortened and lengthened. In the form of my invention herein illustrated the link just referred to consists of a rod or shaft 13 journaled at its upper end in a pivotally mounted bearing 14 on the arm 12 and provided at its lower end with a double screw thread 15 that passes through an internally screw-threaded opening in a bearing 16 that is pivotally mounted on the base B. The shaft 13 is provided with collars 13^a that are arranged on opposite sides of the bearing 14, so as to prevent said shaft from moving longitudinally of said bearing, and at the upper end of said shaft is a knurled finger piece 17 which the operator grasps to turn the shaft. If it is desired to move the foot rest D forwardly away from the seat of the chair, the operator turns the shaft 13 in such a direction that said shaft will move upwardly with relation to the screw-threaded bearing 16 through which it passes. If it is desired to move the foot rest toward the seat of the chair the operator turns the shaft 13 in the opposite direction, so as to cause it to move downwardly with relation to the bearing 16. In other words, the movement of the swinging frame C is effected by simply turning the shaft 13 in one direction or the other, so as to increase or decrease the distance between the outer end of the arm 12 and the base B. When the support E is arranged straight, or in a perfectly upright position, as shown in Fig. 1, the shaft 13 will extend approximately parallel thereto, and when said support is tilted in one direction or the other the shaft 13 will extend in the same general direction as the inclination of said support.

A foot rest structure of the character above described can be adjusted accurately and quickly, owing to the fact that the foot rest can be moved upwardly, by simply turning the handle 7^a and can be lowered, by simply depressing the handle 11, both of which handles are arranged at the front of the foot rest in such a position that they can be manipulated easily by the operator. The foot rest can be turned over or arranged at any desired angle, by manipulating the handle nut 2^a on one end of the shaft on which the foot rest is mounted, and the position of the foot rest with relation to the seat of the chair can be changed easily by turning the knurled finger piece 17 which is arranged in a convenient position for operating. The fact that the foot rest is moved

downwardly by gravity greatly reduces the time required to change the adjustment of the foot rest; and still another desirable feature of such a structure is that the foot rest can be allowed to drop without creating a noise or subjecting the foot rest to a sudden shock or jar, this being due to the fact that resilient buffers 4 are provided for absorbing the shocks on the support E that carries the foot rest when said support is released from the mechanism that locks it in its elevated position. In addition to the desirable features above mentioned, a foot rest structure of the character herein illustrated is exceptionally strong and rigid; it can be manufactured at a low cost and is not apt to get out of order on account of its simple design and it presents a neat and ornamental appearance.

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

1. A foot rest structure for chairs, comprising a swinging foot rest frame, a base to which the lower end of said frame is pivotally connected, an arm on one of said elements arranged at an angle to the axis about which said frame swings, and a device arranged approximately parallel to said frame and pivotally connected to said arm and to said other element, said device being constructed in such a manner that it can be adjusted to move said frame relatively to said base.

2. A foot rest structure for chairs, comprising a swinging foot rest frame, a supporting element that carries said frame, an arm on said frame arranged above the axis of movement of the frame and provided with a pivotally-mounted bearing, and a shaft journaled in the pivotally mounted bearing on said arm and having a screw-threaded portion that passes through an internally screw-threaded bearing which is pivotally connected to said supporting element at such a point that said shaft extends approximately parallel to said frame.

3. A foot rest structure for chairs, comprising a base portion, a swinging foot rest frame on said base portion, an angularly-disposed arm on one end of said frame provided with a bearing that can turn, a shaft journaled in said bearing in such a manner that it cannot move longitudinally of same and provided with a screw-threaded portion, and a pivotally mounted bearing on said base provided with an internally screw-threaded bore for receiving the threaded portion of said shaft.

4. A foot rest structure for chairs, comprising a base, a swinging frame on said base, a vertically-adjustable support provided with a foot rest and having guides that pass through said frame, a manually-operable pinion on said frame, a rack bar

on said support that meshes with said pinion, a pawl and ratchet mechanism for preventing said pinion from rotating in one direction, and a device operable from a point in front of the foot-rest for disengaging said pawl from said ratchet so as to release said pinion.

5. A foot rest structure for chairs, comprising a frame, a vertically-adjustable foot rest support provided with guide rods that pass through said frame, means for raising said support, means for holding said support in adjusted position, operating devices for said means arranged in front of said frame, and a buffer for absorbing the shocks on said support when it drops to its lower limit of movement.

6. A foot rest structure for chairs, comprising a base, a swinging frame on said base, a vertically-adjustable support carried by said frame, an adjustable foot rest on said support, means arranged at one end of said foot rest for effecting the adjustment of same and holding it in adjusted position, means arranged at the front of said

frame for effecting the upward and downward movement of said support, and means arranged at one side of said frame for varying the position of same with relation to said base.

7. A foot rest structure for chairs, comprising a base, a swinging frame on said base, a vertically-adjustable foot rest support guided by said frame, means for raising said support, an arm on one end of said frame arranged adjacent the lower end of same, a rod journaled in a pivotally mounted bearing on said arm and provided with a screw-threaded portion, and a pivotally-mounted bearing on said base through which the screw-threaded portion of said rod passes.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this first day of November 1915.

WALTER F. KOKEN.

Witnesses:

LEWIS E. MOORE,
A. F. GIEGLING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."