



US00D635083S

(12) **United States Design Patent**
DeLaurier

(10) **Patent No.:** **US D635,083 S**

(45) **Date of Patent:** **** Mar. 29, 2011**

(54) **HYBRID AIRSHIP**

(76) Inventor: **James D. DeLaurier**, Concord (CA)

(**) Term: **14 Years**

(21) Appl. No.: **29/325,966**

(22) Filed: **Oct. 9, 2008**

(51) **LOC (9) Cl.** **12-07**

(52) **U.S. Cl.** **D12/319**

(58) **Field of Classification Search** D12/319,
D12/328-331, 333, 334, 343; D21/430,
D21/447, 448; 446/30, 56; 244/13, 15, 24,
244/29, 30, 45 R, 45 A, 59, 215, 900
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,778,585	A	1/1957	Tschudy
3,486,719	A	12/1969	Fitzpatrick et al.
3,620,486	A	11/1971	Charpentier et al.
3,761,041	A	9/1973	Putman
4,149,688	A	4/1979	Miller, Jr.
4,261,534	A	4/1981	Roselli
4,606,515	A	8/1986	Hickey
4,768,738	A	9/1988	Weinert
4,896,160	A	1/1990	Miller, Jr.
5,005,783	A	4/1991	Taylor
5,110,070	A	5/1992	Hagenlocher et al.
5,285,986	A	2/1994	Hagenlocher
5,348,254	A	9/1994	Nakada
5,823,468	A	10/1998	Bothe
5,909,857	A	6/1999	Filimonov
6,196,498	B1	3/2001	Eichstedt et al.
6,224,016	B1	5/2001	Lee et al.
6,293,493	B1	9/2001	Eichstedt et al.
6,302,357	B1	10/2001	Kalisz
6,311,925	B1	11/2001	Rist
6,315,242	B1	11/2001	Eichstedt et al.
6,371,409	B1	4/2002	Steele
6,540,178	B1	4/2003	Hillsdon
6,565,037	B1	5/2003	Tonkovich

D488,426	S *	4/2004	Hall	D12/319
6,860,449	B1	3/2005	Chen		
6,880,783	B2	4/2005	Munk		
7,036,768	B2	5/2006	Bundo		
7,093,789	B2	8/2006	Barocela et al.		

(Continued)

FOREIGN PATENT DOCUMENTS

GB	2300010	B	10/1998
WO	2008046872	A1	9/2006

OTHER PUBLICATIONS

Zhou, Zheng; Ye, Zheng-Yin; The influence of airship envelop vibration on the flow field; Kongjun Gongcheng Daxue Xuebao (Ziran Kexue Ban); 2008; pp. 6-10; 200809-10-1612042; Air Force Engineering University Xi'an City; Xi'an City; China.

(Continued)

Primary Examiner — Cathron C. Brooks

Assistant Examiner — Maurice Stevens

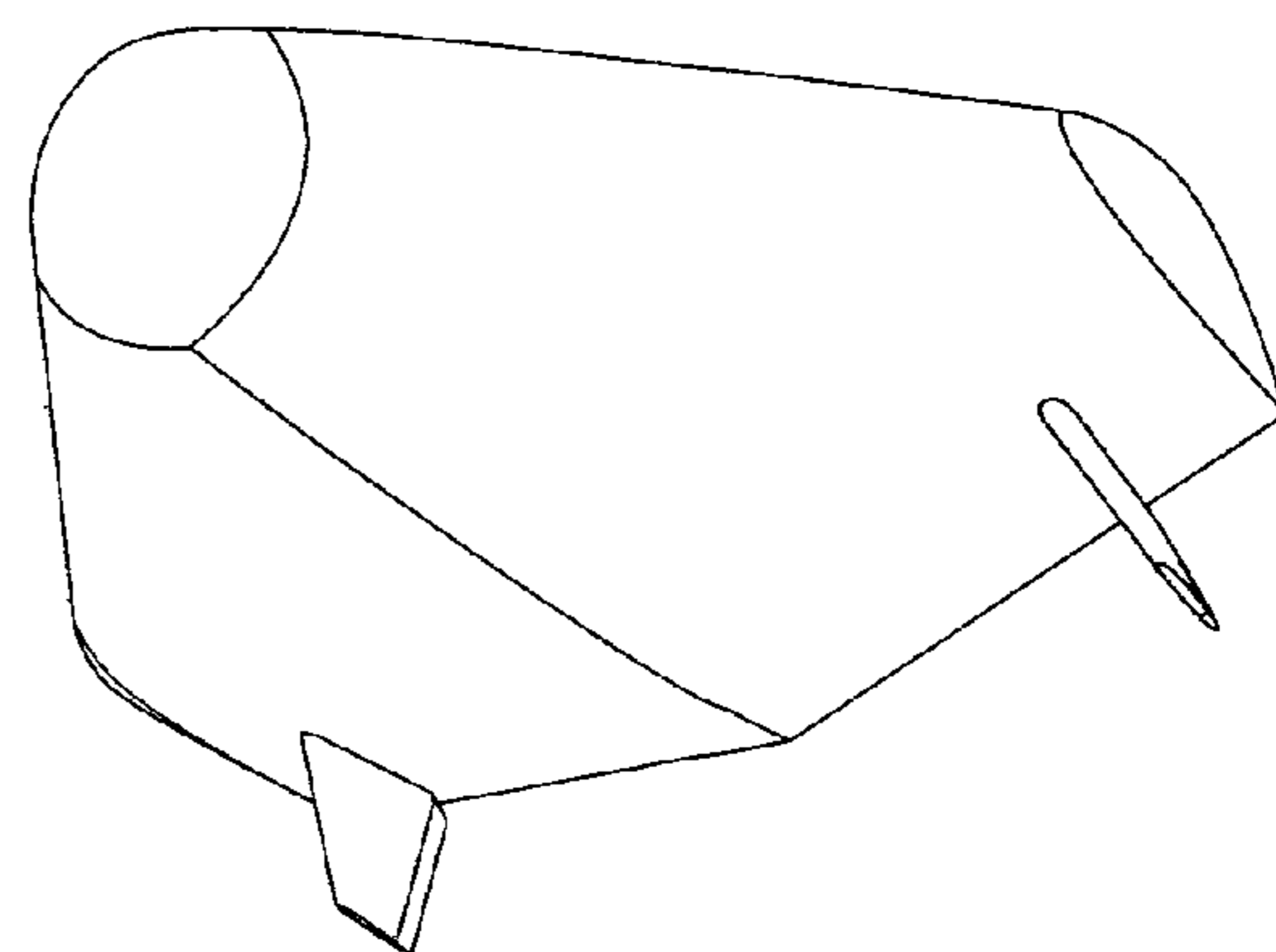
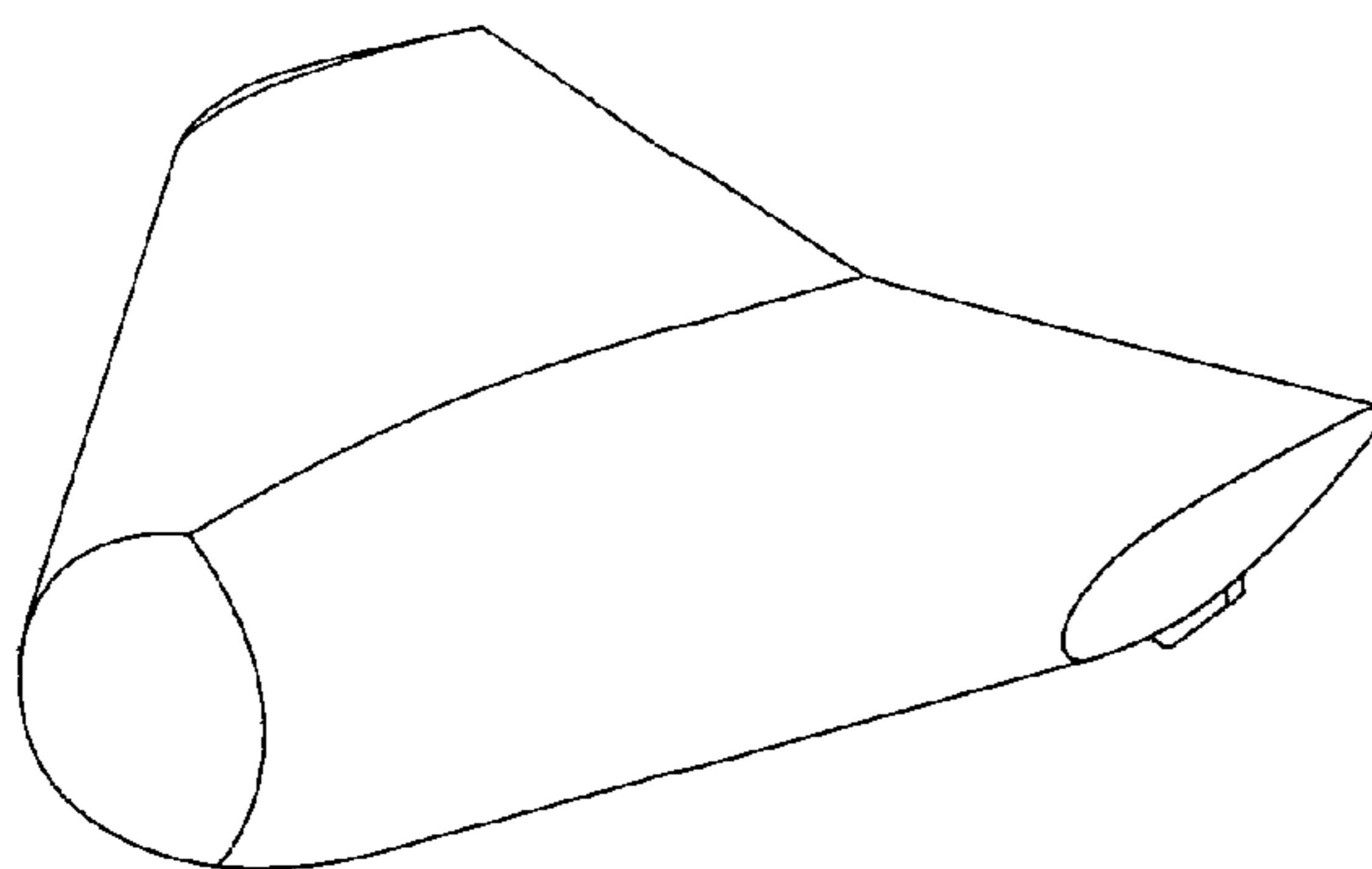
(57) **CLAIM**

The ornamental design for a hybrid airship, as shown and described.

DESCRIPTION

FIG. 1 is a top plan view of the hybrid airship showing my new design;
FIG. 2 is a top perspective view of the hybrid airship of FIG. 1;
FIG. 3 is a front elevation view of the hybrid airship of FIG. 1;
FIG. 4 is a side elevation view of the hybrid airship of FIG. 1, the opposite side being a mirror image;
FIG. 5 is a bottom plan view of the hybrid airship of FIG. 1;
FIG. 6 is a bottom perspective view of the hybrid airship of FIG. 1; and,
FIG. 7 is a back elevation view of the hybrid airship of FIG. 1.

1 Claim, 1 Drawing Sheet



U.S. PATENT DOCUMENTS

7,108,230	B2	9/2006	Clark	
7,137,592	B2	11/2006	Barocela et al.	
7,350,746	B2	4/2008	Gili et al.	
D588,519	S *	3/2009	Westra et al.	D12/319
D588,976	S *	3/2009	Westra et al.	D12/319
D597,472	S *	8/2009	Cazals	D12/319
D616,352	S *	5/2010	Schafroth	D12/319
D616,805	S *	6/2010	Zha	D12/343
2007/0029448	A1	2/2007	Powell	
2007/0205330	A1	9/2007	Hubbard	
2007/0295859	A1	12/2007	Colvin	

OTHER PUBLICATIONS

Gregory, P. A.; Joubert, P. N. Chong, M.S.; Flow Over a Body of Revolution in a Steady Turn; N06-34-36083; Oct. 2004; pp. 37;

N06-34-36083; NASA Center for AeroSpace Information; Maryland; USA.

Lutz, TH.; Funk, P.; Jakobi, A.; Wagner, S.; Aerodynamic investigations on inclined airship bodies; International Airship Convention and Exhibition—1998, Proceedings; Jun. 26, 1998; pp. 127-138; A98-41053 11-01; Airship Association; Folkestone; U.K.

Layton, D. M.; Quasi-hybrid airships; Lighter-Than-Air Systems Technology Conference, Annapolis, MD, Jul. 8-10, 1981, Collection of Technical Papers; 1981; pp. 86-89; A81-38526 17-01; American Institute of Aeronautics and Astronautics; New York.

Cabot, L.; Some problems posed by the Aerodynamics of the dirigible balloon; Association Aeronautique et Astronautique de France, Colloque d'Aerodynamique Appliquee, 11th, Universite de Bordeaux I, Talence, Gironde, France; Nov. 6-8, 1974; pp. 18; Centre National d'Etudes Spatiales; Gironde, France.

* cited by examiner

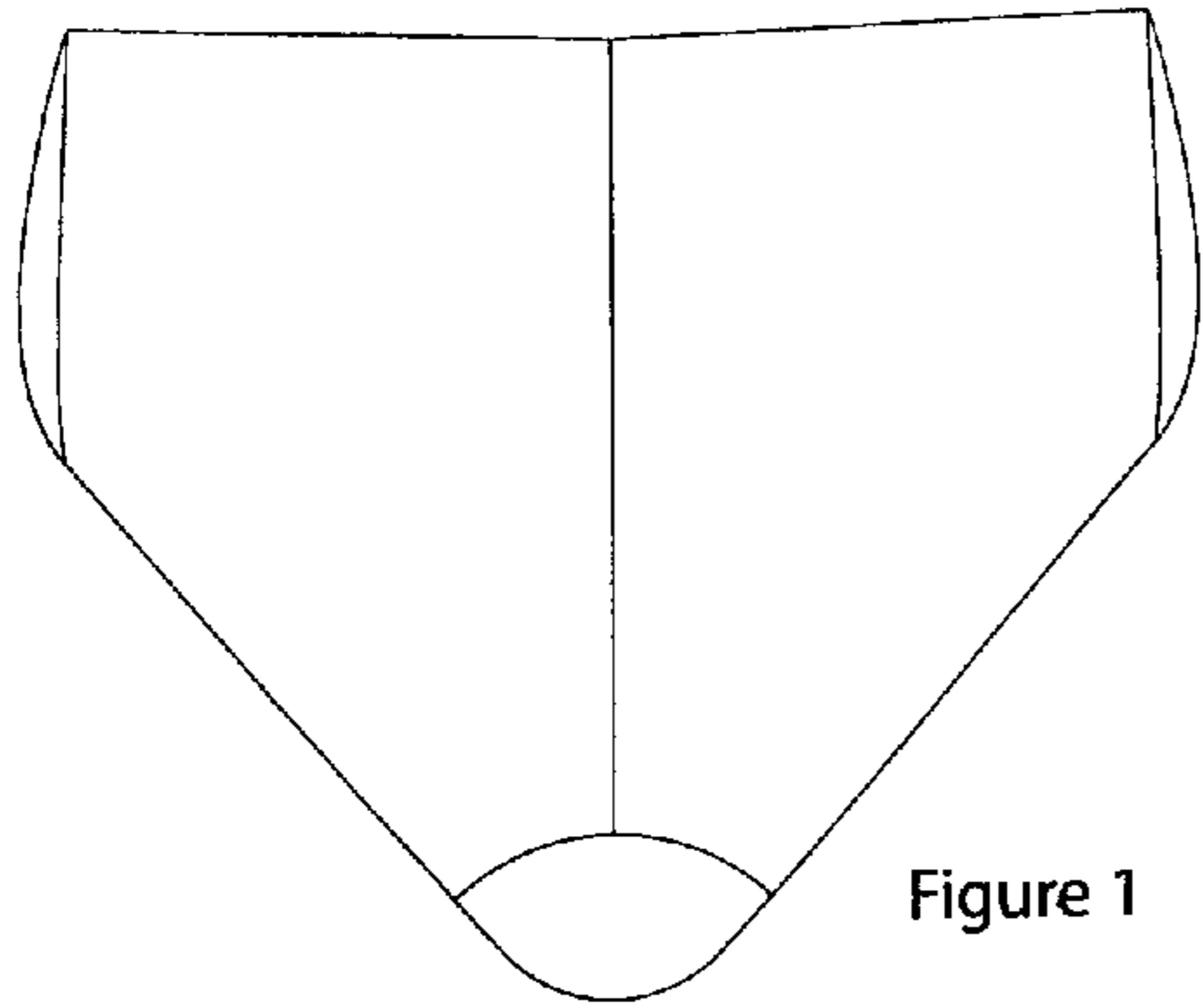


Figure 1

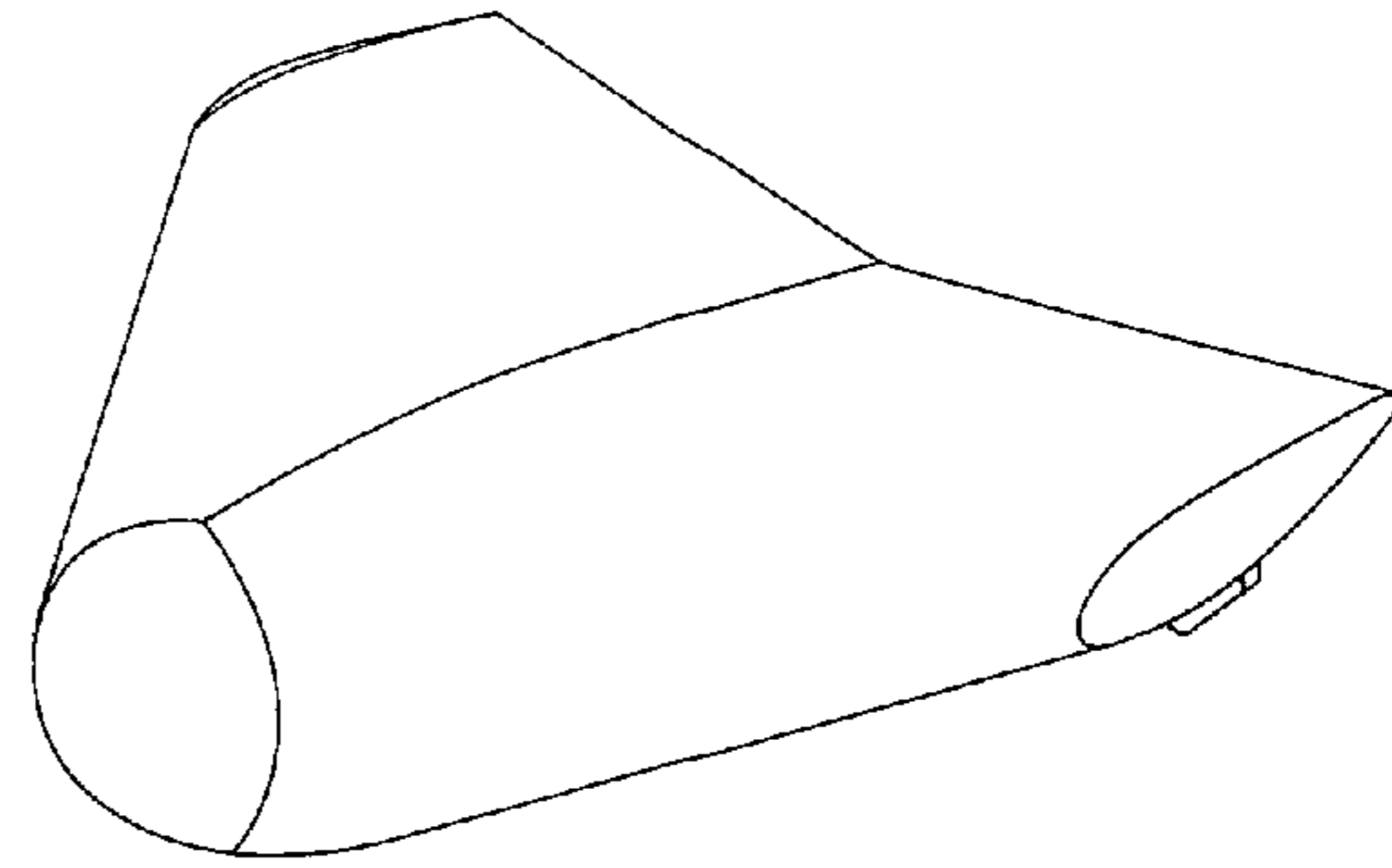


Figure 2

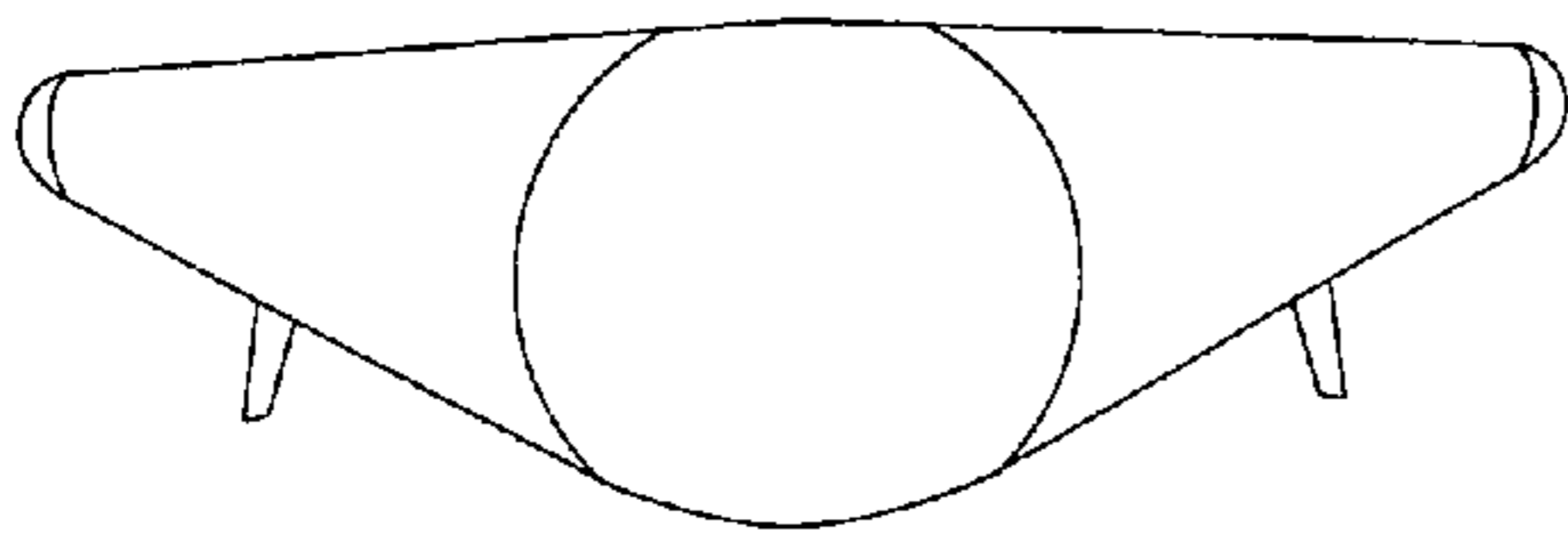


Figure 3

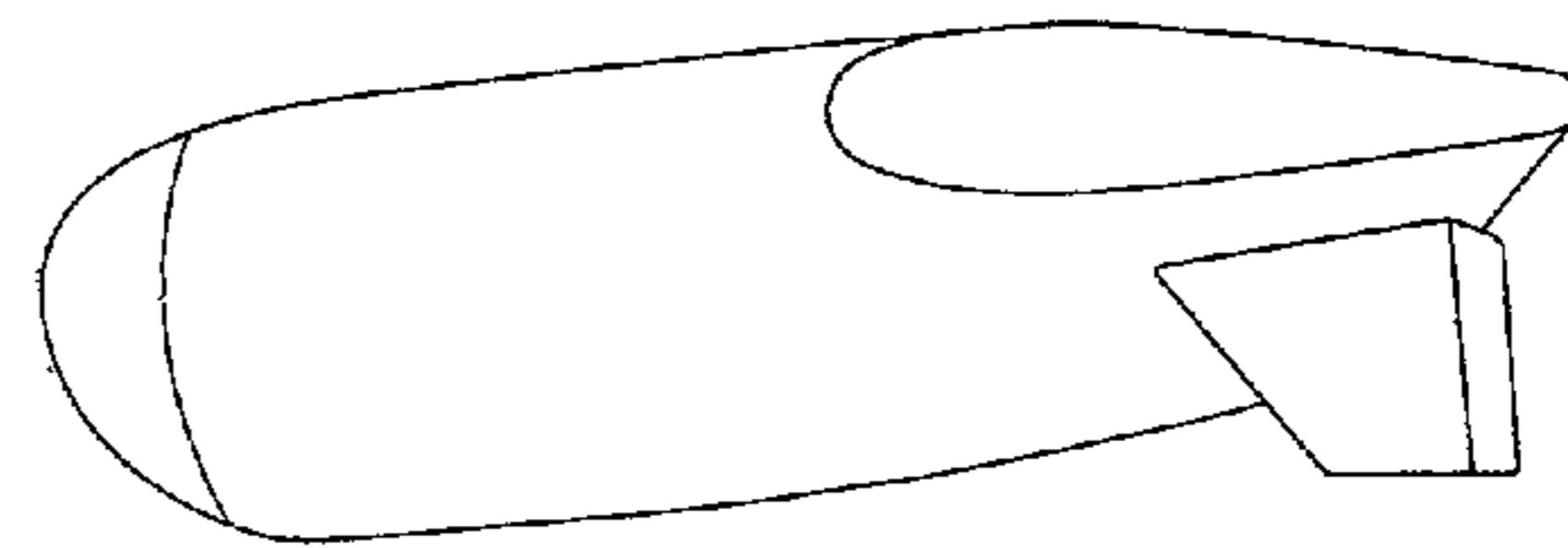


Figure 4

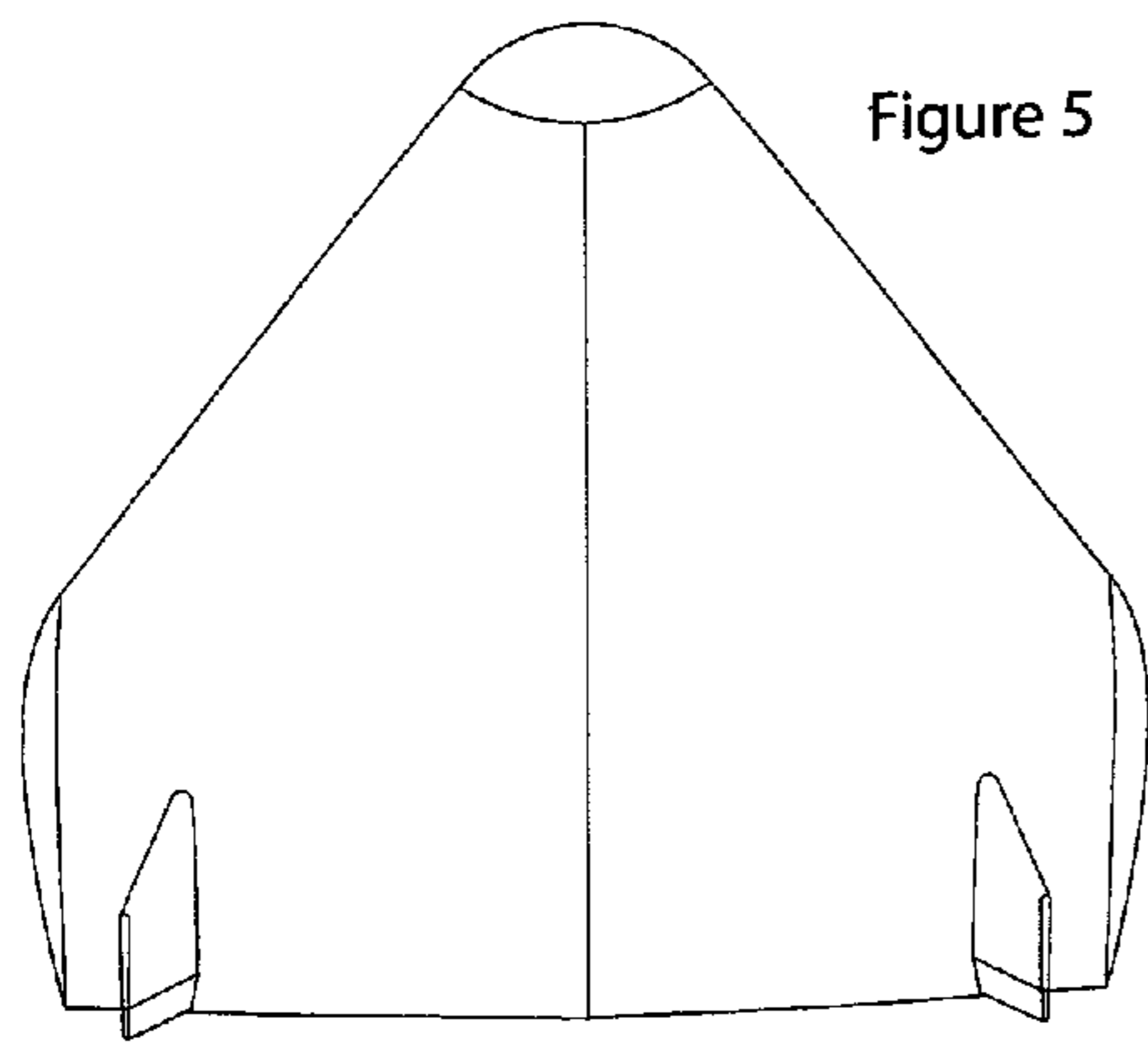


Figure 5

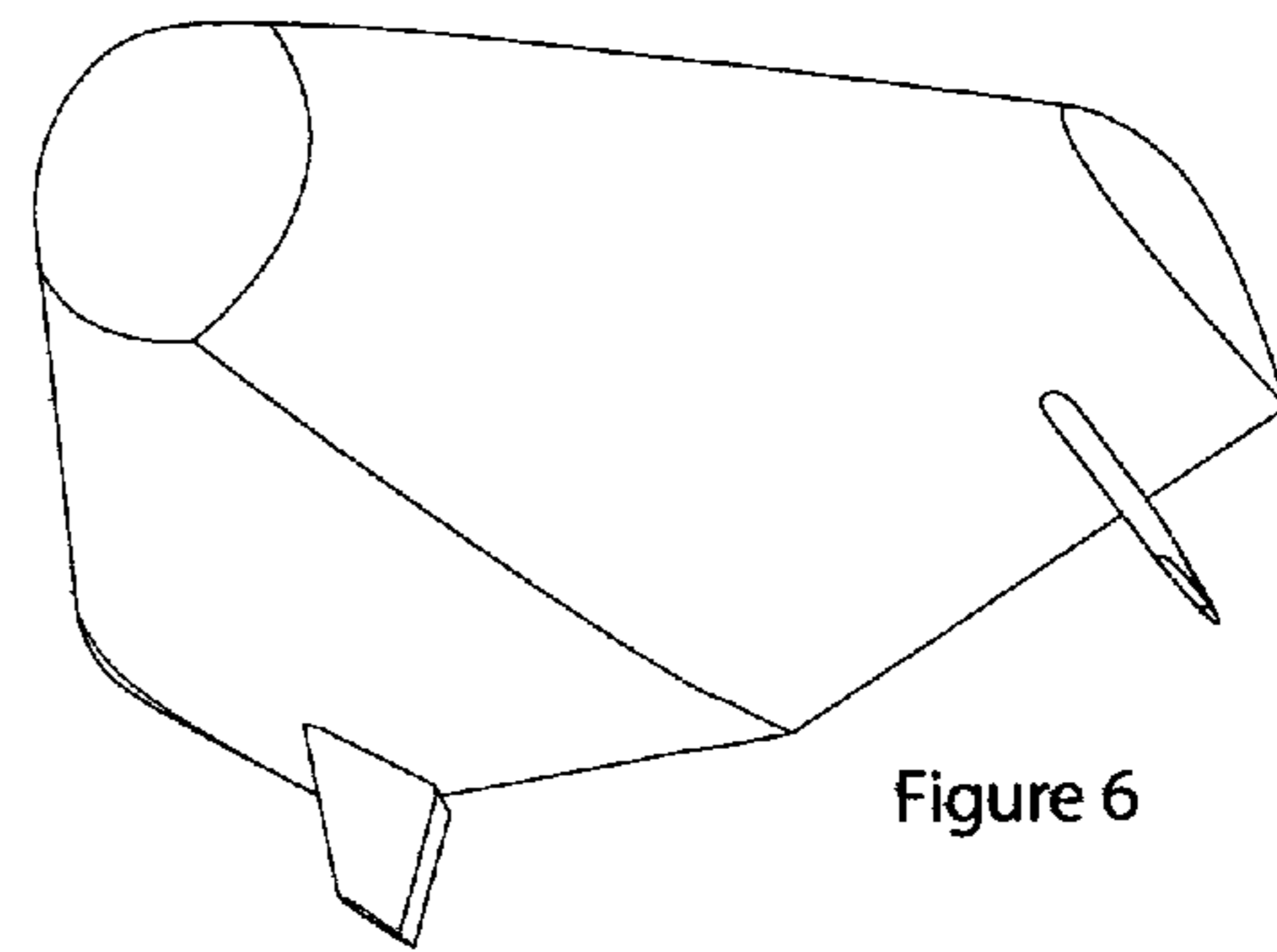


Figure 6

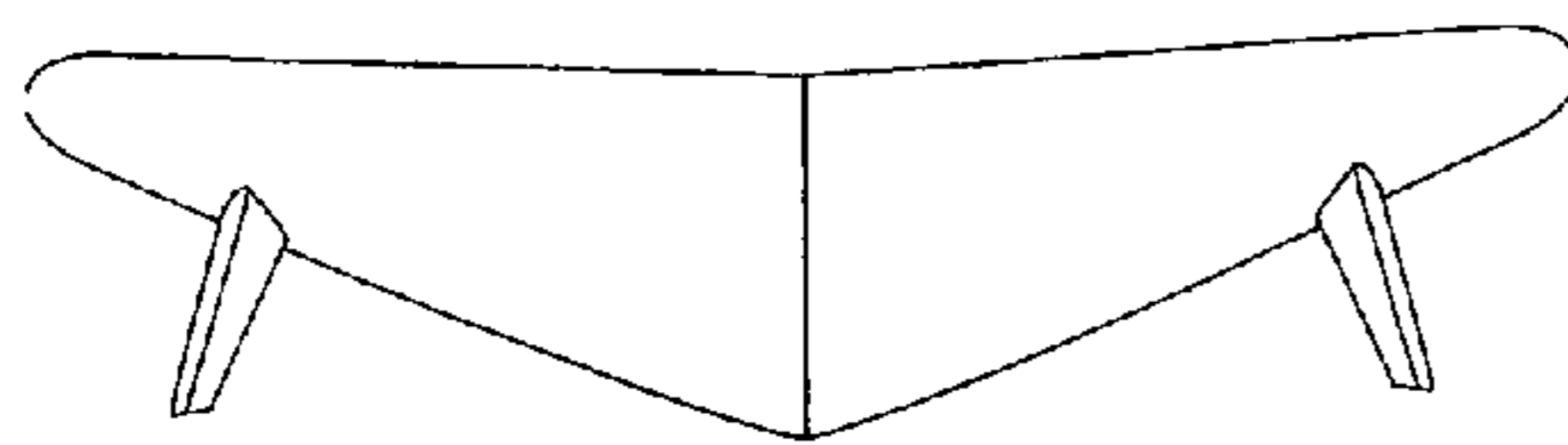


Figure 7