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FAN.

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1,328,353.

Patented Jan. 20, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

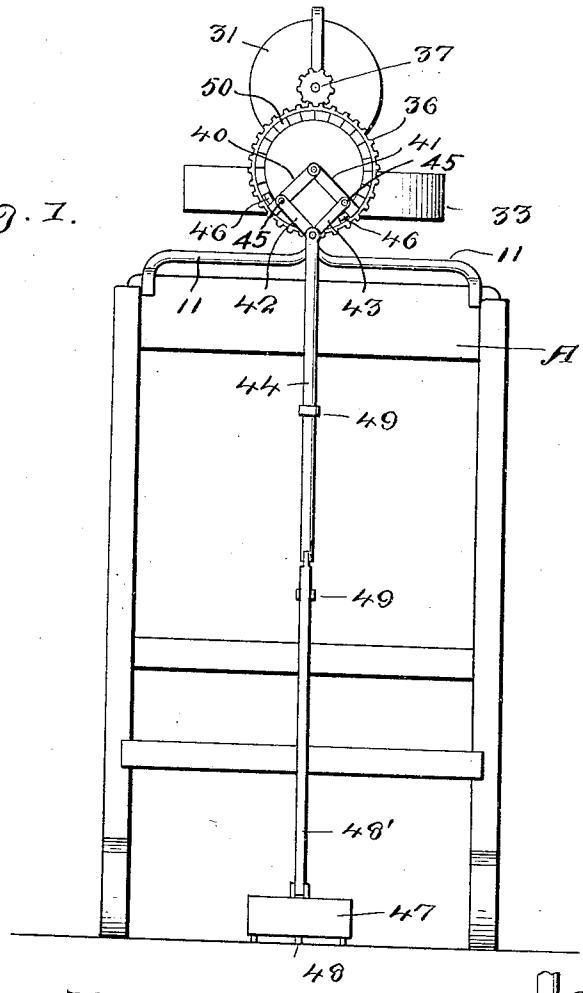


Fig. 3

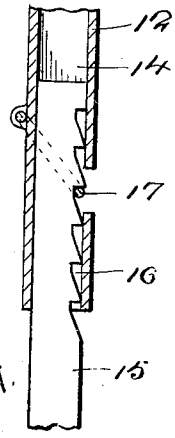
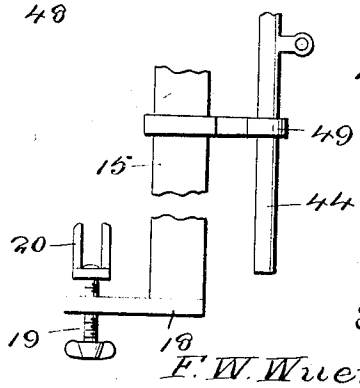


Fig. 5.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

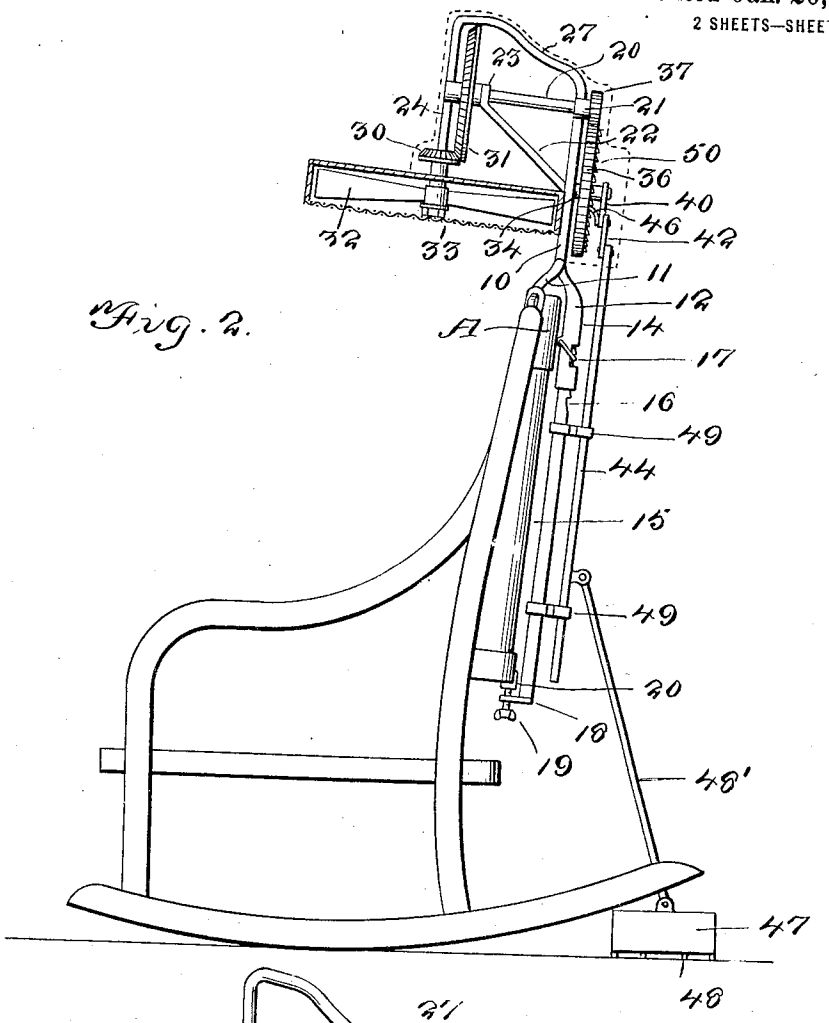
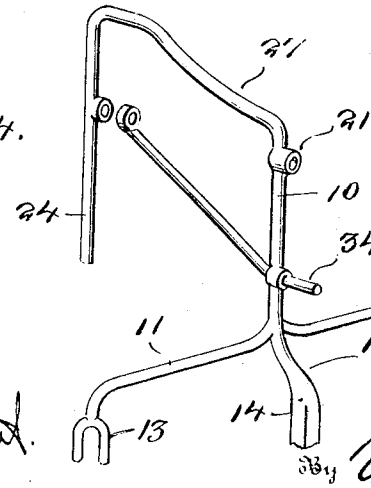


Fig. 4.



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To all whom it may concern:

Be it known that I, FRED W. WUERTH, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Fans, of which the following is a specification.

This invention comprehends the provision of a chair attachment in the nature of a fan adapted to be operated simultaneously with the movements of the chair in both directions.

One of the chief characteristics of the invention resides in the provision of a device of the above mentioned character which can be easily and quickly attached to or removed from the back of a chair, and susceptible of adjustment to accommodate itself to chairs of various designs and sizes.

Another object of importance consists in the fact that the component parts of the attachment can be readily disassembled for convenience in packing for shipping purposes or the like.

Other objects and advantages will appear as the nature of the advantages is better understood, from the following detailed description when taken in connection with the accompanying drawing, the invention residing in the construction, combination and arrangement of parts as claimed.

In the accompanying drawings forming part of this specification, like numerals of reference indicate the similar parts in the several views, wherein:—

Figure 1 is a rear elevation of the attachment showing the same applied to a chair.

Fig. 2 is a side elevation of the same with the protective housing or casing in section.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 1.

Fig. 4 is a perspective view of the stationary frame.

Fig. 5 is an enlarged detail sectional view of the connection between the separable parts of the frame.

The attachment forming the subject matter of my invention embodies a stationary frame such as shown in Fig. 4 and which consists of a vertically disposed rod 10 being provided at its lower extremity with a pair of laterally extending branches 11 and a downwardly and intermediately disposed branch 12, the branches 11 being bifurcated at their free extremities 13 to embrace the upper edge of the back A of the chair, and when so disposed the downwardly extending branch 12 assumes position at the rear of the back A as shown. The branch 12 has associated therewith a socket 14 which provides a connection between the said branch and the attaching member 15 of the frame. This member 15 while forming a part of the stationary frame, can be readily separated therefrom when desired. The member is disposed vertically at the rear of the back A of the chair, and has its upper extremity provided with a plurality of teeth 16 adapted to be engaged by a swinging latch 17 carried by the socket 14, when the toothed extremity 16 is inserted or positioned within the adjacent end of said socket. The lower end of the attaching member 15 terminates to provide a right angularly disposed flange 18 which extends beneath the lower edge of the back A of the back of the chair, and has associated therewith an adjusting screw 19 carrying a U-shaped swiveled portion 20 adapted to embrace the lower edge of the back edge of the chair as clearly shown. By reason of this construction, it is manifest that the attaching member 15 can be adjusted relative to the branch 12 of the rod 10, so that the stationary frame as an entirety can adjust itself to chair backs of different heights or designs, the latch 17 automatically engaging the teeth 16 subsequent to the adjustment of the said parts, to hold the attaching member 15 fixed relatively to the branch 12.

A transversely disposed shaft 20 has one end journaled in a bearing 21 formed in the rod 10, the shaft 20 being braced by a diagonally disposed rod 22 the upper extremity of which also provides a bearing 23 for the shaft 20. A vertically disposed branch 24 of the frame is arranged immediately in advance of the shaft 20. A curved rod 27 projects from the bearing 21 in a direction of the vertically disposed branch 24. A fan carrying shaft is associated with the vertically disposed branch 24 and carries beveled gear 30 which meshes with a relatively large beveled gear 31 fixed to the shaft 20, so that the fan 32 is operated upon rotation of the shaft 20. The fan 32 operates within a wire cage or housing 33 as shown. Projecting from the rod 10 at a suitable point in its length is a stub shaft 34 upon which is rotatably mounted a cog wheel 36, the latter meshing with the relatively small cog wheel 37 which is fixed

upon the adjacent extremity of the shaft 20, to rotate the latter upon rotation of the cog wheel 36.

For the purpose of rotating the cog wheel 36 with both the forward and backward movement of the chair, I employ a plurality of pivotally connected arms arranged in normal position to define a parallelogram. The arms 40 and 41 have their adjacent extremities pivoted upon the stub shaft 34 upon which the cog wheel 36 is journaled, while the opposite extremities of said arms have pivotal connection with the adjacent extremities of the arms 42 and 43 of the parallelogram. The adjacent extremities 42 and 43 respectively are pivotally connected with a vertically disposed reciprocating rod 44, which when moved in an upward direction causes the collapsing of the parallelogram, consequently moving the pivots 44 for all of said arms away from each other. Carried by each of the arms 40 and 41 is a resilient dog 46, and both of which dogs extend in the same direction for the purposes to be presently described. While the rod 44 may be operated in any suitable manner, I preferably make use of a weighted floor engaging element 47 provided with spurs or teeth 48 to prevent slipping or movement of the member while the attachment is in use. Pivotally connected with the weighted member 47 and with one end of the rod 44 is a bar 48 which reciprocates the rod 44 upon rocking movement of the chair as will be readily understood. Suitable guiding members 49 are securely fastened to the attaching element 15 and arranged to receive the reciprocating rod 44.

In practice, the attachment is secured to the back of the chair in the manner illustrated in Figs. 1 and 2, and when the chair is rocked or moved in a rearward direction, the rod 44 is elevated thus collapsing the parallelogram defined by the arms 40, 41, 42 and 43, respectively. With the collapsing of the parallelogram the pivots 45 are moved away from each other, or in other words, toward the top of the cog wheel 36. As hereinabove stated, the resilient dogs 46 carried by the arms 40 and 41 respectively extend in a common direction so that when the rod 44 is elevated the dog 46 carried by the arm 40 engages the teeth 50 formed on one side of the cog wheel 36 to rotate the latter, while the resilient dog 46 carried by the arm 41 moves freely over the teeth. When the chair is moved in a forward direction and the rod 44 consequently moved downwardly, the dog 46 carried by the arm 41 engages the teeth 50 of the wheel 36 to continue the rotation of the latter, while the dog carried by the arm 40 moves freely over the teeth to its normal position. Manifestly, a continuous rotation of the wheel 36 is therefore obtained with the forward and backward movement of the chair. As the cog wheel 36 is rotated the fan 32 is actuated through the instrumentality of the gearing hereinabove described. It is to be noted, that the protective housing or casing which incloses the gearing permits ready access to be had to the parts for lubricating purposes, and that the component parts of the attachment in its entirety can be readily disassembled and compactly arranged to minimize space for shipping purposes.

While I have shown and described the preferred embodiment of the invention, I desire to have it understood that what is shown is merely illustrative, and that I do not limit myself to this exact disclosure and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim is:—

1. A rocking chair attachment including a frame, said frame embodying a member having a plurality of branches, certain of said branches embracing the upper edge of the back of the chair, the other of said branches being hollow, a second member embracing the lower edge of the back of the chair and slidably fitted in the last mentioned branch whereby the frame can be adjusted to chairs of different sizes, and means for holding said members fixed relatively, a fan carried by the first mentioned member of the frame, and means for operating the fan upon rocking movements of the chair.

2. A rocking chair attachment comprising a frame, said frame including a member having a plurality of branches, certain of said branches embracing the upper edge of the back of the chair, the remaining branch being disposed at the rear of said back, and of a hollow formation, a second member designed to embrace the bottom edge of the back of the chair and slidably fitted in said hollow branch, said branch having an opening in one side thereof, the second mentioned member having teeth, a yoke swingingly mounted on said hollow branch and arranged to engage the teeth, to hold said members of the frame fixed relatively in adjusted position, a fan carried by the first mentioned member of said frame, and means for rotating said frame upon rocking movement of the chair.

3. A rocking chair attachment comprising a frame, said frame including a member designed to embrace the upper edge of the back of the chair, and a member designed to engage the lower edge of said back, said members being adjustably associated, means for holding said members fixed relatively in adjusted position, the first mentioned member of said frame being designed to support a fan, in horizontal position above the chair, a shaft journaled in said member, gearings connecting the said shaft with the fan, a pinion on said shaft, a gear wheel mounted

on said frame and meshing with said pinion, ratchet teeth on said gear wheel, a reciprocating element operable upon rocking movement of the chair, and a connection between said element and the teeth of said gear wheel whereby the latter is continuously rotated upon reverse movements of the chair to operate the fan.

4. A rocking chair attachment, including a stationary frame, a fan carried by the frame and disposed above the seat of the chair, means for operating the fan including a shaft journaled in said frame, a pinion carried by said shaft, a vertically disposed gear, journaled on said frame and meshing with said pinion, ratchet teeth formed on one side of said wheel, a reciprocating element operable on rocking of the chair, a plurality of pivotally connected arms arranged to define a parallelogram, said arms being pivoted upon the axis of said gear wheel and also pivotally connected with the reciprocatory element, whereby the parallelogram is collapsed upon movement of the said element in one direction, and means carried by certain of the arms of the parallelogram to engage the ratchet teeth and operate the fan upon rocking movements of the chair.

In testimony whereof I affix my signature.

FRED W. WUERTH.