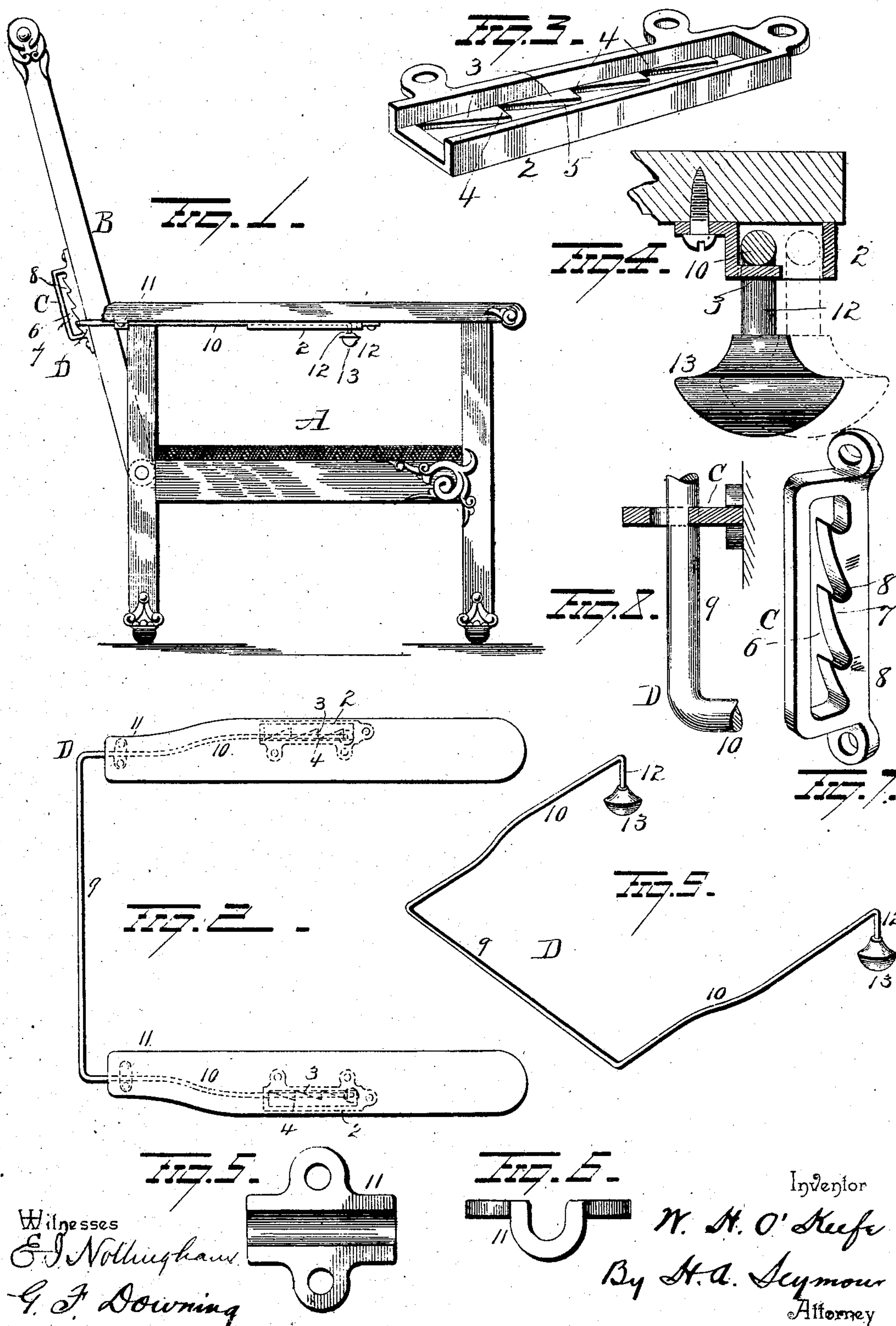


(No Model.)

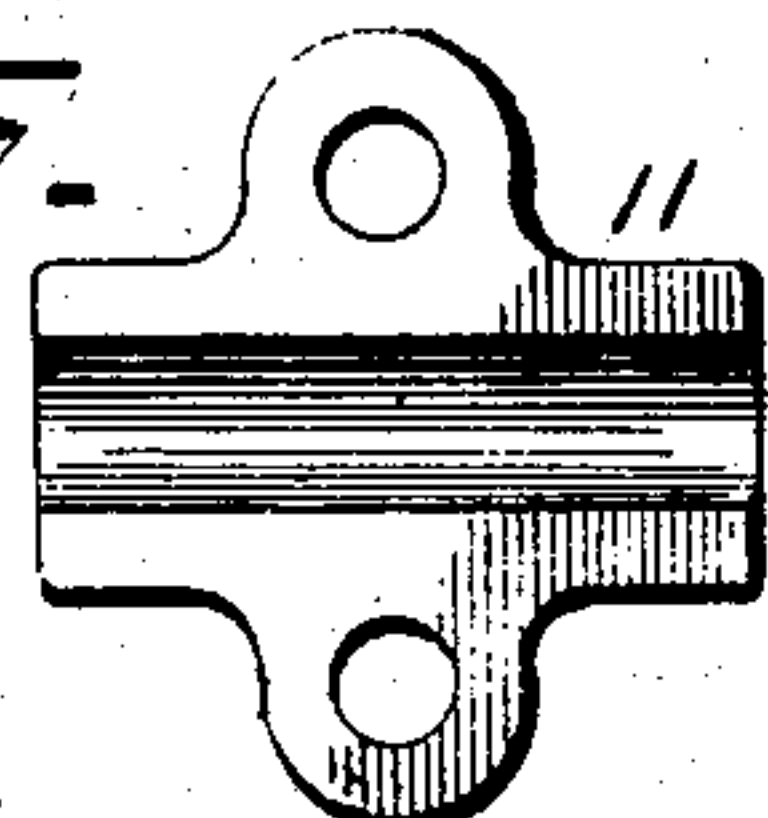
W. H. O'KEEFE.  
ADJUSTING DEVICE FOR CHAIRS.

No. 605,008.

Patented May 31, 1898.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. O'KEEFE, OF LOCKPORT, NEW YORK.

## ADJUSTING DEVICE FOR CHAIRS.

SPECIFICATION forming part of Letters Patent No. 605,008, dated May 31, 1898.

Application filed July 29, 1897. Serial No. 646,397. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. O'KEEFE, a resident of Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Adjusting Devices for Chairs; and I do hereby 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.

My invention relates to an improvement in adjusting devices for chairs, the objects of the invention being to provide adjustable devices for chair-backs which shall be simple in construction, in which the pull on the connecting-rods will be at all times longitudinal of said rods, which shall be easy and quick of application, and which shall be effectual in all respects in the performance of their functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of a chair, showing the application of my improvements thereto. Fig. 2 is a top plan view of a portion of a chair, showing the arms, the yoke, and, in dotted lines, the means of fastening the yoke. Figs. 3, 4, 5, 6, 7, 8, and 9 are detail views.

A represents the body portion of a chair, and B the back thereof, the lower end of the latter being pivotally connected with the body portion of the chair in proximity to the seat. To the under face of each side rail or arm-rest a slotted box 2 is secured, one wall of the slot of each box being made to form a ratchet-bar 3, each tooth of which is made with a face 4 at right angles to the longitudinal axis of the box, and the faces 4 of the teeth are connected by diagonal edges or faces 5.

Brackets C are secured to the uprights of the chair-back in line with the side rails or arm-rests when the back is in its normal position. Each bracket C is made with an elongated slot 6, the inner wall of which is made with ratchet-teeth 7, and one wall of each tooth is preferably curved, as at 8.

A yoke D, made preferably of steel rod or wire, is passed loosely through the slotted

brackets C, the rear bar 9 of said yoke extending transversely of the chair-back and the parallel bars 10 projecting parallel with the under face of the side rails or arm-rests. Each side bar 10 of the yoke D passes loosely through a clip or bracket 11, secured to the under faces of the respective side bars or arm-rests of the chair.

The side bars 10 of the yoke D enter the slotted boxes 2, and their free ends are bent downwardly to form teeth 12, which project through the slots in the respective boxes 2 and engage the ratchet-bars 3. Each side bar 10 of the yoke is also provided at the free end of its tooth 12 with a knob 13, whereby to disengage the same from the ratchet-bars 3. The teeth on the side bars 10 of the yoke are prevented from being moved out of line with the ratchet-bars on the side rails or arm-rests by the slotted boxes 2, into which the side bars of the yoke project, as above explained.

By connecting the side rails or arm-rests of the chair with the chair-back those portions of the side bars of the yoke beyond the clips 11 will form springs, and thus retain said yoke in proper connection with the ratchet-bars on the side rails of the chair, but permitting at the same time the ready withdrawal of the teeth at the free ends of the parallel bars of the yoke from the ratchet-bars when it is desired to adjust the back.

From the construction and arrangement of parts above described it will be seen that when the pressure of a person is brought to bear against the back the strain will come directly upon the side bars of the yoke, and the pull on these bars will be straight and exactly in line with the longitudinal axes thereof. Thus I am enabled to employ light material for the yoke D, the strain on the side bars of said yoke being at all times, regardless of the position to which the back may be adjusted, exactly in line with the longitudinal axes thereof and never in a lateral direction, and said strain on the side bars of the yoke is never torsional.

The brackets C afford positive and certain supports for the yoke, and the yoke will move from one tooth to another as the back is adjusted and regulated by the ratchets on the side rails or arm-rests, and no matter what inclination the back may be made to assume



the yoke will always occupy the same horizontal plane.

My improvements are very simple in construction, cheap to manufacture, can be easily  
5 and quickly applied and readily operated while the user is seated on the chair, and are effectual in all respects in the performance of their functions.

Various changes might be made in the form  
10 and construction of the various details of the invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details herein set forth.

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

1. The combination with a chair-body and a back hinged thereto, of a ratchet-bar se-  
20 cured to the chair-body at each side thereof, ratchet-bars secured to the chair-back at each side thereof and a yoke extending across said back, engaging the ratchet-bars thereon and having teeth at the free ends of its side bars  
25 adapted to engage the ratchet-bars secured to the chair-body, substantially as set forth.

2. The combination with a chair-body and a back hinged thereto, of ratchet-bars se-  
30 cured to the chair-body, ratchet-bars secured to the chair-back, a yoke extending across the chair-back and engaging the ratchet-bars thereon, teeth at the free ends of the side bars of said yoke to engage the ratchet-bars on the chair-body and clips secured to the chair-  
35 body, through which the side bars of the yoke pass, substantially as set forth.

3. The combination with a chair-body and a back hinged thereto, of slotted brackets se-  
40 cured to the chair-back, a ratchet-bar in each slotted bracket, a yoke extending across the chair-back, passing through said slotted brackets and engaging said ratchet-bars and means for adjustably and removably con-  
45 necting the side bars of said yoke to the chair-body, substantially as set forth.

4. The combination with a chair-body and

a chair-back hinged thereto, of ratchet-bars secured to the under face of the side rails of the chair-body, ratchet-bars secured to the upright rails of the chair-back at points which  
50 are normally in line with the side rails of the chair, rods connected with the ratchet-bars on the back and with the ratchet-bars on the side rails and clips through which said rods loosely pass, said clips being secured to the  
55 under faces of the side rails of the chair, substantially as set forth.

5. The combination with a chair-body and a back hinged thereto at points below the side rails of the chair, of ratchet-bars secured to  
60 the side rails, brackets having slots and ratchet-bars therein, secured to the chair-back, a yoke extending across the chair-back, passing through the slots in said brackets and engaging the ratchet-bars therein, teeth at  
65 the free ends of the parallel bars of said yoke adapted to engage the ratchet-bars secured to the side rails, handles or knobs on said side bars of the yoke and clips secured to the rear bars of the chair through which said side  
70 bars of the yoke pass, substantially as set forth.

6. The combination with a chair-body and a back hinged thereto, of slotted brackets having ratchet-bars, secured to the chair-  
75 back, slotted boxes having ratchet-bars, secured to the side rails of the chair, a yoke passing through the slotted brackets and engaging the ratchet-bars therein, teeth at the free ends of the parallel bars of the yoke, said  
80 free ends of the parallel bars being adapted to enter said boxes and the teeth to engage the ratchet-bars therein, and knobs at the free ends of said teeth, substantially as set  
85 forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM H. O'KEEFE.

Witnesses:

E. W. S. RINGINBERG,  
ARTEMUS A. BRADLEY.