

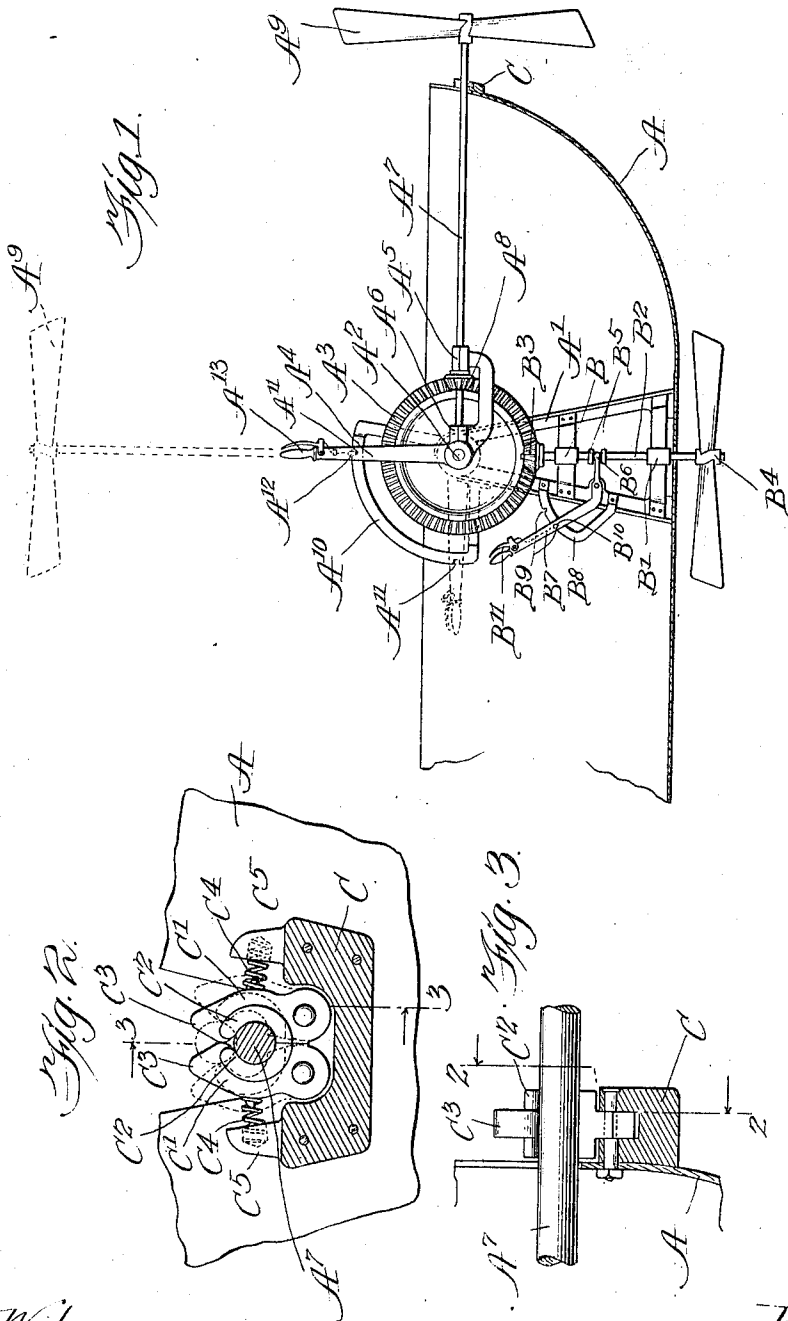
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AIRSHIP.

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1,036,781.

Patented Aug. 27, 1912.



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UNITED STATES PATENT OFFICE.

JOHN G. BAUER, OF CLEVELAND, OHIO.

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1,036,781.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN G. BAUER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Airships, of which the following is a specification.

My invention relates to improvements in air ships and is illustrated diagrammatically in one form in the accompanying drawing, wherein—

Figure 1 shows a section through a portion of the driving mechanism; Fig. 2 shows a detail of the catch; and Fig. 3, a section on the line 3—3 of Fig. 2.

Like parts are indicated by like letters in all the figures.

A is the frame work of the air ship upon which is mounted the A-frame A¹ carrying at its apex the drive shaft A² upon which is rigidly mounted the driving gear A³. The bell crank lever A⁴ is rotatably mounted about the drive shaft A² and carries the bearings A⁵, A⁶, in which is mounted the propeller shaft A⁷ having the gear A⁸ in engagement with the gear A³ and having at the other end the propeller A⁹. The quadrant A¹⁰ rigidly mounted upon the A-frame A¹ is provided with the notches A¹¹ to engage the locking mechanism A¹² controlled by the handle A¹³ upon the lever A⁴. The bearings B, B¹ rigidly mounted upon the A-frame A¹ carry the shaft B² having at one end the gear B³ in mesh with the gear A³ and at the other end the propeller B⁴. The collars B⁵ upon the shaft B² engage the pawl B⁶ carried by the lever B⁷ which is in engagement with the quadrant B⁸ having the notches B⁹ adapted to be engaged by the catch B¹⁰ controlled by the handle B¹¹ upon the lever B⁷. The lug C mounted upon the frame A, carries pivotally mounted therein the two jaws C¹, which are provided with the cylindrical bearings C² and have the upwardly extending points C³. The springs C⁴ engaging the lug C⁵ force the jaws C¹ together to grip the shaft A⁷.

I have shown in my drawings an operative device, but it will, of course, be evi-

dent that many changes might be made in the size, shape and arrangement of parts without departing materially from the spirit of my invention and I, therefore, wish that my drawings be regarded as in a sense diagrammatic.

The use and operation of my invention are as follows:—When the ship is to be operated, the drive shaft is driven in any suitable manner from an engine not shown, carrying with it the main driving gear. The combined lifting and propelling screw is moved into the upper or lifting position and the gear which drives the auxiliary lifting screw is thrown into mesh with the driving gear. The combined force of the two screws is thus used to raise the ship perpendicularly from the ground. After the ship has reached the desired height, the position of the combined propelling and lifting screw is changed until the propeller shaft assumes a horizontal rather than a vertical position, at which point it acts as a propelling screw. The vertical position of the ship may then be controlled by the auxiliary lifting screw which may be thrown out of operation when a descent is to be made or thrown into operation when an ascent is to be made.

I claim:—

1. In a flying machine a frame, a transversely disposed driving shaft and a driving gear thereon, a controlling lever rotatably mounted on the driving shaft, an arm projecting at right angles from said lever, bearings at both ends of said arm and a propeller shaft rotatably mounted in said bearings, a propeller at one end of said shaft and a pinion adjacent the other end in mesh with said driving gear, a lifting propeller, a shaft therefor, a pinion carried thereby in opposition to the driving gear and means for holding said pinion in mesh with and out of mesh with the driving gear.

2. In a flying machine a frame, a transversely disposed driving shaft and a driving gear thereon, a controlling lever rotatably mounted on the driving shaft, an arm projecting at right angles from said lever, bearings at both ends of said arm and a pro-

5 peller shaft rotatably mounted in said bearings, a propeller at one end of said shaft and a pinion adjacent the other end in mesh with said driving gear, a lifting propeller, a shaft therefor, a pinion carried thereby in opposition to the driving gear and means for holding said pinion in mesh with and

out of mesh with the driving gear and means for holding said propeller shaft in a vertical and in a horizontal position.

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