F. BARNETT.

FLYING-MACHINE.

No. 190,730. Patented May 15, 1877.

Fig. 1.

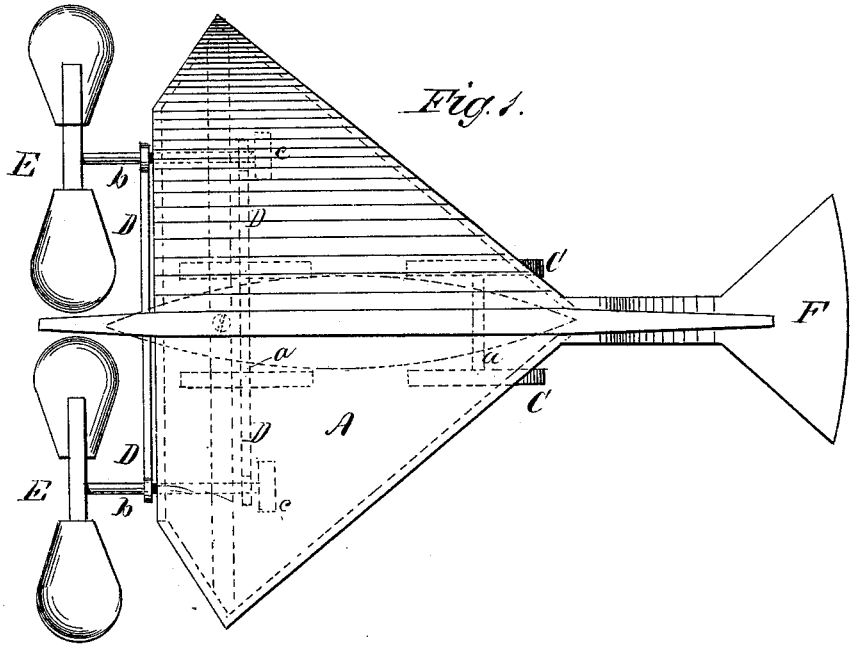
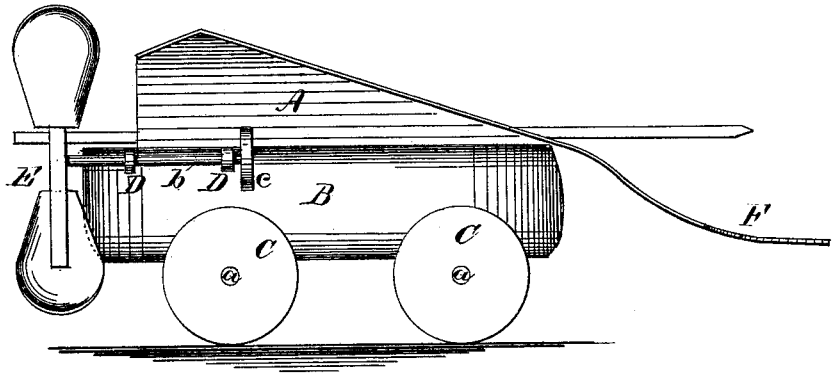


Fig. 2.



WITNESSES:

Francis McArdle.

J. H. Scarborough.

INVENTOR:

F. Barnett.

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANK BARNETT, OF KEOKUK, IOWA.

IMPROVEMENT IN FLYING-MACHINES.

Specification forming part of Letters Patent No. **190,730**, dated May 15, 1877; application filed March 12, 1877.

To all whom it may concern:

Be it known that I, FRANK BARNETT, of Keokuk, in the county of Lee and State of Iowa, have invented a new and Improved Flying-Machine, of which the following is a specification:

Figure 1 is a plan view. Fig. 2 is a side elevation.

Similar letters of reference indicate corresponding parts.

My invention relates to apparatus for aerial navigation; and it consists of a kite or horizontal sail provided with a boat or basket for passengers, which is placed on wheels, and is provided with propeller-wheels for moving the apparatus, and with a device for guiding.

Referring to the drawing, A is the kite or horizontal sail, and consists of two triangular kites or sails fastened to a spar or beam, or along a central line of the body, hereafter described, the spar or central line along the body with extenuations answering the same purpose as a spine or backbone upon which to build or hang the entire structure. This backbone extends from the tail, or along the body, beyond the kite's sails or wings far enough to brace with rigging, so that each wing or triangular sail may be extended at right angles or transversely from main body, and be so rigged that the wings or sails can be elevated at the outer extremities more or less, as found desirable. To this kite a boat-shaped body, B, is secured, which is of sufficient capacity to contain one or more passengers. Transverse axles *a* are secured to the under surface of the body B, and upon these axles the wheels C are placed. Arms D project laterally from the upper surface of the body B, under the projecting wings of the kite A, and in the ends of these arms the shafts *b* are journaled, parallel with the center-line of the body. To the front ends of these shafts the fans or propeller-wheels E are secured, and upon their rear ends wheels *c* are placed.

The wings of the fans are concaved, and are placed on their arms diagonally, so that by turning the wheels E, a volume of air is thrown backward under the kite A. The projecting wings of the kite are elevated slightly to receive the air thrown backward by the propeller-wheels E.

F is a guiding-vane or tail, that is capable of being turned from within the body A.

The operation is as follows: The power is applied to the shaft of wheels C (upon which the machine rests) and to the fans or propellers E, simultaneously. The wheels C are thus made to act as drive-wheels, and, together with the fans E, cause the machine to advance with such velocity that it will be supported by the kite or sails A, which act on the air as inclined planes. The greater part of the weight of the machine is in rear of the propellers, and hence its rear end would droop to the earth but for the support afforded by the expanded tail. In swift flight the tail can be folded, it not being then required. The sails being elevated at their outer extremities, with the weight between them and at their base, will keep the vessel from pitching or lurching, and should one or both the fans become so unmanageable as not to work, the machine would have to descend, while in motion, on an easy incline, the wheels touching the ground like the wheels of a wagon when going downhill.

It is proposed to start from the ground on a gradual incline, and descend in the same way—not to rise abruptly or descend perpendicularly.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, in a flying-machine, with the horizontal sustaining-sail A and guiding-tail F, of the body B, provided with front propellers E, whose shafts *b b* are journaled in lateral arms D, as and for the purpose specified.

FRANK BARNETT.

Witnesses:

DAVID G. LOWRY,

F. SIEVERS.