(No Model.)

J. H. SMITH.

PHOTOGRAPHER'S CHAIR.

No. 354,259. Patented Dec. 14, 1886.

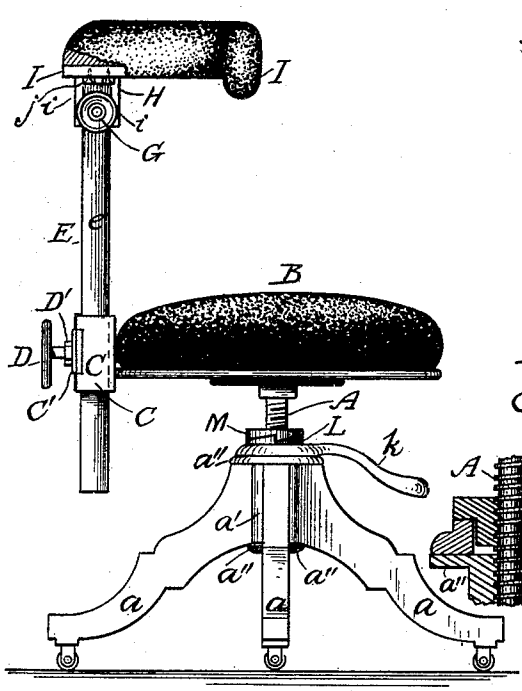


FIG. 1.

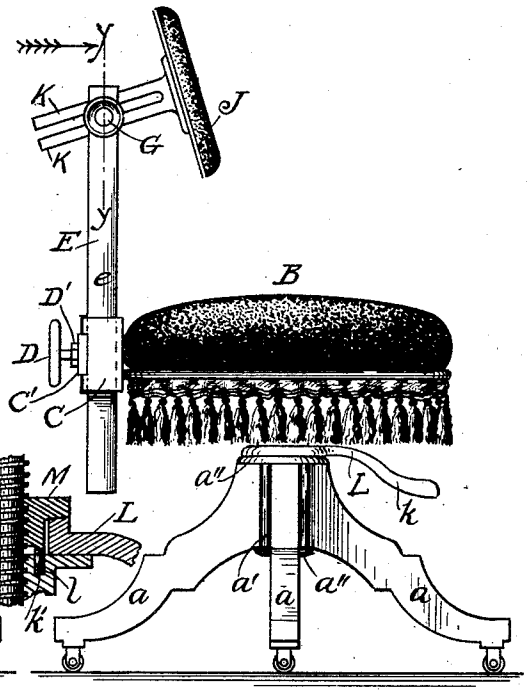


FIG. 2.

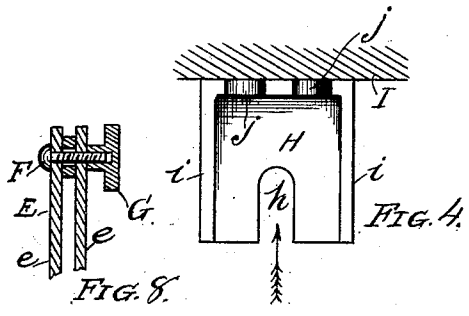


FIG. 8.

FIG. 4.

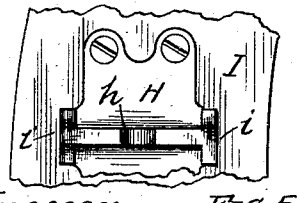


FIG. 5.

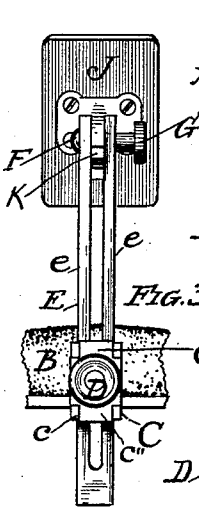


FIG. 3.

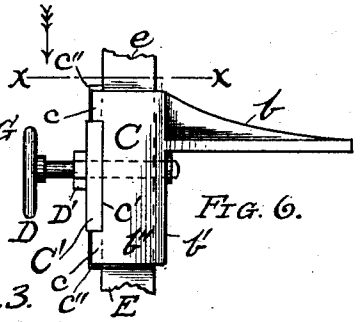


FIG. 6.

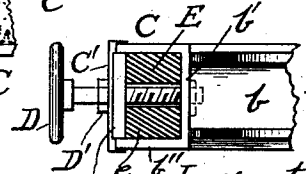


FIG. 7.

Witnesses:
J. B. Halpenny.
David Stevens.

Inventor:
James H. Smith
By Lindley & Fletcher
his Attys.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES H. SMITH, OF CHICAGO, ILLINOIS.

PHOTOGRAPHER'S CHAIR.

SPECIFICATION forming part of Letters Patent No. 354,259, dated December 14, 1886.

Application filed March 26, 1886. Serial No. 196,674. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. SMITH, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Photographers' Chairs, of which the following, in connection with the accompanying drawings, is a specification.

The purpose of my invention is to improve that class of chairs usually employed in photographers' studios for the purpose of posing people in a sitting position in front of the camera.

My principal aim is to provide improved means for properly and comfortably supporting the back of the occupant of the chair. I also aim to improve the construction and operation of some of the clamps or fastenings for rendering certain parts of the chair adjustable, all of which will be hereinafter fully explained.

In the drawings, Figure 1 is a side view of a chair embodying my improvements, a part of the curved rail forming the back and arms being broken away to illustrate some features of construction which would not otherwise be shown. Fig. 2 is a like representation, showing the said curved rail removed and the back-support applied in its stead. Fig. 3 is a detail, the same showing the back portion of the means employed for connecting either the back-support or the curved rail in adjustable connection with the chair-seat. Fig. 4 is a detail, the same being a side view of the iron or plate which is applied to the curved rail to admit of its being applied removably to its support. Fig. 5 represents the parts shown in Fig. 4 when viewed in the direction indicated by the arrow shown in Fig. 4. Fig. 6 is a side view of the means employed for connecting the support for the curved rail adjustably to the seat. Fig. 7 is a section in the plane of the line *x x* of Fig. 6, viewed in the direction indicated by the arrow there shown; and Fig. 8 is a section in the plane of the line *y y* of Fig. 2.

Like letters of reference indicate like parts.

The chair, in the example which I have selected for illustrating my improvements, has four branching or diverging legs, *a a*, meeting in or branching from a common center, *a'*, through which a vertical screw, A, passes, either plates *a'' a''*, having screw-holes therein, being applied to the said center, or a suitable internally-screw-threaded bushing being arranged therein.

B is the chair-seat, which is rigidly applied at its central portion to the upper end of the screw A.

The chair so far as thus described is not new with me.

C is a plate or box applied to the seat B.

For the purpose of applying to the chair an adjustable back-support which may be raised and lowered, I attach rigidly to the chair-seat a horizontal plate or arm, *b*, Fig. 6, to which is attached a hollow vertical part or box, C, having a front plate, *b'*, and sides or flanges *b'' b''*, all of which are preferably cast in one piece.

C' is a loose or removable back plate, which is attached to the front side, *b'*, of the box C by means of a hand-screw, D, Fig. 6 and 7. At the upper and lower ends of the flanges *b'' b''*, I provide extensions or projections *c'' c''*, of about the thickness of the plate C', which are adapted to fit loosely into corresponding notches cut from said plate, as clearly shown in Fig. 3, whereby said plate is retained in its proper position in alignment with the edges of the box C. Upon tightening the hand-screw D, which passes into a screw-hole in the plate *b'*, and is provided with a shoulder, D', the plate C' is clamped firmly against a vertically-adjustable support, E, to which the curved arm-rail I or head-rest J, as the case may be, is detachably secured, and which support may be raised or lowered at will by means of said screw. This support E, I make, by preference, of wood. It consists of two parallel vertical arms, *e e*, in junction at their lower ends, as is clearly shown in Fig. 3. The part E is of such size as to fit neatly in the box C, but loosely enough to be moved vertically therein with facility. It should also be made somewhat thicker from front to rear than the width of the flanges *b'*, so that the plate C' may clamp upon the wood without touching said flanges. Otherwise it is obvious that the pressure would be upon the latter unless the whole of the plate C' were made sufficiently narrow to pass in between said flanges.

F is a bolt passing through the upper ends of the arms *e e*, and G is a hand-nut run upon said bolt.

H is a plate applied rigidly to the central part of the curved rail I. This plate consists of a vertical part, *f*, having a deep notch, *h*, in the lower edge, and having along its edges, on both sides or faces thereof, lateral ribs or ridges *i i*. It also has thereon, at its upper end, lateral or horizontal wings or flanges *j j*, to adapt it to be secured to the rail I by means of screws or other fastenings.

J is a rest for supporting the back of the occupant of the chair, and K K are two parallel arms or bars extending rearwardly from the said rest, and rigidly attached thereto in any suitable way.

L is a cam.

M is a fixed nut on the screw A. This nut has a cam-formed lower face resting on the upper face of the said cam. One or more arms, *k k*, project from the said cam, and *k'* is a pin depending from the said nut into a hole, *l*, to prevent said nut from turning.

I employ the cam L and the nut M for preventing the chair-seat from being accidentally rotated after it has once been set as desired.

In order to adjust the seat B vertically, I turn it in the usual manner, first turning the cam L on its axis, so that the said nut will not bind upon the screw A. After the seat has been adjusted I turn the cam L in such a direction that it will cause the nut M to bind upon the said screw, or operate as a jam-nut, after which the seat B will be held firmly in its place. It will only be necessary for the cam L to be capable of being turned slightly, as there is a considerable difference between the inclination or pitch of the cam and the screw-thread on the screw A.

The operations of the different parts in the respects in which the same have not already been described are as follows: To apply the rail I to its support, I arrange the plate H between the upper ends of the arms *e e*. The slot *h* permits the said plate to pass down somewhat beyond the bolt F, and the ribs *i i*, by overlapping the said arm, prevent any tilting movement of the said plate. To clamp the plate H (and consequently the rail I) firmly in place, I turn the nut G in against the arm *e* next thereto, thus clamping the said arms upon the said plate with sufficient force to prevent the accidental detachment of the rail I from its support, it being understood that the arms *e e* are somewhat flexible, pliable, or yielding under the pressure exerted by the said nut. The rail I, however, may be readily removed by simply loosening the said nut. To apply the rest J, I remove the rail I in the manner now suggested, and then slip the arms K K in between the arms *e e*, so that they will embrace the bolt F. I then clamp the arms K K as I would against the plate H, by turning the nut G in the manner already described. It will now be perceived, particularly on reference to Fig. 2, that the rest J may be arranged and firmly clamped in a more or less inclined position, and also adjusted to a position more or less distant from its support with facility.

Either the rail I or the rest J may be adjusted vertically by simply loosening the screw D sufficiently to allow the support E to be moved either up or down in the box C, it being understood that the collar D' bears against the plate C', which in turn bears against the support E, thus clamping the latter firmly wherever it may be set or adjusted. The said support, by being square, prevents it from being turned in its box or clamp. The plate C', by interlocking with the sides *b'' b''* in the manner described, is prevented from being turned when the screw D is turned, and the said plate is movable slightly toward and from the part E, either to clamp or release it, without loosening that engagement.

It will be perceived from the foregoing description, and on reference to the drawings, that the curved rail I may be applied and removed with facility to its support E, and that the clamp upon the upper end of the support E is adapted, without a change of structure, also to clamp the arms of the rest J, so that the latter may with facility be adjusted in various positions. It will also be perceived that the support E may be adjusted vertically, and that the means employed therefor are simple in construction and operation.

I am familiar with Patents Nos. 304,876 and 326,184, and I make no claim to any part of the construction shown in either.

What I do claim, and desire to secure by Letters Patent, is—

1. The combination of the vertically-adjustable bifurcated support E, having hand-screw G, with the arm-rest I, having slotted plate H, and head-rest J, having slotted plate K, the slots of said plates being open at the ends, whereby said arm and head-rest, respectively, are rendered interchangeably adjustable with the support E, substantially as and for the purposes set forth.

2. The combination, in a photographer's chair, of the support E, consisting of the parallel arms *e e*, the box C, having a movable back piece, C', and the screw D, having thereon a collar, D', and passing through screw-holes in the said back piece and in the said box, respectively, substantially as and for the purposes specified.

3. The combination, in a photographer's chair, of the usual seat-screw for adjusting the height of the chair, a screw-threaded socket attached to the chair-support for the reception of said seat-screw, a supplemental screw-threaded socket, one face of which is oblique to its axis, with means for preventing the same from rotating, and a loosely-interposed washer having a cam-shaped face conforming to that

upon said supplemental socket, and one or more handles for rotating said washer, substantially as and for the purposes set forth.

4. The combination, in a photographer's chair, of a seat-screw, a screw-threaded socket for its reception, cam-nut M, loosely connected with said socket by means of a pin, *k'*, and the interposed cam L, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

JAMES H. SMITH.

Witnesses:
F. F. WARNER,
HENRY FRANKFURTER.