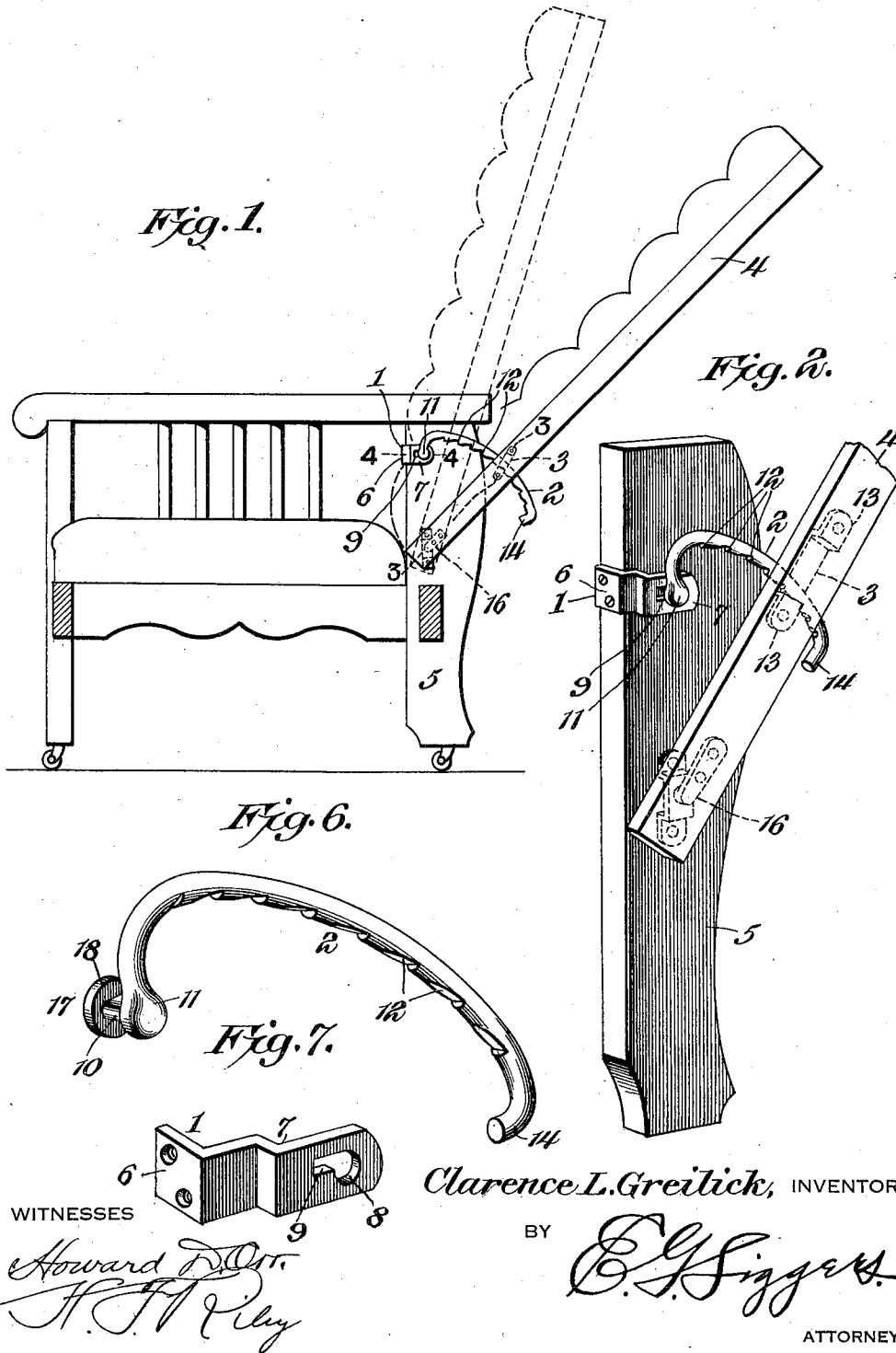


C. L. GREILICK.
 AUTOMATIC CHAIR FIXTURE.
 APPLICATION FILED FEB. 11, 1911.

1,032,202.

Patented July 9, 1912.
 3 SHEETS—SHEET 1.



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3 SHEETS-SHEET 2.

Fig. 3.

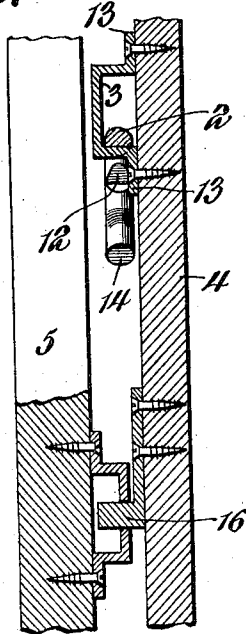


Fig. 4.

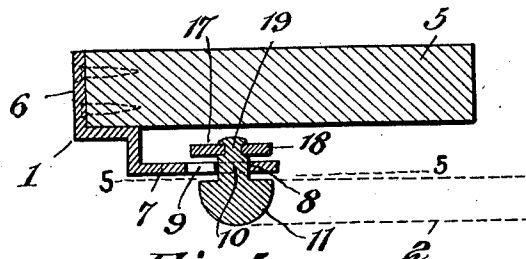


Fig. 5.

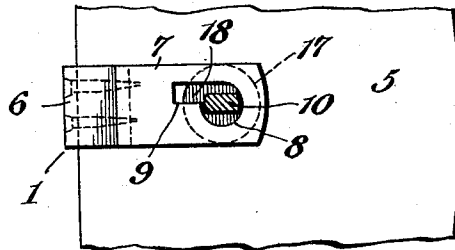


Fig. 8.

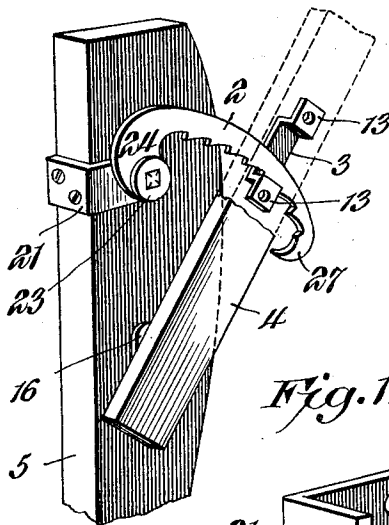


Fig. 9.

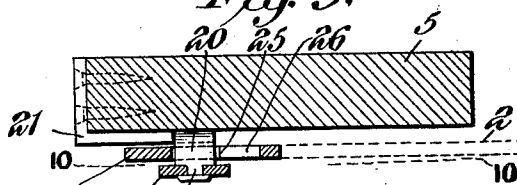


Fig. 10.

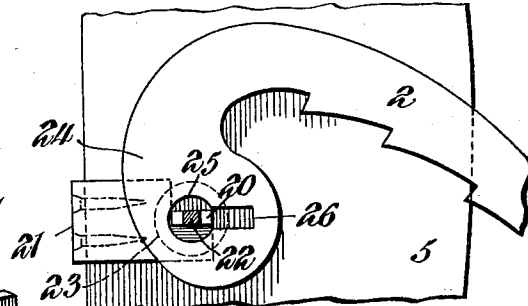
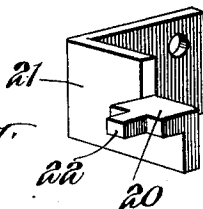


Fig. 11.



WITNESSES

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3 SHEETS-SHEET 3.

Fig. 12.

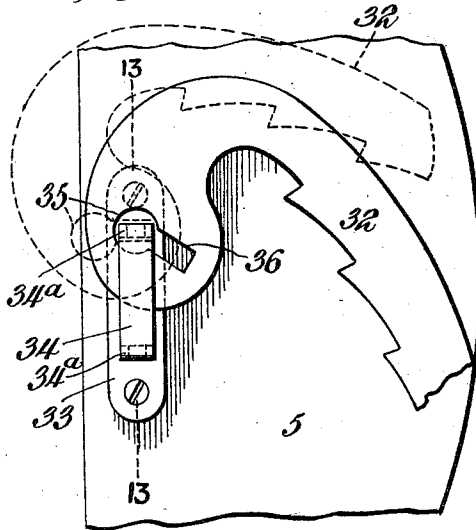


Fig. 13.

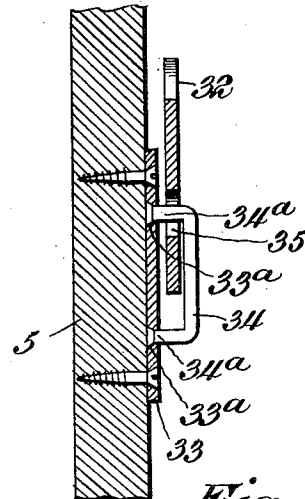


Fig. 14.

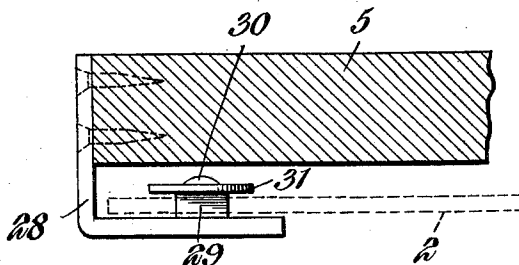


Fig. 15.

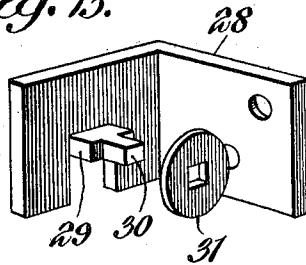


Fig. 16.

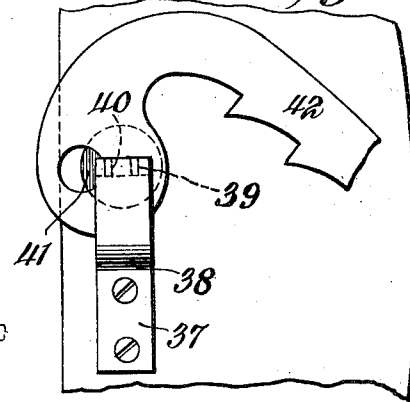
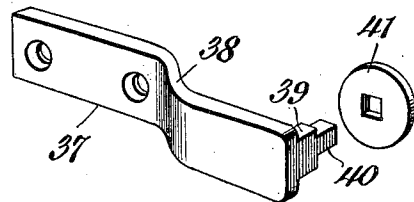


Fig. 17.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC CHAIR-FIXTURE.

1,032,202.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed February 11, 1911. Serial No. 608,064.

To all whom it may concern:

Be it known that I, CLARENCE L. GREILICK, a citizen of the United States, residing at Traverse City, in the county of Grand Traverse and State of Michigan, have invented a new and useful Automatic Chair-Fixture, of which the following is a specification.

The invention relates to an automatic chair fixture for Morris chairs, Morris rockers and various other chairs having adjustable backs.

The object of the present invention is to improve the construction of automatic fixtures for adjustably connecting the movable back of a chair with the body portion thereof, and to provide a simple, efficient and inexpensive device, which may be easily applied to a chair and which will require less space between the movable back thereof and the leg or other part to which the device is connected.

A further object of the invention is to provide an automatic fixture of this character of great strength and durability, adapted particularly for use on knock-down constructions and having no loose parts liable to be lost in shipment.

With these and other objects in view, the invention consists in the construction and novel combination 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 the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a vertical longitudinal sectional view of a Morris chair provided with an automatic fixture, constructed in accordance with this invention. Fig. 2 is an enlarged detail perspective view of the fixture, showing the same applied to the rear leg and a portion of the back. Fig. 3 is an enlarged detail view, taken substantially on the line 3—3 of Fig. 1. Fig. 4 is a horizontal sectional view on the line 4—4 of Fig. 1. Fig. 5 is a detail sectional view on the line 5—5 of Fig. 4. Fig. 6 is a detail perspective view of the ratchet bar. Fig. 7 is a similar view of the supporting bracket. Fig. 8 is a perspective

view of an automatic chair fixture, showing another form of the invention. Fig. 9 is a horizontal sectional view of the same. Fig. 10 is a vertical sectional view on the line 10—10 of Fig. 9. Fig. 11 is a detail perspective view of the supporting bracket shown in Fig. 8. Fig. 12 is a side elevation of the automatic chair fixture, illustrating another form of the invention. Fig. 13 is a vertical sectional view on the line 13—13 of Fig. 12. Fig. 14 is a detail horizontal sectional view, showing another form of the horizontal supporting bracket. Fig. 15 is a perspective view of the same. Fig. 16 is a side elevation of a portion of an automatic fixture having a vertical bracket. Fig. 17 is a perspective view of the bracket shown in Fig. 16.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

In the embodiment of the invention illustrated in Figs. 1 to 7 inclusive, the automatic chair fixture comprises in its construction a horizontal supporting bracket 1 and a movable ratchet bar 2, mounted on the bracket and co-acting with a keeper 3, which is secured to and carried by the back 4. The parts are designed to be constructed of steel, or other suitable metal, and the horizontal bracket 1, which is secured to the rear leg 5 at the inner side thereof, is of angular formation and consists of an approximately L-shaped attaching portion 6 and a substantially L-shaped supporting portion 7. The attaching portion is fitted against the inner or front edge of the rear leg 5 and is secured to the same by screws, or other suitable fastening devices, and it may be applied to legs of one inch in thickness and upward. The supporting portion projects from the inner face of the leg and extends rearwardly in parallelism with the same, the rearwardly extending portion being spaced from the inner portion of the leg and provided with an opening consisting of a rounded bearing portion 8 and a reduced front portion 9, arranged horizontally and extending forwardly from the top of the circular bearing portion. The circular bearing portion is of a diameter to receive and permit rotary or pivotal movement of a substantially oblong pivot portion 10, flattened at the top and bottom to fit in the reduced front portion 9 of the opening of

the supporting bracket. The ratchet bar is curved and the flattened pivot portion extends laterally from the front end 11 of the ratchet bar, which is curved downward, as clearly shown in Fig. 6. The pivot portion 10, when moved forwardly into engagement with the front portion 9 of the opening of the bearing bracket, supports the ratchet bar in an elevated position with its teeth 12 above and out of the plane of the engaging portion of the keeper 3. The keeper 3, which is preferably in the form of a loop to receive the ratchet bar, has terminal attaching portions 13, which are secured by screws or other suitable fastening devices to the frame of the back of the chair at the side edge of the said back. The teeth 12 of the ratchet bar are located at the lower edge thereof, and are shouldered at the front and are adapted to engage with the lower end of the loop of the keeper when the pivot portion 10 is in the enlarged bearing portion of the opening, and the ratchet bar is free to drop into engagement with the bottom portion of the keeper. The rear end 14 of the ratchet bar is arranged at an angle to the body portion of the ratchet bar and projects downward when the ratchet bar is horizontal or in a substantially horizontal position. The teeth of the ratchet bar are arranged in the curved series, the front end of which is located above the plane of the pivot portion. The teeth are beveled at their bottom edges or faces, and the back of the chair, which is pivoted between the legs 5 by a suitable hinge 16, is adapted to be moved upward or forward freely, and when it is raised to an upright position, the bottom of the keeper engages the downwardly extending front terminal of the ratchet bar and carries the same forwardly, engaging the flattened or oblong pivot portion with the reduced front portion or recess of the opening of the bearing bracket. This movement also tilts the ratchet bar and swings the same upwardly, and when the said pivot portion is engaged with the bearing bracket, the teeth will be supported above and out of the plane of the bottom of the loop or keeper of the back, and the latter may then be swung rearwardly through the keeper, engaging the terminal portion of the ratchet bar. This moves the ratchet bar rearwardly and withdraws the pivot portion and causes the ratchet bar to drop and rest upon the keeper. The chair back may then be moved forward to any of the positions allowed by the teeth, which may be of any desired number to secure the requisite adjustment of the chair back. In the adjustment of the chair back, the fixture is entirely automatic, the forward movement lifting the ratchet bars, and the rearward movement releasing the ratchet bars and permitting them to re-engage the keeper of the back.

The pivot of the ratchet bar is equipped with a suitable head 17, which may consist of a disk 18, secured to a stud or reduced portion 19 of the pivot, as clearly illustrated in Fig. 4 of the drawings, but any other suitable means may be employed for holding the ratchet bar against lateral movement on the supporting bracket.

In the embodiment of the invention illustrated in Figs. 8 to 11 inclusive, the co-acting pivot and the bearing opening are reversed, the pivot portion 20 being carried by the supporting bracket 21. The supporting bracket is angular and the pivot portion extends horizontally from one of the sides or wings thereof, and is provided with a reduced portion or stud 22 for the attachment of a head 23. The ratchet bar, which is curved similarly to the ratchet bar heretofore described, has an enlarged front end 24, provided with an opening consisting of an enlarged circular front bearing portion 25, and a reduced rear portion 26, extending horizontally from the back of the bearing portion 25 midway between the top and bottom thereof. The ratchet bar is provided with a rear hook-shaped terminal 27 and co-operates with the keeper 3. The forward or upward movement of the back elevates the ratchet bar and moves the same forward and engages the pivot portion of the bracket with the rear reduced portion 26 of the opening. The downward and rearward movement of the back engages the keeper 3 with the rear hook-shaped terminal 27 and carries the ratchet bar rearwardly sufficient to disengage the pivot portion from the reduced portion of the opening. The back will then be raised to any of its several adjustments. The bearing portion of the bracket 21 may be formed by splitting the side or wing of the bracket from the upper edge to about the center of such side, and then bending the partially severed portion of metal downwardly to a horizontal position as shown. The bracket may, however, be formed in any other suitable manner. The pivot portion 20 projects from the inner face of the rear leg and is arranged at the rear end of the side or wing of the bracket.

In Figs. 14 and 15 is also illustrated a horizontal approximately L-shaped supporting bracket 28, composed of two angularly related sides or wings and provided with a horizontal pivot portion 29, projecting from the inner face of one of the sides or wings, and located at a point intermediate of the ends thereof. Also in this form of the invention, the metal is cut or split from the lower edge of the side or wing. The bearing portion is provided with a reduced stud 30, designed to receive a head 31.

In Figs. 12 and 13 of the drawings is illustrated another form of the invention in

which the ratchet bar 32 is provided with an opening and is supported by a vertical bracket, consisting of a plate 33 and a substantially oblong loop 34, secured to the plate. The terminals 34^a of the loop are reduced and are secured in openings 33^a of the plate 33. The opening of the ratchet bar consists of a front circular bearing portion 35 and a reduced rear portion 36. The circular bearing portion is of a size to receive the upper end of the loop of the bearing bracket, the upper end constituting the oblong pivot portion and being engageable with the rear reduced portion 36 of the opening.

In Figs. 16 and 17 is illustrated a vertical supporting bracket 37, consisting of a lower attaching portion and an upper supporting portion, the bracket being provided at an intermediate point with a bend 38, which offsets the upper supporting portion from the inner face of the leg to which the lower portion is secured by screws, or other supporting devices. The upper supporting portion is provided at its inner face with an inwardly extending pivot portion 39, having a reduced stud 40 for the attachment of a head 41. The pivot portion 39 is arranged in a horizontal position and coöperates with a ratchet bar 42, which is engaged by a keeper, the operation being automatic, as heretofore explained.

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

1. An automatic chair fixture including a fixed supporting bracket, a keeper designed to be mounted on the back of a chair, and a movable ratchet bar coacting with the keeper and mounted on the bracket, said bracket and ratchet bar having co-acting interlocking bearing and pivot portions arranged to support the ratchet bar in an inoperative position with its teeth out of engagement with the keeper.

2. An automatic chair fixture including a fixed supporting bracket, a movable ratchet bar mounted on the supporting bracket, one of the parts having a flat pivot portion, and the other part being provided with a bearing opening receiving the flat pivot and adapted to permit pivotal movement of the ratchet bar and provided with a reduced ex-

tension adapted to receive the pivot portion, whereby the ratchet bar is interlocked with the bracket for supporting the former in an elevated position, and a keeper designed to be secured to the back of a chair and arranged to engage with the ratchet bar.

3. An automatic chair fixture including a fixed supporting bracket, a keeper designed to be mounted on the back of a chair and consisting of a loop, and a ratchet bar mounted on the supporting bracket and extending through the loop of the keeper and having terminal engaging portions, said ratchet bar and bracket having co-acting interlocking bearing and pivot portions arranged to support the ratchet bar in an inoperative position with its teeth out of engagement with the keeper, the latter operating between the terminal portions of the ratchet bar and arranged to contact with the said terminal portions to move the ratchet bar into engagement with the bracket and out of interlocked relation with the same.

4. An automatic chair fixture including a supporting bracket having a flat pivot portion, a movable ratchet bar provided with teeth and having a bearing opening receiving the pivot portion of the supporting bracket and provided with a reduced portion, which is arranged to receive the pivot portion of the bracket for holding the ratchet bar with its teeth in an inoperative position, and a keeper engageable with the teeth of the ratchet bar.

5. An automatic chair fixture including a fixed bearing bracket having a flat horizontally projecting pivot portion provided with a reduced stud, a ratchet member having a bearing opening receiving the pivot and provided with a reduced extension engageable with the pivot, a keeper coöperating with the ratchet bar, and means mounted on the stud for retaining the ratchet bar on the pivot portion of the supporting bracket.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CLARENCE L. GREILICK.

Witnesses:

HERBERT D. GAGE,
R. E. LYLE.