J. B. VITULLO.

ROCKING CHAIR.

APPLICATION FILED OCT. 11, 1916.

1,241,171.

Patented Sept. 25, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

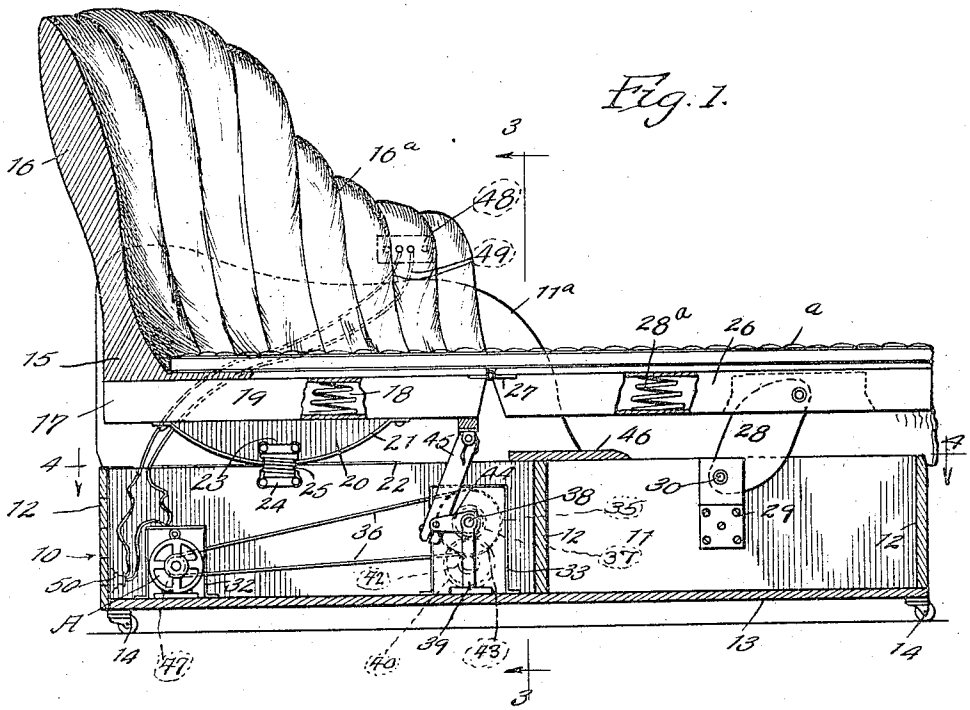
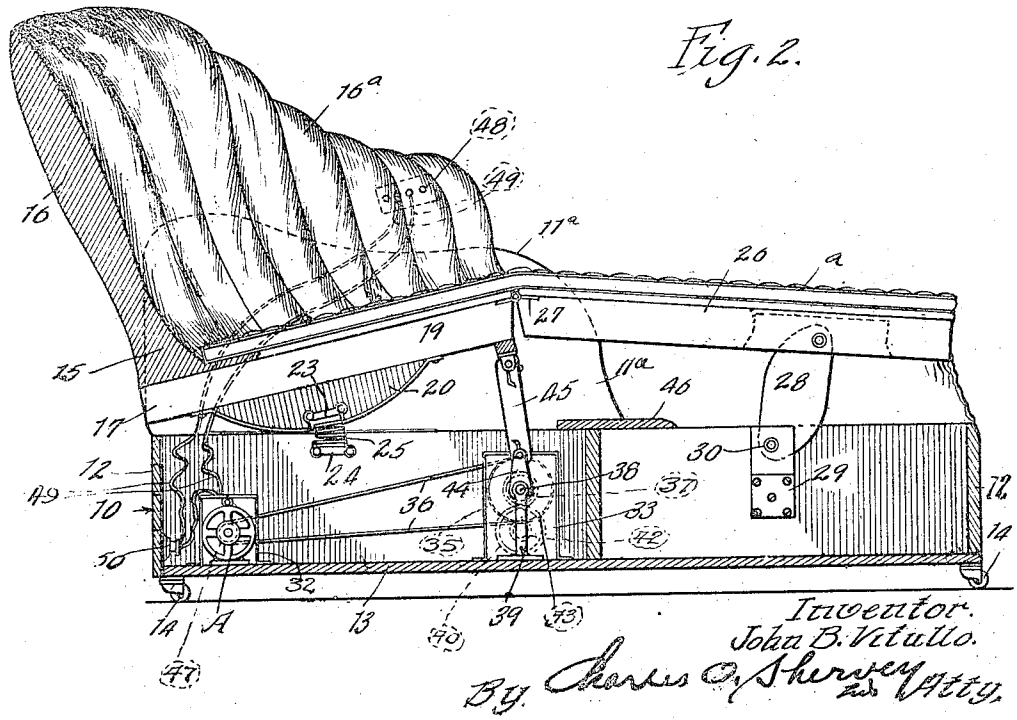


Fig. 2.



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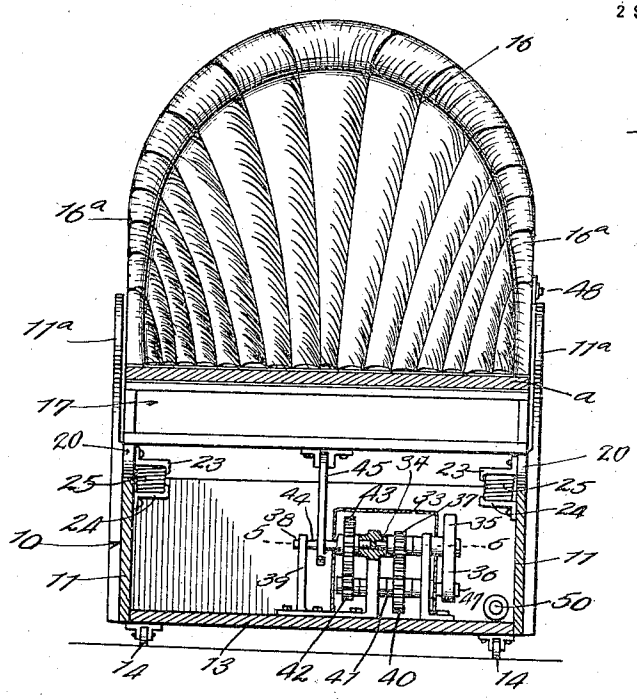


Fig. 3.

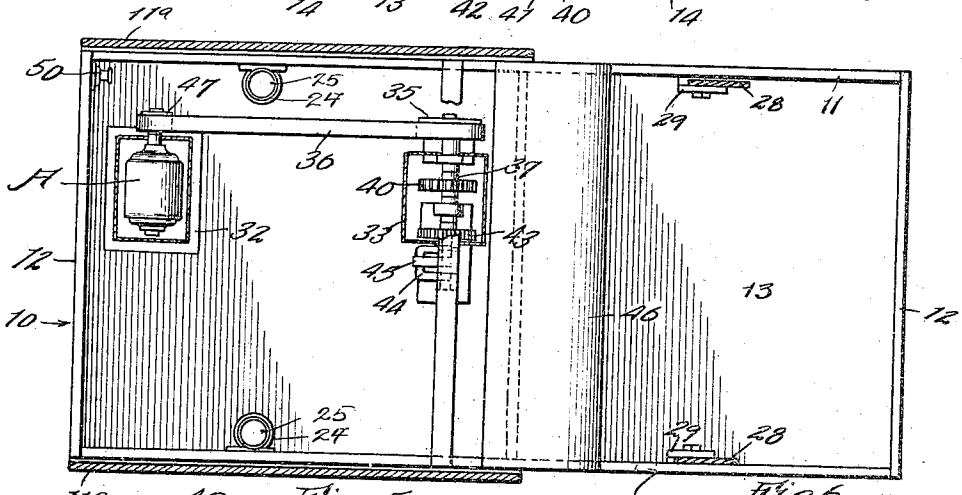


Fig. 4.

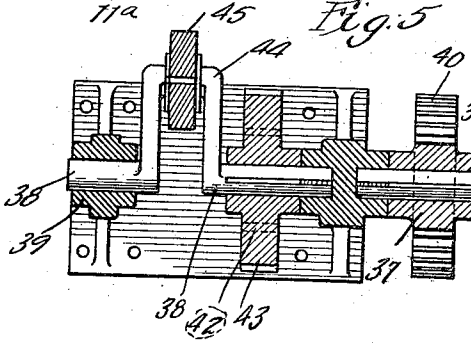


Fig. 5

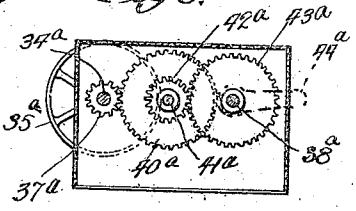


Fig 6.

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UNITED STATES PATENT OFFICE.

JOHN B. VITULLO, OF CHICAGO, ILLINOIS.

ROCKING-CHAIR.

1,241,171. Specification of Letters Patent. Patented Sept. 25, 1917.

Application filed October 11, 1916. Serial No. 124,925.

To all whom it may concern:

Be it known that I, JOHN B. VITULLO, a subject of the King of Italy, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Rocking-Chairs, of which the following is declared to be a full, clear, and exact description.

This invention relates to rocking chairs and its primary object is to provide automatic, mechanical means for rocking a chair and under the control of the person in the chair or another person. Another object is to provide mechanical chair rocking means, operated by an electric motor contained in the base of the chair. Other objects and advantages will appear in the course of this specification and with said objects and advantages in view this invention consists in the several novel features hereinafter fully set forth and claimed.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a view of the chair, partly in side elevation and partly in longitudinal section; Fig. 2 is a similar view but showing the seat and seat extension in a different position; Fig. 3 is a cross section taken on line 3—3 of Fig. 1; Fig. 4 is a plan with the seat and seat extension removed, Fig. 5 is a detail horizontal section of certain speed reducing gearing between the motor and seat rocking member, the line of section being indicated at 5—5 in Fig. 3, and Fig. 6 is a side elevation of another form of speed reducing gearing.

Referring to said drawings, which illustrate one embodiment of the invention, 10, designates the base of the chair, which base may comprise a rectangular frame formed of lengthwise and crosswise extending frame members, 11, 12, and a bottom member 13, secured together in any desired manner to provide a strong box-like base. Conveniently the base 10, may be provided with casters 14, to facilitate moving the chair about.

Above the base 10, is the seat portion 15, which may have a chair back 16, and arms 16ª as usual, and said parts may be upholstered as desired. The seat portion has a rectangular frame 17, in which are located the springs 18, and covering therefor, made in accordance with any of the well known spring seats for chairs and other furniture. Extending down from the side members 19, of said frame 17, are rockers 20, having arc shaped bearing edges on their lower sides which rest upon and rock upon the upper edges of the side members 11, of the base. Conveniently leather strips 21, 22, may be secured to the bearing edges of the rockers and upper edges of the side members to eliminate squeaking when the chair is in use. At the middle portion of each rocker 20, on the inner face thereof is secured a spring holder 23, and below said holders 23, are similar but inverted holders 24, that are secured to the side members of the base, and secured to and extending between said holders of each pair is a coiled tension spring 25, which serves to bring the seat portion back to a position paralleling the base whenever it is rocked forward or backward from such position. This spring connection between the rocking seat portion and base is one common and well known to those skilled in this art. Two side pieces 11ª, are secured to the side members 11, and extend up along side the seat.

Hinged to the forward edge of the seat 15, is a seat extension or leg and foot rest 26, which lies approximately parallel with the base. One of the hinges is seen at 27. Said seat extension may be provided with springs 28ª, and upholstered in accordance with the common practice in this art. Conveniently an upholstered cushion *a*, may be placed upon the seat and seat extension for the comfort and convenience of the person reclining in the chair.

The forward end of the seat extension is supported by two rocking, supporting members 28, pivotally connected at their lower ends to the side members 11, of the base, and pivotally connected at their upper ends to the side members of the seat extension 26. It will be noted that the upper end of the supporting members 28 are pivotally secured to the extension in a vertical plane nearer to the front end of the box structure than the lower ends thereof; in other words the members 28 are when in the normal position shown in Fig. 1 inclined forwardly toward the front or outer end of the box structure, whereby when the seat is rocked said member 28 swings upward and rearward so that said extension is raised bodily and maintained in proper relative position with the seat when said seat is rocked. Preferably brackets 29 are secured to the inner faces of the side frame members of the base

and the supporting members 28, are held between the brackets and side members, and bolts or pivot pins 30, extending through the side members, supporting members and brackets are employed for pivotally connecting the supporting members 28, to the base.

The mechanism for rocking the seat portion and therewith oscillating and reciprocating the seat extension will now be described. Supported in the base 10, is a motor, A, for example a small electric motor which has a small belt pulley 47, secured on its shaft. The motor is preferably covered by a metal box-like cover 32, secured to the base 10. Located near one end of the seat portion 15, is gear inclosing box or case 33, which is secured to the base, and journaled in bearings in said box 33, is a shaft 34, which carries on its outer end a belt pulley 35, of larger diameter than the belt pulley 47; trained around said pulleys 47, 35, is a belt 36. A pinion 37, is secured upon the shaft 34, inside of the gear case, which pinion is one of a train of speed reducing gears between the shaft 34 and a crank shaft 38, which is journaled in a bearing in said gear case and in a post 39, secured to the base. Said train of gears may comprise the pinion 37, a gear wheel 40, meshing therewith and fastened on a shaft 41, journaled in bearings in the gear case, a pinion 42, on said shaft 41, and a gear wheel 43 fast on the crank shaft 38. Fig. 6 shows the speed reducing gears 37^a, 40^a, 42^a, 43^a on horizontal shafts 34^a, 41^a, 38^a, the pulley 35^a being fast on shaft 34^a, and the crank arm 44^a, fast on shaft 38^a. On the crank shaft 38 between the post and gear box is a crank arm 44, to which is pivotally secured one end of a link or connecting rod 45, the other end of which is pivotally connected with an end of the seat portion 15. Preferably the parts are so positioned as to locate the link 45, midway between sides of the seat portion.

A cross piece 46, is secured to the upper edges of the side members 11, of the base.

On one of the arms 16^a, of the seat portion, is secured an electric switch 48, from which run electric conductor wires 49, that connect the motor with a socket 50, secured in the base 10. Electric connection with the service or house wires may be made by the usual plug and flexible conductor cords in the usual and common practice.

In operation, a person seats himself on the seat or reclines on the seat and seat extension. When he wishes to be rocked, he presses the proper button of the electric switch to close the circuit, thereupon starting the motor. Power is transferred to the crank shaft, and the speed thereof is greatly reduced—say to twenty revolutions per minute, or thereabout; rotation of the crank is transferred into reciprocatory movements of the link and the seat portion is thereby caused to rock upon the base. The seat extension by reason of its hinged connection with the seat, and its connection with the base through the instrumentality of the supporting members is given a rotary, reciprocatory movement. To stop the rocking mechanism the proper push button is pressed thereby breaking the circuit to the motor.

More or less variation of the exact details of construction is possible, without departing from the spirit of this invention; I desire, therefore, not to limit myself to the exact form of the invention shown and described, but intend, in the following claims to point out all of the invention disclosed herein.

I claim as new and desire to secure by Letters Patent:

In a rocking chair the combination with an elongated box like structure, of a seat rockingly mounted on the rear portion of said structure, a leg rest extension having a hinge connection at its rear end with the said seat and its front end free to move up and down, a supporting link pivotally secured to each side of said structure at its lower end approximately midway between the seat and the front end of the structure and pivotally secured at its upper end to said extension beyond the vertical plane of its connection to the structure and in a vertical plane nearer the front end of said structure, so that said links, are inclined toward the front end of the structure when the seat is in normal position, whereby when the seat is rocked the supporting links swing upward and rearward.

JOHN B. VITULLO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."