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FAN ATTACHMENT FOR ROCKING CHAIRS.

APPLICATION FILED DEC. 21, 1914.

1,173,043.

Patented Feb. 22, 1916.

2 SHEETS—SHEET 1.

Fig. 6.

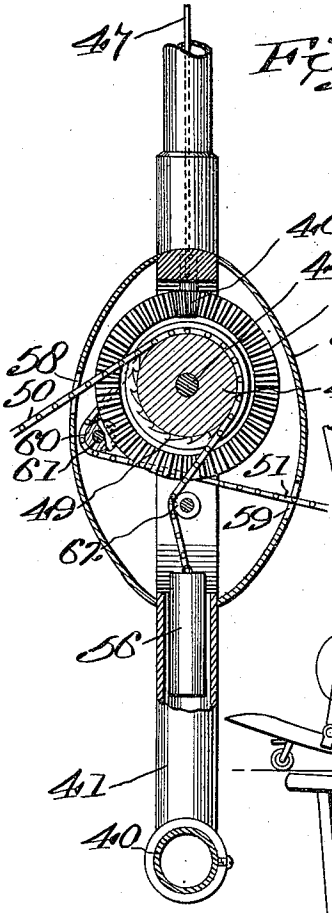


Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

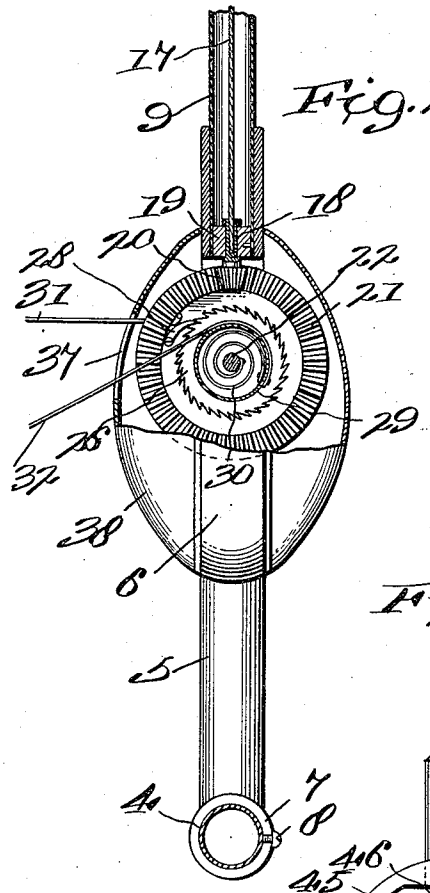


Fig. 3.

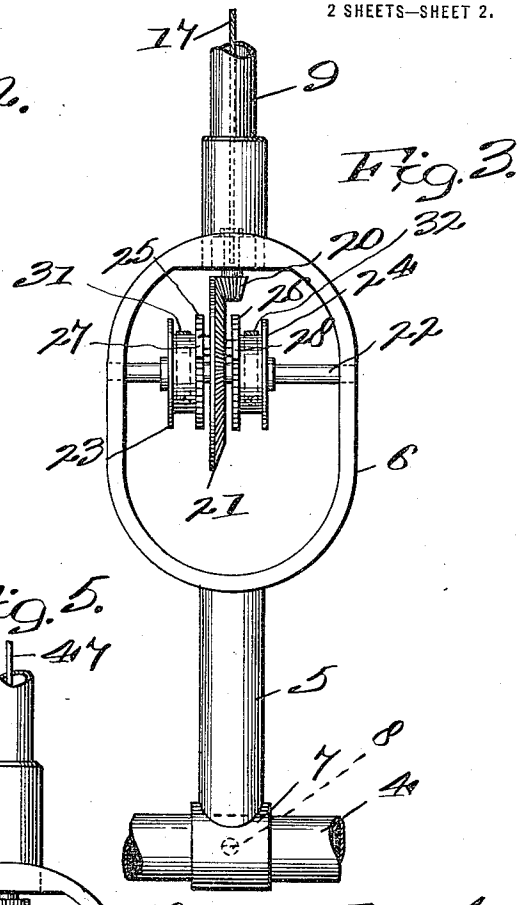


Fig. 5.

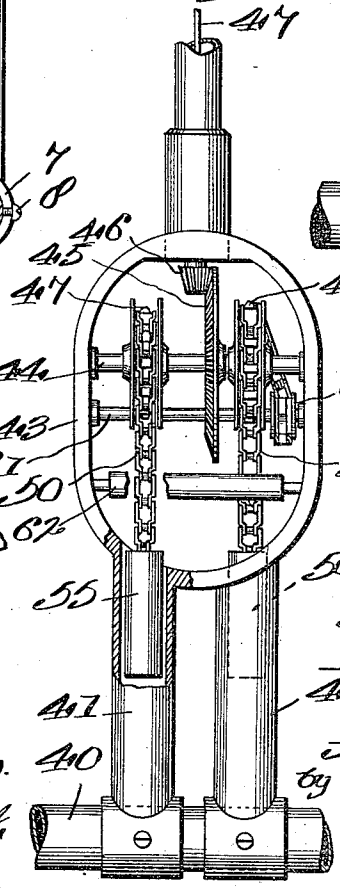


Fig. 4.

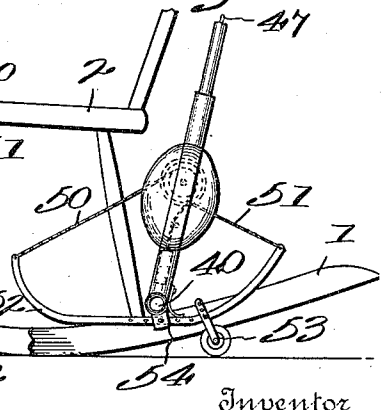
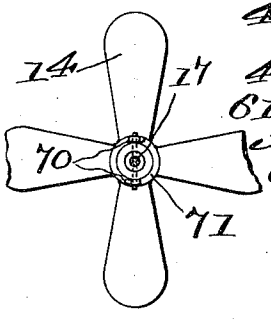


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

ANTHONY JULIEUS SCHROEDER, OF DONALDSONVILLE, LOUISIANA.

FAN ATTACHMENT FOR ROCKING-CHAIRS.

1,173,043. Specification of Letters Patent. Patented Feb. 22, 1916.

Application filed December 21, 1914. Serial No. 878,360.

To all whom it may concern:

Be it known that I, ANTHONY J. SCHROEDER, a citizen of the United States, residing at Donaldsonville, in the parish of Ascension and State of Louisiana, have invented certain new and useful Improvements in Fan Attachments for Rocking-Chairs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to fan attachments for rocking chairs, and consists in an improved device of the type shown in my similarly entitled co-pending application Serial No. 813,918, filed January 23, 1914.

It is an object of the present invention to provide a fan attachment for rocking chairs that will be of simplified construction over my former device and of improved operation, and the invention consists in constructions, combinations and arrangements hereinafter described and claimed.

In the accompanying drawings forming a part of this application, and in which similar reference symbols indicate corresponding parts in the several views: Figure 1 is a side elevational view of a rocking chair illustrating one embodiment of my invention applied thereto and shown partly in section. Fig. 2 is a fragmentary elevational view, partly in section, of the driving connections therefor. Fig. 3 is a front elevational view of the same with the gear casing removed. Fig. 4 is a fragmentary side elevational view of a rocking chair provided with a slightly modified form of the invention. Fig. 5 is a front elevational view, partly in section, of the driving connections of the device as shown in Fig. 4; Fig. 6 is a side elevational view, partly in section, of the same illustrating the gear casing; Fig. 7 is a sectional view taken on the line 7—7 of Fig. 1; and Fig. 8 is a fragmentary side elevational view of a modified arrangement of the fan.

Referring to the drawings, and particularly to Figs. 1 to 3 inclusive thereof, the rockers 1, upon which the chair 2 is supported, are connected by front and rear cross bars 3 and 4, respectively, preferably of tubular construction, as shown. Upon the rear tubular cross bar 4 is mounted a stub post 5, constructed with a yoke 6 for supporting the driving connections, as will hereinafter appear. The stub post 5 may be, as illustrated, formed at its lower end with a collar 7, whereby the same is slidably mounted upon the tubular cross bar 4 and secured against displacement thereon by set screw 8. In the upper end of the stub post 5, above the yoke 6, is supported a tubular standard 9, held to position by a clamp or other device 10 engaging the chair back; and the tubular standard 9 is preferably of brass, although the same may be constructed of any other suitable material.

In the standard 9 is included a telescopic section, as indicated at 11, for permitting the standard to be conveniently taken apart and packed for transportation. The standard is further bent at its upper end above the chair back into a substantially horizontal arm 12, and terminates in a downwardly-directed free end 13, arranged to support the fan 14. In the tubular standard 9, and in the horizontal arm 12 thereof, are included slip or other joints 15 and 16, respectively, for permitting the fan to be horizontally swung to either side of the occupant of the chair, and adjusted in a vertical plane to direct the air currents from the fan to either side away from the chair.

The fan 14 may be mounted in the end 13 of the standard in any suitable manner, and is driven by a flexible shaft 17, provided with pointed pawls 70 engaging a rubber ring 71 on the fan. The shaft 17 is housed in the tubular standard and connected at its lower end, as advantageously disclosed in Fig. 2, in a socket formed in a bearing sleeve 18. The bearing sleeve 18 is journaled to rotate in a plug 19 mounted at the base of the tubular standard 9, and is provided at its lower projecting end with a beveled pinion 20. The pinion 20 meshes with a beveled gear wheel 21, mounted on a shaft 22 journaled in the yoke 6, and fixed against rotation. On the shaft 22, to either side of the beveled gear wheel 21, are mounted a pair of flanged pulleys 23 and 24 constructed with ratchets 25 and 26, for engaging spring-pressed pawls 27 and 28 mounted on the beveled gear wheel 21.

As advantageously shown in Fig. 2, each of the pulleys 23 and 24 is formed with a

central recess 29, wherein are confined volute springs 30, connected respectively to the shaft 22 and to the pulley, and are arranged to return the pulleys to original position, as hereinafter described. To the pulleys 23 and 24 are respectively connected one end each of a pair of belts or cords 31 and 32, connected at their outer ends to the operating levers 33 and 34 fulcrumed on the front and rear cross bars 3 and 4, as illustrated in Fig. 1. The levers 33 and 34 are provided with rollers 35 and 36, arranged to normally engage the floor and oscillate the levers as the chair is rocked. As indicated, the levers 33 and 34 and the respective roller-arms may be provided with series of perforations for permitting adjustment of the latter to secure any desired throw of said levers. The belt or cords 31 and 32 operate through a slot 37 in a gear casing 38 mounted on the yoke 6.

In operation, as the chair is rocked the levers 33 and 34 will be oscillated by means of the rollers 35 and 36, and will alternately draw upon the belts 31 and 32 to rotate the respective pulleys 23 and 24 on the shaft 22 against the action of their springs 30. As shown to advantage in Fig. 2, when the pulleys are rotated in a counter-clockwise direction as actuated by the belts, the ratchets 25 and 26 thereof will engage the spring-pressed pawls 27 and 28 on the gear wheel 21, and through such connections impart movement to the gear wheel. The gear-wheel 21, through the pinion 20 and flexible shaft 17, operates the fan 14. As the action of the levers 33 and 34 is alternate, it will be understood that the fan is given a continuous rotary motion. When the belts 31 and 32 become slack on the back throw of the respective levers, the springs 30 will unwind and drive the pulleys 23 and 24 in a reverse direction, which is permitted by the ratchets 26 running freely over the pawls 28.

Referring more particularly to Figs. 4 to 6 inclusive, the rockers 1 of the chair 2 are connected by a single tubular rod 40, upon which is mounted a pair of hollow stub posts 41 and 42, opening at their upper ends into a yoke 43 in which is mounted for rotation a shaft 44. The shaft 44 supports a gear wheel 45 meshing with a pinion 46, connected to the flexible shaft 47, whereby motion is transmitted to the fan, as will be understood. On the shaft 44, to either side of the gear wheel 45, are mounted a pair of sprockets 47 and 48, formed with inclined teeth 49, as illustrated in Fig. 6, and upon which a pair of chains 50 and 51 are mounted to engage the shoulders of the teeth 49 when operated in one direction and rotate the sprockets, and to slip over the inclined faces of the teeth when operated in the reverse direction. The outer ends of the chains 50 and 51 are connected, respectively, to opposite ends of a lever 52 fulcrumed centrally upon the tubular cross bar 40, and provided with a roller 53 for engaging the floor to actuate the lever when the rocker is moved in one direction; and the lever 52 is acted on by a spring 54 for actuating the lever in the opposite direction and maintaining the roller 53 constantly in engagement with the floor as the rocker proceeds.

In each of the hollow stub posts 41 and 42 are slidably mounted a pair of counter-weights 55 and 56, connected to the opposite ends of the chains 50 and 51, and the same are arranged to retract the chains and draw the same over the inclined teeth of the sprockets 47 and 48 when the lever 52 is moved to slacken the same.

As shown in Fig. 6, the driving connections are inclosed in a gear casing 57, formed with slots 58 and 59 for the passage of the chains 50 and 51. An idler 60 is mounted on a spindle 61, supported in the gear casing 57, and receives the chain 51 to direct the same to one side after passing over the sprocket 48. The chains 50 and 51 may be trained over a roller 62 for directing the weights 55 and 56 to properly slide in the hollow posts 41 and 42.

In operation, as the chair is rocked the lever 52 will be oscillated, and will alternately actuate the chains 50 and 51 to rotate the gear wheel 45 constantly in one direction, and thereby provide for a continuous rotary motion for the connected fan.

It is to be understood that the chains 50 and 51 may be of any suitable construction, although I preferably employ a roller-link chain as minimizing friction and contributing to permit the chain to slide over the inclined teeth of the gear wheels.

Referring to Fig. 8, 72 indicates a hollow flexible tube housing the flexible shaft that drives the fan and the same is connected to the lower end of a rigid hollow arm 73 supporting the fan. The arm 73 is supported in a bracket 74 clamped to the chair, as indicated at 75, and provided with a swivel joint 76 and 77 for permitting the same to be swung to the desired position.

I do not desire to limit myself to the double lever and roller arrangement shown in Fig. 1, nor to the single arrangement illustrated in Fig. 4, as either arrangement may be employed to operate both forms of the invention.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of my invention, and therefore I do not wish to be limited to such features except as may be required by the claims.

I claim:—

1. The combination with a rocking chair, of a fan attachment therefor comprising a

cross bar mounted on the chair, a stub post supported on said cross bar, a yoke formed at the upper end of said stub post, a tubular standard erected in said yoke and extending upwardly beyond the chair back, means for securing said standard to the chair back, a substantially horizontal arm extending forwardly from the upper end of said standard, a fan journaled to rotate on the outer end of said arm above the chair seat, a flexible shaft journaled in said tubular standard and arm, connections between said flexible shaft and fan, a motor mounted in said yoke and connected to rotate said flexible shaft, and means for operating said motor from the motion of the chair, substantially as described.

2. The combination with a rocking chair, of a fan attachment therefor comprising a cross bar mounted on said chair, a stub post supported on said cross bar, a yoke formed at the upper end of said stub post, a motor mounted in said yoke, levers arranged to be actuated by the motion of the chair, connections between said levers and the motor for operating the latter, a tubular standard erected in said yoke, a clamp for securing said tubular standard to the chair back, a horizontal tubular arm extending forwardly from the upper end of said standard and terminating in a downwardly turned end, a fan journaled to rotate in the downwardly turned end of said hollow arm, a flexible shaft journaled in said tubular standard and arm, connections between said flexible shaft and motor, pawls on the upper end of said shaft, and a rubber ring on said fan for engagement by said pawls to rotate the fan, substantially as described.

3. The combination with a rocking chair, of a fan attachment therefor comprising a stub post supported on said chair, a yoke formed at the upper end of said stub post, a shaft journaled in said yoke, a gear wheel mounted on said shaft, means connected to continuously rotate said gear wheel from the motion of the chair, a tubular standard composed of telescopic sections erected in said yoke, a clamp for securing said standard to the chair back, a tubular horizontal arm extending forwardly from the upper end of said standard, a downwardly turned end on said horizontal arm, slip joints included in said standard and downwardly turned end for permitting the parts to be swung to either side of the chair seat, a flexible shaft journaled in said standard and arm, a pinion on the lower end of said shaft and arranged in mesh with said gear wheel, pawls mounted on the upper end of said shaft, a fan journaled to rotate on the free end of said horizontal arm, and a rubber ring on said fan for engagement by said pawls whereby the fan may be rotated, substantially as described.

4. The combination with a rocking chair, of a fan attachment therefor comprising a pair of hollow posts erected on said chair, a yoke formed at the upper ends of said posts, a shaft journaled in said yoke, a pair of sprockets provided with inclined teeth on said shaft, a chain trained over each of said sprockets, a counterweight hung on the inner ends of said chains and operating in said hollow posts, means connected to the outer ends of said chains for actuating the same to rotate said sprocket wheels against the influence of said counterweights from the motion of the chair, a tubular standard erected on said yoke, a forwardly extending hollow arm on the upper end of said standard, a fan journaled to rotate in the free end of said horizontal arm, a flexible shaft journaled in said standard and arm and connected to be rotated continuously in one direction from said sprockets, and connections between said flexible shaft and fan, substantially as described.

5. The combination with a rocking chair, of a fan attachment therefor comprising a cross bar secured to said chair, a pair of hollow stub posts supported on said cross bar, a yoke formed at the upper ends of said hollow posts, a tubular standard composed of telescopic sections, mounted in said yoke, a clamp for securing said standard to the chair back, a slip joint included in said standard, a hollow arm extending forwardly from the upper end of said tubular standard and formed with a downwardly turned free end, slip joints included in said horizontal arm and downwardly turned end, a flexible shaft journaled in said tubular standard and arm, pawls on the upper end of said flexible shaft, a fan journaled to rotate in the downwardly turned end of said hollow arm, a rubber ring in said fan adapted to be engaged by said pawls, a pinion on the lower end of said shaft, a gear wheel in said yoke in mesh with said pinion, a shaft journaled in said yoke and supporting said gear wheel, a pair of sprockets with inclined teeth on said shaft, chains trained over said sprockets, counterweights connected to the inner ends of said chains and operating in said hollow stub posts for returning the chains to initial position, and means connected to the outer ends of said chains for alternately actuating the same to revolve said sprockets, substantially as described.

6. The combination with a rocking chair, of a fan attachment therefor comprising a pair of tubular stub posts erected on said chair, a yoke formed at the upper ends of said posts, a shaft journaled in said yoke, a pair of sprockets formed with inclined teeth on said shaft, chains trained over said sprockets, counterweights operating in said tubular posts and connected to the inner ends of said chains for retracting the same, means

connected to the outer ends of said chains for actuating the same to rotate the sprockets alternately on the motion of the chair, a flexible shaft, a fan connected to be rotated from said flexible shaft, means for supporting said fan on the chair, and gear connections between said flexible shaft and the shaft in said yoke, substantially as described.

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

ANTHONY JULIEUS SCHROEDER.

Witnesses:
DENIS TRUKILLO,
V. ALCÉÉ RODRIGUE.

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