No. 780,252. PATENTED JAN. 17, 1905.

W. A. WYLIE.

KNOCKDOWN ADJUSTABLE RECLINING CHAIR.

APPLICATION FILED DEC. 21, 1903.

2 SHEETS—SHEET 1.

Fig. 1.

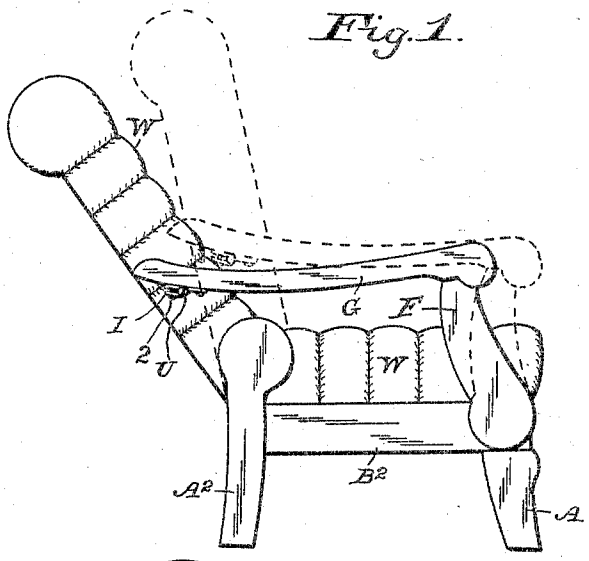


Fig. 2.

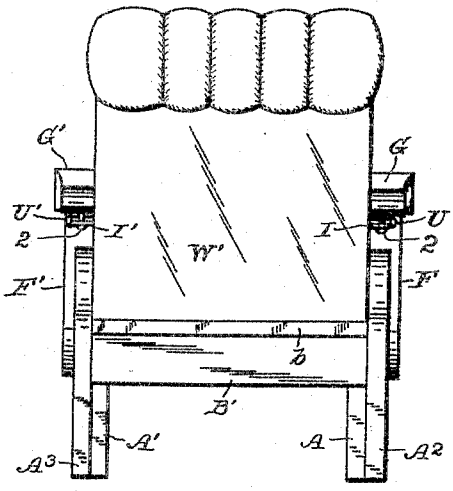


Fig. 3.

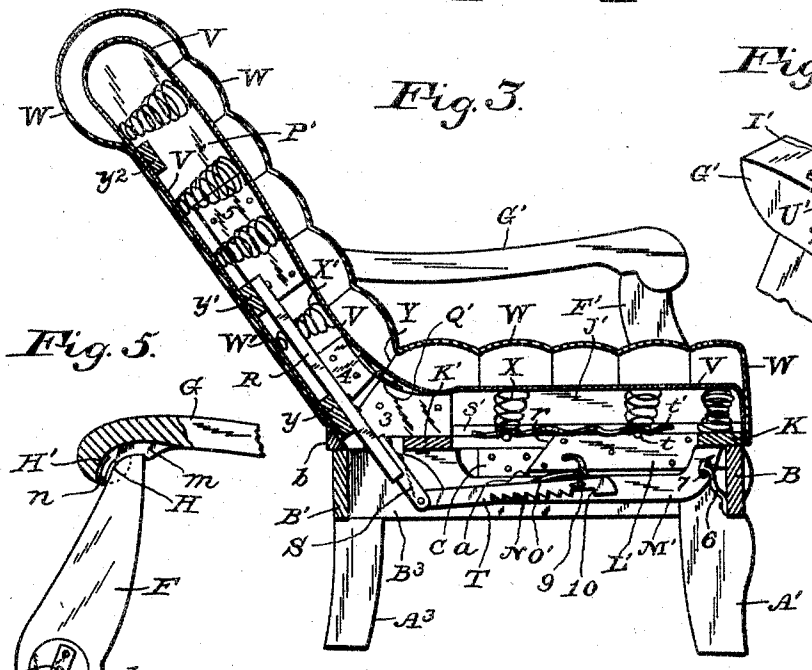


Fig. 4.

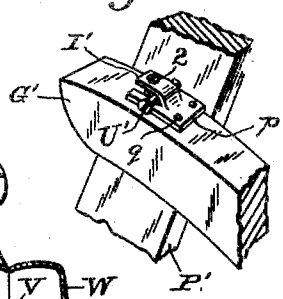
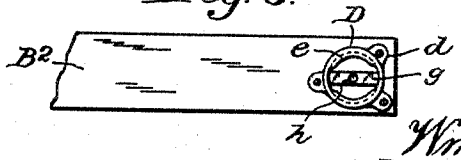


Fig. 5.

Fig. 6.



Witnesses:

Dow W. Vorhies.

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2 SHEETS—SHEET 2.

Fig. 7.

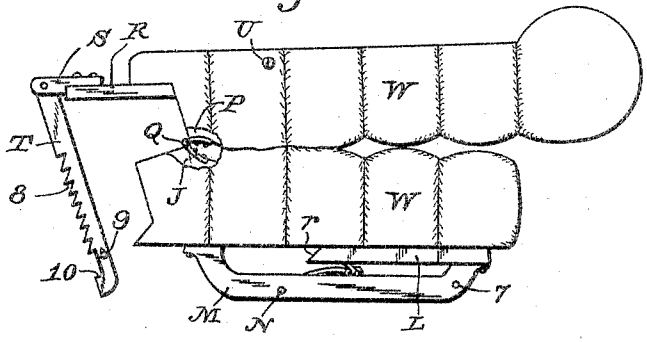


Fig. 8.

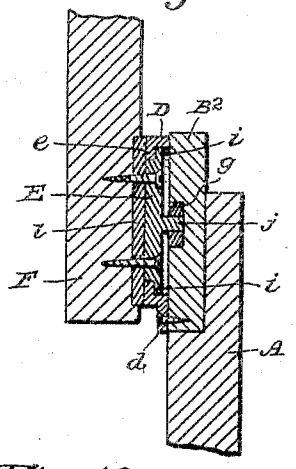


Fig. 9.

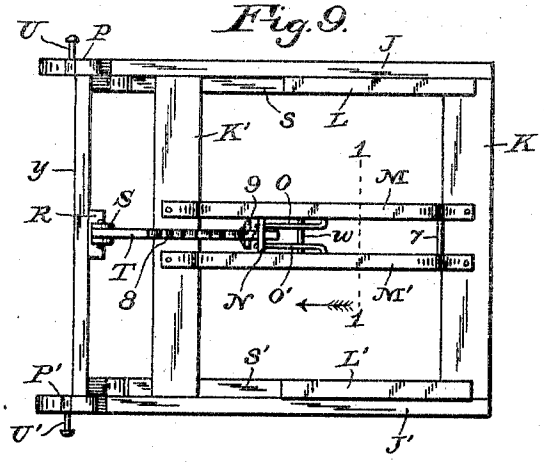


Fig. 10.

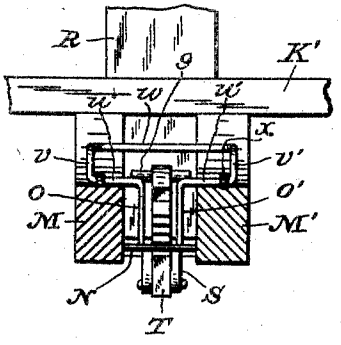


Fig. 11.

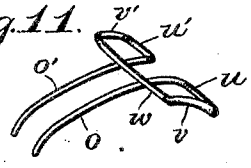


Fig. 13.

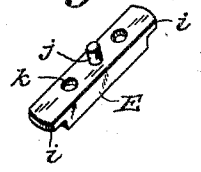


Fig. 14.

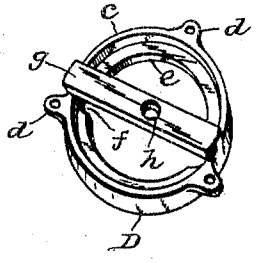
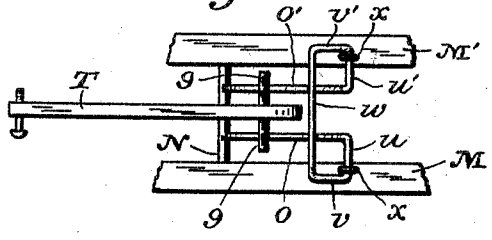


Fig. 12.



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No. 780,252. Patented January 17, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM A. WYLIE, OF MARTINSVILLE, INDIANA.

KNOCKDOWN ADJUSTABLE RECLINING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 780,252, dated January 17, 1905.

Application filed December 21, 1903. Serial No. 185,934.

To all whom it may concern:

Be it known that I, WILLIAM A. WYLIE, a citizen of the United States, residing at Martinsville, in the county of Morgan and State of Indiana, have invented new and useful Improvements in Knockdown Adjustable Reclining-Chairs; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to high-class or upholstered chairs of the type that are designed to be adjusted automatically by the occupants thereof; and the invention has reference particularly to the framing, the arm-rests, the latches, and the upholstering thereof.

The objects of the invention are to provide adjustable chairs which may be used both in sitting and reclining positions with an equal degree of comfort, to provide continuous seat and back cushions adapted to be folded compactly, and to improve the knockdown type of arm-rests and also the latching devices for the backs of the chairs, the purpose of the continuous cushions being to eliminate the disadvantage arising from the use of separate back-cushions on adjustable back-frames.

With the above objects in view the invention consists in the novel forms of construction and in the combinations and arrangements of parts, as hereinafter particularly described and claimed.

Referring to the drawings, Figure 1 represents a side elevation of a chair in which the invention is embodied shown in partial reclining position and in broken lines showing a sitting position of the back and arm-rests; Fig. 2, a rear elevation of the chair; Fig. 3, a central longitudinal vertical sectional view; Fig. 4, a fragmentary detail view showing the devices for pivotally connecting the arm-rests detachably to the chair-backs; Fig. 5, an elevation of the inner side of an arm-rest support and the forward end of an arm-rest connected thereto, the latter being broken away to show the hidden pivotal connections between the two members; Fig. 6, a fragmentary side view of the chair-frame, showing a part of a pivotal device for detachably connecting the arm-rest supports to the frame; Fig. 7, a side view of the upholstered seat and back and framing detached from the chair-frame and folded for shipment; Fig. 8, a fragmentary vertical transverse sectional view showing an arm-rest support connected to the chair-frame, taken centrally of the pivot thereof; Fig. 9, an inverted plan view of the removable seat and back frames and showing the latching apparatus mounted thereon; Fig. 10, a fragmentary transverse vertical sectional view as at the line 1 1 in Fig. 9; Fig. 11, a perspective view of a portion of the latching apparatus; Fig. 12, a fragmentary plan of the latching apparatus; Fig. 13, a perspective view of one of the two pivoting members, and Fig 14 is a perspective view of the other one of the pivoting members for the arm-rest supports.

Similar reference characters in the several figures of the drawings indicate corresponding parts or features.

In construction the parts of the foundation-frame, including the legs, are permanently and rigidly connected together, and the other principal parts are removably mounted thereon. The foundation-frame comprises legs A A′ A^2 A^3, a front rail B, a rear rail B′, and side rails B^2 B^3. Each side rail is provided at the inner side thereof with a key-block C, rigidly secured thereto, which has a downwardly-inclined face *a* presented forwardly. The top of the rear rail B′ is provided with a facing-strip *b*, that has an inclined inner side. At the forward end of each side rail a pivoting member D is secured to the outer side thereof, comprising an annular frame *c*, having perforated ears *d* for attaching the same to the rail by means of screws, the front of the frame having an inwardly-extending annular flange *e*, having two openings *f* at opposite sides of the frame, the back of the frame having a cross-bar *g* attached thereto, in which is an aperture *h* centrally of the frame to receive the pivot-pin of the companion part E, one of which is secured to the inner side of each arm-rest support F or F′, each member E being

formed as a bar having two lips *i* at opposite ends thereof and a central pivot-pin *j*, adapted to enter the aperture *h*, screw-holes *k* being provided for securing the member to the support. A thin metallic wearing-plate *l* is interposed between the member E and the support F or F'. In connecting the two members E and D together the lips *i* may enter the openings *f* and then pass under the flange *e* while being rotated, the two members thereby being held together, except when intentionally disconnected, the arrangement being such that the arm-rest supports may be attached to the rails and detached therefrom when in horizontal positions only. It will be understood that the member D may be attached to the arm-rest support and the member E to the frame-rail, if desired.

The forward ends of the arm-rests G and G' have each a recess *m* in the under side thereof into which the upper end of the support F or F' extends and operates. Each support has a metallic plate H attached to the upper forward face thereof, and a similar plate H' is secured in the forward portion of the recess to the companion arm-rest, the two plates being connected together by means of a pivot *n*, situated at the lower ends thereof, the pivot and the upper end of the support being hidden from the ordinary range of vision, thus affording neat hinged connections.

In order to provide simple pivotal connections for the arm-rests with the chair-back that may be frictional and free from lost motion and yet be adapted to be readily disconnected, the under sides of the rear ends of the arm-rests G and G' are provided with spring-clips I I', each clip being struck up from a base-plate *p*, the latter being secured at one end thereof to an arm-rest by screws *q*, the free end of the clip being connected to the arm-rest by a removable screw 2.

The removable seat-frame comprises a pair of side bars J J' and a pair of cross-bars K K', all rigidly and permanently connected together, the side bars having key-blocks L L' rigidly attached to the inner sides thereof and extending below the plane of the bottoms thereof, the rear ends of the blocks having each an upwardly and rearwardly inclined face *r* adapted to engage a face *a* of the fixed block C. The seat-frame supports a pair of drop-hangers M M', which are attached at their ends to the under sides of the cross-bars K and K' and extend longitudinally of the chair from one bar to the other, the hangers supporting portions of the latching apparatus. Cleats *s s'* are attached to the inner sides of the bars J J' for supporting the rods *t* and *t'*, on which seat-springs are mounted. The parts of the latching apparatus that are supported by the seat-frame on the hangers M M' comprise a catch N, that extends between the hangers, being secured thereto, and a pair of connected swinging arched guides O O', cooperating with the catch N. The guides are provided with pivot members *u u'*, to which arms *v v'* are attached, the arms being connected by an integral guard *w*, extending across the guides slightly above them, the pivots *u u'* resting on the tops of the hangers M M' and connected thereto by staples *x* and the free ends of the guides normally resting on the catch N. The seat-frame rests on the top of the foundation-frame, the key-blocks L L' fitting between the side rails thereof, and the interlocking key-blocks preventing vertical movements of the seat-frame, the latter requiring to be inclined when being connected to the foundation-frame and also when being disconnected therefrom, the forward ends of the hangers M M' being inclined and fitting closely against the front rail B, serving to aid in locking the seat-frame. The rear ends of the side bars J J' have reinforcing-blocks 3 and are curved upwardly at the tops thereof.

The back-frame, which is permanently connected to the seat-frame, comprises a pair of side bars P P', connected rigidly together by cross-bars *y y' y²* at the backs thereof, the lower ends of the side bars being pivotally connected to the seat-frame side bars J J' by hinges Q Q', secured to the tops thereof, so that the back-frame may fold over onto the top of the seat-frame. The back-frame has reinforcing-blocks 4 and 5.

The inner side of the front rail B is provided with a spring-latch 6, adapted to engage a catch 7, attached to the hangers M M', for holding the front of the seat-frame securely yet detachably on the foundation-frame; but in some cases this may not be required and when desired may be suitably modified.

At the inner sides of the cross-bars *y y'* a vertically-disposed arm R is secured thereto, extending downwardly beyond the bar *y*, the latter being at the lower end of the back-frame, and a pivot-block S is secured to the lower end of the arm R, extending beyond the end thereof. A latch-bar T is pivoted at its rear end to the block S and extends at all times to or beyond the catch N, having ratchet-teeth 8 adapted to engage the catch N, so as to prevent forward movements of the latch-bar. Guide-fingers 9 are secured to and project from opposite sides of the bar T near the forward end thereof beyond the teeth 8 and are adapted to ride on the guides O O' to elevate and carry the bar T in its reverse movements above the catch N, so that the teeth 8 cannot engage the catch until the fingers slide off the ends of the guides at the pivots *u u'* and permit the bar T to descend onto the catch N. The under side of the bar T has a stop-shoulder 10 to engage the catch N for limiting the rearward movement of the bar T, and consequently the lower end of the chair-back. It will thus be seen that the latching appa-

ratus is connected alone with the seat-frame and the connected back-frame and removable therewith from the foundation-frame.

The back is provided with pivots U U′, extending laterally from the sides thereof between the clips I I′ and their base-plates *p* and between the clips and the screws 2, whereby the back is pivotally connected to the rear ends of the arm-rests.

The seat is provided with springs X, supported on the rods *t t′*, and with other suitably-supported springs, and the back has springs X′ supported on fabric V′ or tapes attached to the cross-bars *y y′ y²*.

The continuous cushion for the seat and the back comprises a cushion-bottom V, of suitable material, extending from the front bar K to the top of the back-frame on the springs and suitably secured to both the seat and the back frames, and also a cushion-top W, extending likewise from the front bar K to the top of the back-frame, the space between the cushion top and bottom being suitably filled with hair or other material, as will be understood, although omitted for convenience in the drawings, the cushions being suitably tufted by cords Y when desired. In the vicinity of the folding-point in the plane of the hinges Q Q′ there are no springs, so that the cushion may readily sink in when being folded, and the top of the cushion is creased at the folding-point, as at Y. The rear of the seat-back has a covering W′, which extends behind the facing-piece *b*.

To knock down the chair, only a screw-driver is required, and the screws 2 are to be withdrawn, permitting the arm-rests to be disconnected from the pivots U U′, after which the arm-rest supports are to be moved radially to horizontal positions, when the lips *i* may be drawn through the openings *f*, thus disconnecting the supports. Then the front of the seat may be elevated and drawn forwardly until the key-blocks become disengaged, and the latch-bar T may be lifted from the catch N and drawn rearwardly, while the chair-back may be folded over onto the seat, as in Fig. 7. In shipment, however, the seat-frame and folded back may remain on the foundation-frame.

In practical use when the chair-back is tilted rearwardly for the reclining position the latch-bar T will engage the catch N, as in Fig. 3. If now the top of the chair-back be elevated or moved forwardly, the latch-bar T will move rearwardly on the catch N and engage therewith at any position at which the back may be stopped manually, the weight of the back tending to move the latch-bar forwardly against the catch. If the back be moved farther up to the proper sitting position, the stop 10 will engage the catch N and prevent further movement, and at the same time the fingers 9 will lift the ends of the guides O O′ and pass under them during the movement of the latch-bar, the guides again dropping onto the catch. The latching apparatus now being inoperative, the chair-back will gently fall to the reclining position, the fingers 9 riding on the guides O O′ and carrying the bar T clear of the catch N forwardly until the latch-bar drops into engagement with the catch N, when the back may be again readjusted to suit. The various movements may be made by the person occupying the chair by means of the arm-rests.

Having thus described the invention, what I claim as new is—

1. An adjustable chair including a seat-frame, a back-frame hinged to the seat-frame, a continuous cushion attached permanently to both the seat-frame and the back-frame, a stationary catch supported below the seat-frame, a pair of swinging guides pivotally supported with free ends normally on the catch, and a toothed latch-bar connected to the back-frame and coöperating with the catch and the swinging guides.

2. An adjustable chair including a seat-frame, a back-frame hinged to the seat-frame, a continuous cushion attached permanently to both the seat-frame and the back-frame, pivoted arm-rest supports, arm-rests pivoted to the back-frame and to the arm-rest supports, a stationary catch supported below the seat-frame, a pair of swinging guides pivotally supported with free ends normally on the catch, and a toothed latch-bar connected to the back-frame and coöperating with the catch and the swinging guides.

3. An adjustable knockdown chair including a foundation-frame, a seat-frame mounted removably on the foundation-frame, a back-frame hinged to the seat-frame, keying devices for the seat-frame, latching apparatus for the back-frame supported by the seat-frame and the back-frame, arm-rest supports pivoted to the foundation-frame, and arm-rests pivoted to the back-frame and to the arm-rest supports.

4. An adjustable knockdown chair including a foundation-frame, a seat-frame mounted removably on the foundation-frame, keying devices for the seat-frame, a back-frame hinged to the seat-frame and adapted to fold over onto the seat-frame, latching apparatus for the back-frame supported by the seat-frame and the back-frame, and a continuous cushion attached permanently to both the seat-frame and the back-frame.

5. An adjustable chair including a foundation-frame, a seat-frame, a pivoted back-frame, a stationary catch, a pair of swinging guides connected together and pivotally supported with free ends normally on the catch, and a toothed latch-bar connected to the back-frame and coöperating with the catch and the swinging guides.

6. In an adjustable chair, the combination of a frame, a pair of fixed hangers, a catch mounted between the hangers, a pair of swinging guides pivoted on the hangers and having a guard connected therewith that extends transversely above the guides, a pivoted back-frame, and a latch-bar connected to the back-frame and coöperating with the catch and having guide-fingers coöperating with the swinging guides.

7. In an adjustable chair, the combination of a foundation-frame provided with keying-blocks, a seat-frame mounted removably on the foundation-frame and provided with keying-blocks engaging the keying-blocks of the foundation-frame, a back-frame hinged to the removable seat-frame, and latching apparatus for the back-frame.

8. In an adjustable chair, the combination of a foundation-frame provided with keying devices, a seat-frame mounted removably on the foundation-frame and provided with keying devices coöperating with the keying devices of the foundation-frame, a back-frame hinged to the removable seat-frame, latching apparatus for the back-frame, and an independent latching device for the seat-frame.

9. In an adjustable chair, the combination of a foundation-frame, a seat-frame, a pivoted back-frame, arm-rest supports, arm-rests pivoted to the arm-rest supports and to the back-frame, and detachable pivoting devices for the arm-rest supports comprising each an annular frame having a pivoting-aperture and also an inwardly-extending flange having openings therein at the front thereof, the frame also having apertured ears for the support thereof, and a companion member having a pivot for entering said pivoting-aperture and also having lips adapted to enter said openings and engage said flange, said member also having screw-holes therein.

10. In an adjustable chair, the combination with an arm-rest pivoted at its forward end and with a pivoted chair-back, of a spring-clip having a base secured to the arm-rest, a pivot attached to the chair-back and extending between the clip and its base, and a screw extending through the clip into the arm-rest adjacent to the pivot.

11. In an adjustable chair, the combination of a pivoting member for arm-rest supports comprising an annular frame having a cross-bar at the rear thereof provided with a pivoting-aperture, said frame having also an inwardly-extending flange having openings therein at the front thereof, with a companion pivoting member having a pivot for entering said aperture and also having lips adapted to enter said openings and engage said flange.

12. In an adjustable chair, the combination of a frictional pivotal connecting device for the arm-rests and chair-back, comprising a base having a spring-clip struck up therefrom provided with a screw-hole in the end thereof, the base being secured to an arm-rest of the chair, with a pivot attached to the chair-back in engagement with the base and the clip, and a screw attached to the arm-rest and engaging and frictionally binding the clip to the pivot.

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

WILLIAM A. WYLIE.

Witnesses:
WM. H. PAYNE,
E. T. SILVIUS.