Oct. 6, 1959 A. J. KATZ 2,907,373

ROCKER LOCK MECHANISM

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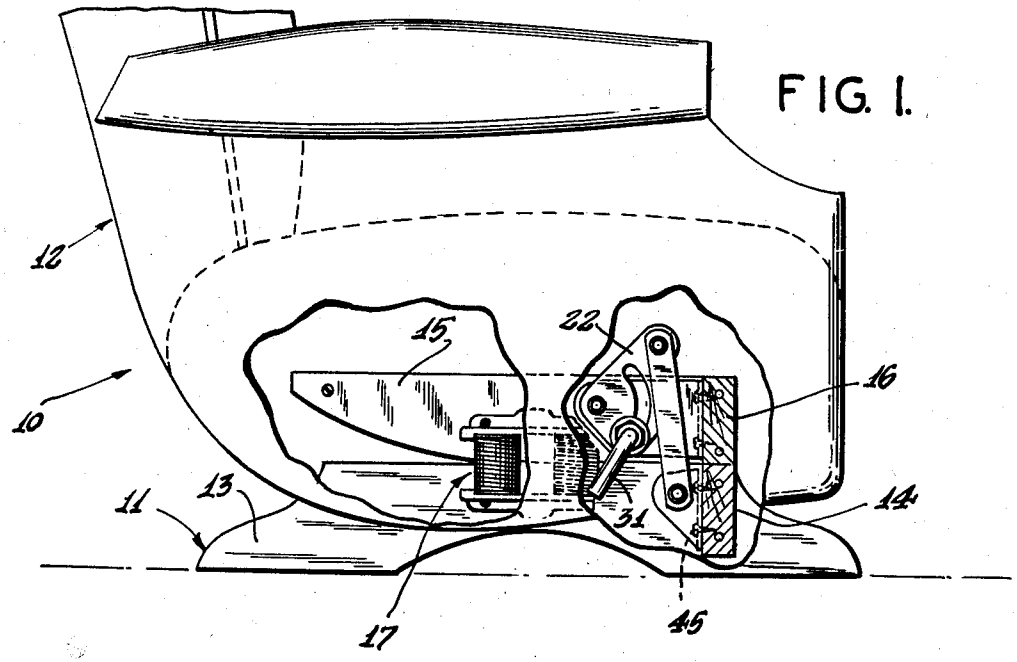


FIG. 1.

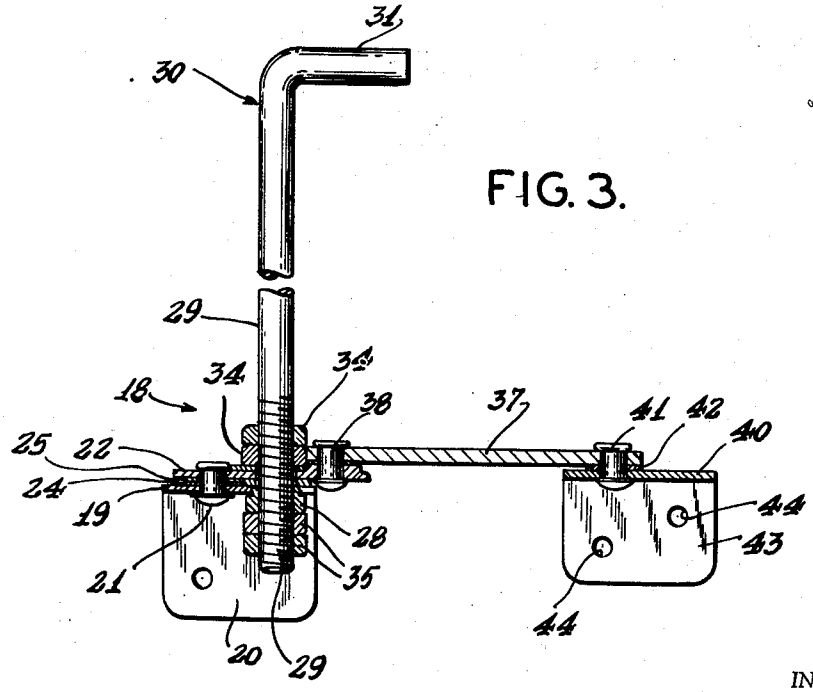


FIG. 3.

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ROCKER LOCK MECHANISM

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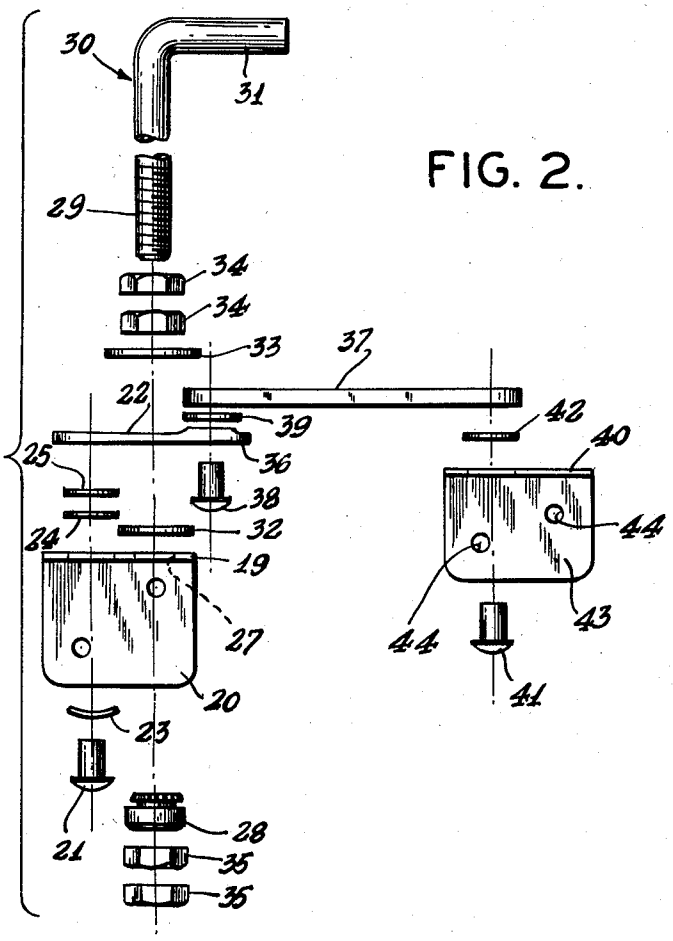
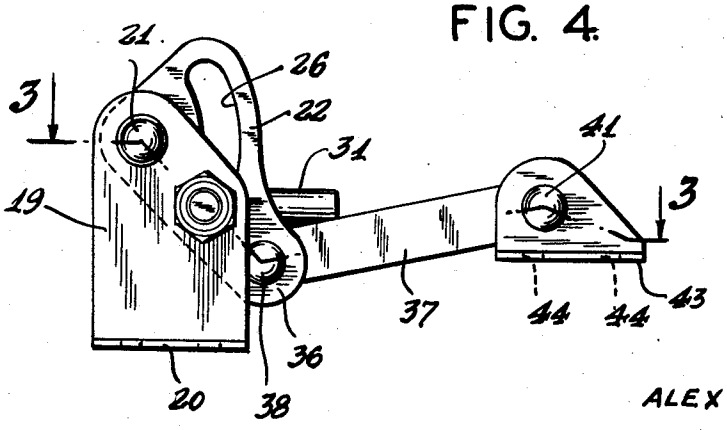


FIG. 2.

FIG. 4.



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ROCKER LOCK MECHANISM

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11 Claims. (Cl. 155—72)

This invention relates to platform rocking chairs of the type wherein a seat is rockable with respect to a supporting base and is directed particularly to an improved lock mechanism for releasably locking the rockable seat in any adjusted position with respect to the base as may be desired from time to time.

The principal object of the invention is to provide an improved lock mechanism of the character described which comprises a swing plate pivotally secured to a main bracket adapted to be fixed to the rockable chair seat, a base bracket adapted to be fixed to the chair base, a link interconnecting said brackets, an arcuate slot in the swing plate concentric with its pivotal axis and rotatable control means threadedly arranged with respect to the main bracket and operative to releasably jam the swing plate in fixed position with respect to the main bracket for locking the rocker seat in any desired position along its path of swinging movement with respect to the chair base.

Another object of the invention is to provide an improved rocker lock mechanism of the character described that is simple and compact in construction, inexpensive to manufacture and install, and foolproof and durable in operation.

Other objects, features and advantages of the invention will be apparent from the following description when read with reference to the accompanying drawings.

In the drawings:

Fig. 1 is a side view, with portions broken away, of a platform rocker showing a lock mechanism embodying the invention assembled thereto;

Fig. 2 is an exploded view, of the lock mechanism of Fig. 1, shown separately, as seen from above;

Fig. 3 is a horizontal cross-sectional view of the lock mechanism, taken along the broken line 3—3 of Fig. 4 in the direction of the arrows; and

Fig. 4 is a side view of the lock mechanism, shown in fully extended condition.

Referring now in detail to the drawings, wherein like reference numerals denote corresponding parts throughout the several views, the numeral **10** in Fig. 1 illustrates a platform rocker comprising a base **11** and a seat structure **12** rockably supported with respect to the base. The base **11** comprises a pair of spaced side support members **13** (only one shown) secured together by a framework comprising a front lateral member **14** which extends beyond the outer side surface of the illustrated support member **13**, for the purpose hereinafter appearing. The seat structure **12** comprises the usual framework, not illustrated in detail herein, to which is secured a pair of rockers **15** (only one shown), one arranged above each of the top flat surface edges of the support members **13**. Secured between the front ends of the rockers **15** is a lateral member **16** which also extends beyond the outer side surface of the illustrated rocker **15**, for the purpose hereinafter appearing.

Spring devices **17** of known construction interconnect

the rockers **15** and base support members **13** at each side of the chair **10** for urging the seat **12** into normal upright position with respect to the base **11**. The spring devices **17** allow resilient rocking by the chair occupant when desired.

The rocker lock mechanism embodying the invention is shown separately in Figs. 2, 3, and 4 of the drawings and indicated generally by reference numeral **18**. The lock mechanism **18** is comprised of a main plate **19** formed with a right-angular base **20**. Pivoted near the outer end of the main plate **19** by means of a rivet **21** extending through a circular opening in said plate is a swing plate **22**. As best illustrated in Figs. 2 and 3, the head of the rivet **21** is spaced at one side of the main plate **19** by a spring washer **23**, and the swing plate **22** is spaced from the other side of said main plate by a pair of washer-like spacers **24** and **25**, spacer **24** of which is preferably of steel and spacer **25** of which is preferably of nylon to insure smooth, non-binding swinging operation.

The swing plate **22** is provided with an arcuate slot **26** concentric with its pivotal axis. The main plate **19** is provided with a circular opening **27** below the pivotal axis of the swing plate **22** and in register with the arcuate slot **26** therein. Swedged within the opening **27** is an internally-threaded plug nut **28**. Extending through the arcuate slot **26** in the swing plate **22** and threadedly received in the plug nut **28** is the screw-threaded end **29** of a turn rod **30**. The outer end of the turn rod **30** is provided with a right angularly bent operating handle **31**.

A steel, washer-like lock disc **32** is fitted in the screw threaded end of the turn rod **30** between the main plate **19** and the swing plate **22**, its thickness being about equal to the combined thickness of the spacers **24** and **25**. A washer **33** is fitted on the turn rod **30** adjacent the outer surface of the swing plate **22**. A pair of inner jam nuts **34** and outer jam nuts **35** are fixed in adjusted position adjacent the washer **33** and the plug nut **28**.

The swing plate **22** is formed with an outwardly projecting portion **36** to which one end of a connecting link **37** is pivotally connected by a rivet **38**. A washer **39** is fitted on the rivet **38** between the swing plate **22** and the connecting link **37**. The outer end of the connecting link **37** is pivotally connected to a right-angular bracket **40** by a rivet **41**. A washer **42** is fitted between the bracket **40** and the connecting link **37**.

The bracket **40** has a base **43** having a pair of screw holes **44** enabling said bracket to be screwed against the outwardly projecting end of the front lateral member **14** of the base **11** by means of wood screws **45**, as illustrated in Fig. 1. The base **20** of the main plate **19** is also provided with a pair of screw holes **45** enabling it to be secured against the outwardly-projecting end of the lateral member **16** of the seat structure **12**.

Referring now to Fig. 1, and considering the operation of the lock mechanism **18**, it will be seen that as the seat structure **12** is rocked backwardly with respect to the side support members **13**, the connecting link will serve to pull the swing plate **22** downwardly with respect to the rocker **15**, and that the backward rocking motion will be limited by the upward extent of the arcuate slot **26** in said swing plate. There is enough space between the inner jam nuts **34** and the outer jam nuts **35** when the turn rod **40** is adjusted to the outermost position, that is, when the inner one of the jam nuts **35** abuts the plug nut **28**, so that the swing plate **22** can swing freely for rocking motion. When the turn rod is adjusted inwardly, however, the innermost jam nut **34** will bear against the washer **33** and jam the swing plate against the main plate **19** through the lock disc **32**, thereby preventing any relative movement

between the seat structure 12 and the base 11 and fixing the seat in the erect position or any desired inclined position within the limits of normal rocking motion.

While there has been illustrated and described herein one form in which the invention may conveniently be embodied in practice, it is to be understood that this example is given by way of example only, and that the invention is not to be limited thereby, but only by the scope and spirit of the following claims.

What is claimed as new and for which it is desired to secure Letters Patent, is:

1. In a lock mechanism for rocker chairs, the combination comprising a main plate adapted to be fixed to the rockable chair seat, a swing plate pivotally secured to said main plate, a base bracket adapted to be fixed to the chair base, a link interconnecting said swing plate and said bracket, said swing plate being formed with an arcuate slot concentric with its pivotal axis and spaced from the pivotal connection of said link to said swing plate, and rotatable control means extending through said slot and threadedly engaged in said main plate and operative to releasably jam said swing plate in fixed position with respect to said main plate for locking the rocker seat in any desired position along its path of swinging movement with respect to the chair base.

2. In a lock mechanism for rocker chairs, the combination comprising a main plate adapted to be fixed to the rockable chair seat, a swing plate pivotally secured to said main plate, a base bracket adapted to be fixed to the chair base, a link interconnecting said swing plate and said bracket, said swing plate being formed with an arcuate slot concentric with its pivotal axis and spaced from the pivotal connection of said link to said swing plate, said main plate being provided with a threaded opening in register with said arcuate slot, a rotatable threaded control rod extending through said slot and extending threadedly through said threaded opening, and adjustable stop means on said control rod adjacent said swing plate for forcing said swing plate toward said main plate upon actuation of said control rod in one direction of rotation.

3. The rocker lock mechanism as defined in claim 2 wherein said threaded opening is formed in a plug nut swedged in said main plate.

4. The rocker lock mechanism as defined in claim 2 wherein said adjustable stop means comprises a pair of jam nuts arranged on said control rod.

5. The rocker lock mechanism as defined in claim 3 including adjustable stop means on said control rod adjacent said plug nut for limiting rotation of said control rod in the other direction.

6. The rocker lock mechanism as defined in claim 5 wherein said last mentioned adjustable stop means comprises a pair of jam nuts arranged on said control rod.

7. A rocker lock mechanism comprising a main plate, a swing plate pivotally secured to said main plate, spacing means between said swing plate and said main plate at their pivotal connection, a base bracket, a link interconnecting said swing plate and said base bracket, said swing plate being provided with an arcuate slot concentric with its pivotal axis, said main plate being provided with a threaded opening in register with said arcuate slot, a threaded control rod extending through said slot and extending through said threaded opening, a lock disc in register with said arcuate slot and arranged on said control rod and between said main plate and said swing plate, and stop means on said control rod adjacent said swing plate for forcing said swing plate toward said main plate upon actuation of said control rod in one direction of rotation.

8. The rocker lock mechanism as defined in claim 7 wherein said spacing means comprises a nylon washer and a steel washer back-to-back.

9. The rocker lock mechanism as defined in claim 7 wherein said threaded opening is formed in a plug nut swedged in said main plate.

10. In a lock mechanism for a chair having a fixed part and a movable part, the combination comprising a first plate adapted to be fixed to one of said parts, a swing plate pivotally secured to said first plate, a bracket adapted to be fixed to the other part, a link pivoted at one end to the bracket and at its other end to the swing plate, said swing plate being formed with an arcuate edge concentric with its pivotal axis and spaced radially closer to said pivotal axis than the pivotal connection of said link to said swing plate, said first plate being formed with a threaded opening adjacent said arcuate edge, a rod screwed to the threaded opening in the first plate, and means on said rod for clamping said swing plate to said first plate upon rotating said rod in one direction.

11. The combination of claim 10, said arcuate edge being part of an arcuate slot formed in said swing plate, with said opening in said first plate registering with said arcuate slot.

References Cited in the file of this patent

UNITED STATES PATENTS

2,524,418	Belisle	Oct. 3, 1950
2,776,703	Belisle	Jan. 8, 1957

FOREIGN PATENTS

1,136,131	France	Dec. 22, 1956