

UNITED STATES PATENT OFFICE

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AEROPLANE

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This invention relates to new and useful improvements in an aeroplane of rooster shape.

The invention has for an object the provision of a device of the class mentioned which is of simple durable construction, dependable in use and efficient in action, and which can be manufactured and sold at a reasonable cost.

The invention proposes an aeroplane body simulating a rooster and having a pair of pivoted wings, a motor-driven traction propeller mounted on the front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings constituting flapping.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:—

Fig. 1 is a perspective view of the device constructed according to this invention.

Fig. 2 is a fragmentary vertical sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged detailed view of a portion of Fig. 2.

Fig. 4 is an enlarged detailed view of another portion of Fig. 2.

Fig. 5 is another enlarged detailed view of a different portion of Fig. 2.

The aeroplane of rooster shape consists of an aeroplane body 10 simulating a rooster and having a pair of pivoted wings 11, a motor-driven traction propeller 12 mounted on the front of said body, each of said wings 11 being composed of inner sections 13 and outer sections 14 telescopically and slidably engaged in edge contacting relation, means for retracting the outer wing sections 14 in lowered positions of the wings, means for projecting the outer wing sections in raised posi-

tions of the wings, and means for raising and lowering said wings constituting flapping.

The aeroplane body 10 has a rooster head 15, neck 16, tail 17 and legs 18. The propeller 12 is mounted upon the bill of the head 15. The motor for driving the propeller is housed within the neck. Wheels 19 are mounted upon the legs 18 constituting the landing gear of the device. Each inner wing section 13 is pivotally mounted at its inner edge 20 on the said body 10 and is of hollow construction arranged so that the hollow communicates with the outer edge. The outer section 14 is slidably engaged in this hollow so as to extend therewith.

The means for retracting the outer wing sections in lowered positions of the wings consists of an arm 21 arranged beneath each of the wings and pivotally mounted at its inner end 22 upon lugs 23 projecting from the body 10. A coaxial spring 24 is arranged upon the pivot point and acts between the lugs and the arm for normally holding the arm in a substantially horizontal position. A gear 25 is rotatively mounted on the outer end of the arm and slightly projects above its top. A driving means 26 is connected with the gear for imparting rotations. This driving means consists of a plurality of sprocket chains and wheels arranged in connections with each other.

An aperture 27 is arranged in the bottom of the inner wing section and communicates with its hollow and aligns with the said gear 25 so that in the lowered position of the wing the gear extends into the hollow. A plurality of rack teeth 28 are arranged upon the bottom face of the outer wing section so that the gear 25 when extending thru the aperture 27 meshes therewith. A plurality of ratchet teeth 29 are formed upon the top face of the outer wing section and are engageable by a pawl 30 pivotally mounted at 31 and urged into engagement by a coaxial spring 32 arranged on the pivotal point. This pawl is provided with a head portion 33 projecting above the top surface of the inner wing section. This is possible by a recess 34 arranged thru the inner wing section.

The means for projecting the outer wing sections in raised positions of the wings consists of expansion springs 35 within the hollows of the inner wing sections and acting between the sections so as to normally extend the outer wing sections. Lugs 36 project from the body 10 and support a substantially horizontal arm 37 arranged above the wing 11. This arm is formed with a downturned outer end 38 engageable with the head 33 for releasing the outer wing section. The inner end of the arm 37 is formed with radial teeth 39 engageable in radial slots 40 formed in the lugs and held in meshed positions by a bolt 41. The bolt may be loosened and the angular position of the arm 37 adjusted so that engagement with the head occurs at a different elevated position of the wings.

The means for raising and lowering the wings 11 consists of a rod 42 projecting from each of the inner wing sections and extending into the body 10. These arms are rigidly connected with the wing section so that upon motion pivoting of the wings occurs. A link 43 connects the inner end of each arm 42 with a crank 44 of a driver shaft 45. The driver shaft may be connected for receiving rotations from the engine used to rotate the propeller 12.

In operation of the device, and assuming the wings moving downwards, and the outer sections 14 in the extended position, the rack teeth 28 will engage the gear 25. Rotations from the gear retract the outer wing section. The arm 21 may bend downwards as indicated by the dot and dash lines 46 in Fig. 2 so that connection between the gear and the rack teeth may be sufficiently long to accomplish full retraction. The pawl 30 at all times acts to hold the outer wing section in the retracted position. Next the wing moves upwards and when it reaches its completely raised position, the head 33 acts against the downturned end 38 of the arm 37 so that the pawl is released from the ratchet teeth 29 and the springs 35 project the outer wing sections.

The propeller 12 is depended upon to accomplish most of the flying of the device and the wings to assist in the flying and also to simulate a flying rooster.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:—

1. An aeroplane of rooster shape, comprising an aeroplane body simulating a rooster and having a pair of pivotal wings, a motor-driven traction propeller mounted on the

front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings so as to constitute flapping.

2. An aeroplane of rooster shape, comprising an aeroplane body simulating a rooster and having a pair of pivotal wings, a motor-driven traction propeller mounted on the front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings so as to constitute flapping, said aeroplane body having a rooster head, neck, tail and legs.

3. An aeroplane of rooster shape, comprising an aeroplane body simulating a rooster and having a pair of pivotal wings, a motor-driven traction propeller mounted on the front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings so as to constitute flapping, said aeroplane body having a rooster head, neck, tail and legs, said propeller being mounted upon the bill of the rooster head.

4. An aeroplane of rooster shape, comprising an aeroplane body simulating a rooster and having a pair of pivotal wings, a motor-driven traction propeller mounted on the front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings so as to constitute flapping, said aeroplane body having a rooster head, neck, tail and legs, wheels being mounted upon the said legs and constituting a landing gear.

5. An aeroplane of rooster shape, comprising an aeroplane body simulating a rooster and having a pair of pivotal wings, a motor-driven traction propeller mounted on the front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of

the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings so as to constitute flapping, each inner wing section being pivotally mounted at its inner end upon the said body and formed with a hollow communicating with the outer edge, and said outer wing sections engaging in said hollows and extending from the outer edge.

6. An aeroplane of rooster shape, comprising an aeroplane body simulating a rooster and having a pair of pivotal wings, a motor-driven traction propeller mounted on the front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings so as to constitute flapping, said means for retracting the outer wing sections in lowered positions of the wings comprises an arm beneath each of the wings and pivotally mounted on its inner end upon the said body, means for resiliently holding the arm horizontal, a gear rotatively mounted on the arm and projecting above the top thereof and engageable thru a slot in the inner wing section so as to mesh with ratchet teeth formed on the outer wing section, and a driving system for rotating said gear.

7. An aeroplane of rooster shape, comprising an aeroplane body simulating a rooster and having a pair of pivotal wings, a motor-driven traction propeller mounted on the front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings so as to constitute flapping, said means for retracting the outer wing sections in lowered positions of the wings comprises an arm beneath each of the wings and pivotally mounted on its inner end upon the said body, means for resiliently holding the arm horizontal, a gear rotatively mounted on the arm and projecting above the top thereof and engageable thru a slot in the inner wing section so as to mesh with ratchet teeth formed on the outer wing section, and a driving system for rotating said gear, a pawl being pivotally mounted on the inner wing section and engageable with ratchet teeth formed on the outer wing section for holding the section in various retracted positions against the outward urge of springs acting between these sections.

8. An aeroplane of rooster shape, compris-

ing an aeroplane body simulating a rooster and having a pair of pivotal wings, a motor-driven traction propeller mounted on the front of said body, each of said wings being composed of inner and outer sections telescopically and slidably arranged in edge contacting relation, means for retracting the outer wing sections in lowered positions of the wings, means for projecting the outer wing sections in raised positions of the wings, and means for raising and lowering said wings so as to constitute flapping, said means for projecting the outer wing sections in raised positions of the wings consists of expansion springs normally urging the outer wing sections outwards, means for holding the outer wing sections retracted, and a means for releasing the latter means when the wing assumes raised position.

In testimony whereof I have affixed my signature.

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