D. C. FUNCHEON.

FLYING MACHINE.

APPLICATION FILED NOV. 3, 1908.

953,198.

Patented Mar. 29, 1910.

2 SHEETS—SHEET 1.

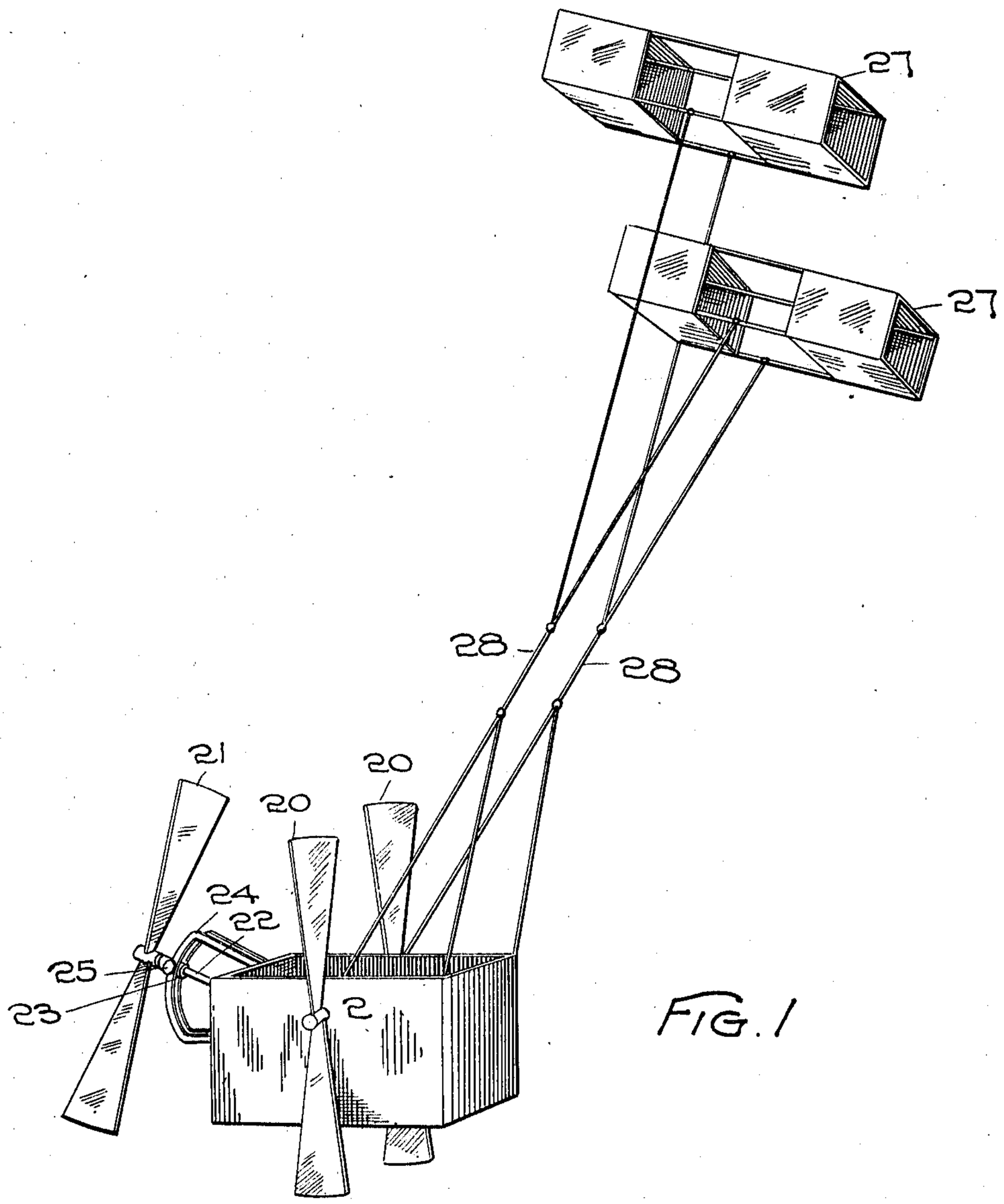

FIG. 1

WITNESSES:

J. H. Johns

M. L. Geary

INVENTOR.

D. C. Funcheon

BY J. F. DeLaney

ATTORNEY.

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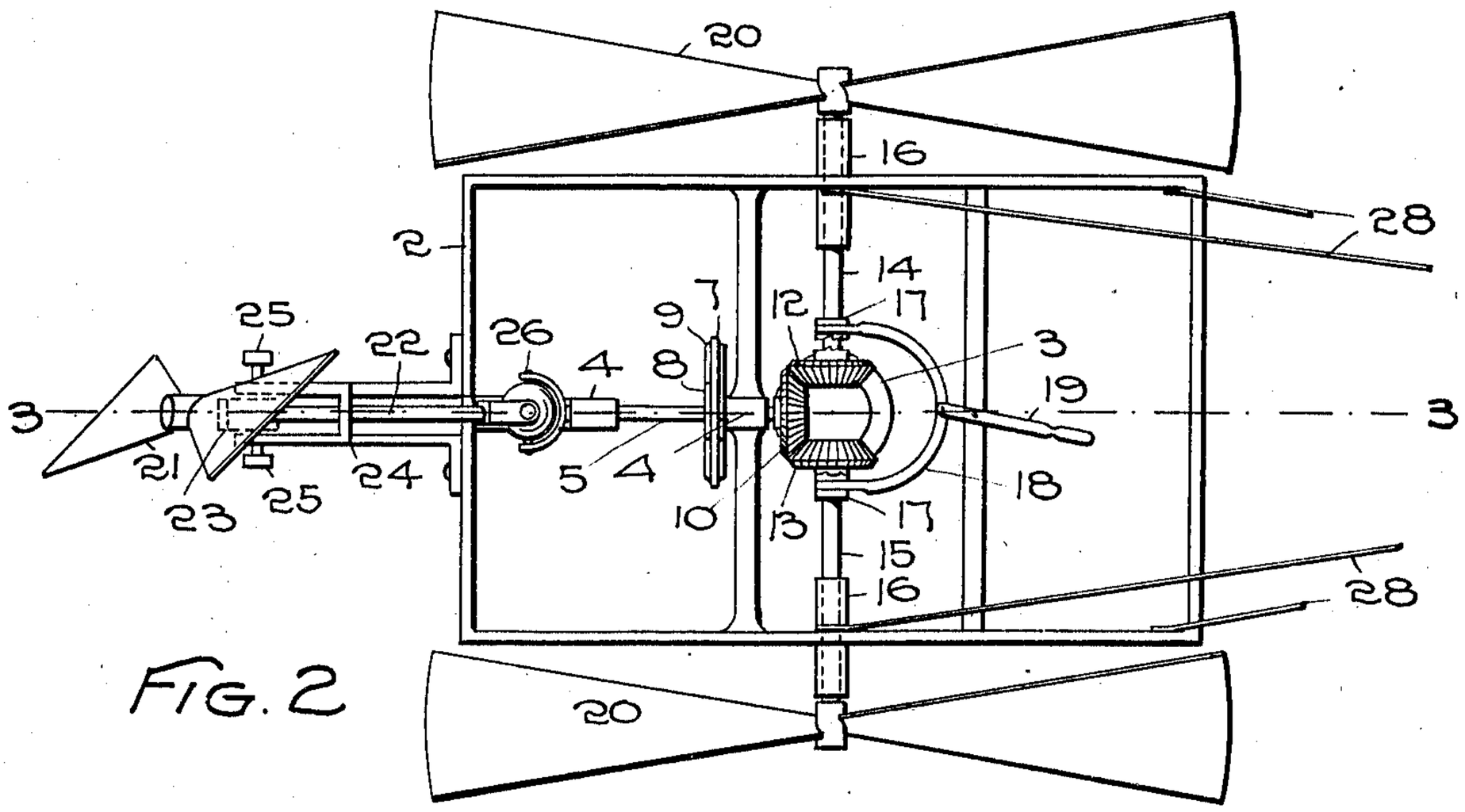

FIG. 2

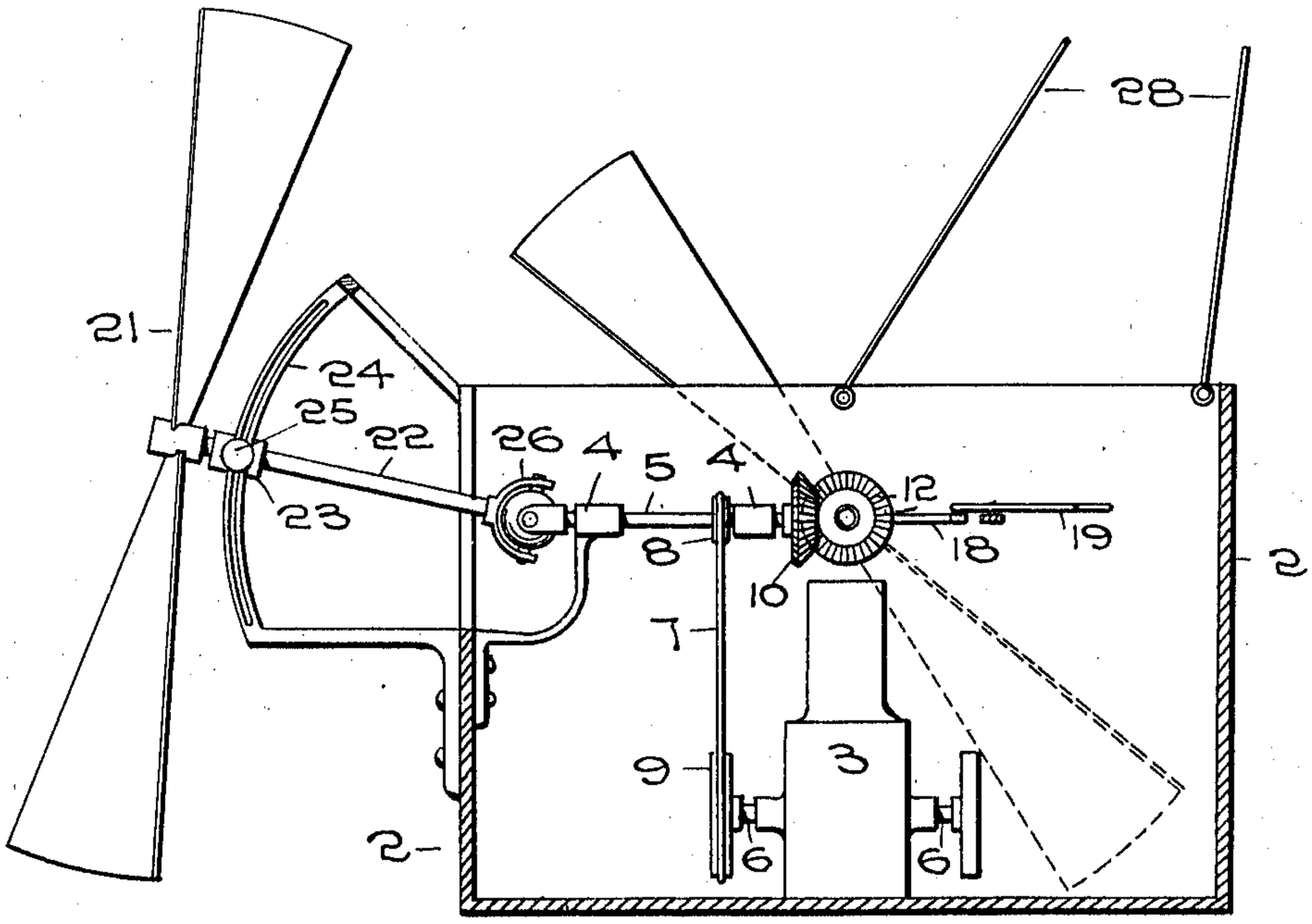

FIG. 3

WITNESSES.

J. H. Johns

M. L. Geary.

INVENTOR.

D. C. Funcheon

BY

ATTORNEY.

UNITED STATES PATENT OFFICE.

DANIEL C. FUNCHEON, OF DENVER, COLORADO.

FLYING-MACHINE.

953,198. Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed November 3, 1908. Serial No. 460,915.

To all whom it may concern:

Be it known that I, DANIEL C. FUNCHEON, citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Flying-Machines, of which the following is a specification.

This invention relates to improvements in flying machines of the heavier than air type, and has for its object the provision of a machine of the class named in which simplicity of construction is combined with effectiveness and practicability in use. I attain this object by the mechanism illustrated in the accompanying drawings, in the various views of which like parts are similarly designated and in which—

Figure 1—represents a perspective view of the flying machine, Fig. 2— a plan view of the basket and operating mechanism and Fig. 3—a vertical section taken along the line 3—3 Fig. 2.

My improved flying machine comprises a carrier 2 which may be any design most suitable to the purpose and which carries the operating mechanism by means of which the device is propelled through the air.

The above mentioned mechanism includes an engine 3 which may be of any desired type to be operated through the agency of electricity, explosive gases or any other motive fluid.

Mounted in bearings 4, above the engine 3 is a horizontal line shaft 5 which, in practice, receives its rotary movements from the engine shaft 6 by means of a belt or chain 7 which passes around wheels 8 and 9 on the respective shafts. The shaft 5 is provided at one of its extremities with a bevel gear wheel 10 which meshes with two corresponding gears 12 and 13, which are carried loosely respectively upon the extremities of axially alined shafts 14 and 15, mounted transversely of the basket in bearings 16. Clutches 17, which are slidable upon the shaft and are rotatably carried upon the extremities of a rigid yoke 18, are adapted to operatively engage one or the other of the gears 12 and 13 for the purpose of connecting it with the shaft, upon which it is mounted, and to thus transmit the rotary movement of the line shaft 5 thereto. A lever 19 connected with the yoke 18 serves to adjust the latter and to retain the clutches associated therewith, in engagement with the respective gears. The opposite extremities of the shafts 14 and 15 which project outside the basket, are provided with propellers 20 which, being composed of spirally arranged blades, are, in the operation of the machines, employed to deflect it from the course in which it is driven.

The onward movement of the airship is accomplished by means of a third propeller 21, which is rotatably mounted at the front end of the basket 2, and whose shaft 22 is adjustable in a vertical plane. The shaft 22 is, to this end, mounted in a box 23, which is slidable in a segmental slotted guide 24, which is rigidly secured to the carrier, 2. Set screws 25 which project through the slots in the guide, serve to secure the box 22, in the desired position. The extremity of the shaft 22, opposite to that which carries the propeller 21, connects operatively with the line shaft 5, by means of a universal joint 26 which is preferably of the gimbal type. By tilting the shaft 22 at an angle, as is shown in the Fig. 2 of the drawings, the propeller connected therewith not only propels the ship but aids to raise and support the basket in the air, the principal lifting power being supplied by a plurality of kites, 27 which connect with the basket at its stern, and near its middle, by means of cords or ropes 28. The kites 27 may be of any suitable design, preference being given to the socalled box kite of rectangular parallelopiped form, and they may be increased or decreased in size and number, in accordance with the weight of the basket and its occupants.

In the operation of my machine, the basket is lifted to, and supported at the desired elevation by the combined actions of the propeller 21, and the kites 27, and will, under ordinary circumstances be propelled against the direction of the wind with its propeller end forward. To propel the ship in the opposite direction, the velocity of the propeller 21 is decreased so as to allow the ship to drift with the wind in the direction of the kite while still maintaining its power to retain the ship on an even keel. To propel the ship in a direction, angular to that of the air current, one or the other of the propellers 20 is actuated, and the basket may be retained at a level keel, or raised and lowered by adjusting the position of the propeller 21 relative thereto, in the manner hereinabove described.

It is desirable, when traveling at high speed, to reduce the distance between the kites and the carrier, which may be accomplished by pulling the ropes 28 by any suitable means.

I wish it understood that while I have shown and described the device in the best form now known to me, I do not limit myself to the precise construction herein set forth, since variations in the form and arrangement of the various parts may be resorted to within the spirit of the invention.

What I claim and desire to secure by Letters-Patent is:—

1. A flying machine comprising a carrier, one or more kites flexible connections between the latter and one of the ends of said carrier, and a propeller revolubly arranged at its opposite end so as to coöperate with said kites in raising the carrier in the air and maintaining it on an even keel.

2. A flying machine comprising a carrier, one or more kites flexible connections between the latter and one of the ends of said carrier, and a propeller whose shaft is adjustable in a vertical plane, revolubly arranged at its opposite end so as to coöperate with said kites in raising the carrier in the air and maintaining it on an even keel.

3. A flying machine comprising a carrier, one or more kites connected therewith at one of its ends, a propeller revolubly arranged at its opposite end so as to coöperate with said kites in raising the carrier in the air and maintaining it on an even keel, and propellers independently revoluble at the sides of the carrier, whereby the direction of its course may be varied.

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

DANIEL C. FUNCHEON.

Witnesses:

G. J. Rollandet,

M. L. Geary.