US00D583297S

(12) United States Design Patent

Van De Rostyne et al.

(10) Patent No.: US D583,297 S
(45) Date of Patent: ** Dec. 23, 2008

(54) **HELICOPTER ROTORS**

(75) Inventors: **Alexander Jozef Magdalena Van De Rostyne**, Bornum (BE); **Chi Pok Billy Wai**, Causeway Bay (HK)

(73) Assignee: **Silverlit Toys Manufactory Ltd.**, Hong Kong (HK)

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

(21) Appl. No.: **29/296,934**

(22) Filed: **Oct. 31, 2007**

(51) **LOC (8) Cl.** **12-07**
(52) **U.S. Cl.** **D12/345**
(58) **Field of Classification Search** 12/326–329, 12/345; D21/441–442, 450, 453; 446/36–45, 446/230, 232; 244/17.11, 17.23, 17.25, 17.19, 244/17.27, 12.4
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,403,909	A		1/1922	Moir
1,446,522	A	*	2/1923	Smith 416/123
1,773,281	A		8/1930	Scott
1,800,470	A		4/1931	Oehmichen
2,030,578	A		2/1936	Flettner
2,366,698	A		2/1945	Young
2,384,516	A		9/1945	Young
2,411,596	A		11/1946	Shapiro
2,413,831	A		1/1947	Jordan
2,429,502	A		10/1947	Young
D149,130	S		3/1948	Katenberter et al.
2,439,143	A		4/1948	Nemeth
D153,314	S		4/1949	Piasecki
D153,315	S		4/1949	Piasecki
D153,316	S		4/1949	Piasecki
D153,317	S		4/1949	Piasecki
2,469,144	A		5/1949	Baggott
2,481,750	A		9/1949	Hiller, Jr. et al.
2,486,059	A	*	10/1949	Pentecost 416/115
2,532,683	A		12/1950	Traver
D163,938	S		7/1951	Douglas
2,629,568	A		2/1953	Croshere, Jr. et al.
2,633,924	A		4/1953	Young
2,646,848	A		7/1953	Young
2,629,570	A		12/1953	Carnahan
D171,569	S		3/1954	Apostolescu
2,725,494	A		11/1955	Anderson
D178,081	S		6/1956	Papadakos
2,750,131	A		6/1956	Thomson
D181,643	S		12/1957	Graham

(Continued)

FOREIGN PATENT DOCUMENTS

BE	338599	12/1926

(Continued)

OTHER PUBLICATIONS

Photographic prior art reference #1, helicopter.

(Continued)

Primary Examiner—Charles A. Rademaker
Assistant Examiner—Maurice Stevens
(74) *Attorney, Agent, or Firm*—Greenberg Traurig LLP

(57) **CLAIM**

The ornamental design for helicopter rotors, as shown and described.

DESCRIPTION

FIG. **1** is a side elevation view of helicopter rotors, showing our new design;

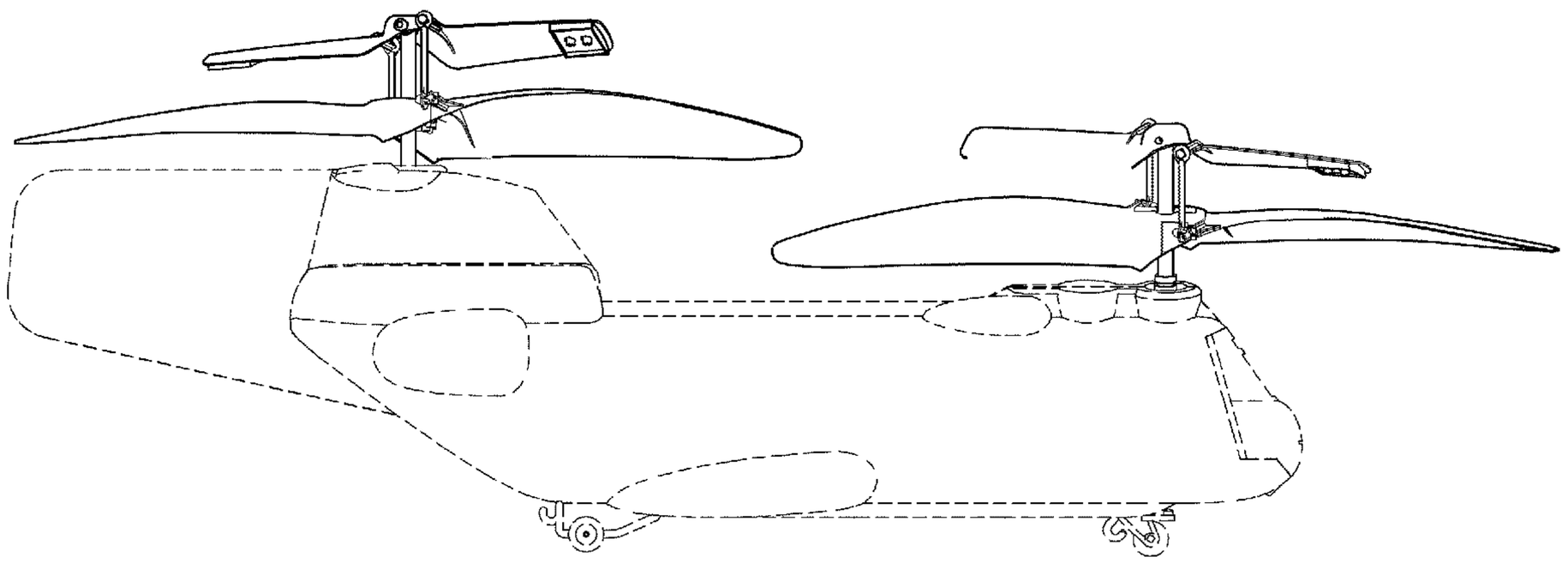
FIG. **2** is an elevation of the side opposite that shown in FIG. **1**;

FIG. **3** is a top perspective view thereof; and,

FIG. **4** is a top perspective view thereof.

Broken lines are for illustrative purposes only and form no part of the claimed design.

1 Claim, 4 Drawing Sheets



U.S. PATENT DOCUMENTS

D187,895	S		5/1960	Douglas
2,950,074	A		8/1960	Apostolescu
3,029,048	A		4/1962	Brooks et al.
3,035,643	A		5/1962	Kelley et al.
3,080,001	A		3/1963	Culver et al.
3,093,929	A		6/1963	Robbins et al.
3,106,964	A		10/1963	Culver et al.
3,180,424	A		4/1965	Serriades
3,213,944	A		10/1965	Nichols et al.
3,228,478	A		1/1966	Edenborough
3,409,249	A		11/1968	Bergquist et al.
3,448,810	A		6/1969	Vogt
3,572,616	A		3/1971	Ulisnik
3,592,559	A		7/1971	Ward
3,625,631	A		12/1971	Covington, Jr. et al.
3,771,924	A		11/1973	Buchstaller
D232,168	S		7/1974	Leoni
D232,170	S		7/1974	Diamond et al.
D234,350	S		2/1975	Beckert et al.
D239,930	S		5/1976	Ulisnik
4,025,230	A		5/1977	Kastan
4,053,123	A		10/1977	Chadwick
4,073,086	A		2/1978	Ogawa
4,118,143	A		10/1978	Kavan
4,142,697	A		3/1979	Fradenburgh
D253,003	S		9/1979	Tanaka
4,227,856	A		10/1980	Verrill et al.
4,307,533	A		12/1981	Sims et al.
4,522,563	A		6/1985	Reyes et al.
4,629,440	A		12/1986	McKittrick et al.
D294,605	S		3/1988	Matsumoto
5,015,187	A		5/1991	Lord
5,108,043	A	*	4/1992	Canavespe 244/17.11
5,209,429	A	*	5/1993	Doolin et al. 244/17.11
5,240,204	A		8/1993	Kunz
5,255,871	A		10/1993	Ikeda
5,370,341	A	*	12/1994	Leon 244/17.11
D357,894	S		5/1995	Arnold et al.
5,511,947	A		4/1996	Schmuck
D372,741	S		8/1996	Tsai
D378,606	S		3/1997	Tamagnini
5,609,312	A		3/1997	Arlton et al.
5,628,620	A		5/1997	Arlton
D388,048	S		12/1997	Taylor et al.
D390,942	S		2/1998	Mei
5,749,540	A		5/1998	Arlton
5,836,545	A		11/1998	Arlton et al.
5,879,131	A		3/1999	Arlton et al.
5,906,476	A		5/1999	Arlton
6,000,911	A		12/1999	Toulmay et al.
D421,279	S		2/2000	Tsai
6,032,899	A		3/2000	Mondet et al.
6,039,541	A		3/2000	Parker et al.
D425,853	S		5/2000	Caporaletti
6,302,652	B1		10/2001	Roberts
6,398,618	B1		6/2002	Wu
6,435,453	B1	*	8/2002	Carter, Jr. 244/8
6,460,802	B1		10/2002	Norris
6,467,726	B1		10/2002	Hosoda
D467,861	S		12/2002	Lee
6,499,690	B1		12/2002	Katayama et al.
6,543,726	B2		4/2003	Illingworth
6,632,119	B2		10/2003	Chernek et al.
6,659,395	B2		12/2003	Rehkemper et al.
6,659,721	B1		12/2003	Parker et al.
6,719,244	B1		4/2004	Gress
6,732,973	B1		5/2004	Rehkemper
6,749,401	B2		6/2004	Vanmoor
6,758,436	B2		7/2004	Rehkemper et al.
6,789,764	B2		9/2004	Bass et al.
6,884,034	B1		4/2005	Parker et al.
6,886,777	B2		5/2005	Rock
6,929,215	B2		8/2005	Arlton
D524,227	S	*	7/2006	Stille et al. D12/327
D524,228	S	*	7/2006	Scott et al. D12/327
D524,229	S		7/2006	Stille et al.
D524,718	S	*	7/2006	Scott et al. D12/327
7,100,866	B2		9/2006	Rehkemper et al.
7,178,758	B2	*	2/2007	Rehkemper 244/17.11
7,198,223	B2		4/2007	Phelps, III et al.
D545,735	S	*	7/2007	Angelo et al. D12/173
D548,803	S		8/2007	Zimet
7,264,199	B2		9/2007	Zientek
2002/0109044	A1		8/2002	Rock
2002/0134883	A1		9/2002	Stamps et al.
2004/0087241	A1		5/2004	Agostini et al.
2004/0184915	A1		9/2004	Kunii et al.
2004/0222329	A1		11/2004	Kuhns et al.
2004/0245376	A1		12/2004	Muren
2005/0121553	A1		6/2005	Isawa et al.
2006/0121819	A1		6/2006	Isawa
2006/0231677	A1		10/2006	Zimet et al.
2007/0012818	A1		1/2007	Miyazawa et al.
2007/0105475	A1		5/2007	Gotou et al.
2007/0164148	A1		7/2007	Van De Rostyne
2007/0164149	A1		7/2007	Van De Rostyne
2007/0178798	A1		8/2007	Lai
2007/0181742	A1		8/2007	Van de Rostyne et al.
2007/0187549	A1		8/2007	Owen
2007/0215750	A1		9/2007	Shantz et al.

FOREIGN PATENT DOCUMENTS

BE	1016960		11/2007
DE	1 270 408		6/1968
DE	40 17 402	A1	12/1991
DE	94 14 652	U1	11/1994
GB	916894	A	1/1963
GB	956536		4/1964
GB	958536		5/1964
GB	1081341	A	8/1967
JP	S30-7668		10/1930
JP	S32-003535		6/1932
JP	1269699		10/1989
JP	9048398		2/1997
JP	9512515		12/1997
JP	10076996		3/1998
JP	2000-272594		10/2000
JP	2003-103066		4/2003
JP	2003-220999		8/2003
JP	2004-121798		4/2004
JP	2005-193905		7/2005
JP	2006-051217		2/2006

OTHER PUBLICATIONS

Photographic prior art reference #2, helicopter displaying writing in French on the tail.

Photographic prior art reference #3, explanation of the function of the flybar.

Photographic prior art reference #4, toy helicopter, www.raidentech.com.

Photographic prior art reference #5, toy helicopter.

Photographic prior art reference #6, helicopter.

Photographic prior art reference #7, helicopter with M40297 or MA0297 displayed on the tail.

Photographic prior art reference #8, toy helicopter #AHS-23900, hstoy en.alibaba.com.

Photographic prior art reference #9, toy helicopter, toys999.en.alibaba.com.

Mill, Colin. "Practical Theories, Part 9", WeMH—World Wide Web Model Helicopter Magazine, Jul. 1996, http://www.w3mh.co.uk/articles/html/csm9-11.htm.

Day, David. "Moving swashplates & CCPM", 2001-2006. See http://www.iroquois.free-online.co.uk.

Selberg, B.P.; Cronin, D.L.; Rokhsaz, K.; Dykman, J.R. Yager, C. J. "Aerodynamic-Structural Analysis of Dual Bladed Helicopter Systems (Field technical Report", Report No. NASA-CR-162754, Feb. 80 46p (Abstract).

Ham, Normand. Helicopter individual-blade-control research at MIT 1977-1985; DGLR, European Rotorcraft Forum, 12th, Garmisch-Partenkirchen, West Germany; Germany, Federal Republic of; Sep. 22-25, 1986 10 pp. 1986 (Abstract).

Proctor, Paul. "Aviation Weet & Space Technology", vol. 146, No. 13, p. 47(1), Mar. 31, 1997 (Abstract).

Zein-Sabatto, S.; Zheng, Y. "Intelligent Flight Controllers for Helicopter Control"; 1997 IEEE International Conference on Neural Networks, Proceedings (Cat. No. 97CH36109) Part vol. 2 p. 617-21 vol. 2 (Abstract).

Mirick, Paul H. "A Comparison of Theory and Experiment for Coupled Rotor Body Stability of a Bearingless Rotor Model in Hover and Forward Flight", Jun. 1, 1988, IP Document Id 19880017770 pp. 87-101 (Abstract).

US District Court, Eastern District of Virginia, Norfolk Division, *Silverlit Toys Manufactory, Ltd., et al.* v. *Westminister, Inc., et al.*, Case No. 2:07-cv-472-JBF/JEB.

US District Court, Northern District of Georgia, Atlanta Division, *Westminister, Inc.* v. *Silverlit Toys Manufactory, Ltd., et al.*, Case No. 1:07-cv-2450-JOF.

US District Court, Central District of California, Southern Division, *Innovage LLC* v. *Silverlit Toys Manufactry, Ltd., et al.*, Case No. SAC07-1334 DOC (ANx).

* cited by examiner

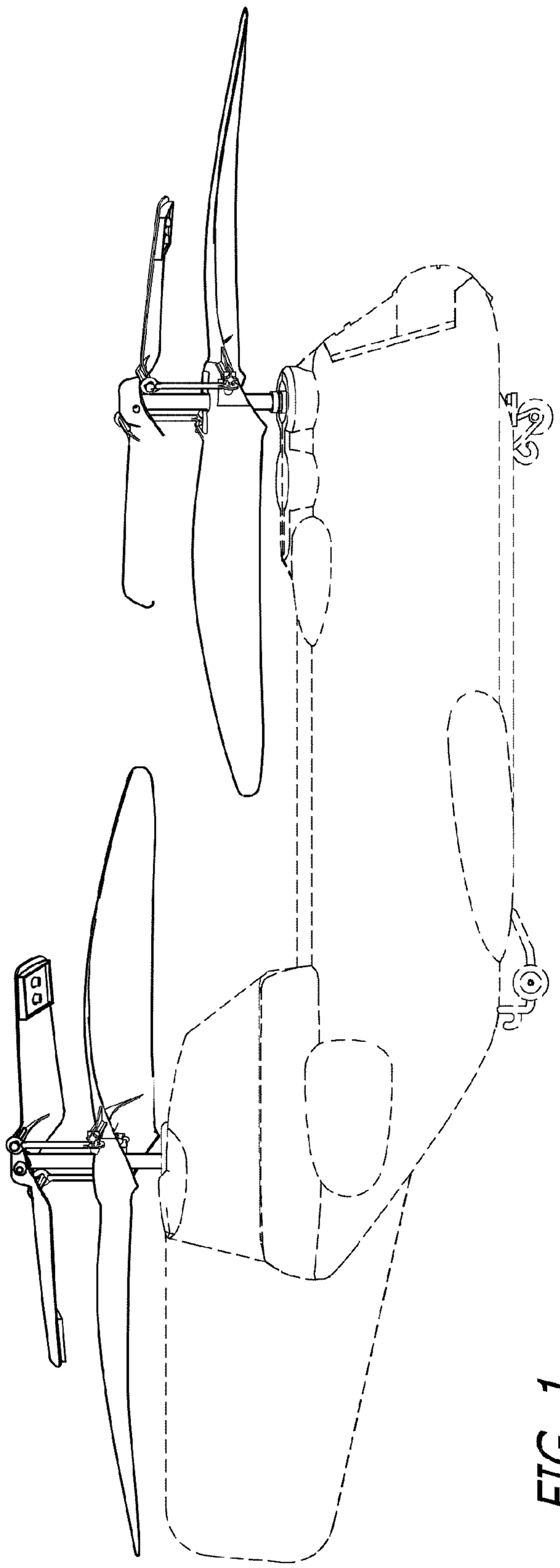


FIG. 1

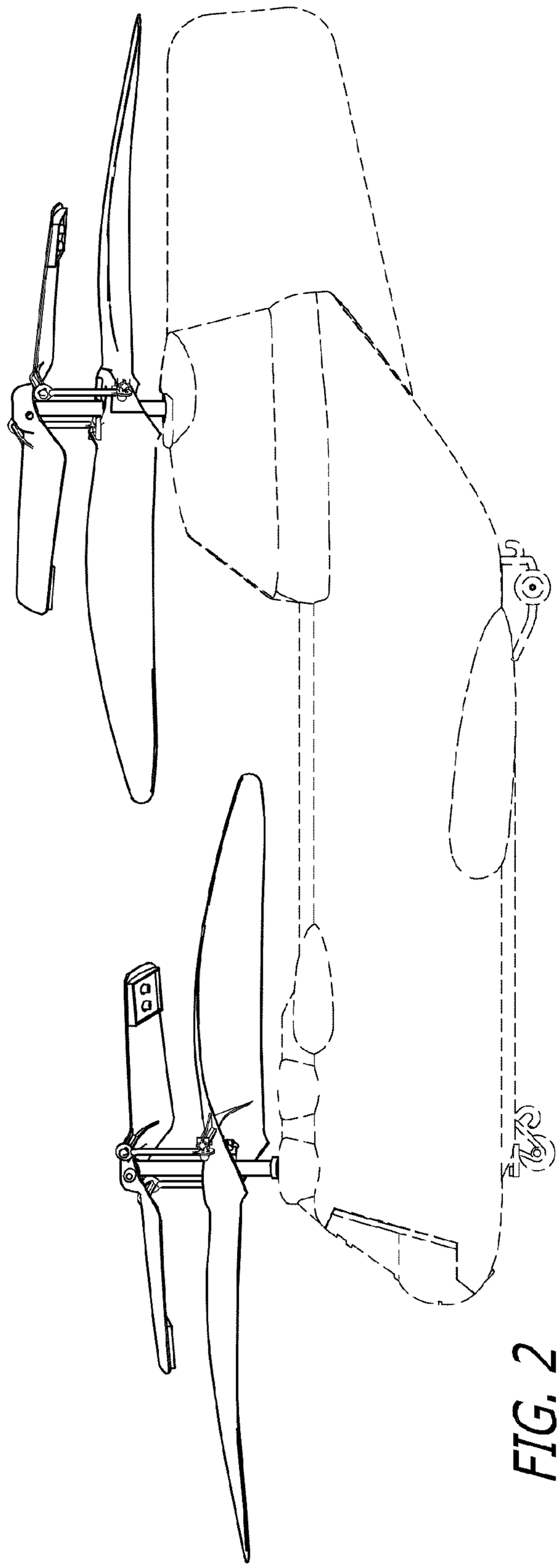


FIG. 2

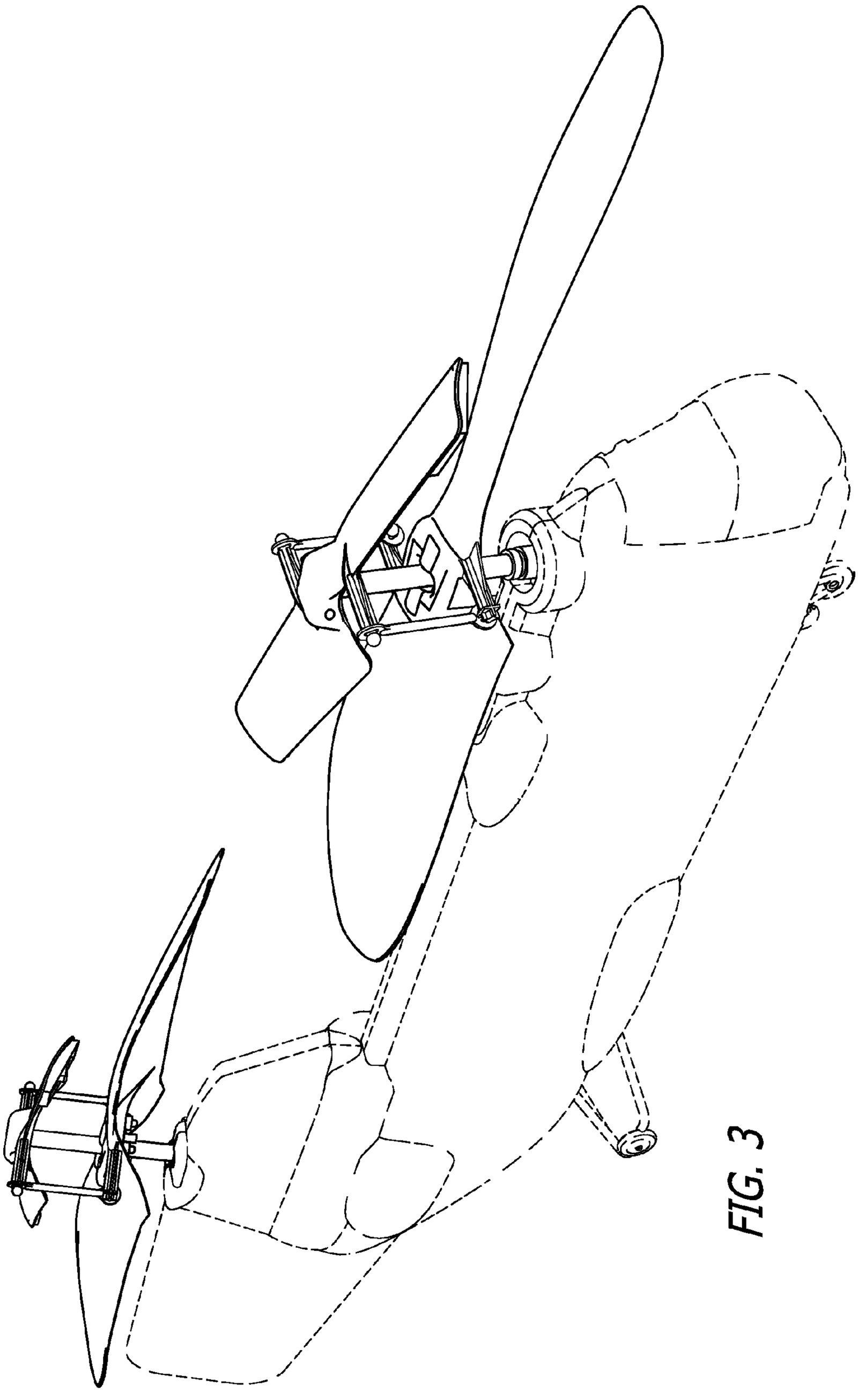


FIG. 3

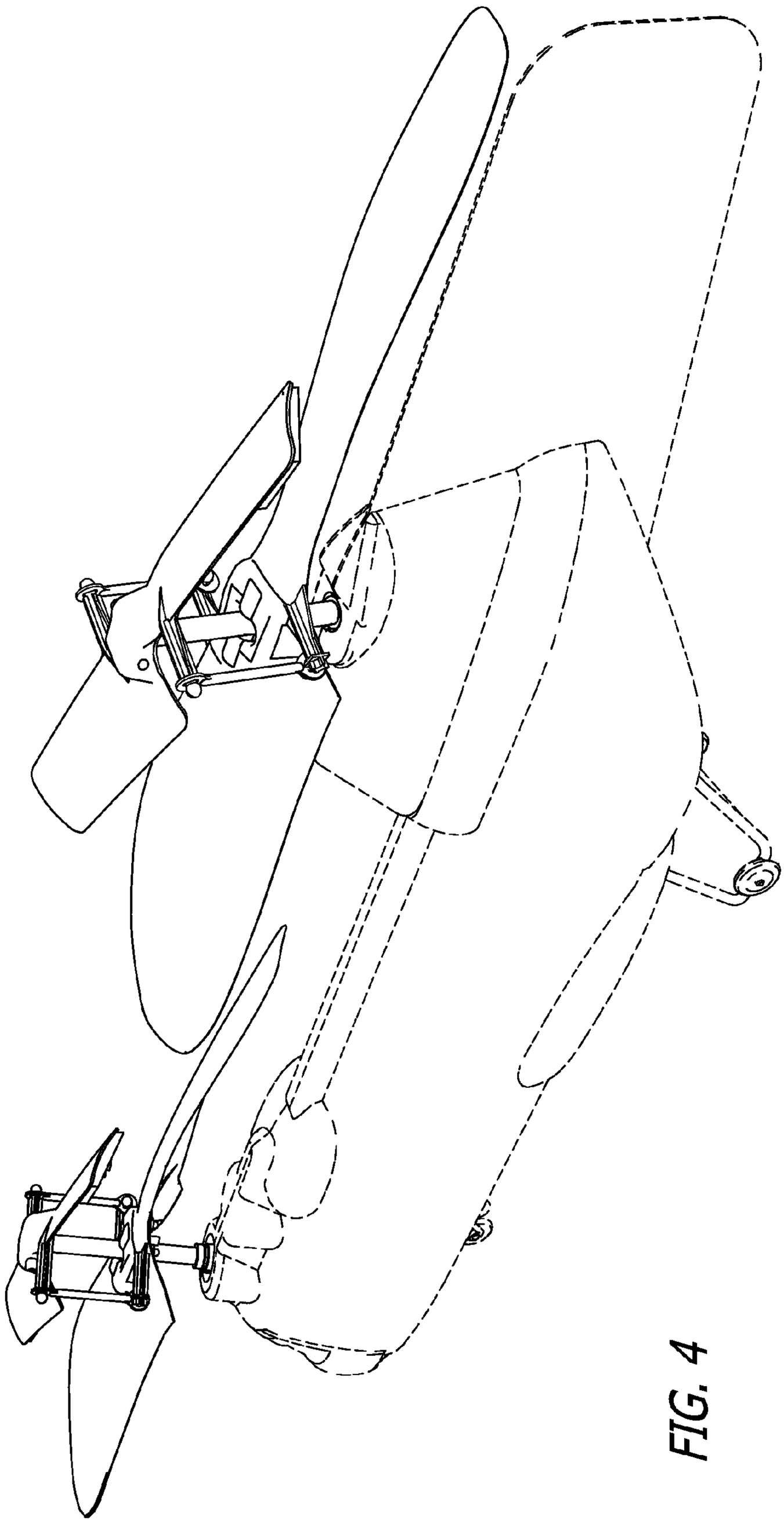


FIG. 4