J. B. BARDIN.

ADJUSTABLE OPERATOR'S SEAT FOR DENTAL CHAIRS.

APPLICATION FILED MAY 23, 1914.

1,155,541.

Patented Oct. 5, 1915.

2 SHEETS—SHEET 1.

Fig 1

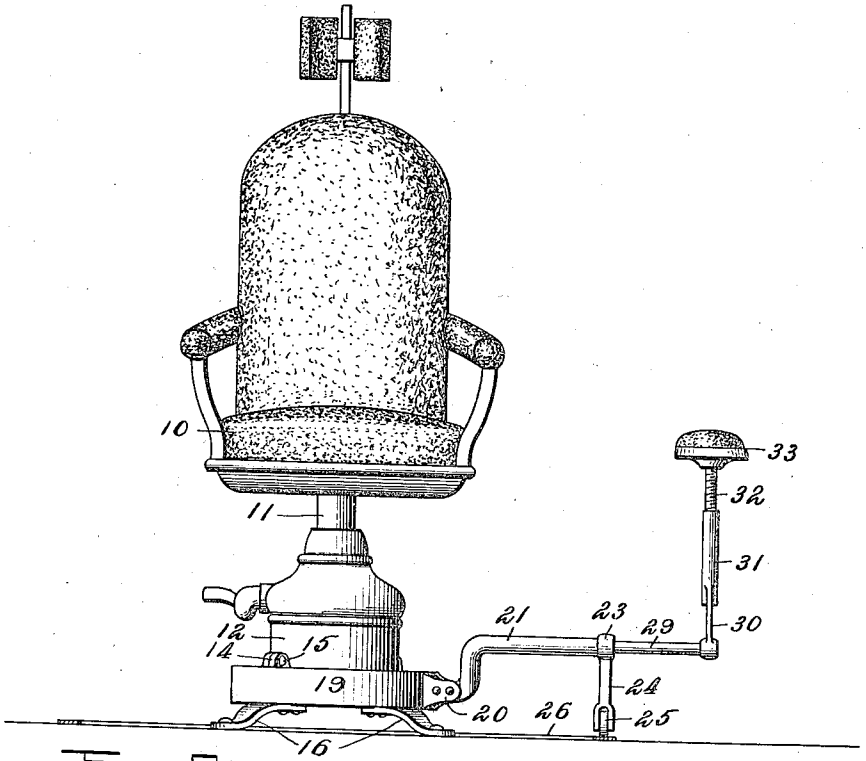
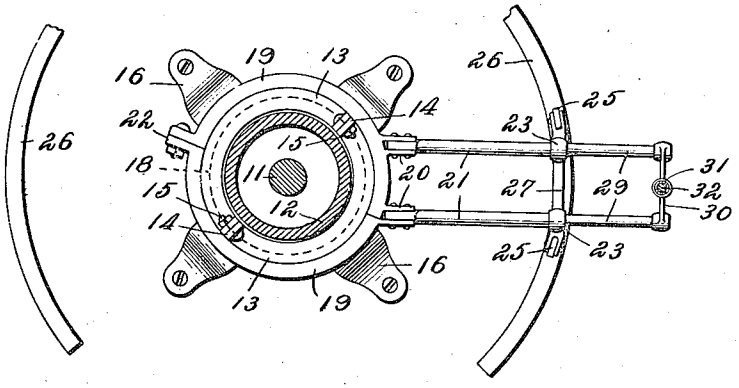


Fig 2



Witnesses

H. C. Pohlette

H. P. Hollingsworth

Inventor

James B. Bardin

By Dreyer Cushman & Rea

Attorney

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2 SHEETS—SHEET 2.

Fig 3

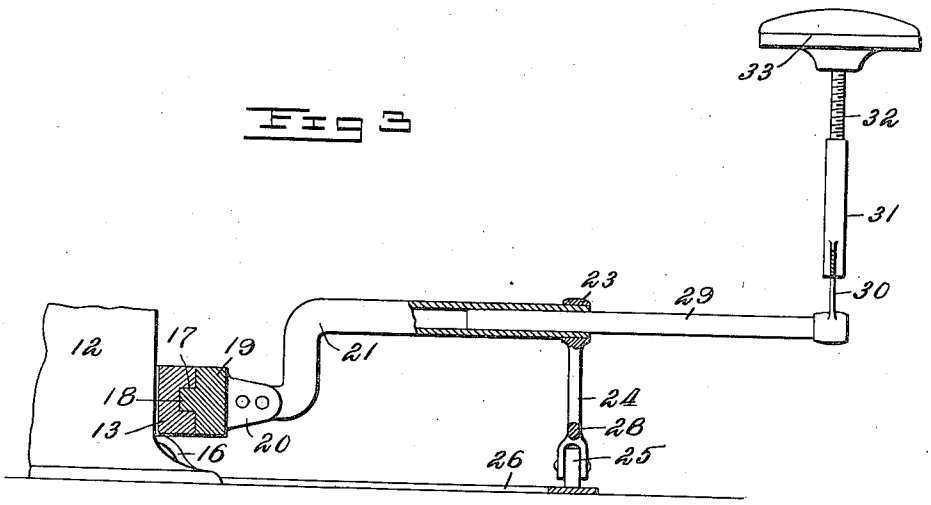


Fig 4

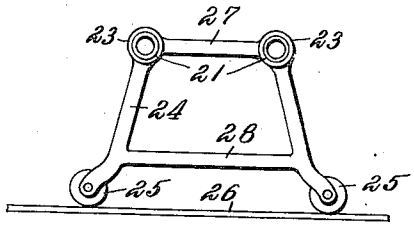


Fig 5

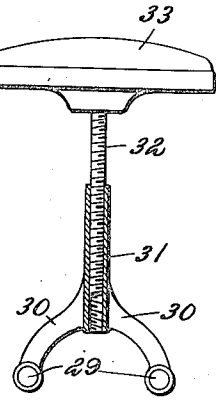


Fig 8

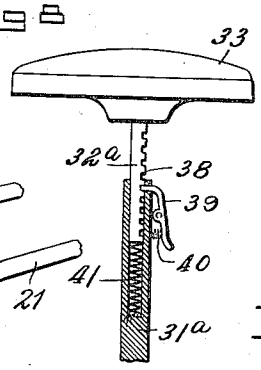


Fig 9

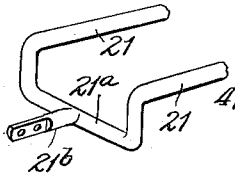


Fig 7

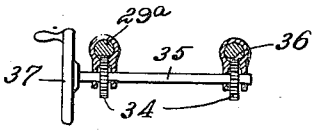
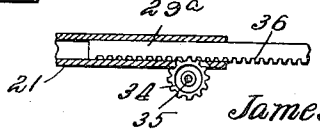


Fig 6



Witnesses

H. A. Johnston

J. P. Hollingsworth

Inventor

James B. Bardin

By Munn Cushman & Rea

Attorney

UNITED STATES PATENT OFFICE.

JAMES B. BARDIN, OF CHADBOURN, NORTH CAROLINA.

ADJUSTABLE OPERATOR'S SEAT FOR DENTAL CHAIRS.

1,155,541. Specification of Letters Patent. Patented Oct. 5, 1915.

Application filed May 23, 1914. Serial No. 840,536.

To all whom it may concern:

Be it known that I, JAMES B. BARDIN, a citizen of the United States, residing at Chadbourn, in the county of Columbus and State of North Carolina, have invented new and useful Improvements in Adjustable Operators' Seats for Dental Chairs, of which the following is a specification.

This invention relates to chairs of the type used by dentists and barbers which may be raised and lowered to vary the height thereof, and also rotated about a pivotal axis.

The object of the invention is to equip such chairs with an adjustable seat for the use of the operator, capable of adjustment to any desired height and capable of being moved to and from the chair and around the seat to place the operator who occupies the same in proper position with relation to his patient. The operator's seat is applied to the chair in such manner that it may be rotated about the same axis of rotation as the chair, but independently thereof, and may, when not required for use, be pushed out of the way by the foot of the operator, and when desired easily moved into position by his foot should his hands be otherwise engaged.

This invention broadly considered is in the form of a seat adjustable vertically in a supporting frame by a screw, a ratchet, or other mechanism, the frame being carried in arms that project outwardly from the chair in a horizontal direction, said arms being connected to a rotating member supported on a sleeve that surrounds the pedestal of the chair and preferably secured to the floor independently of the chair. The arms at their outer ends are supported by legs that descend to the floor and are movable with said arms about the axis of the chair, said legs being preferably provided with rollers at their lower ends that run on a circular track. These legs practically support the weight of the operator when seated and relieve the chair from the strain of such weight. The horizontal movement of the seat to and from the chair is provided for by a telescopic connection between the supporting frame of the seat and the arms, and may be a simple tubular connection, or a rack and gear device applied thereto, which upon turning a crank or hand-wheel attached to the gear wheel will adjust the seat as desired.

In the accompanying drawings, Figure 1 is an elevation of a dentist's chair with the improvement applied thereto. Fig. 2 is a top plan view of the same with the chair removed. Fig. 3 is a side elevation of the invention, partly in section, on an enlarged scale. Fig. 4 is an end view with the operator's seat and its supporting frame removed. Fig. 5 is a similar view of the operator's seat and its supporting frame. Figs. 6 and 7 are detail views of one means of adjusting the seat to and from the chair. Fig. 8 is a view partly in section, illustrating a modification of the device for adjusting the seat vertically. Fig. 9 is a perspective view illustrating the modified form of arms that carry the seat-supporting frame.

In the drawings, 10 indicates a dentist's chair of any approved type mounted on a column 11 capable of being raised and lowered in a base 12 fixed to the floor, said chair adapted to rotate about the axis of the column 11 and, as usual, is provided with an adjustable back, foot-rest and head-rest.

Surrounding the base 12, a short distance above the floor and out of the way of the levers that raise and lower the chair, is a sleeve 13 made in two semicircular parts to permit ready placing of the sleeve in position. Ears 14 project from the upper side of each part for screws or bolts 15 that secure the parts firmly together. The sleeve 13 may fit the base tightly, but preferably does not, it being maintained in position by feet 16 projecting from its under side and bolted or screwed to the floor.

The exterior face of the sleeve 13 has a circular groove 17 cut therein to receive a rib 18 on the inner side of a collar 19 that embraces the sleeve and rotates freely thereon. The collar is also formed in two semicircular parts to permit easy application on the sleeve, these parts being connected by bolts or screws. On one side of the sleeve 19 are two pairs of parallel lugs 20 spaced a suitable distance apart, between each of which pairs is bolted a tubular arm 21 that has a vertical portion near the lugs and a horizontal portion continuous therewith extending outwardly from the collar and parallel to each other. The collar 19 is split diametrically, the joint between the two parts

on one side is, for convenience between one pair of lugs 20 and the same bolts that secure the arm 21 therebetween also hold the parts of the collar together. On the opposite side of the collar are ears 22, one on each part which are fastened together by bolts as shown.

The outer ends of the two arms are secured in sockets 23 on the upper ends of legs 24 that extend to the floor, said legs being preferably provided with rollers 25 on their lower ends that travel over a curved track 26 fastened to the floor. A rib 27 extends between the sockets to hold the ends of the arms rigid and properly spaced, and a second rib 28 lower down holds the legs a suitable distance apart, and prevents them spreading under the weight of the operator.

Within the open outer end of each tubular arm 21 is fitted a rod 29 that slides freely in said arm, the outer ends of the rods being rigidly connected to the lower ends of two upwardly curved brackets 30 that support a vertical tubular post 31, preferably threaded internally for a threaded rod 32 on the under side of an operator's seat 33. As thus arranged, the seat may be raised and lowered by rotating the seat and moved to and from the chair 10 by sliding the rods 29 in the tubular arms 21, until the seat is in a position convenient for the operator with relation to his patient in the chair 10. When seated, the operator may move to any position around the chair without interrupting his work by pushing against the floor with his feet, the seat moving independently of the chair.

For moving the seat to and from the chair, means, such as shown in Figs. 6 and 7 may be employed. Such means comprise the pinions 34 fixed on a shaft 35 turning in bearings at the outer ends of the arms 21, said pinions meshing with racks 36 on the under sides of the seat frame rods 29^a. A hand-wheel 37, or a crank is fixed on one end of the shaft for rotating the same.

Instead of a screw rod for supporting the seat 33 a rod 32^a, as in Fig. 8, with teeth 38 on one side may be used in connection with a hand operated pawl 39 pivoted on the post, and a coiled spring 41 within the post. The pawl is normally held in connection with one of the teeth 38 by a spring 40 that prevents the seat moving either up or down, but when said pawl is disconnected by pressing on the same, the spring 41 raises the seat which may be lowered by bearing down thereon with the other hand, thus quickly and easily permitting adjustment to any required height.

This improvement can be attached to any of the modern chairs now in use by dentists and barbers without interfering in any way with the means for raising and lowering the chair, and as this attachment is not in its preferred form fitted to the pedestal of the chair, but is held in place by feet 16 secured to the floor, it may be applied to chairs having pedestals of various diameters.

By providing the arm 21 at its inner end with a vertical depending portion, which vertical portion is attached to the collar 19 the sleeve 13 and the collar 19 may be positioned about the base at or a short distance from the floor, so that the same will be out of the way and will not interfere with the operation of the levers that raise and lower the chair. Thus by this construction the seat attachment may be connected to any modern dental chair and yet sufficient clearance is allowed between the arm 21 and the floor for the depending legs 24.

The arms 21 and rods 29 may be shaped differently from that shown when desired or to suit varying conditions, provided the outer ends of said arms are parallel to permit the rods to telescope therein. It is possible also to use a single arm and a single rod instead of two as shown and described if the same be made sufficiently strong to support the operator.

If desired the two arms 21 may be joined together at the lower ends of the upright portions thereof by a cross piece 21^a, from the center of which a stem 21^b projects rearwardly to be secured to one pair of lugs 20 on the sleeve 19. In this instance the sleeve 19 will have but one pair of lugs instead of two pairs, as shown in the preceding figures.

What I claim is,—

1. A seat attachment for dental chairs and the like, comprising an arm for attachment to the base of the chair and projecting radially therefrom, means on said arm in fixed-apart relation to the base for supporting the outer end of the arm, and a seat support mounted on the arm independently of said supporting means and adapted for radial adjustment toward and from the base of the chair and said supporting means.

2. A seat attachment for dental chairs and the like, comprising a supporting ring arranged about the base of the chair, a collar upon said supporting ring adapted for rotation about the same, an arm radiating from said collar, a depending leg fixed on the end of said arm and movable with the same, a seat, and an adjustable connection between said seat and said arm whereby the seat may be moved radially to and from the chair and legs independently thereof.

3. A seat attachment for dental chairs and the like comprising a sleeve for securement about the base of the chair, a collar rotatably supported on said sleeve, a plurality of arms projecting outwardly from said collar, legs secured on the outer ends of said arms extending downwardly to the floor and movable with said arms, a seat sup-

port slidably connected to said arms independently of said legs whereby the seat may be moved radially to and from the chair and said legs.

4. An operating attachment for dental chairs and the like, comprising an arm for attachment to the base of the chair and extending outwardly therefrom, a leg depending from said arm to support the same, a roller on said leg and track for said roller arranged concentrically about the chair base, a seat support slidably connected to said arm and adapted for radial movement to and from the base independently of said leg and said track, and a seat on said support.

5. In combination with a chair having a pedestal, a split sleeve surrounding said pedestal and having a groove in its outer periphery, a split collar surrounding said sleeve and having a rib on its inner periphery for engagement in the groove in the sleeve and adapted for rotation thereon about the axis of said pedestal, a plurality of arms projecting from said collar, legs supporting the outer ends of said arms, and a seat support slidably connected to said arms and projecting beyond said legs, said seat support being adapted to be adjusted radially of said pedestal independently of said legs.

6. A seat attachment for dental chairs and the like, comprising an arm extending outwardly from the base of the chair, means on said arm in fixed apart relation to said pedestal for supporting the outer end of said arm, a seat support mounted on the arm and adjustable radially of said base and said supporting means independently thereof, a seat upon the outer end of said seat support and retaining means upon the inner end of said arm adapted to prevent the vertical displacement thereof and admit of the free rotation of the arm and the seat about the base.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES B. BARDIN.

Witnesses:
D. C. CLARK,
S. L. KOOMS.