No. 715,388. Patented Dec. 9, 1902.

J. S. KENNY.

RECLINING CHAIR.

(Application filed Apr. 11, 1901.)

(No Model.) 2 Sheets—Sheet 1.

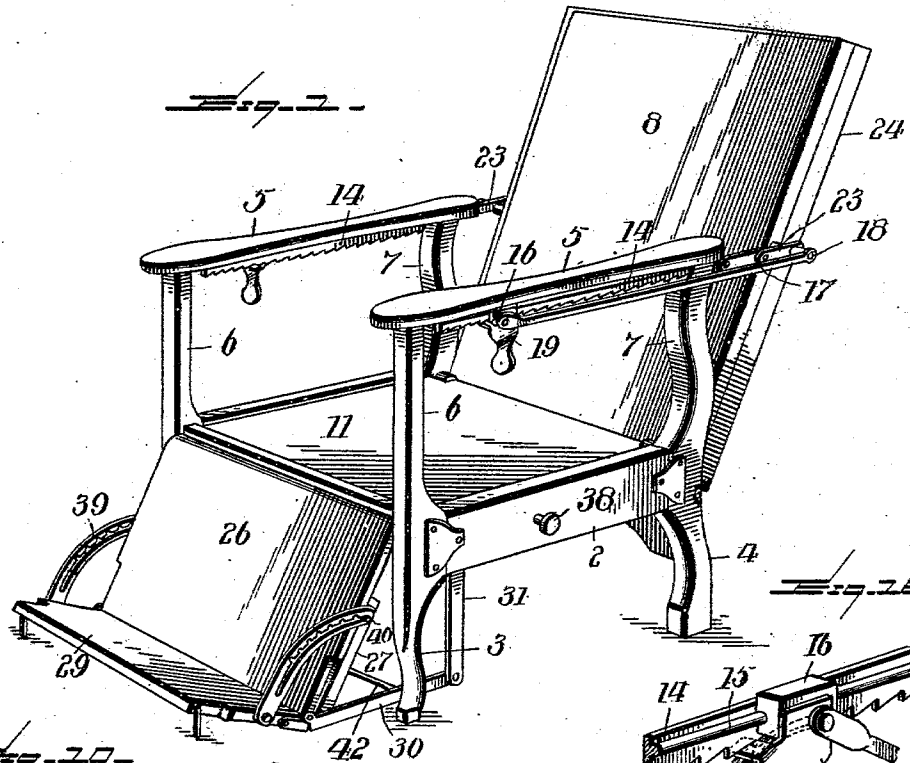


Fig. 2.

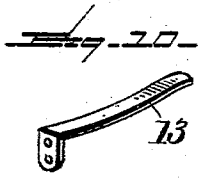


Fig. 2a.



Fig. 2b.

Fig. 2c.

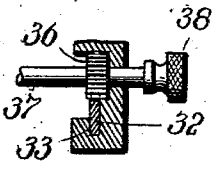


Fig. 2d.

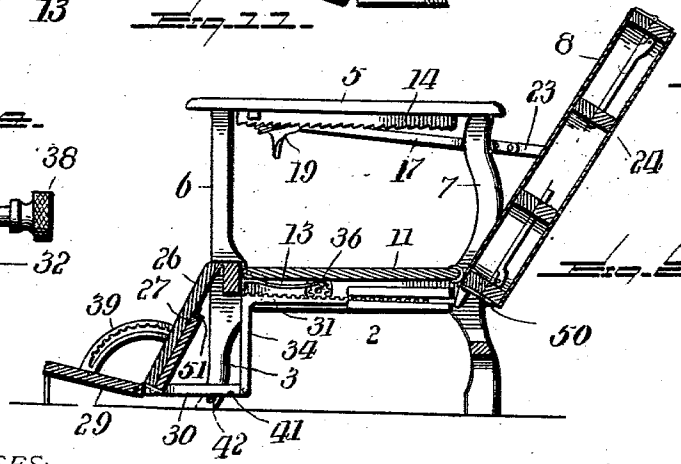


Fig. 2e.

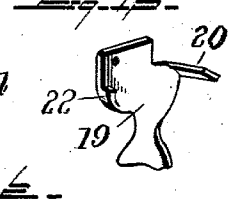


Fig. 2f.

Fig. 2g.

WITNESSES:

Wm. F. Doyle.

Edwin King Lindy

INVENTOR

John S Kenny

BY Marcellus Bailey

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 715,388. Patented Dec. 9, 1902.

J. S. KENNY.

RECLINING CHAIR.

(Application filed Apr. 11, 1901.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 5.

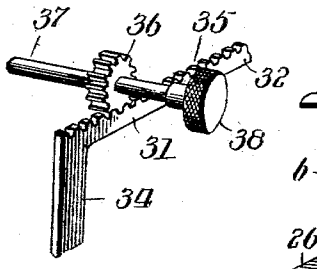


Fig. 4.

Fig. 6.

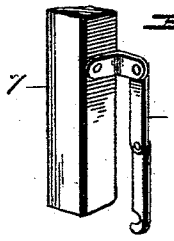


Fig. 7.

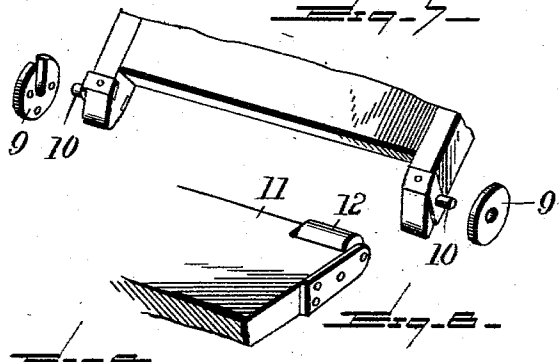


Fig. 8.

Fig. 3.

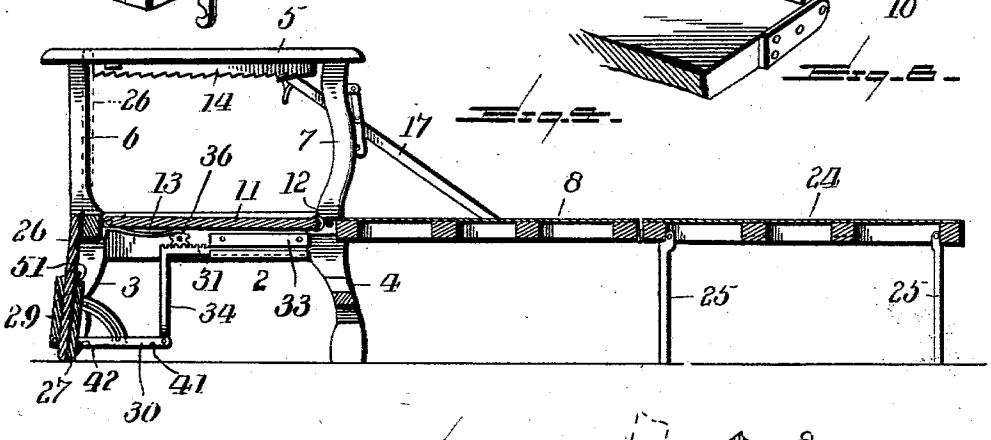


Fig. 9.

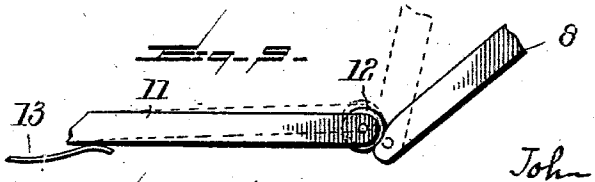
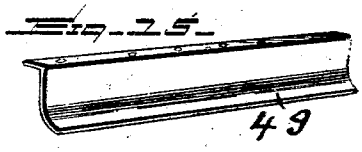


Fig. 25.



WITNESSES:

Wm. F. Doyle.

Edwin King Lindsey

INVENTOR

John S Kenny

by Marcellus Bailey

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN S. KENNY, OF NEW YORK, N. Y.

RECLINING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 715,388, dated December 9, 1902.

Application filed April 11, 1901. Serial No. 55,330. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. KENNY, a citizen of the United States, residing at New York city, in the county and State of New York, have invented a new and useful Improvement in Reclining-Chairs, of which the following is a specification.

My invention has for its object to produce a chair having adjustable back and adjustable foot or leg supporting sections which is capable of a wide variety of uses and which may by the adjustment of the various parts be used as an ordinary reclining-chair or as a steamer-chair or may be converted into a couch.

The invention consists of improvements in the several parts of the chair, which are described and pointed out in the following specification.

In the accompanying drawings, Figure 1 is a perspective view of the preferred form of my invention, the parts being arranged to constitute a reclining-chair. Fig. 2 is a central vertical longitudinal section of the chair represented in Fig. 1. Fig. 3 is a central longitudinal section of the parts of the chair when arranged as a steamer-chair. Fig. 4 is a similar sectional view when the parts are arranged to constitute a couch. Figs. 5 to 15, inclusive, represent details of the construction of parts to be hereinafter described.

The chair is provided with a suitable supporting-framework comprising the seat-frame 2, the front legs 3, the rear legs 4, the arm-rests 5, and the front and rear supports for the arm-rests 6 and 7, the latter by preference being each formed in one piece with one of the legs 3 and 4, respectively.

8 represents the back, hinged at its lower end to the supporting-frame and situated between the supports 7. Any suitable form of hinge may be employed for uniting the back and the supporting-framework; but I prefer the form shown and which I will now describe.

9 is a socket-piece attached to a side part of the supporting-frame, and 10 represents a pintle carried by the side bar of the back near its lower end and adapted to enter and to turn in the recess in the socket-piece 9. One of the socket-pieces should be provided with an open slot in order to facilitate the ready removal and attachment of the back without necessitating the separation of any fixed parts.

11 indicates the seat. I prefer that this part of the chair should be hinged at its forward end to the seat-frame, and the hinging devices are preferably of a construction similar to those employed for uniting the back. The seat is provided at its rear edge with rollers 12, adapted to bear upon the front face of the side bars of the back near their lower ends. Springs 13 are arranged to bear against the under side of the seat and tend to lift its rear free edge. It will be seen that when the chair-back, which is adjustable, is moved into its forward and nearly upright position, that the rollers 12 carried by the seat will engage with the side bars of the back at higher points than when the back is adjusted to a more inclined and lower position. The seat is thus adjustable simultaneously with the adjustment of the back, so that these two parts shall be caused to maintain proper positions relative to each other whatever the adjustment of the back. The springs 13 are not sufficiently strong to lift the back or the rear edge of the seat entirely out of engagement with the back; but they operate to substantially relieve the chair-back of the weight of the seat, so that adjustments may be easily effected.

I arrange adjusting mechanism between the back 8 and the supporting-framework, and I will describe the form of adjusting mechanism which I prefer to employ.

14 represents a ratchet plate or bar secured to the under side of the arm, and 15 is a slide rod or bar parallel with the ratchet and adjacent thereto. A block 16 is mounted upon and adapted to slide longitudinally of the rod or bar 15, and to this block there is pivotally connected a link 17, uniting it with the chair-back, to which it is pivoted at 18.

19 indicates a pawl or dog pivoted to the block 16 and having a tooth or finger 20 arranged to engage with the teeth of the ratchet 14. A spring 21 is arranged to bear upon the pawl or dog 19 and to hold its tooth in engagement with the ratchet. The pawl is provided with a handpiece 21^a, by means of which it is manipulated, and also with a stop

22, arranged to engage with the block 16 and limit the extent to which the pawl may be moved when operated to disengage the ratchet.

While a single adjusting device such as I have described would be operative, I prefer that one should be arranged on each side of the chair, as the back is thereby better supported and tendency to strain the parts is reduced to a minimum. The handpieces 21ª are so situated that a person occupying the chair may easily grasp them and move the pawls to disengage the ratchets, when the back is free to be moved in a rearward or more inclined position. The chair-back may be adjusted forward without operating the ratchet device, as the pawl will move freely over the ratchet-teeth in a forward direction.

If it be found desirable, a shield, such as represented at 49 in Fig. 15, may be secured to the arm of the chair in order to prevent the clothing or other articles catching upon the ratchet 14 or the parts which engage therewith.

If desired, I may arrange suitable catches or stop devices to limit the extent to which the chair-back may be adjusted rearward, though this will not ordinarily be necessary.

23 indicates links arranged, preferably, between the upper ends of the rear support 7 for the arm-rests and the pivot connections 18, which unite the chair-back with the links 17 of the adjusting devices. These links 23 permit free adjustment of the chair-back within the desired limits, but operate to prevent the back from being inclined beyond a certain position for which they are set. The links 23 are made readily detachable, for which purpose one of them may be provided with a hooked end, as represented in Fig. 6.

When it is intended that the chair should also be used as a couch, I hinge to the upper or free end of the back a section 24, which is preferably of substantially the same size as the back. This section when the chair is being used as a chair may be folded against the back 8 and secured by any suitable catch or holding device 50, as represented in Figs. 2 and 3. When it is intended to adjust the chair so as to form a couch, the back 8 is moved downward into a substantially horizontal position, and the couch-section 24 is opened out into a position in line therewith, as represented in Fig. 4. The couch-section 24 and the outer or free end of the back are provided with suitable folding legs 25, which support the parts when in an extended position. These legs may be of any usual or preferred construction and need not be described in detail.

The parts which have been thus far described may be suitably upholstered, if found desirable, or there may be combined and used therewith removable cushions; but I have not illustrated these features, as my invention is not limited to any particular arrangement or form of cushioning or upholstering.

I combine with the chair constructed as described a peculiar form of adjustable foot-rest, which I will now describe.

26 represents a front board hinged at its upper end to the front edge of the seat-frame. It is preferably of a size to extend from leg to leg 3 and from the upper edge of the seat-frame nearly to the floor. To the outer or free edge of the front board 26 there is hinged an extension-board 27, which is provided at its outer or free edge with folding legs 28, arranged to support the extension-board when it is in the open or extended position indicated in Fig. 3. The extension piece or board 27 is adapted to fold against the rear face of the front board 26 and be there secured by suitable catch devices 51 when it is not in use, as indicated in Fig. 4

The foot rest or board is indicated at 29 and is pivoted at its lower edge to the forward ends of the links 30, which connect it with the slide or adjusting bars 31. These bars are preferably of the angular shape shown in the drawings, having an upper and substantially horizontally-arranged portion adapted to be moved longitudinally forward and back in suitable ways 33, formed on the inner sides of the side bars of the seat-frame and vertically-disposed parts 34, pivotally united at their lower ends with the links 30. The upper edge of the horizontal portion 32 of each slide-bar 31 is preferably formed with teeth to constitute a rack 35, and a pinion or toothed wheel 36 engages therewith. The pinions 36 for the racks of the two slide-bars are both mounted upon a cross-shaft 37, so that the slide-bars will be simultaneously and synchronously moved forward and back. The shaft 37 extends through the side pieces of the seat-frame and is provided at its ends with hand-wheels 38 or other suitable manipulating devices. The foot-rest is connected with the front board 26 by slotted links 39 and clamping or binding nuts 40. These adjusting means while uniting the foot-board and the front board permit the former to be adjusted on the pivots which unite it with the links 30 to any position between one in which the two parts are parallel with each other, as represented in Fig. 4, and one in which they are substantially at right angles to each other, as shown in Fig. 2.

A foot-rest constructed as I have shown and described is capable of being manipulated so as to bring the parts into a large number of desirable positions to suit the various uses to which the chair may be put, and I will describe several of the different positions. When the chair is being used as a couch, the foot-rest parts are folded close to the supporting-frame, so as to be out of the way, as represented in Fig. 4. As there shown, the front board is substantially vertical, the extension-board 27 is folded against the rear face of the front board, the slide-bars 31 are moved to their rearmost positions, bringing the inner or lower edge of the footboard 29 close to the

front face of the front board, and the footboard is folded up parallel to the front board, lying against the front face thereof. It may be held in this position by tightening the clamped nuts 40.

When the chair is adjusted for use as a steamer-chair, the back is inclined, as indicated in Fig. 3. The slide-bars for the foot-rest are then adjusted to their forwardmost position, and the front board is adjusted so as to lie above the footboard, and the extension-board is folded out and supported by the legs 28. When the parts are in this position, the under edge of the front board rests upon the upper edge of the footboard and is supported thereby, the footboard being held in position by the slotted links 39 and the clamping-nuts. In order to steady the parts when in this position and whenever the footboard is adjusted forward, I prefer to notch the under side of the links 30 at 41, so that they may engage with a cross-bar 42, arranged between the front legs 3 of the supporting-frame.

When the chair is used as an ordinary reclining-chair, the foot-rest parts are adjusted so as to have the lower edge of the footboard engage with the front face of the front board near its lower edge, as indicated in Figs. 1 and 2, the extension-board being folded close against the rear face of the front board. When the parts are in this position, the footboard may be adjusted to occupy any desired angle relative to the front board, as will be readily understood.

The front board may be also employed as a wind guard or shield when the chair is adjusted to constitute a couch. To permit this, it is only necessary to disconnect the links 39 and to swing the front board into an upright position between the forward supports 6 for the arms and there secure it by any suitable catch, as indicated in dotted lines in Fig. 4.

Suitable stop devices are employed wherever required to positively limit the extent to which the various movable parts may be adjusted.

It will be seen that I have devised an article of furniture of simple construction which may be adapted to a wide variety of uses.

I do not limit my invention to the combination of all the novel features thereof in a single article, as it is evident that some of the features of invention may be used independently of others; but, as set forth, when combined in a single article they operate to produce an article of great utility and capable of a wide variety of uses.

I do not claim the foot-rest herein shown and described, the same having been made the subject-matter of a separate application for patent filed by me May 1, 1902, and bearing Serial No. 105,560.

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

1. In a chair, the combination of a supporting-frame, a back hinged thereto near its lower end, a seat hinged to the frame near its forward edge, and a roller-bearing carried by the rear portion of the seat and resting upon the back above its pivot, substantially as set forth.

2. In a chair, the combination of a supporting-frame, a back hinged thereto near its lower end, a seat hinged to the frame near its forward edge and having its rear edge resting against the chair-back above its hinged connection with the frame and a spring which tends to lift the seat, substantially as set forth.

3. In a chair, the combination of a supporting-frame, a back hinged thereto, a seat hinged to the frame near its forward edge, the bearing-rollers 12 carried by the seat and arranged to rest against the side frame-pieces of the back above the hinge connections with the frame, and the springs 13 which tend to lift the free edge of the seat, substantially as set forth.

4. In a chair, the combination of a supporting-frame, a swinging back, a ratchet carried by the supporting-frame, a pivoted pawl arranged to engage with the said ratchet, a spring for holding the pawl in engagement with the ratchet, a link connecting the pawl and the swinging back, and a handpiece connected with the pawl for disengaging it from the ratchet, substantially as set forth.

5. In a chair, the combination of a supporting-frame, a swinging back, a ratchet carried by the supporting-frame, a slide-piece arranged to move longitudinally in proximity to the ratchet, a pivoted pawl carried by the slide-piece arranged to engage with the ratchet, and a link connecting the slide-pieces and the swinging back, substantially as set forth.

6. In a chair, the combination of a supporting-frame, a swinging back, a ratchet carried by the supporting-frame, a slide-piece arranged to move longitudinally in proximity to the ratchet, a pawl pivoted to the said sliding piece and provided with a finger or tooth adapted to engage with the ratchet, with a handpiece and with a stop 22, a spring for holding the tooth of the pawl in engagement with the ratchet, and a link connecting the said sliding piece and the chair-back, substantially as set forth.

In testimony whereof I have hereunto set my hand this 27th day of March, 1901.

JOHN S. KENNY.

Witnesses:
PERCY H. BUCKMASTER,
FRANK MCINTYRE.