

**AËRONAUTICS: AN ABRIDGMENT
OF AËRONAUTICAL
SPECIFICATIONS FILED AT THE
PATENT OFFICE FROM A.D. 1815
TO A.D. 1891**

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Aëronautics: An Abridgment of Aëronautical Specifications Filed at the Patent Office from A.D. 1815 to A.D. 1891 by Griffith Brewer & Patrick Y. Alexander

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GRIFFITH BREWER & PATRICK Y. ALEXANDER

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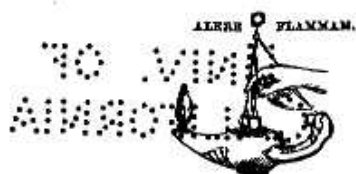
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1893.

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22

P R E F A C E.

OWING to the large number of specifications which have been filed at the Patent Office, it is extremely difficult for inventors of the present day to ascertain if their inventions have been anticipated.

It is hoped that those interested in the subject of Aëronautics will find this work of benefit to them in their researches, though it must not be expected that all the information contained in the specifications is comprised in so small a volume.

In the yearly indexes published by H.M. Patent Office, many inventions are included under the heading "Aëronautics" which do not particularly refer to the subject. This error in the official indexes is partly the fault of inventors who wish to cover an enormous ground under one Patent. Say, for example, an inventor patents a new motor, and states in his specification that the said motor may be employed for driving locomotives, traction-engines, ships, balloons, etc. The Government would probably place that invention under each of the separate titles, comprising the apparatus to which the motor could be applied. No doubt this is the best way to evade unnecessary responsibility in compiling such indexes; but in a work of this condensed description it would be impracticable to follow their example, as the reader searching for improvements in aërial machines

would hardly appreciate a light sprinkling of traction-engines or ironclad war-ships.

Many of the specifications describe inventions which are no doubt impracticable ; some are even ridiculously absurd and are probably the result of dreams. All these, however, are equally included with the ingenious inventions, as in weeding them from the remainder we should make the work incomplete and therefore of little value. Besides, many practical suggestions may be gleaned from the most absurd inventions; and is it not premature to criticize a question which is still unsolved ?

It is to be hoped that so many failures will not deter inventors from still striving to master the great problem of aërial navigation ; for it should be remembered that aërial navigation is not an *impossibility* but only a *difficulty*, which may be mastered by careful study and perseverance.

GRIFFITH BREWER.

PATRICK Y. ALEXANDER.

AËRONAUTICS.



A.D. 1815.

No. 3909.

PAULY, Samuel John, and EGG, Durs.

“AËRIAL CONVEYANCES AND VESSELS.”

ROUND bodies being unfit for navigation through a fluid, a fish-shaped aërostat is employed. The net is attached to a frame round the lower part of the aërostat, and the belly of the balloon is attached to this frame by a ribband or other appendage to enable same to act as a parachute, in case of the balloon bursting. The car is suspended to the frame.

Wings are described composed of a head-piece playing backwards and forwards horizontally, and provided with feathers formed of silk, fixed to one side of a rod by means of ribs of whalebone. Five of these feathers may form a wing, and have their silk edges toward the tail. These wings will draw the air from the nose of the balloon, and drive it along its sides to the tail, thus causing the forward motion. They may also produce an upward or downward motion.

The tail is of similar construction to the wings, and any motor may be employed.

A barrel is suspended below the car, which, when moved toward the tail, causes the nose to rise, and when moved toward the nose depresses same; thus the balloon proceeds upwards or downwards, as the case may be, in an inclined direction. Water contained in the barrel may be used as ballast. The inventors state that the aërostat might be dispensed with.



A.D. 1828.

No. 5420.

VINEY, James, and POCOCK, George.

"IMPROVED KITES."

KITES are employed for drawing vessels, etc., or for raising persons in the air.

The peculiarities of these kites are:—They are fitted with joints in the wings and the standard so that they may be folded up. The wings are spread by a moveable distender. There are four lines for controlling their power or diverting their course. Kite after kite may be attached one behind the other, and thus an indefinite power is obtained.

(Drawing.)

A.D. 1840.

No. 8337.

POOLE, Moses. (*A Communication.*)

"OBTAINING MOTIVE POWER FOR THE PROPULSION OF VESSELS, ETC."

THE inventor describes a screw-propeller having from two to twelve blades, which may be set at from one to eighty-nine degrees, according to "the power of wind you have to act against."

This screw is shown in the two sheets of drawings, in conjunction with a boat or car.

(Drawings.)

A.D. 1842.

No. 9478.

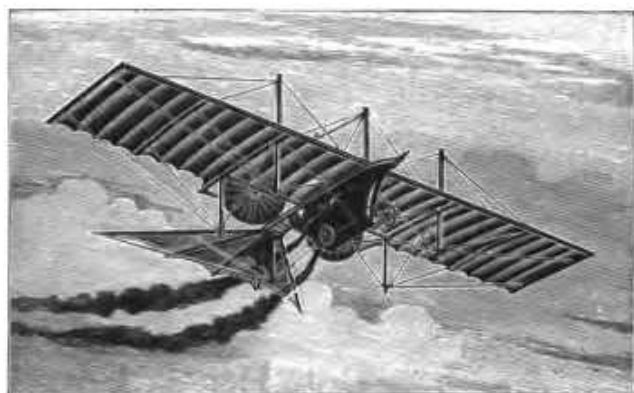
HENSON, William Samuel.

"MECHANICAL FLYING MACHINE."

THIS invention describes the employment of an "aëro-plane" for mechanical flight.

In the introductory part of the specification the inventor

states :—" If any light and flat or nearly flat article be projected or thrown edgewise in a slightly inclined position, the same will rise on the air till the force exerted is expended, when the article so thrown or projected will descend; and it will readily be conceived that if the article so projected or thrown possessed in itself a continuous power or force equal to that used in throwing or projecting it, the article would continue to ascend so long as the forward part of the surface was upwards in respect to the hinder part, and



that such article, when the power was stopped or when the inclination was reversed, would descend by gravity only if the power was stopped, or by gravity aided by the force of the power contained in the article, if the power be continued, thus imitating the flight of a bird."

It will be seen from this quotation that Henson had a clear knowledge of the properties of what is now termed the "aëroplane," and he proceeds to describe a machine in which an "aëroplane," propelled forward at a suitable inclination and speed, serves as a support on the air for itself and other parts connected therewith.

The car or vessel is made with a view to strength and lightness, and three wheels are situated below to enable it to run on the ground. On either side of the car is an extended