

No. 730,690.

PATENTED JUNE 9, 1903.

P. C. PALMER.
ADJUSTABLE CHAIR OR TABLE.

APPLICATION FILED FEB. 28, 1902.

NO MODEL.

Fig. 1.

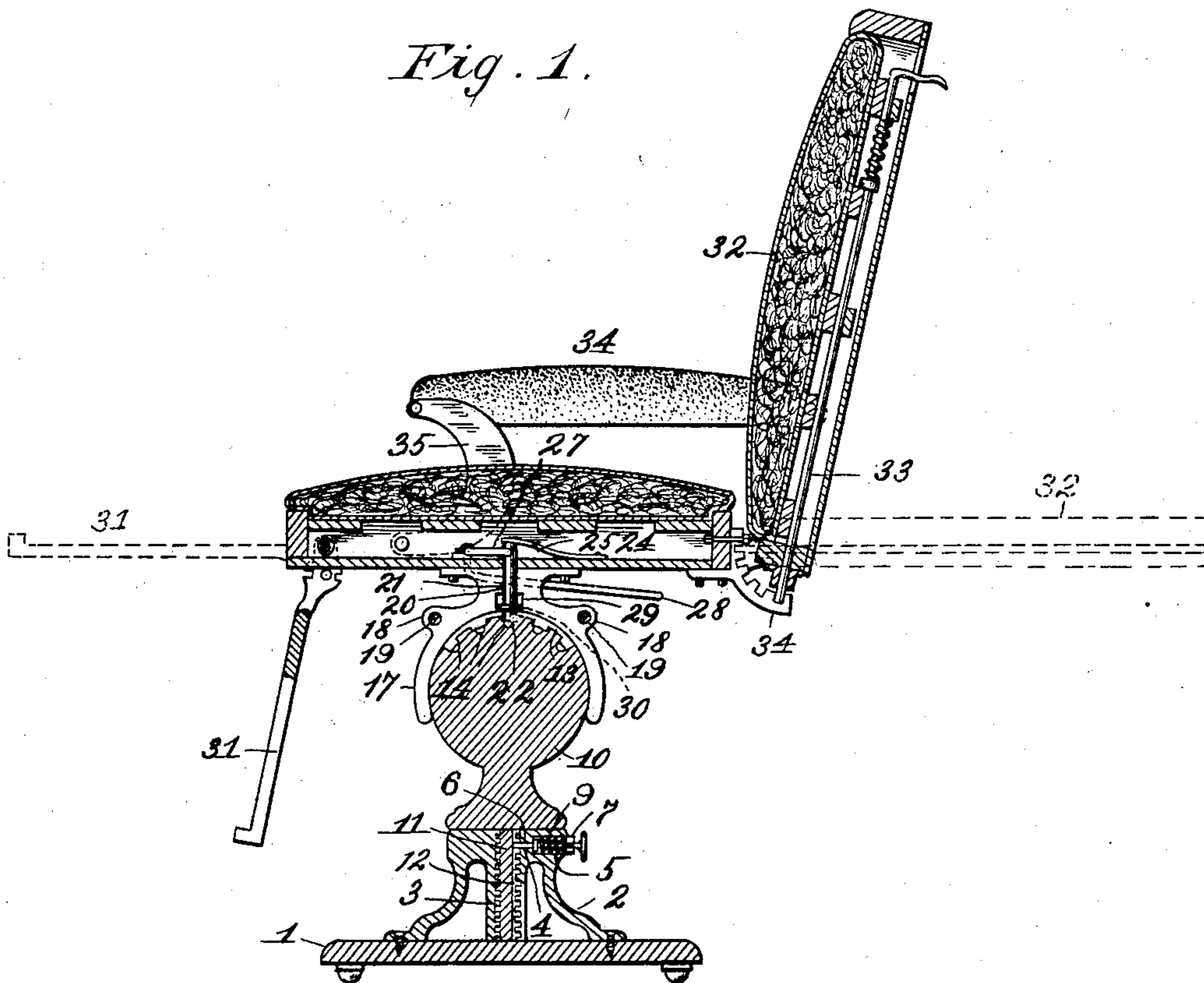


Fig. 2.

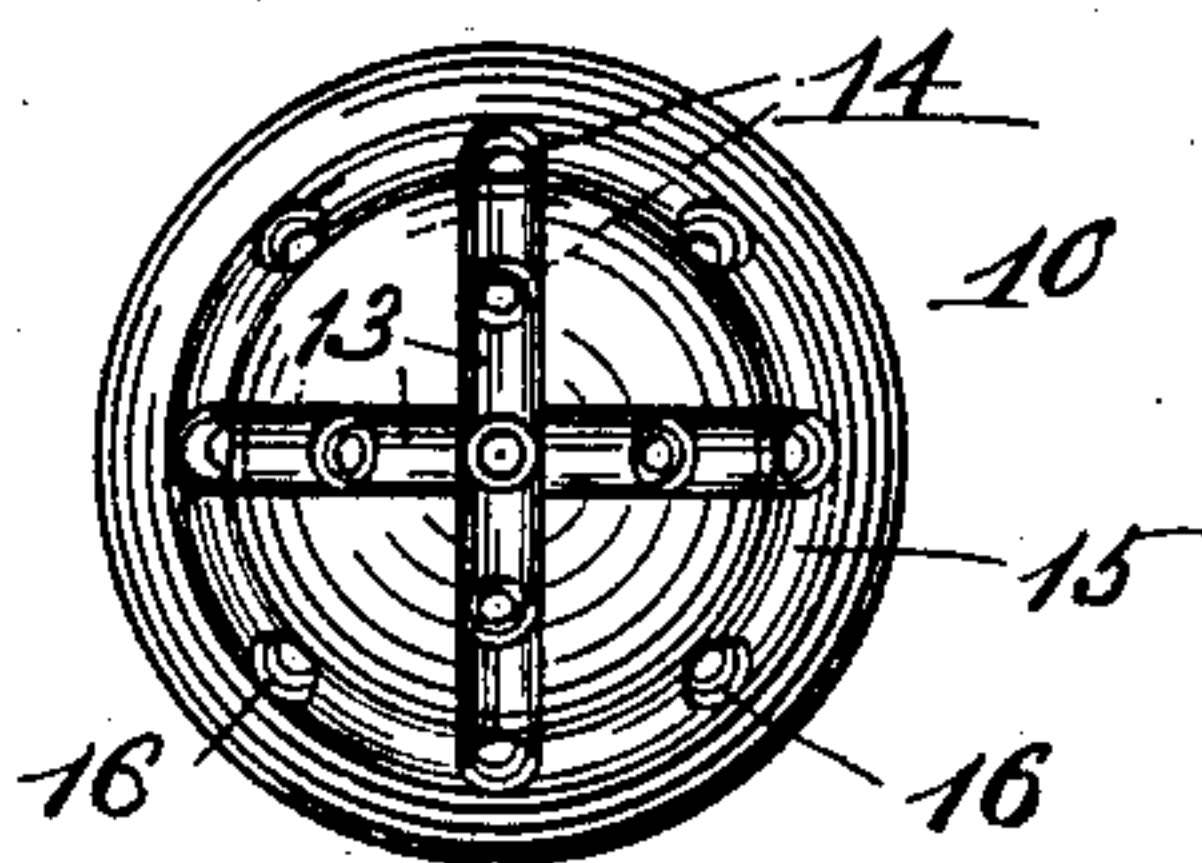
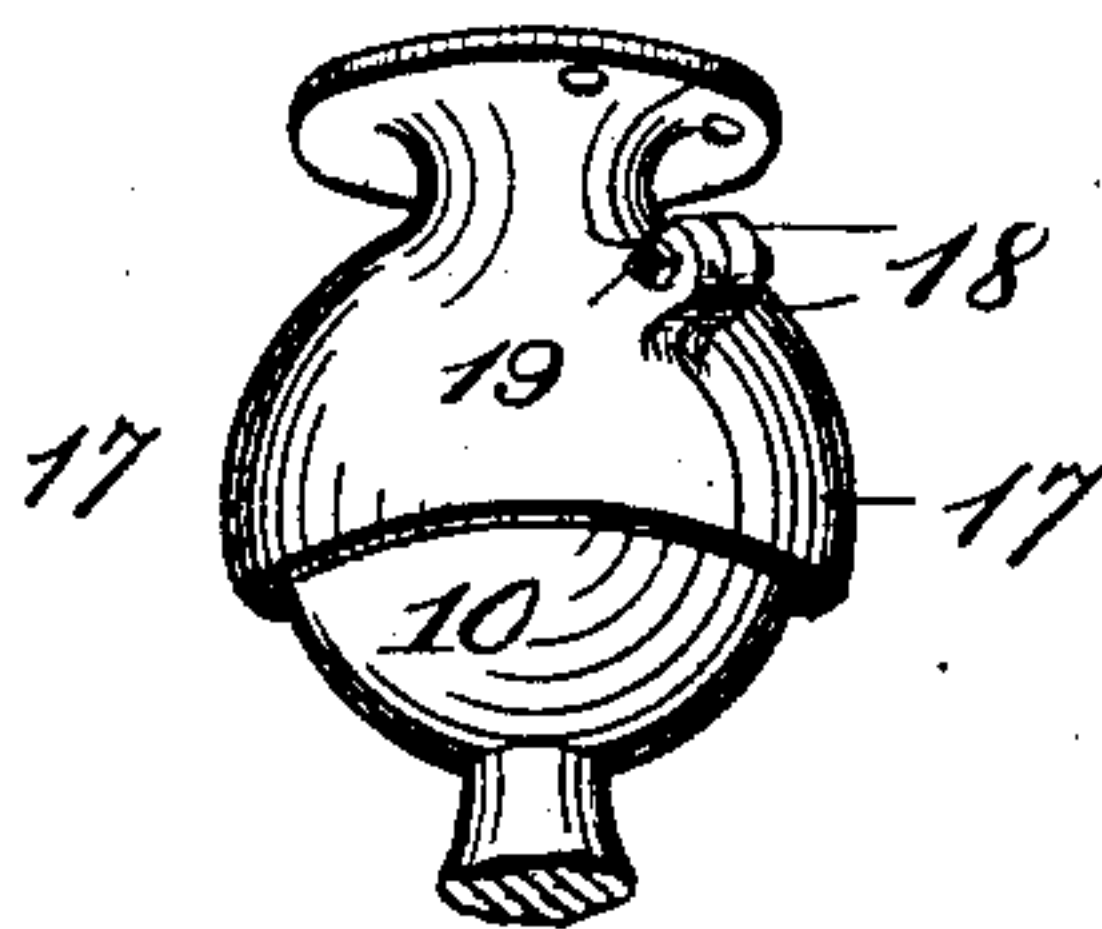


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

PHILIP C. PALMER, OF KANSAS CITY, MISSOURI.

ADJUSTABLE CHAIR OR TABLE.

SPECIFICATION forming part of Letters Patent No. 730,690, dated June 9, 1903.

Application filed February 28, 1902. Serial No. 96,062. (No model.)

To all whom it may concern:

Be it known that I, PHILIP C. PALMER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Adjustable Chairs or Tables, of which the following is a specification.

My invention relates to adjustable chairs or tables, and more particularly to that classification in which fall physicians' operating chairs and tables and invalid, dentist, barber, and railway-car chairs, and, in fact, revolving and reclining chairs of all types; and my object is to produce a device of this character giving universal adjustment to the seat or body portion and independent or simultaneous vertical adjustment to the back and foot-rest.

With these general objects in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as hereinafter described and claimed, and in order that the invention may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 is a central vertical section of a chair embodying my invention. Fig. 2 is a detail plan view of a sphere forming part of my invention. Fig. 3 is a detail perspective view of said sphere and the socket which operates thereon.

1 designates the base, which may be of any suitable or preferred type, and 2 a central stand or pedestal thereon, provided centrally with a vertical threaded passage 3 and a registering horizontal passage 4, the last-named passage being enlarged, as at 5. A headed locking-pin 6 extends through said passage 4 and through screw-plug 7, closing the outer end of the passage enlargement 5, and mounted on said pin is a collar 8 and a spiral spring 9 within said enlargement, the spring bearing at its opposite ends against the collar and plug, so as to hold the pin normally projected into passage 3.

10 designates a sphere, preferably metallic, and said sphere is provided with a vertical depending threaded stem 11, engaging threaded passage 3, said stem being provided with a longitudinal groove 12, into which pin 6 is

normally projected to prevent the stem turning in the passage. The upper side of the sphere is provided with intersecting grooves 13, extending, preferably, at right angles to each other, and at their intersection-point said grooves register with cavity or socket 14, similar cavities or sockets being formed at the opposite ends of the grooves and at intermediate points. The sphere is also provided with a circular groove 15, which intersects the outer ends of the cross-grooves and is provided with cavities or sockets 16 at suitable points, similar to cavities or sockets 14. The socket, which engages said ball and constitutes in conjunction therewith a ball-and-socket joint, consists of two similar halves 17, provided with lugs 18, connected together by bolts 19, and said socket is provided centrally with a passage 20, wherein a pin 21 is slidably mounted, said pin fitting at its lower end in one of the grooves of the ball and having a diametrically reduced prolongation 22 to engage a cavity or socket, and thus lock the ball-and-socket-joint members rigidly together.

23 designates a seat or body portion, the same being upholstered and formed at its under side with a chamber 24, into which the pin 21 projects through a hole in the bottom, said pin being held depressed normally by a spring 25, secured to the bottom, as shown, or in any equivalent manner. The pin is elevated when desired, so as to withdraw the prolongation 22 from the engaged cavity or socket, by means of a shaft 26, journaled in chamber 24 and provided at one end with a crank-arm 27, pivotally engaging the upper end of the pin, and at its opposite end with a lever 28, the latter projecting through the bottom of the seat or body portion in order that the operator may conveniently grasp and manipulate it, and to prevent the pin being accidentally elevated sufficiently high to withdraw it from the ball-groove with which it is engaged at the time the socket-passage 20 is provided with an enlargement 29, engaged by a rigid collar or enlargement 30 of said pin.

31 indicates a foot-rest hinged to the front portion of the seat and adapted to be elevated to the position shown by the dotted lines in

Fig. 1, or it may be adjusted to any intermediate point between the positions shown by full and dotted lines in said figure.

32 indicates a back hinged to the rear end 5 of the seat and provided with a latch 33, adapted to engage any of the notches in a quadrant-shaped sector 34 on the back of the seat for the purpose of adjustably holding the back at any point between the positions 10 shown by the full and dotted lines in Fig. 1.

34 indicates arm-rests pivotally secured at their opposite ends to the back and standards 35, which latter are pivotally secured to the sides of the seat to permit the adjustment 15 of the back.

To turn the chair in any direction desired, lever 28 is manipulated to withdraw the pin prolongation 22 from the cavity or socket. The chair is then manipulated to slide the 20 pin in the proper direction through one of the grooves 13, in which it may again be secured by the engagement of the pin prolongation with one of the cavities or sockets registering with said groove, and the chair when the 25 pin registers with the circular groove may be rotated, so as to cause the pin to slide in the said groove and engage one of the cavities or sockets therein.

It will thus be seen that the chair or the 30 body portion may be secured at any desired angle, and it is obvious that additional cavities or sockets and registering grooves will permit of a finer degree of adjustment. Without regard to the angle of the seat or 35 body portion with relation to the ball 10 they both may be revolved and at the same time raised or lowered by the operation of the threaded stem 11 in passage 3, the pin 6 of course being withdrawn from groove 12 of 40 the stem to enable the latter to turn.

From the above description it will be apparent that I have produced an adjustable chair or table of simple, strong, durable, and cheap construction which is easily operated 45 and embodies the features of advantage enumerated as desirable in the statement of invention, and while I have illustrated and described the preferred embodiment of the same it is to be understood that it is susceptible 50 of modification in various particulars

without departing from the principle and scope or sacrificing any of the advantages of the appended claims.

Having thus described the invention, what I claim as new, and desire to secure by Letters 55 Patent, is—

1. In a device of the character described, a ball having intersecting grooves and cavities or sockets in said grooves, a socket embracing said ball, a pin mounted slidably in said 60 socket and engaging one of the grooves of the ball, and provided with a prolongation engaging one of the cavities or sockets of the ball, a seat or body portion mounted upon said socket, a lever connected to raise said 65 pin until its prolongation is disengaged from the cavity or socket, and means to force said pin downwardly with a yielding pressure when the lever is released.

2. In a device of the character described, a 70 ball having intersecting grooves and cavities in said grooves, a socket embracing said ball, a pin mounted slidably in said socket, and engaging one of the grooves of the ball, and provided with a prolongation engaging one 75 of the cavities or sockets of the ball, a seat or body portion mounted upon said socket, a spring secured to the seat or body portion and holding said pin yieldingly depressed, and a lever pivoted in the seat and provided 80 with a crank-arm pivotally connected to the upper end of said pin.

3. In an adjustable chair or table, the combination of a pedestal, a ball mounted thereon, intersecting peripheral grooves on the 85 ball, an annular groove which connects the terminals of the intersecting grooves, cavities arranged in the grooves, a socket embracing the ball and secured at its upper portion to the chair or table, a pin reciprocally 90 arranged in the shank of the socket and adapted to engage any one of the cavities in the ball, and suitable means for operating said pin, substantially as described.

In testimony whereof I affix my signature 95 in the presence of two witnesses.

PHILIP C. PALMER.

Witnesses:

H. C. RODGERS,
G. Y. THORPE.