No. 777,745. PATENTED DEC. 20, 1904.

A. PAVLISH.

AUTOMATIC RECLINING CHAIR RATCHET.

APPLICATION FILED APR. 8, 1904.

NO MODEL.

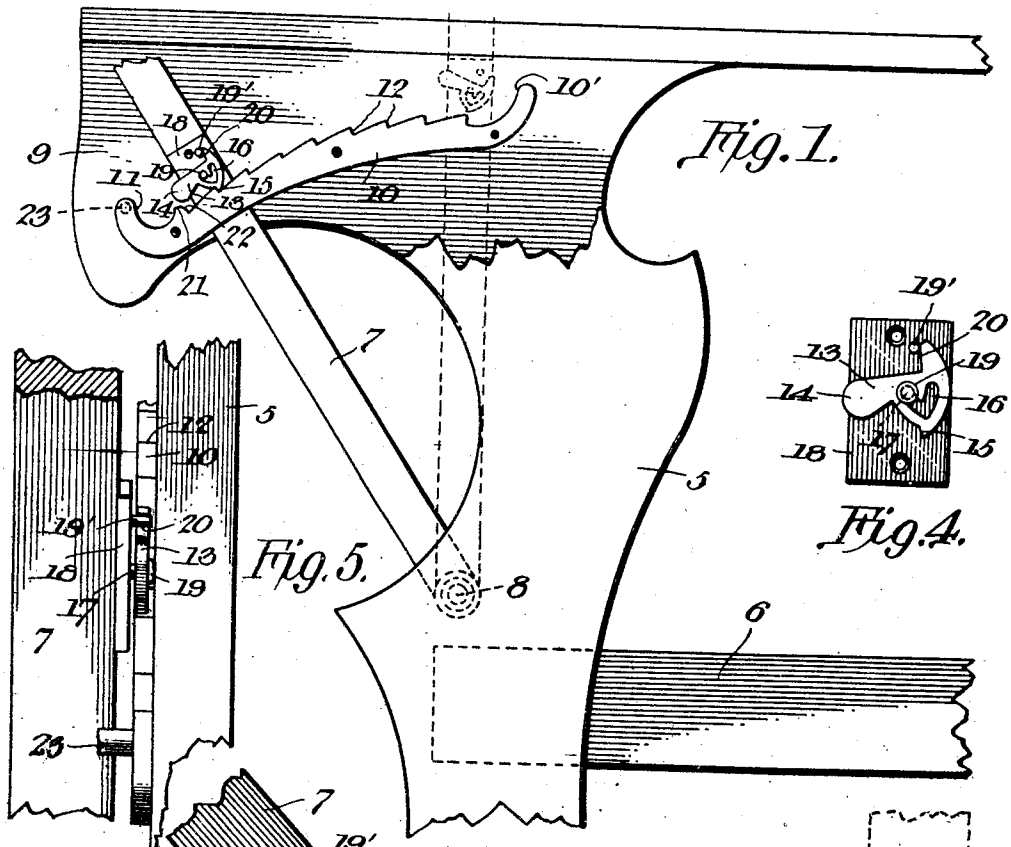


Fig. 1.

Fig. 4.

Fig. 5.

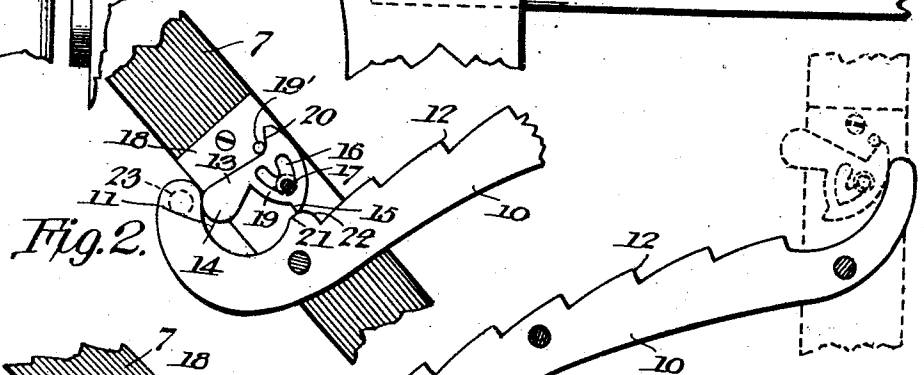


Fig. 2.

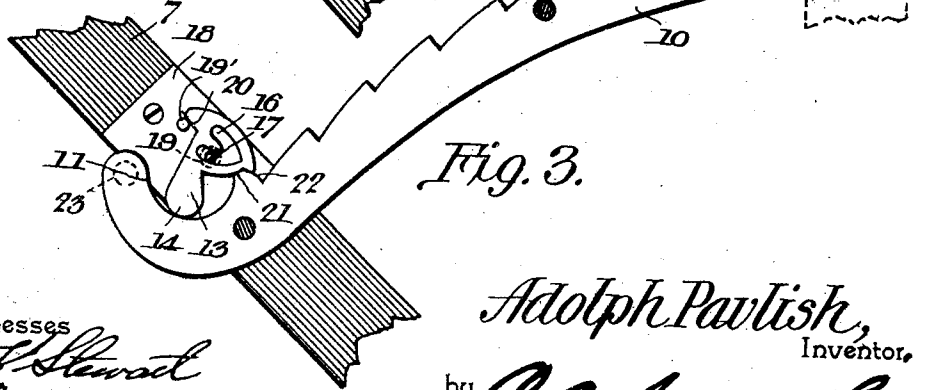


Fig. 3.

Witnesses

E. F. Stewart

L. M. Ackers

Adolph Pavlish,

Inventor.

by Cachow & Co.

Attorneys

No. 777,745. Patented December 20, 1904.

UNITED STATES PATENT OFFICE.

ADOLPH PAVLISH, OF CHATFIELD, MINNESOTA.

AUTOMATIC RECLINING-CHAIR RATCHET.

SPECIFICATION forming part of Letters Patent No. 777,745, dated December 20, 1904.

Application filed April 8, 1904. Serial No. 202,272.

To all whom it may concern:

Be it known that I, ADOLPH PAVLISH, a citizen of the United States, residing at Chatfield, in the county of Fillmore and State of Minnesota, have invented a new and useful Automatic Reclining-Chair Ratchet, of which the following is a specification.

This invention relates to certain improvements in reclining-chairs, and more particularly to an automatic ratchet for locking the back of the chair in adjusted position.

The object of the invention is to provide a simple, inexpensive, and efficient device of this character capable of being readily attached to a reclining-chair and by means of which the back of the chair may be conveniently adjusted at any angle or inclination with respect to the seat and securely locked against accidental displacement.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

In the accompanying drawings, forming a part of this specification, Figure 1 is a vertical sectional view of a portion of an adjustable reclining-chair, showing the application of my invention thereto. Fig. 2 is an enlarged detail view. Fig. 3 is a similar view showing the back resting on the supporting-lugs. Fig. 4 is a front elevation of the dog and wear-plate detached. Fig. 5 is a rear view of Fig. 1.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the present embodiment of the invention I have shown the device applied to the well-known Morris chair, 5 indicating the frame, 6 the seat, and 7 the back of the chair pivoted at 8 to the rear portion of the seat and adapted to swing back and forth upon the pivot to adjust said back relatively to the seat. Secured to a rearward extension 9, preferably formed integral with the frame, is a locking-plate or rack-bar 10, the opposite ends of which are bent to form curved guides 10′ and 11, and the intermediate portion provided with a series of teeth or serrations 12 for engagement with a locking-dog 13. The dog 13 is provided with a weighted end portion 14 and a locking-lip 15, adapted to engage the teeth or serrations on the rack-bar, said dog being formed with a slot or recess 16, designed to receive a pin or stud 17. The pin or stud 17 projects laterally from a wear-plate 18, secured to the back of the chair, as shown, said stud being provided with an elongated head 19, which engages the flat side face of the dog and serves to retain said dog in position on said plate. The dog 13 is pivoted on the plate 18 in such a manner that either branch of the slot 16 may engage the stud 17, the position of the dog depending on the relative position of the back with respect to the seat.

Disposed above the stud 17, and preferably formed integral with the plate 18, is a lug or projection 19′, adapted to engage an extension 20 on the dog 13 and lock said dog in inoperative position when the back of the chair has reached the limit of its forward movement, thereby holding the locking-lip of the dog 13 out of engagement with the teeth on the rack-bar while the chair-back is swung rearwardly to effect a new adjustment, as will be more fully explained hereinafter. The tooth or serration adjacent the guide-plate 11 is provided with a flat head 21 and an inclined or beveled portion 22, the said tooth being designed to elevate the dog 13 when the latter comes in contact therewith and shift said dog to the position in Fig. 2 of the drawings. As the dog is elevated the stud or pin 17 engages the opposite branch of the slot 16, the weighted portion 14 of the dog coming in contact with the guide-plate 11 and causing said dog to tilt rearwardly and in position to automatically engage the teeth on the rack-bar when the back of the chair is tilted forward to effect an adjustment thereof. The rack-bars, of which there are two, one secured to each side of the chair-frame, are provided with inwardly-projecting pins or lugs 23, which form a support

for the back of the chair and serve to take the strain off the teeth or serrations.

When it is desired to adjust the back of the chair, the former is tilted forward until the head of the dog 13 engages the guide 10′, thereby causing the dog to ride on said guide until the extension 20 engages the lug 19′, as indicated by dotted lines in Fig. 3, in which position the locking-lip of the dog will clear the teeth or serrations when the back is tilted rearwardly. When the locking-lip of the dog strikes the tooth having the flat head 21, said dog will be elevated sufficiently to cause the stud or pin 17 to engage the opposite branch of the slot 16, as clearly shown in Fig. 2, the weighted end of the dog at the same time engaging the rear guide 11 and causing said dog to drop by its own weight to the position shown in Fig. 3. The back of the chair may then be adjusted at any angle or inclination with respect to the seat by tilting the seat forward until the locking-lip of the dog engages the proper tooth on the rack-bar, as will be readily understood.

The device as a whole is very simple and may be readily applied to chairs now in use, and, furthermore, substantially the same construction may be applied to the movable hinged-head sections of sofas, lounges, couches, and the like.

Having thus described the invention, what is claimed is—

1. The combination with a frame, of a movable section pivoted thereto, a rack-bar carried by the frame, and a locking-dog pivoted on the movable section and having a changeable center of movement, said dog being adapted to engage the teeth on the rack-bar for locking said section in adjusted position.

2. The combination with a frame, of a movable section pivoted thereto, a rack-bar carried by the frame, and a reversible locking-dog pivoted on the movable section and having a changeable center of movement, said dog being adapted to engage the teeth on the rack-bar for locking the movable section in adjusted position.

3. The combination with a frame, of a movable section pivoted thereto, a rack-bar carried by the frame, a reversible locking-dog pivoted on the movable section and having a changeable center of movement, and a locking-lip on said dog adapted to engage the teeth on the rack-bar for locking the said movable section in adjusted position.

4. The combination with a frame, of a movable section pivoted thereto, a rack-bar carried by the frame, and a reversible locking-dog pivoted on the movable section and having a changeable center of movement, said dog having one end thereof weighted and the opposite end provided with a depending locking-lip adapted to engage the teeth on the rack-bar for locking the movable section in adjusted position.

5. The combination with a frame, of a movable section pivoted thereto, a rack-bar secured to the frame and having its opposite ends curved to form terminal guides, and a reversible locking-dog having a changeable center of movement pivoted on the movable section for engagement with the teeth on the rack-bar, said dog being adapted to engage the terminal guides for reversing the position of the former.

6. The combination with a frame, of a movable section pivoted thereto, a bar secured to the frame and provided with a series of teeth or serrations one of which is formed with a flat head, and a reversible locking-dog loosely mounted on the movable section and provided with a locking-lip for engagement with the flat head of the tooth of said bar.

7. The combination with a frame, of a movable section pivoted thereto, a bar formed with a series of teeth or serrations secured to the frame and having its opposite ends curved to form terminal guides, a lug or pin projecting inwardly from said bar and arranged in the path of the movable section, and a reversible locking-dog pivoted on said movable section and having a changeable center of movement, said dog being adapted to engage the teeth on the bar for locking said section in adjusted position.

8. The combination with a frame, of a movable section pivoted thereto, a rack-bar carried by the frame, a reversible locking-dog loosely mounted on the movable section and adapted to engage the teeth on the rack-bar, and a pin secured to said movable section for locking the dog out of engagement with the teeth.

9. The combination with a frame, of a movable section pivoted thereto, a rack-bar carried by the frame, a wear-plate secured to the movable member and provided with a laterally-extending stud, and a reversible locking-dog provided with a cam-slot adapted to receive said lug, said dog being adapted to engage the teeth on the rack-bar.

10. The combination with a frame, of a movable section pivoted thereto, a rack-bar carried by the frame, a stud secured to the movable member, a reversible locking-dog loosely mounted on the movable member and provided with a slot for the reception of said stud, said dog being adapted to engage the teeth on the rack-bar for locking the movable member in adjusted position.

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

ADOLPH PAVLISH.

Witnesses:

A. L. Ober,

I. E. Ober.