

No. 663,582.

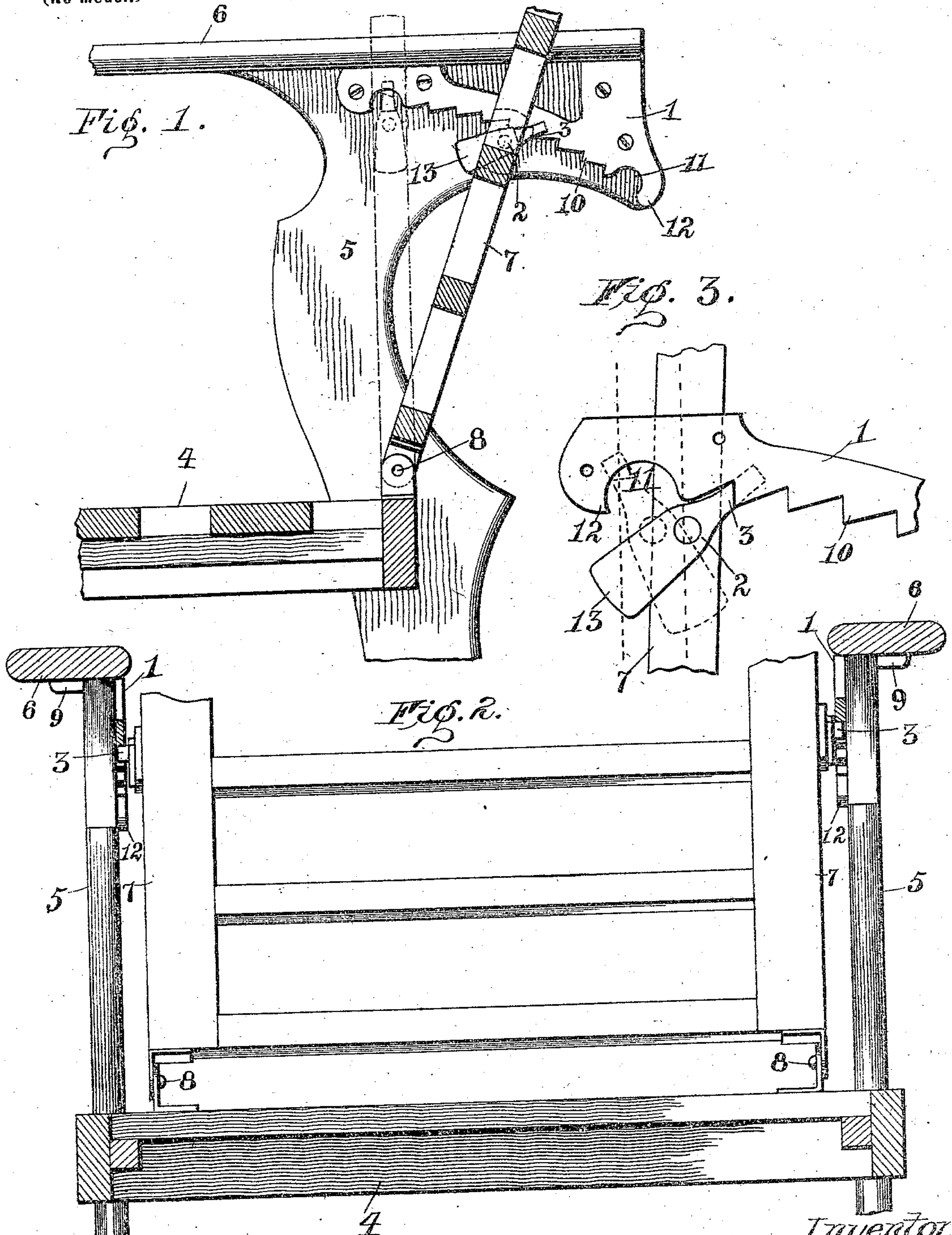
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F. ROBBIN, JR.

LOCKING DEVICE FOR ADJUSTABLE CHAIRS.

(Application filed July 3, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

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LOCKING DEVICE FOR ADJUSTABLE CHAIRS.

SPECIFICATION forming part of Letters Patent No. 663,582, dated December 11, 1900.

Application filed July 3, 1900. Serial No. 22,438. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK ROBBIN, Jr., of Medina, in the county of Orleans and State of New York, have invented certain new and useful Improvements in Locking Devices for Adjustable Chairs, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to devices for holding in adjusted positions the movable backs or head-sections of reclining-chairs, couches, invalid-bedsteads, or other articles of furniture, and has for its object to provide a device which is simple in construction and enables the relatively movable parts to be adjusted expeditiously and which is capable of being readily applied to the present form of reclining-chairs or invalid-bedsteads.

To these ends the invention consists in certain improvements hereinafter fully described, the novel features being pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a vertical sectional view of a portion of an adjustable reclining-chair, showing the application of my invention thereto; Fig. 2, a cross-sectional view on the line *x x* of Fig. 1; Fig. 3, a side elevation of the adjustable chair-back with the locking device applied thereto.

Similar reference-numerals in the several figures indicate similar parts.

The locking or adjusting device forming the subject-matter of my present invention consists generally of two parts or members, one in the form of a notched or serrated plate (indicated by 1) adapted to be applied to one of two relatively movable parts or members of furniture, such as a chair-frame, and the other member of the adjusting device consisting of a pawl (indicated by 2) pivoted to the other relatively movable part of a piece of furniture, such as the movable back of a chair, and having a locking shoulder or portion 3, adapted to cooperate with the serrations of the plate and to become automatically engaged therewith and hold the movable portion of the chair or other part when in the desired adjusted position.

In the present embodiment I have shown

the device applied to the well-known Morris chair, 4 indicating the seat portion and 5 the upwardly-extending support for the arm. 6. 7 indicates the back of the chair, pivoted at 8 to the lower 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 of the support 5 and also preferably to the under side of the arm 6 is the plate or member 1, consisting of a plate preferably provided with the flanges 9, extending beneath the arm and having upon its lower edge teeth or serrations 10, preferably arranged in the arc of a circle of which the pivot 8 is the approximate center. These teeth 10 are preferably somewhat abrupt at their front sides and the lower sides are more inclined relatively to the pivotal center of the hinge 8, as shown, and at the end of the serrations said plate is provided with enlarged recesses 11, beyond which are arranged shoulders or stops 12.

The pawls 2 are, as stated, provided with the engaging shoulders 3 and are pivoted to the sides of the chair-back or adjustable portions 7 at such a distance from the lower edge of the plate 1 that the said chair-back may be swung forward on its pivots freely, the pivots of the pawls being then in front of the engaging ends; but any attempt to reverse the motion while the pawls 2 are in the position shown in Fig. 1 of the drawings will cause the pawl to engage the abrupt shoulders of the teeth 10 and hold the chair-back in adjusted position. When, however, the said back is moved forward, so that the engaging ends or shoulders 3 upon the pawls may enter the forward recesses 11 in the plates 1, said pawls or stops may turn to the vertical position shown in dotted lines in said figure, and then when the chair-back is swung backwardly again on its pivots the pawls 2 will tilt in the opposite direction and move freely over the ratchet-teeth 10 until the shoulders 3 pass into the rear recesses 11 and the chair-back is arrested by the stops 12. Then by swinging the chair-back forward again the pawls 2 will slide over the lower surfaces of the teeth 10 until the desired position of adjustment is reached, when rearward motion, as by the weight of the occupant against the chair-back, will be prevented.

In order to simplify the construction and cause the pawl or stop 2 to assume a vertical position when the engaging surface or lug is in the forward recess 11 of the plate or member 1, I preferably weight the lower end thereof at 13, so as to cause the shoulder to be automatically held against the teeth or serrations.

The operation of the device will be understood from the above description—that is, the forward movement of the back may be permitted at any time, but the rearward motion is prevented until the back has been swung to the extreme forward position, as in dotted lines in Fig. 1, then moved back to the extreme rear, and then forward again to effect the desired adjustment of the parts.

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 or portions of sofas, lounges, couches, or invalid-bedsteads.

I have in the present instance shown two of the locking devices and prefer this arrangement; but under some circumstances only one may be used.

Instead of operating the pawl by gravity it will be understood that a spring-operated pawl could be used; and such an arrangement performing the functions of the weighted pawl would be the equivalent of the latter, broadly considered.

I claim as my invention—

1. The combination with two relatively movable parts or members, of a locking-plate on one of the members having the serrations or teeth, and a reversible automatically-engaging pawl pivoted on the other member and having the end adapted to engage the toothed portion of the plate and movable beyond the said toothed portion, whereby the members may be moved freely, relatively, with the pivot of the pawl in front of the engaging end thereof, and their movement in the opposite direction will be prevented.

2. In furniture, the combination with a support, and a movable section pivoted thereon, of an adjustable locking device between the support and section consisting of a plate

mounted upon one of them having the teeth or serrations, and a reversible pawl pivoted upon the other, having an end automatically engaging with the teeth or serrations on the plate and movable across and beyond the teeth when the adjustable section is moved in opposite directions.

3. In furniture, the combination with a support and a movable section pivoted thereon, of an adjustable locking device between the support and section, embodying a plate mounted upon one of them having the teeth or serrations, and a weighted reversible pawl pivoted upon the other, having one end held in engagement with the teeth and movable over and beyond the teeth on the plate, when the adjustable section is moved in opposite directions on the pivot.

4. In furniture, the combination with a support, and a movable section pivoted thereto, of an adjustable locking device between the support and section consisting of the plate on one of the parts, having the serrations or teeth, the recesses at the end thereof; and the stops beyond them, and the weighted reversible locking-pawl pivoted on the other part and adapted to cooperate with the teeth and to engage the stops on the plate.

5. In a chair, the combination with the frame or support, and an adjustable back-section pivoted thereon, of an adjustable locking device for the section consisting of the plate on the support having the serrations or teeth arranged in the arc of a circle, the recesses at the ends, and the stops beyond the recesses, and the reversible weighted pawl pivoted on the back-section engaging the teeth on the plate and having its end movable into the recesses and engaging the stops on the plate.

6. The combination with a support, the curved plates on the support, having the teeth, the recesses at the end, and the stops, of the member pivoted to the support, the weighted reversible pawls pivoted thereon and adapted to engage the teeth and stops on the plate.

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