

### POWER REQUIRED.

[579] In reply to "Vinot's" query [492] in your issue of April 30th, 1910, I beg to submit following figures:—Total span, 30 ft.; width, 6 ft.; aspect ratio, 5; engine, 25 h.p. (weight, say, 125 lbs.); total weight, *i.e.*, lift = 625 lbs.; taking angle of incidence = 8°.

At a speed of 44 m.p.h., 1 sq. ft. should support 3.5 lbs. at above angle of incidence.

Therefore, 180 sq. ft. should support 630 lbs. = *actual* lift.

Taking into account the approximate effect of skin and head resistance (assuming good design and construction), the ratio of "lift" to "drift" = 6 to 1. Therefore drift = 105 lbs., which will be the thrust or pull required of the propeller when moving forward at 44 m.p.h. (about 64.5 ft. per sec.).

Therefore, useful h.p. required =  $\frac{105 \times 64.5}{550} = 12.3$ .

The total h.p. necessary will, of course, depend on the efficiency of the particular design of propeller employed.

However, assuming a propeller efficiency of 50 per cent., which is low for a good design, the h.p. of engine should be 24.6.

I find the above data and figures agree approximately with the particulars of the Blériot cross-Channel monoplane given in issue of FLIGHT for April 23rd, 1910, p. 367, and to which I would refer "Vinot," as the areas, weights, &c., are somewhat similar to those in his query.

Dublin.

R. L. B. STEELE.

### THE GNOME ENGINE.

[580] I notice your correspondent Mr. B. H. Balassaniant draws attention to the gyroscopic action of the Gnome rotary motor, and accordingly predicts that the cause of the accidents to M. Dela-grange, and more recently to M. Le Blon, are due to that cause. He apparently omits to take into consideration, however, that it was on the same type machine—a Blériot—that the accident occurred, and from what I can gather from eyewitnesses it was the same member that gave way.

I feel sure that anyone who has gone thoroughly into the construction of the Blériot monoplanes must admit there are defects and weaknesses. When a higher powered engine, Gnome or otherwise, is installed, these weak points are clearly shown.

I think the doings of M. Paulhan, also Mr. Farman and others, is sufficient proof of the utility, reliability, and all round good qualities of the Gnome motor.

If it really were the gyroscopic action of the motor (which is so extremely successful on the biplane) that caused the above accidents to the monoplanes, this is another argument in favour of the biplane, taking it from the point of view that the monoplane construction was right and that the machines were airworthy.

Hungerford.

G. H. BROWN-EKINS.

### PUBLICATIONS RECEIVED.

*Bulletin of the Swiss Aero Club.* Nos. 1 and 2, March and April, 1910. Berne: The Swiss Aero Club. Price 1 fr. 25.

*L'Aeroplane de l'Avenir.* By Henry Picq. Paris: Librairie Aeronautique, 32, Rue Madame. Price 1 fr. 50.

*Le Constructeur de Petits Aeroplanes.* By R. Petit. Paris: Librairie Aeronautique, 32, Rue Madame. Price 1 fr. 50.

*Peggy the Aeronaut.* By J. L. J. Carter. London: Everett and Co. Price 1s.

### Catalogues.

*E.N.V. All-British Aviation Motors.* Warwick Wright, Ltd., 110, High Street, Manchester Square, W.

*"Tellier" Aeroplanes.* Aeroplane Tellier (Great Britain) Co. D. L. Santoni, 10, Coburn Place, W.

### NEW COMPANY REGISTERED.

**Davidson's Gyropter Flying Machine, Ltd.**—Capital £250, in 1d. shares. Formed to acquire from G. L. O. Davidson certain patents and rights relating to flying machines.

### Aeronautical Patents Published.

Applied for in 1909.

Published June 23rd, 1910.

25,480. B. J. PRESSEY. Aeroplanes.

Applied for in 1910.

Published June 23rd, 1910.

5,646. H. L., A. E., AND H. O. SHORT. Valves for gas containers.

## DIARY OF FORTHCOMING EVENTS.

### British Events.

1910.	July 2	Wolverhampton.	July 23	Balloon Race, Hurlingham.
June 27	July 2	Balloon Race, Hurlingham.	July 28-Aug. 3	Blackpool.
July 2	July 2	Coventry Ae.S. Model Trials.	Aug. 6-13	Lanark.*
July 9	July 2	Bournemouth.*	Aug. 15-20	Blackpool.
July 11-16	July 2	Kite and Models Competition.	Aug. 24-27	Cardiff.
July 16	July 2	Kite and Model Aeroplane Assoc.	Aug. 17-24	Southend.
July 20-24	July 2	Doncaster.	Sept. 1-3	Folkestone.
	July 2		Sept. 6-10	Durham.

### Foreign Events.

1910.	Sept. 25-Oct. 3	Biarritz.
July 19-26	Oct. 18-25	St. Louis. Gordon-Bennett Balloon Race.
July 3-10	Oct. 25-Nov. 2	America. Gordon Bennett Aviation Cup.
July 24-Aug. 4	Sept. 4-18	Marseilles.
Aug. 6-21		
Aug. 25-Sept. 4		
Sept. 24-Oct. 3		

\* International.

## BACK NUMBERS OF "FLIGHT."

SEVERAL back numbers are now very scarce, and have been raised in price as follows:—

No. 2, Jan. 9,	1909.	Table of Propellers ...	5 s. d.
6, Feb. 6,	"	"How Men Fly" ...	1 0
8, "	20,	"	1 0
10, Mar. 6,	"	"	1 0
12, "	20,	"	1 6
15, Apr. 10,	"	"	1 0
16, "	17,	"	3 6
31, July 31	"	"	2 0

(Full page drawing.)

Other back numbers (excepting Nos. 3 and 4, which are out of print), post free, 1½d. each, including descriptions and scale drawings of the Voisin (Nos. 33 and 34), Curtiss (No. 27), Cody (No. 34), Farman (No. 42), and Wright (No. 63) biplanes, the Santos Dumont (Nos. 40 and 41), Antoinette (Nos. 43 and 44), and Grade (No. 50) monoplanes, and of a full-size Wright glider (Nos. 38 and 39).

BINDING COVERS for Vol. I, price 2s. 4d., post free.

TITLE PAGE and INDEX for Vol. I, 2d., post free.

Readers' own copies bound, price 4s. per part (including cover, title page, and index, postage extra).

VOLUME I, bound complete with all scarce numbers, 25s., post free; in two parts, 28s. 6d., complete.

Prices of special binding on application.

## FLIGHT.

44, ST. MARTIN'S LANE, LONDON, W.C.

Telegraphic address: Truditur, London. Telephone: 1828 Gerrard.

### SUBSCRIPTION RATES.

FLIGHT will be forwarded, post free, to any part of the world at the following rates:—

UNITED KINGDOM.		ABROAD.	
3 Months, Post Free ...	1 8	3 Months, Post Free ...	2 6
6 " " " ...	3 3	6 " " " ...	5 0
12 " " " ...	6 6	12 " " " ...	10 0

Cheques and Post Office Orders should be made payable to the Proprietors of FLIGHT, 44, St. Martin's Lane, W.C., and crossed London and County Bank, otherwise no responsibility will be accepted.

Should any difficulty be experienced in procuring FLIGHT from local news-vendors, intending readers can obtain each issue direct from the Publishing Office, by forwarding remittance as above.