No. 629,036. Patented July 18, 1899.

F. KOENIGKRAMER.

REVOLVING AND RECLINING CHAIR.

(Application filed Nov. 7, 1898.)

(No Model.)

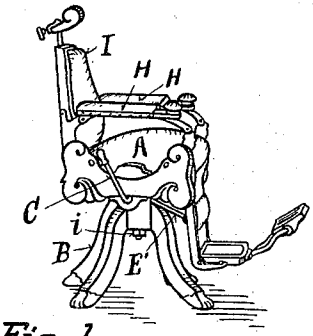


Fig. 1.

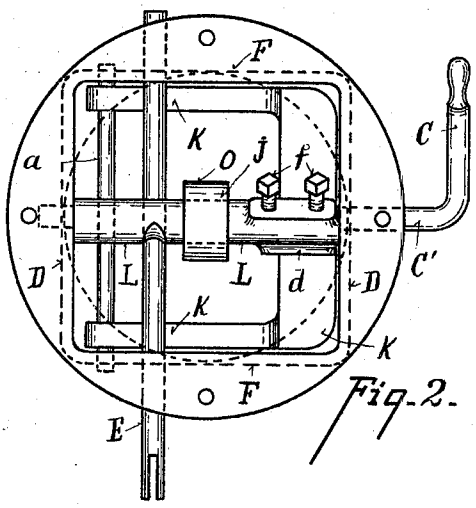


Fig. 2.

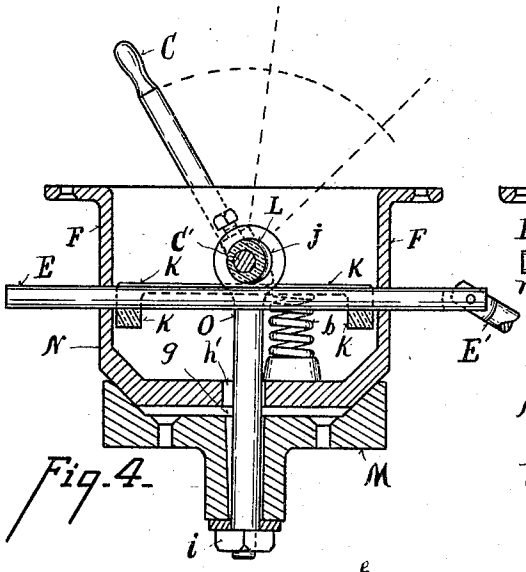


Fig. 4.

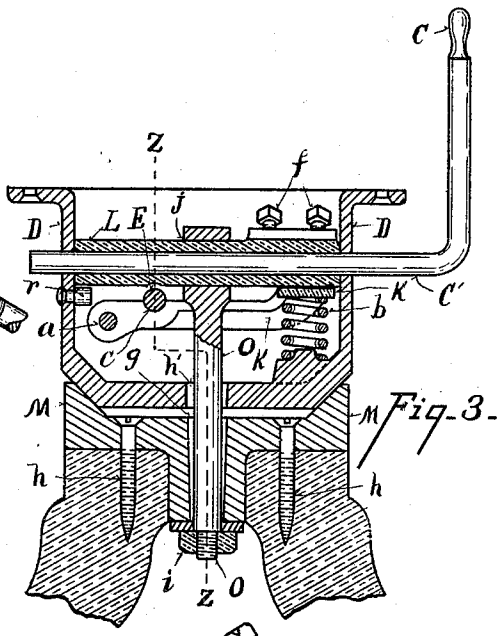


Fig. 3.

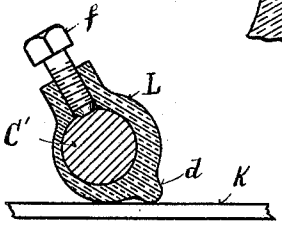


Fig. 5.

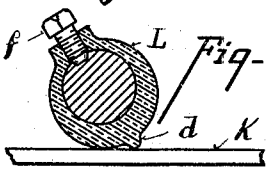


Fig. 6.

Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK KOENIGKRAMER, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO FRANK KOENIGKRAMER, OF SAME PLACE.

REVOLVING AND RECLINING CHAIR.

SPECIFICATION forming part of Letters Patent No. 629,036, dated July 18, 1899.

Application filed November 7, 1898. Serial No. 695,660. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK KOENIGKRAMER, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Revolving and Reclining Chairs, of which the following is a specification.

My invention relates to an improvement in revolving and reclining chairs, such as barber-chairs and dental chairs.

The features of my invention are more fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a revolving and reclining chair. Fig. 2 is a top plan view of the operating mechanism with seat taken off. Fig. 3 is a central vertical section. Fig. 4 is a section on line *z z*, Fig. 3. Fig. 5 is a detailed sectional view through the operating-lever and its eccentric sleeve. Fig. 6 is a modification of Fig. 5.

The object of my invention is to simplify and strengthen the mechanism used to operate revolving and reclining chairs, and particularly that class of chairs which are controlled by the manipulation of a single crank-lever.

A represents the chair portion, and B the pedestal, in which the operating mechanism is mounted.

C represents the hand-lever for operating the chair. The shank C′ of this lever is journaled in the sides D D of the revolving base of the chair.

E represents a slide-rod journaled in the sides F F of the base transverse to the operating-lever. To the front end of this rod the apron G is hinged by means of a link-lever E′. The apron is also hinged to the rods or arms H H, which are in turn hinged to the back I above the point where the back is hinged to the seat A. It will be seen that when the rod E is longitudinally adjusted by operating the chair-back the apron rises and the back drops, or vice versa, according to the direction of rod movement.

K represents a friction-plate underneath the sliding rod. It is pivoted at *a* to a rod supported in the base, the outer end of said plate being supported by a spring *b*, exerting upward pressure and forcing the plate into considerable frictional contact with the sliding rod. The plate is preferably provided with a groove *c* to engage the sliding rod and give greater frictional contact. Upon the shank of the operating-lever is mounted an eccentric sleeve L, provided with a cam-lug *d*. This sleeve is shown as attached to the shank of the lever by a set-screw *f*.

It is obvious that when the lever is rotated to bring this lug *d* into engagement with the friction-plate the spring yields and the pivotal movement of the plate releases the sliding rod, allowing the chair to be inclined to the desired position. It will also be obvious that this rod is locked by the friction-plate at all points of the operating-lever movement except that in which the lug engages the plate. To this end I provide a bed-plate M, provided with a central orifice *g* and attached by screws *h* to the pedestal. The peripheral edges of this plate are preferably beveled. Upon this plate is journaled or supported a revolving base N, in which the operating mechanism is mounted. This base has its peripheral edges beveled to fit snugly in the supporting-plate M and is provided with a central orifice *h*′, registering with the orifice *g* in the bed-plate. This bed-plate is shown as having depending central section N′. The base may have a corresponding projection, if desired, to afford greater bearing-surface; but the specific form of these parts is not material, and any bed-plate adapted to movably support a revoluble base I regard as within my invention.

O represents a straining eyebolt or rod passing through said orifices and provided with a nut *i* at its lower projecting end or otherwise suitably attached to said bed-plate. The upper end is provided with an eye *j*, through which passes the eccentric sleeve L, mounted on the operating-lever.

It will be observed that when the thinner portion of the eccentric sleeve is brought uppermost by the rotation of the crank-lever the bolt will be relaxed, allowing the base and its supported parts to be revolved on the bed-plate, and when the lever is rotated in any other direction the eccentric portion of the

sleeve engages the ring *j* of the bolt O and strains the base to the plate, locking the chair against revolution.

For convenience of operation I preferably locate the thinner portion of the cam-sleeve in such relation to the eye *j* that the straining-bolt is only relaxed and the chair allowed to revolve at the center portion of the hand-lever. This construction has another advantage over the ratchet-teeth hitherto used for this purpose in that the chair provided with my improvement may be adjusted in its revolution to any fraction of an inch desired, whereas with the ratchet-teeth the chair could be adjusted only at intervals determined by the size and number of ratchet-teeth. Further, this form of locking mechanism both for revolving and inclining the chair is convenient, cheap, and more substantial than those hitherto employed in chairs of this description.

Having described my invention, what I claim is—

1. In a reclining and revoluble chair, the combination of a pedestal, a bed-plate supported thereon, a hollow base-plate revolubly mounted therein, a chair member mounted on the base-plate, a sliding rod hinged to the movable chair parts, having its bearings in the walls of the base-plate, a spring-controlled friction-plate mounted in said base-plate and normally engaging said sliding rod, a straining-rod connected to the pedestal at one end, a lever having its bearings in the walls of said base-plate, an eccentric connection between said lever and the upper end of the straining-rod and a tripping-lug formed on the lever and adapted to engage the friction-plate whereby the said chair may be revolved and reclined locked and unlocked, independently by the manipulation of a single lever, substantially as specified.

2. In a reclining and revoluble chair, the combination of a pedestal, a bed-plate supported thereon, a hollow base-plate revolubly mounted therein, a chair member mounted on the base-plate, a sliding rod hinged to the movable chair parts having its bearings in the walls of the base-plate, a spring-controlled friction-plate mounted in said base-plate and normally engaging said sliding rod, a transverse lever having its bearings in the walls of said base-plate in a different horizontal plane from the sliding rod, an eccentric and a tripping-lug formed on said lever, an eyebolt connected to the pedestal at one end and to the said eccentric at the other end whereby the chair may be independently reclined, revolved, locked and unlocked at different points of said lever movement, substantially as specified.

In testimony whereof I have hereunto set my hand.

FREDERICK KOENIGKRAMER.

Witnesses:

OLIVER B. KAISER,

W. R. WOOD.