No. 768,311. PATENTED AUG. 23, 1904.

C. O. ROBERTS.

ADJUSTABLE CHAIR BACK.

APPLICATION FILED MAR. 22, 1904.

NO MODEL.

Fig. 1.

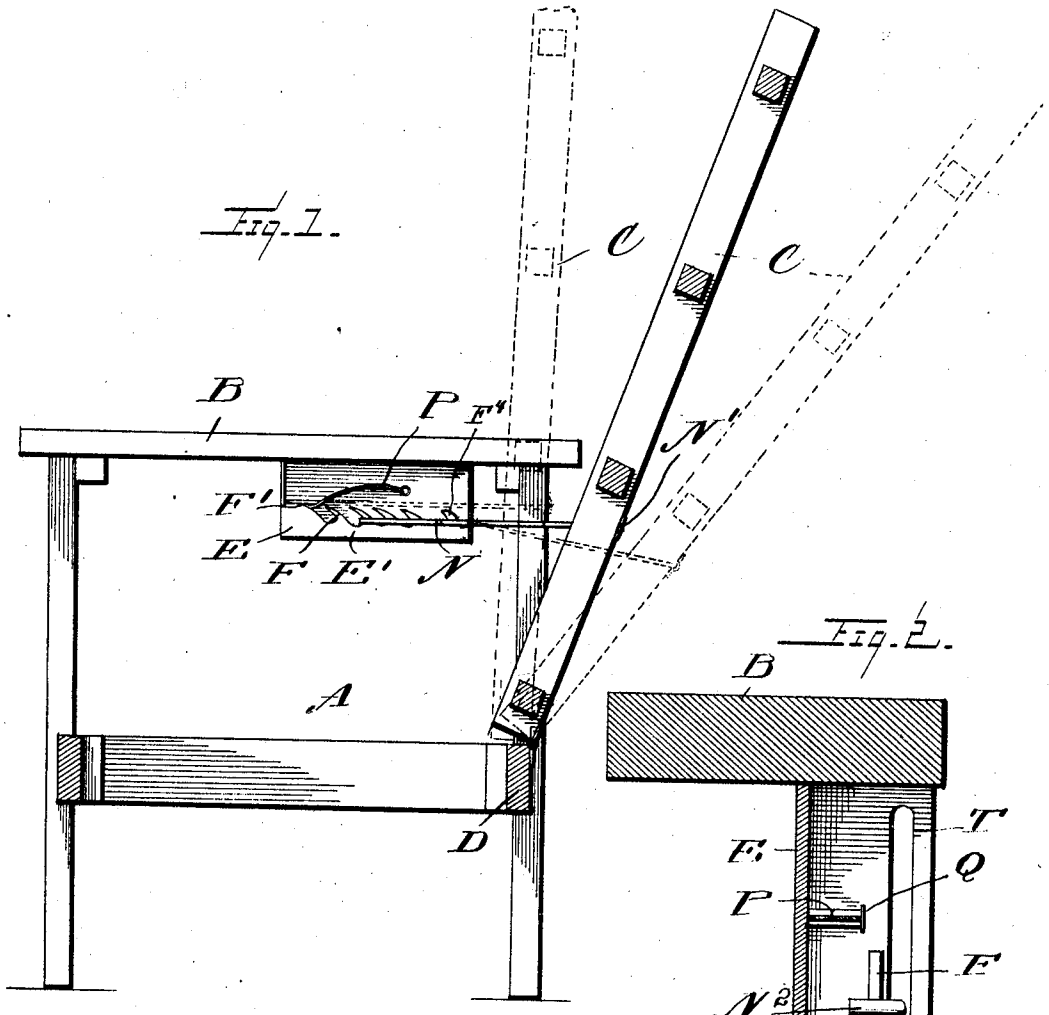
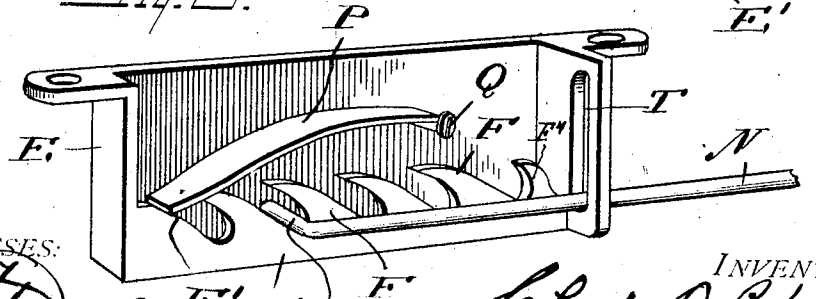


Fig. 2.

Fig. 3.



WITNESSES:

W. F. Doyle.

A. L. Hough.

INVENTOR

Charles O. Roberts,

By Franklin N. Hough

Attorney

No. 768,311. Patented August 23, 1904.

UNITED STATES PATENT OFFICE.

CHARLES O. ROBERTS, OF PHILADELPHIA, NEW YORK.

ADJUSTABLE CHAIR-BACK.

SPECIFICATION forming part of Letters Patent No. 768,311, dated August 23, 1904.

Application filed March 22, 1904. Serial No. 199,388. (No model.)

To all whom it may concern:

Be it known that I, CHARLES O. ROBERTS, a citizen of the United States, residing at Philadelphia, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Adjustable Chair-Backs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in adjusting means for the backs of chairs; and the object of the invention is to produce a device of this character which is so arranged as to allow for the automatic adjustment of the back to be held at different inclinations and to be set in any adjusted positions by throwing the back first forward to its farthest limit, after which it will be allowed to swing back to its rearmost limit without hindrance, and if it is desired to adjust the back to any intermediate position it may be done by merely raising the back to the position desired.

My invention consists, further, in various details of construction and in combinations and arrangements of parts, which will be hereinafter fully described, and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings similar letters of reference indicate like parts in the views, in which—

Figure 1 is a vertical sectional view through my improved chair, parts being shown in elevation and the relative arrangement of parts being illustrated in dotted lines in adjusted positions. Fig. 2 is a cross-sectional view through one arm of the chair and the detailed mechanism for holding the back in an adjusted position. Fig. 3 is a detailed perspective view of features of the invention.

Reference now being had to the details of the drawings by letter, A designates the frame of a chair, which may be of any desired construction and having arms B, only one of which is shown in the drawings, supported on the four corner-posts or legs of the chair.

C designates a back which is hinged to the cross-piece D, connecting the rear legs of the chair.

Secured to the under surface of each of the arms B is a casing E, which is preferably of metal and open upon its inner face. Said casing has a flange E′ along the marginal edge of the opening in its inner face and is provided with a series of teeth F, as shown clearly in the drawings, which are inclined forwardly, and at the forward end of the row of teeth said flange curves upward and forward, as at F′, and rises to a level of the tops of said teeth.

N designates a rod which has an angled end N′ hinged to the back of the chair, while the forward end of said rod is angled, as at N^2, and is adapted to engage one or another of said teeth, as shown clearly in the drawings. Pivotally mounted upon a pin Q, projecting from the outer side wall of said casing, is a curved link P, the free end of which rests upon said curved portion F′ of the flange and normally held thereon by gravity.

In the drawings I have shown but one-half of a chair, and it will be understood that each arm is provided with a similar casing and pivotal link, and also an angled rod is hinged to each side of the back, as illustrated in the drawings.

The operation of my attachment is as follows: Supposing the back of the chair to be at its farthest backward throw and it is desired to adjust it to a higher angle, it may be done by simply raising the back, which will cause the hooked end N^2 of the rod to ride over the curved edges of the teeth and drop into one or the other notches, as may be desired and as illustrated in dotted lines. In the event of it being desired to throw the back rearward to its farthest limit when adjusted in any intermediate position between its farthest forward and rearward limits the back is thrown to an upright position, and in so doing the angled end N^2 of the rod will cause the link to rise to allow the hooked end of the rod to pass by the free end of said link

and to ride up the curved edge F′ of the flange. After said hook N^2 has passed the free end of the pivotal link the latter will fall by gravity back upon the curved edge F′, after which the back may be thrown to its farthest backward limit, and in so doing the hook N^2 will be prevented from engaging the teeth by said pivotal link, upon which the hook rides as the back is thrown rearward. When the hook N^2 reaches the pivotal end of said link, it will fall down upon the curved edge F^3 of said flange, and the back of the chair will be held at its farthest backward limit by the hook N^2 engaging a hook F^4. In order to hold the rod N and guide the same in its movements, a slot T is formed in a projecting end of said casing.

By the provision of an automatic adjusting means for chair-backs made in conformity with my invention it will be observed that a simple and efficient means is afforded for allowing the back to be adjusted in any position by the operator merely swinging the back forward or rearward, as may be desired.

While I have shown a particular construction of apparatus illustrating the details of my invention, it will be understood that I may vary the same, if desired, in various ways without in any way departing from the spirit of the invention.

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

1. A means for adjusting the back of a chair comprising in combination with the frame of a chair, a casing secured thereto and having open faces and top, a serrated flange at the lower marginal edge of the side opening of the casing, a hinged chair-back, a rod secured thereto and having a hooked end designed to engage said serrations, one end of the casing extending outside said series of serrations and having a longitudinal slot therein in which said rod is guided, a link pivotally mounted at one end within said casing and positioned over said serrations, and a hook intermediate the pivotal end of said link and the adjacent end of the casing and adapted to be engaged by said rod to limit the downward movement of said back, as set forth.

2. In combination with a chair and hinged back, a casing having one side and ends closed, an open face, the lower marginal edge of which is provided with serrations, a rod having pivotal connection with said back, one end of said casing having a vertical slot through which said rod passes and in which the latter has a vertical play, a pin projecting from the closed wall of said casing, a link pivotally mounted at one end upon said pin and positioned over said serrations, one end of said casing serving to limit the forward throw of said rod as the back is raised to an upright position, and a stop in the rear of the pivotal point of said link and with which the hooked end of said rod is adapted to engage to limit the downward throw of the back of the chair, as set forth.

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

CHARLES O. ROBERTS.

Witnesses:

H. E. HOLMES,

T. J. COOLIDGE, Jr.