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Attorneys for Plaintiffs
SPIN MASTER and STEVEN DAVIS

UNITED STATES DISTRICT COURT

DISTRICT OF NEVADA

SPIN MASTER, LTD., a Canadian Corporation, and STEVEN DAVIS, an individual

Plaintiff,

v.

UJ TRADING, a Texas corporation,

Defendant.

Case No: CV-N-04-0728-HDM-RAM

FIRST AMENDED COMPLAINT

JURY DEMAND

Plaintiffs SPIN MASTER, LTD. ("Spin Master") and STEVEN DAVIS ("Davis"), for the First Amended Complaint against Defendant UJ TRADING allege the following pursuant to Fed. R. Civ. P. 15(a):

JURISDICTION AND VENUE

1. This is an action for patent, copyright, and trade dress infringement with related unfair competition claims. Jurisdiction is based on federal question pursuant to 28 U.S.C. §§ 1331 and 1338(a-b), and 1400(b) and ancillary and

23

pendant jurisdiction.

2. Venue is proper pursuant to 28 U.S.C. §§ 1391 and 1400 and in the District of Nevada. On information and belief, the infringing acts complained of herein occurred within this district.

THE PARTIES

3. Plaintiff Spin Master is a Canadian corporation with its principal place of business at 450 Front Street West, Toronto, Ontario, M5V 1B6 Canada. Spin Master is in the business of developing, manufacturing, marketing, and distributing toy products around the world. Spin Master is replacing EDU Science ("EDU") as a Plaintiff in this case, as explained further below.

4. Plaintiff Davis is a United States citizen who resides in Hong Kong. Davis is an inventor of flying toys, including a remote controlled wireless flying saucer entitled the Vectron Ultralite (the "Vectron product"). Davis is replacing EDU as a Plaintiff in this case, as explained further below.

5. On information and belief, Defendant UJ Trading is a Texas corporation with its principal place of business at 5755 Bonhomme Road, Suite 414, Houston, Texas, 77036.

FACTS

6. The Vectron product is a remote controlled wireless

flying saucer. A true and correct photograph of the Vectron product is attached hereto as Exhibit A. The Vectron product was invented by Davis, and is the subject of two United States Patents. Davis is the named inventor of the United States Patent No. 6.843,699, issued on January 18, 2005 and entitled "Flying Toy" ("'699 Patent"). A true and correct copy of the '699 Patent is attached hereto as Exhibit B. Davis is also the named inventor of Patent No. D496,695, issued on September 28, 2004 and entitled "Flying Toy" ("'695 Patent"). A true and correct copy of the '695 Patent is attached hereto as Exhibit C.

7. Davis owns all right, title and interest in four United States Copyright Registrations which relate to important and unique aspects of the Vectron product. Davis owns Registration No. VA 1-285-847, entitled "Vectron Ultralite Battery Operated Radio/Infrared Controlled Flying Saucer Toy." A true and correct copy of the registration is attached hereto as Exhibit D. Davis owns Registration No. VA 1-285-848, entitled "Base Station for Vectron Ultralite Radio/Infrared Controlled Flying Saucer Toy." A true and correct copy of the registration is attached hereto as Exhibit E. Davis owns Registration No. VA 1-285-849, entitled "Control Gun for Vectron Ultralite Radio/Infrared Controlled Flying Saucer Toy." A true and correct copy of the

registration is attached hereto as Exhibit F. Davis owns Registration No. TX 5-871-587, entitled "Instruction Manual for Vectron Ultralite." A true and correct copy of the registration is attached hereto as Exhibit G.

8. On December 29, 2003, Davis assigned the '695 Patent to EDU, the former named Plaintiff in this case. A true and correct copy of this assignment is attached hereto as Exhibit H. EDU sold the Vectron product in Hong Kong, Europe and the United States.

9. The Vectron product has been marketed since January, 2003, selling nine hundred thousand (900,000) or more units of the Vectron product.

10. Due to the wide spread exposure of the Vectron product, the Vectron product design has acquired significant goodwill and public recognition amongst the general population, which is of great value. Such recognition includes demonstrations on the Today Show, CNBC and the Late Show with David Letterman. In addition, the Vectron product appeared in over sixty trade magazines, including but not limited to, Popular Science, Penthouse, Toy Wishes, Boys' Life, National Geographic Kids and in Disney Magazine. True and correct samples of this publicity are attached collectively hereto as Exhibit I.

11. In addition to the television recognition, the

Vectron product was nominated the "Most Innovative Toy Of The Year" by Toy Industry Association, Inc. and awarded the "Certificate of Merit Award" from Federation of Hong Kong Industries. True and correct copies of these distinctions are attached collectively hereto as Exhibit J. This, and other evidence, demonstrate that the Vectron product design is well-recognized amongst industry professionals.

12. Due to its distinctive and highly recognized design, the Vectron product has acquired trade dress rights in the aesthetic appearance of its unique design.

13. On January 22, 2005 all intellectual property rights associated with the Vectron product were assigned from EDU to Davis.

14. On January 25, 2005 Davis entered an exclusive license agreement with Spin Master providing Spin Master with the exclusive right and license to use, manufacture, market, sell, distribute and commercialize the Vectron product in the United States.

15. Collectively, Davis and Spin Master own and control all rights being asserted against Defendant UJ Trading in this action, and have standing to sue for UJ Trading's patent, copyright, and trade dress infringement, and related unfair competition claims.

16. UJ Trading is a major distributor of an infringing

product. A true and correct photograph of the UJ Trading product is attached hereto as Exhibit K. UJ Trading's product is indistinguishable from the Vectron product. A true and correct photograph of a side-by-side comparison of the products is attached hereto as Exhibit L. Defendant's infringing product is being offered for sale in this district.

17. The instruction manual for UJ Trading's infringing product is nearly indistinguishable from the instruction manual for the Vectron product. A true and correct copy of a side-by-side comparison of the instruction manuals is attached hereto as Exhibit M.

18. UJ Trading has advertised its infringing product in Specialty Retail, an entrepreneurial magazine that is distributed throughout the country. A true and correct copy of UJ Trading's advertisement in Specialty Retail is attached hereto as Exhibit N.

19. UJ Trading was placed on notice of its infringing acts as early as June 18, 2004. Among other requests, UJ Trading was asked to cease and desist from making, selling and distributing its infringing wireless flying saucer product.

20. Defendant's unauthorized use of the Vectron product design creates a likelihood of confusion, mistake and deception as to the affiliation, connection, association, origin, sponsorship or approval of its infringing design, all

to Plaintiffs' irreparable loss and damage.

21. Upon information and belief, customer confusion has occurred and will likely occur as a result of the acts of the Defendant complained of herein unless Defendant is enjoined from continuing said acts. Furthermore, Spin Master and Davis will suffer irreparable injury to its reputation and goodwill unless Defendant is so enjoined.

22. Spin Master and Davis have been damaged by Defendant's willful misconduct in an amount according to proof.

CLAIM I

(Utility Patent Infringement)

23. Spin Master and Davis repeat, reallege and reiterate each and every paragraph set forth above as if fully set forth herein.

24. Upon information and belief, Defendant has been and is making, using and selling flying saucers that infringe, contribute to or induce infringement of the '699 patent.

25. By the acts complained of by Spin Master and Davis herein, Defendant has unlawfully infringed the '699 patent pursuant to 35 U.S.C. § 271.

26. By reason of Defendant's actions, Spin Master and Davis have been, and will continue to be, seriously and irreparably damaged unless Defendant is enjoined from

infringing the '699 patent.

27. Defendant has unlawfully profited, and Spin Master and Davis have been damaged, in an amount according to proof.

CLAIM II

(Design Patent Infringement)

28. Spin Master and Davis repeat, reallege and reiterate each and every paragraph set forth above as if fully set forth herein.

29. Upon information and belief, Defendant has been and is making, using and selling flying saucers that infringe, contribute to or induce infringement of the '695 patent.

30. By the acts complained of by Spin Master and Davis herein, Defendant has unlawfully infringed the '695 Patent pursuant to 35 U.S.C. § 271.

31. On information and belief, such acts of infringement have been committed knowingly, willfully, and deliberately.

32. By reason of Defendant's actions, Spin Master and Davis have been, and will continue to be, seriously and irreparably damaged unless Defendant is enjoined from infringing the '695 patent.

33. Defendant has unlawfully profited, and Spin Master and Davis have been damaged, in an amount according to proof.

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CLAIM III

(Copyright Infringement)

34. Spin Master and Davis repeat, reallege and reiterate each and every paragraph set forth above as if fully set forth herein.

35. Plaintiff is the owner of all right, title and interest in the copyrighted work set forth in Exhibits D, E, F G.

36. Defendant's unauthorized use and sale of Plaintiffs' copyrighted work constitutes copyright infringement under 17 U.S.C. § 501(a).

37. Plaintiff has been damaged by Defendants' willful copyright infringement in an amount according to proof.

CLAIM IV

(Trade Dress Infringement)

38. Spin Master and Davis repeat, reallege and reiterate each and every paragraph set forth above as if fully set forth herein.

39. The Vectron product consists of non-functional designs which serve to enhance the streamlined look of the flying saucer.

40. The Vectron product has a unique and distinctive design which functions as a product identifier to consumers.

41. The Vectron product has become highly recognized by

consumers and has acquired secondary meaning for the original and creative design.

42. Defendant's use of Spin Master and Davis' design is likely to cause confusion, mistake or to deceive as to origin, affiliation, connection, sponsorship or association, in violation of 15 U.S.C. § 1125(a).

43. Spin Master and Davis have been damaged by Defendant's willful infringement in an amount according to proof.

CLAIM V

(Common Law Unfair Competition)

44. Spin Master and Davis repeat, reallege and reiterate each and every paragraph set forth above as if fully set forth herein.

45. Defendant's actions with respect to copying Spin Master and Davis' unique design and creating a likelihood of confusion constitutes common law unfair competition.

46. Spin Master and Davis have been damaged by Defendant's willful unfair competition in an amount according to proof.

PRAYER FOR RELIEF

Spin Master and Davis respectfully request the following relief:

(a) For an injunction prohibiting Defendant, its

officers, agents, servants, employees, and attorneys, and those person in active concert or participation with it, from: (1) Making, using, selling, importing or offering to sell its infringing flying saucer design, or any confusingly similar variation thereof; and (2) Further infringing upon Spin Master and Davis' patented, copyrighted and trade dress protected works;

(b) Spin Master and Davis be awarded their damages and Defendant's profits attributable to Defendant's infringement of its trade dress pursuant to 15 U.S.C. § 1117(a);

(c) Spin Master and Davis be awarded three times the damages attributable to Defendant's infringement of its trade dress pursuant to 15 U.S.C. § 1117(a);

(d) Spin Master and Davis be awarded their reasonable attorney's fees and costs of suit pursuant to 15 U.S.C. § 1117(a);

(e) For damages, attorney's fees and costs under 17 U.S.C. §§ 504 and 505 of the Copyright Act;

(f) Spin Master and Davis be awarded all appropriate damages and attorney's fees pursuant to 35 U.S.C. §§ 284, 285 and 289;

(g) Spin Master and Davis be awarded punitive damages according to proof;

(h) Spin Master and Davis be awarded prejudgment interest

on any monetary award;

(i) Such other and further relief as this Court deems just and proper.

Dated: March 2, 2005

WATSON ROUNDS

By: S. Greene

Michael D. Rounds
Samantha T. Greene
WATSON ROUNDS
5371 Kietzke Lane
Reno, NV 89511

Attorneys for Plaintiffs

JURY DEMAND

Pursuant to Fed. R. Civ. P. 38(b), Plaintiff demands a jury trial on all issues triable by jury.

Dated: March 2, 2005

WATSON ROUNDS

By: S. Greene
Michael D. Rounds
Samantha T. Greene
5371 Kietzke Lane
Reno, NV 89511

Attorneys for Plaintiff

CERTIFICATE OF SERVICE

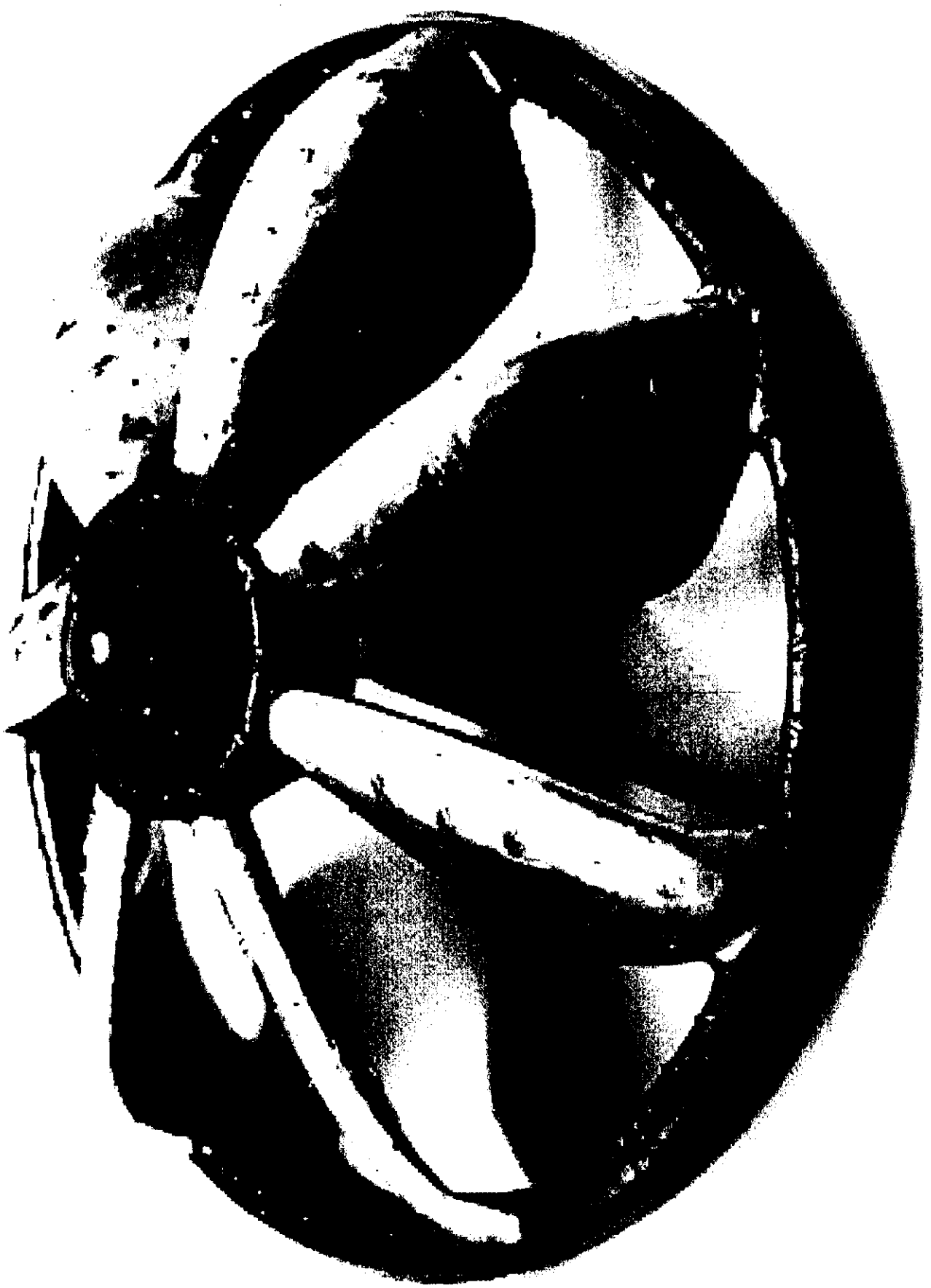
Pursuant to Fed. R. Civ. P. 5(b), I certify that I am an employee of Watson Rounds, and that on this date, I deposited for mailing, with first-class postage prepaid, at Reno, Nevada, a true copy of the document, **FIRST AMENDED COMPLAINT**, addressed to the following:

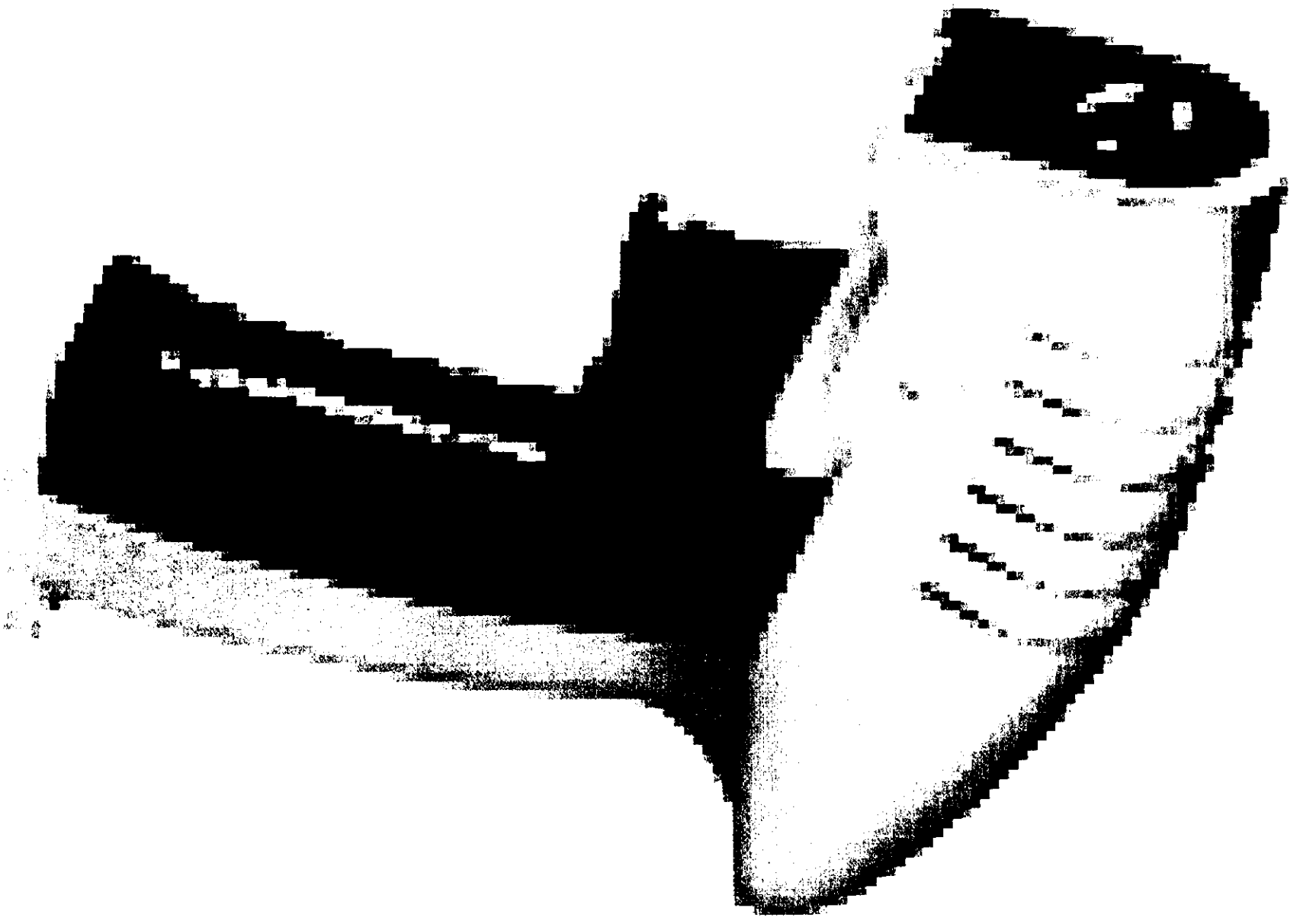
Yalcin Karadag
THE KARADAG LAW FIRM, PLLC
5555 San Felipe, Suite 1675
Houston, Texas 77056

DATED: March 2, 2005

Carla Ousby

Carla Ousby





VECTRON

THE NEXT GENERATION OF FLYING TOYS HAS ARRIVED

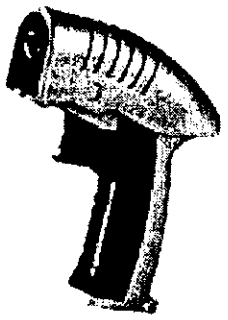
Vectron® Ultralite - Launching the next generation of flying toys. Learning to fly is easy!

SCIENCE TECH

Included Components

These are the components that come with a Vectron® Ultralite kit. The Vectron® AC adaptor, charging cord and the launch platform are used for charging and taking off. The thrust transmitter controls the Vectron's power and altitude. And last but not least the fully assembled Vectron® Ultralite. Select a component below for more information.

Thrust Transmitter

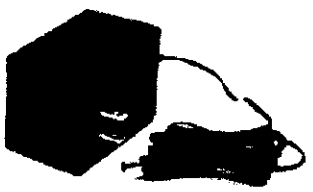


The Vectron® Ultralite

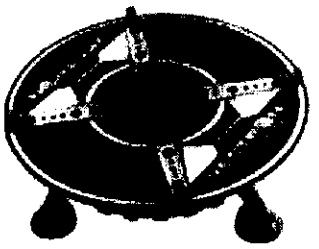
The Vectron Ultralite is available at the following stores:

Discovery CHANNEL STORE

AC Adapter



Launch Platform



The thrust transmitter enables you to increase or reduce the speed of the Vectron Ultralite so that it can make upward and downward movements.

www.vectronultralite.com

VECTRON

THE NEXT GENERATION OF FLYING TOYS HAS ARRIVED

Home Vectron® Ultralite Components Safety Information Operation Manual Product Support

Vectron® Ultralite - Launching the next generation of flying toys. Learning to fly is easy!

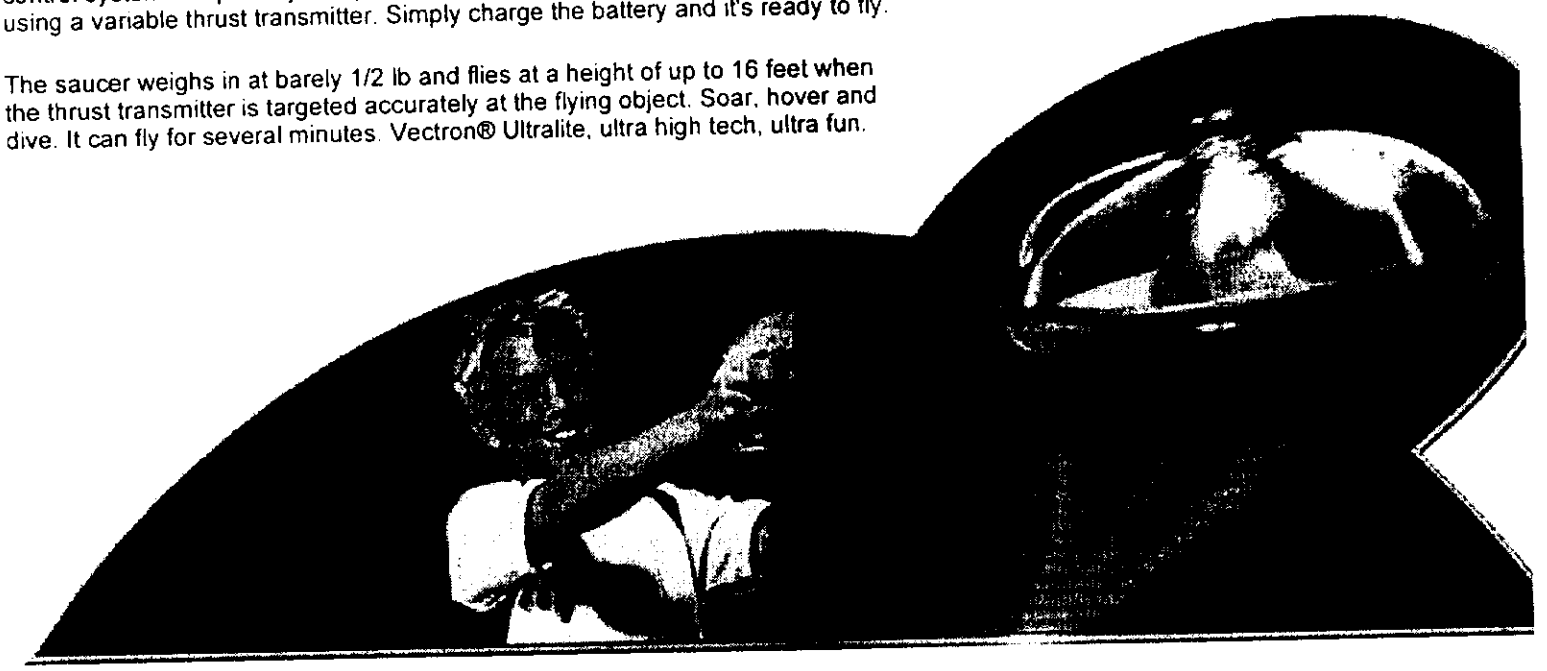
science tech

NOW THERE'S MORE EXCITEMENT IN THE AIR!

Demonstration V

The Vectron® Ultralite is an easy to fly indoor flying saucer with the euro gyro control system. Proprietary and patent pending technology controls the altitude using a variable thrust transmitter. Simply charge the battery and it's ready to fly.

The saucer weighs in at barely 1/2 lb and flies at a height of up to 16 feet when the thrust transmitter is targeted accurately at the flying object. Soar, hover and dive. It can fly for several minutes. Vectron® Ultralite, ultra high tech, ultra fun.



Controlled by an infrared signal, the Ultralite is free flying with no power cord!
Quick charges by batteries or adapter from the launch pad.

www.vectronultralite.com

US006843699B2

(12) **United States Patent**
Davis

(10) **Patent No.: US 6,843,699 B2**
(45) **Date of Patent: Jan. 18, 2005**

(54) **FLYING TOY**

(76) Inventor: **Steven Davis**, Suite 701-3 Wing On Plaza, 62 Mody Road, TST East (HK)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 30 days.

(21) Appl. No.: **10/647,930**

(22) Filed: **Aug. 26, 2003**

(65) **Prior Publication Data**

US 2004/0162001 A1 Aug. 19, 2004

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/819,189, filed on Mar. 28, 2001, now Pat. No. 6,688,936.
(60) Provisional application No. 60/453,283, filed on Mar. 11, 2003.

(51) **Int. Cl.**[7] **A63H 27/127**
(52) **U.S. Cl.** ..... **446/37**; 446/46; 244/23 C
(58) **Field of Search** ..... 446/34, 36, 37, 446/46, 48; 244/12.2, 23 C, 23 R

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FOREIGN PATENT DOCUMENTS

JP	01-201294		8/1989
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WO	WO-01-87446		11/2001

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Primary Examiner—Jacob K. Ackun
Assistant Examiner—Bena R. Miller

(57) **ABSTRACT**

A rotating toy may then include a hub having a central axis and a lower portion; a plurality of counter rotating blades extending outwardly from the lower portion of the hub, the plurality of counter rotating blades having a tip connected to an outer ring; a single means for rotating the hub and blades sufficiently quickly to generate a major portion of the lift generated by the aircraft through the single rotating means; and the hub having an upper portion above the plurality of counter rotating blades and above the single rotating means such that the aircraft includes a center of gravity above the plurality of counter rotating blades to provide a self-stabilizing rotating toy. In furtherance thereto the single rotating means may be secured on the central axis and positioned below the counter rotating blades.

13 Claims, 8 Drawing Sheets

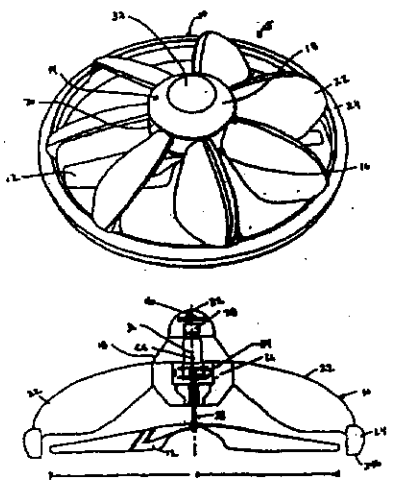


Figure 1

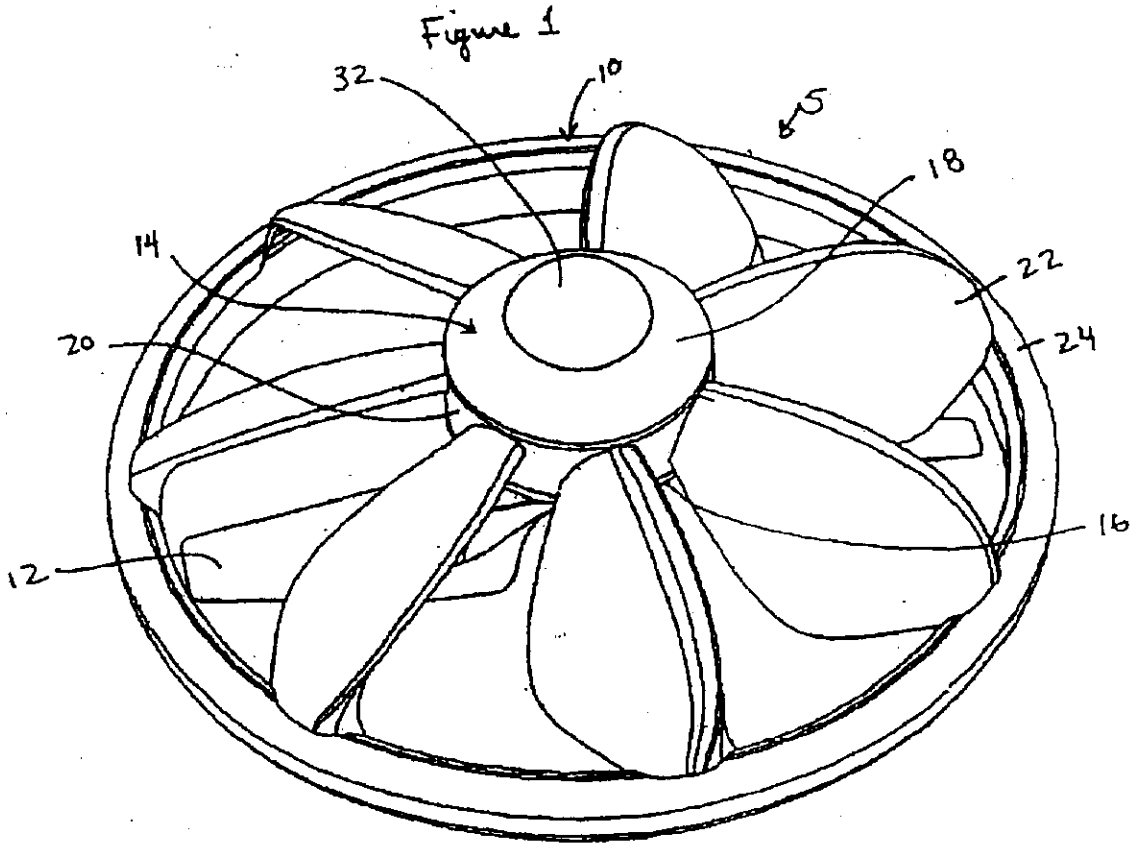


Figure 2

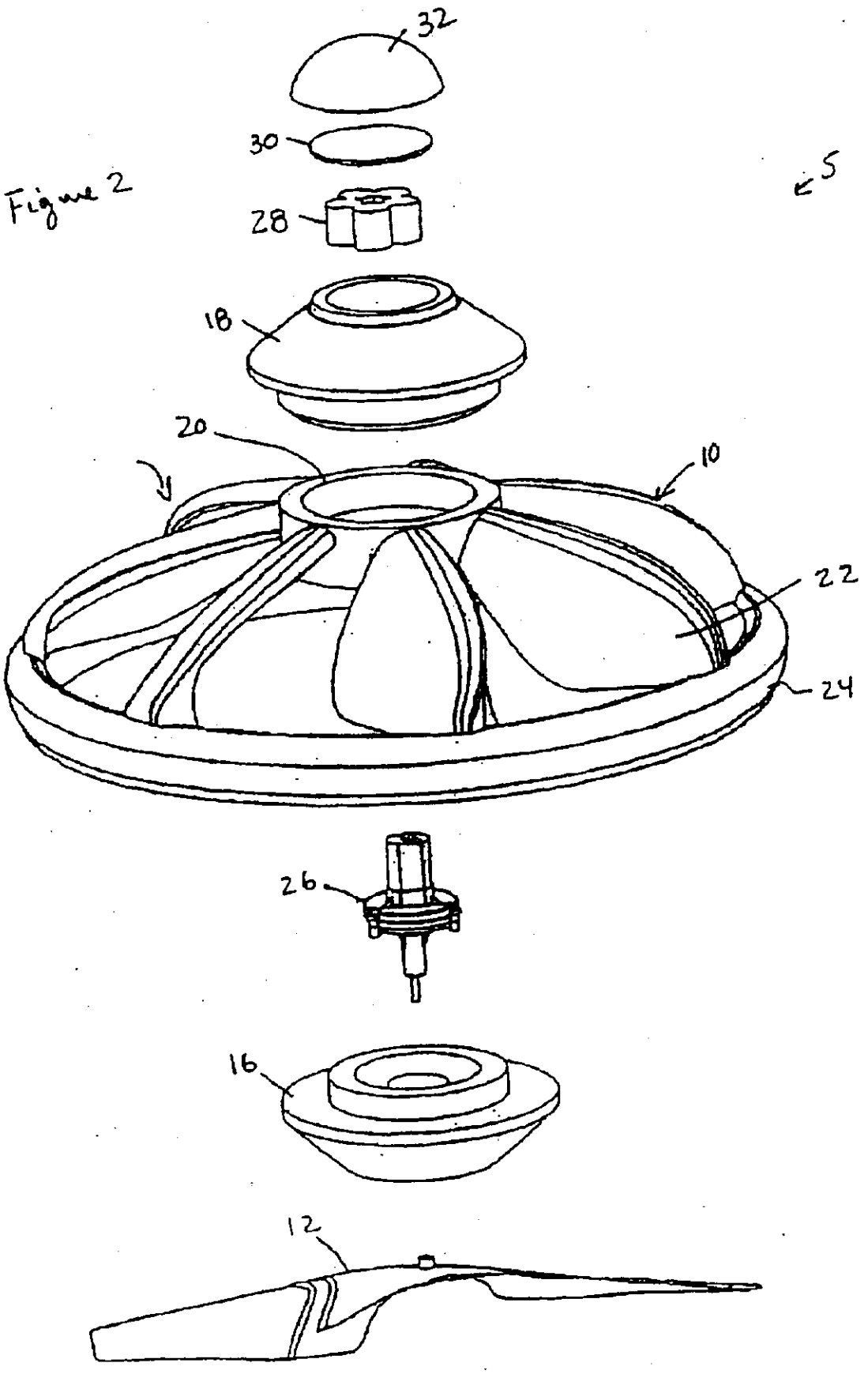


Fig. 3

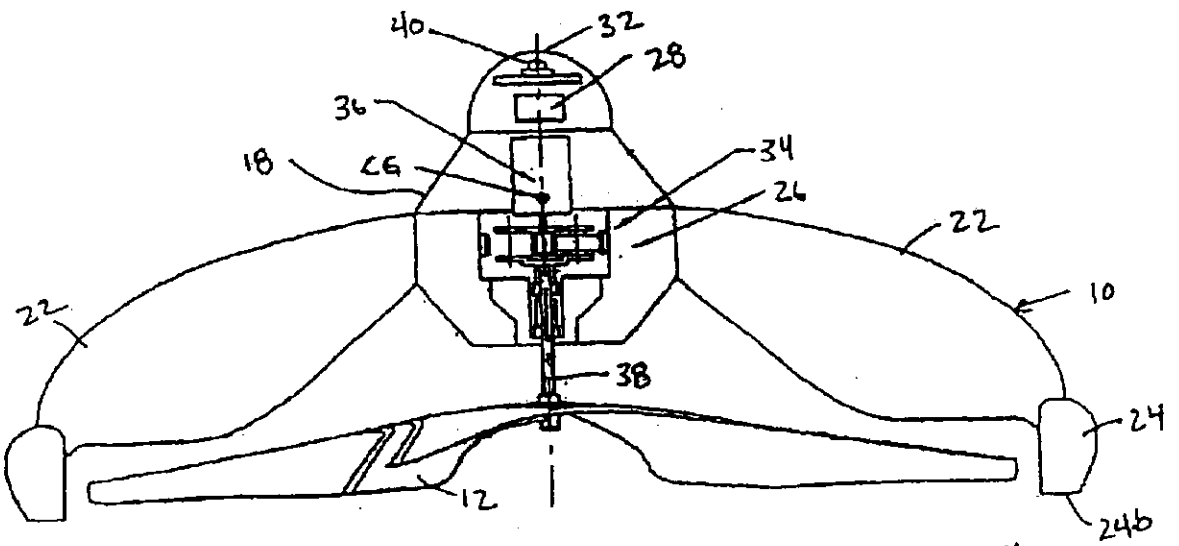


Fig 5

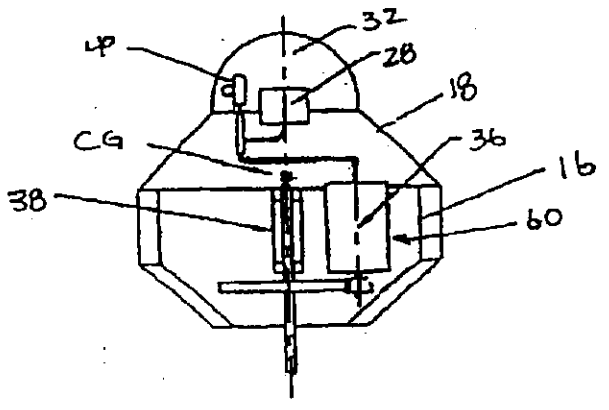


Fig 4

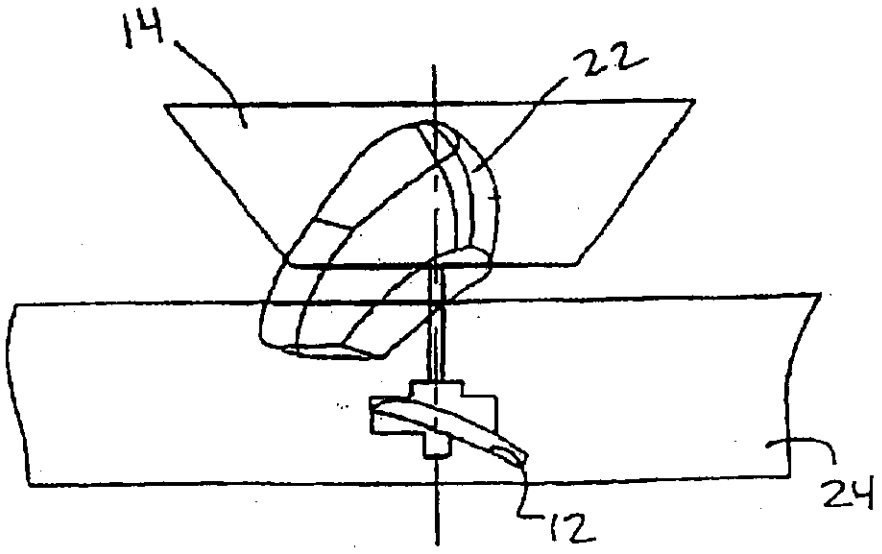
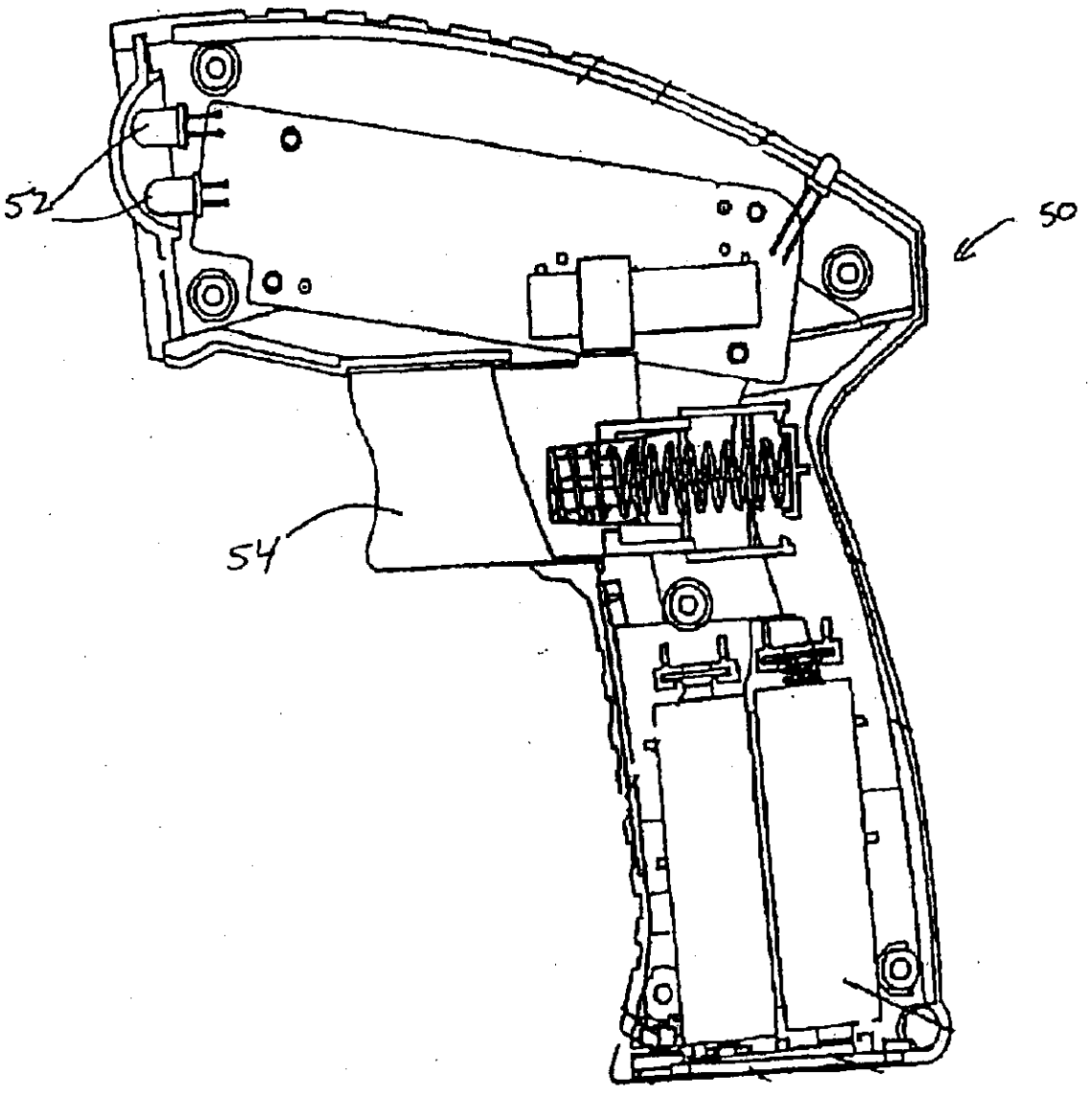


Fig 6



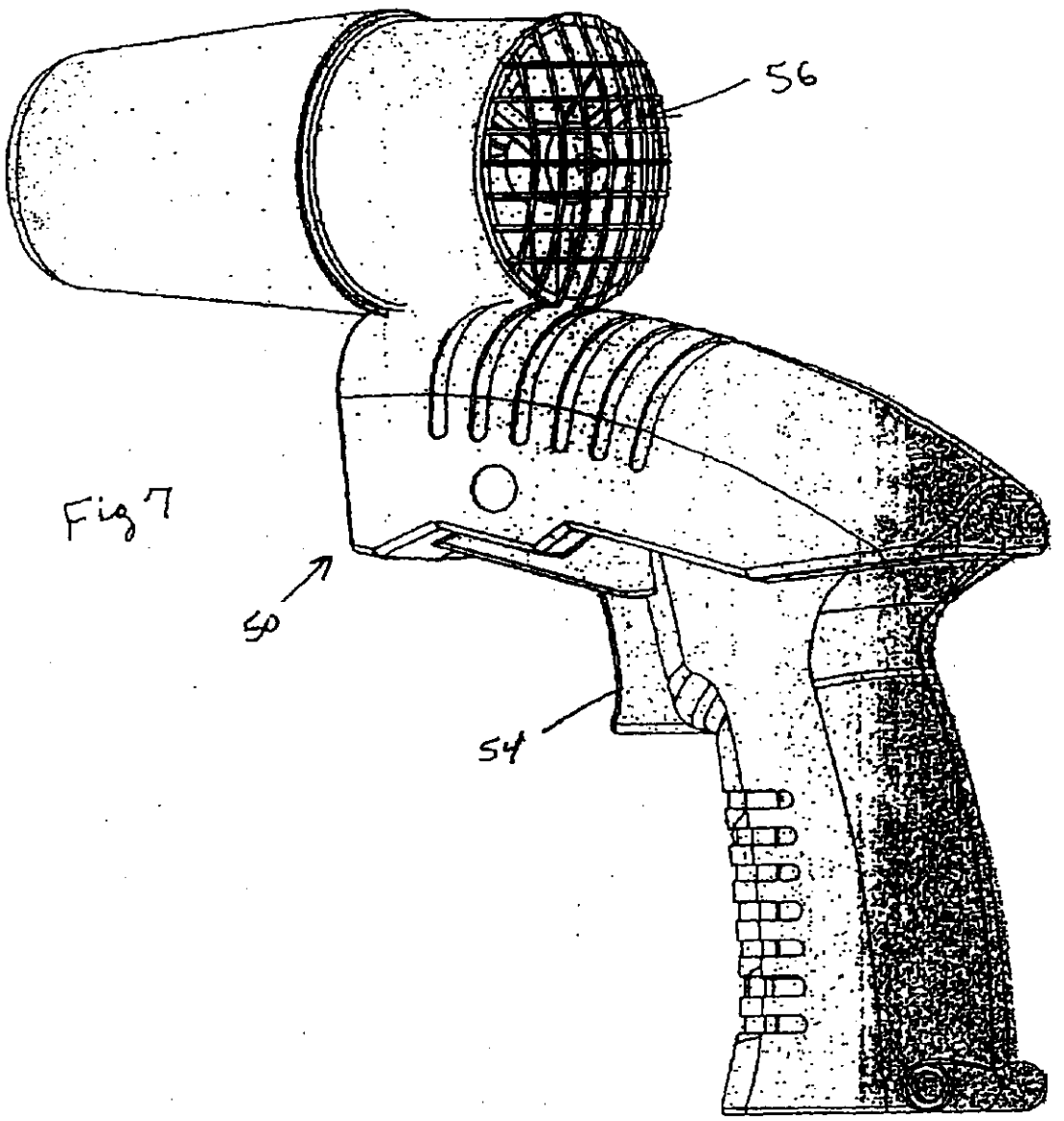


Fig 7

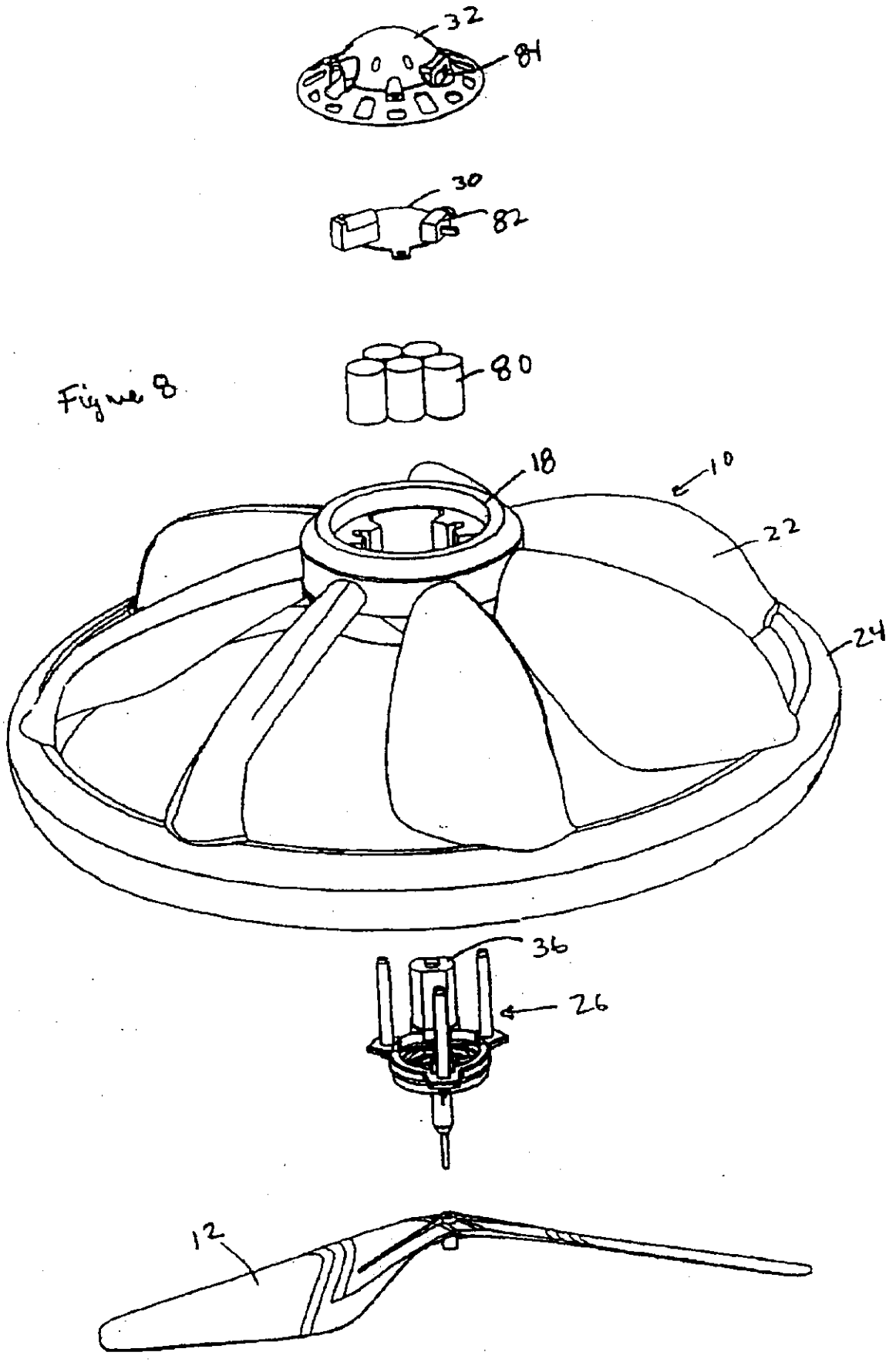
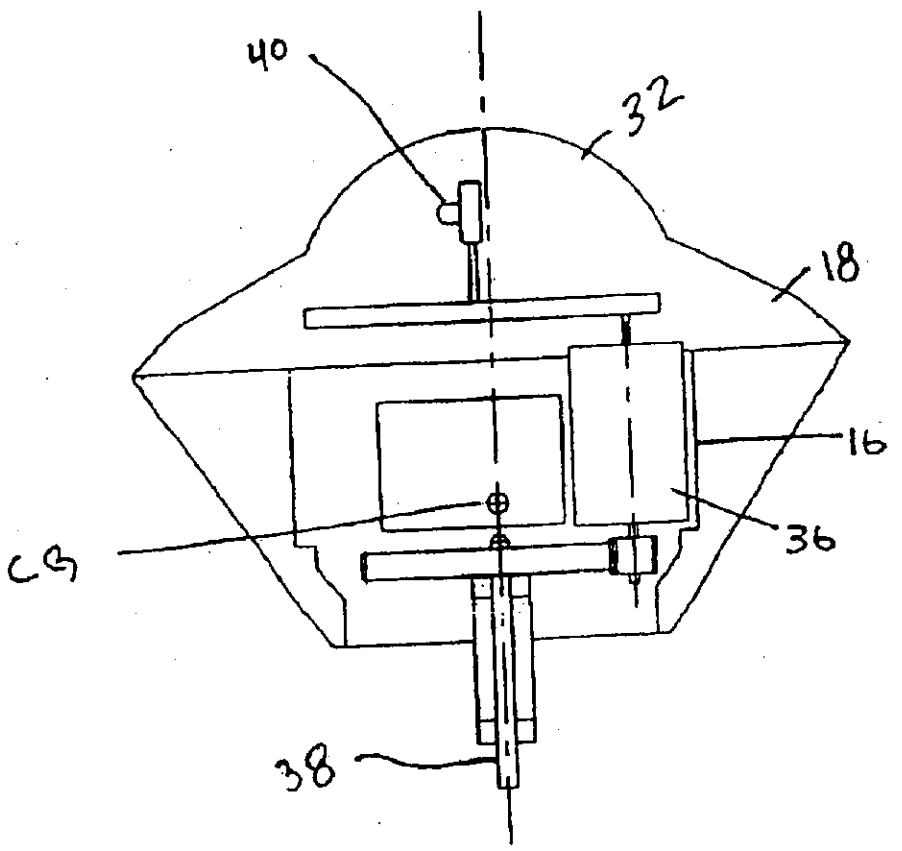


Figure 8

Fig 9



FLYING TOY

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation in part application of Ser. No. 09/819,189 and filed Mar. 28, 2001 now U.S. Pat. No. 6,668,936; and also claims the benefit of provisional application 60/453,283 filed on Mar. 11, 2003.

FIELD OF THE INVENTION

This invention relates generally to toys and more particularly to directionally uncontrollable self-stabilizing rotating toys.

BACKGROUND OF THE INVENTION

Most vertical takeoff and landing aircraft rely on gyro stabilization systems to remain stable in hovering flight. For instance, applicant's previous U.S. Pat. No. 5,971,320 and International PCT application WO 99/10235 discloses a helicopter with a gyroscopic rotor assembly. The helicopter disclosed therein uses a yaw propeller mounted on the frame of the body to control the orientation or yaw of the helicopter. However, different characteristics are present when the body of the toy, such as a flying saucer model, rotates as gyro stabilization systems may not be necessary when the body rotates, for example, see U.S. Pat. Nos. 5,297,759; 5,634,839; 5,672,086; and co-pending co-assigned U.S. patent application Ser. No. 09/819,189.

However, a great deal of effort is made in the following prior art to eliminate or counteract the torque created by horizontal rotating propellers in flying aircraft in order to replace increased stability by removing gyro-stabilization systems. For example, Japanese Patent Application Number 63-026355 to Keyence Corp. provides a first pair of horizontal propellers reversely rotating from a second pair of horizontal propellers in order to eliminate torque. See also U.S. Pat. No. 5,071,383 which incorporates two horizontal propellers rotating in opposite directions to eliminate rotation of the aircraft. Similarly, U.S. Pat. No. 3,568,358 discloses means for providing a counter-torque to the torque produced by a propeller because, as stated in the '358 patent, torque creates instability as well as reducing the propeller speed and effective efficiency of the propeller.

The prior art also includes flying or rotary aircraft which have disclosed the ability to stabilize the aircraft without the need for counter-rotating propellers. U.S. Pat. No. 5,297,759 incorporates a plurality of blades positioned around a hub and its central axis and fixed in pitch. A pair of rotors pitched transversely to a central to provide lift and rotation are mounted on diametrically opposing blades. Each blade includes turned outer tips, which create a passive stability by generating transverse lift forces to counteract imbalance of vertical lift forces generated by the blades, which maintains the center of lift on the central axis of the rotors. In addition, because the rotors are pitched transversely to the central axis to provide lift and rotation, the lift generated by the blades is always greater than the lift generated by the rotors.

Nevertheless, there is always a continual need to provide new and novel self-stabilizing rotating toys that do not rely on additional rotors to counter the torque of a main rotor. Such a need should include a single main rotor to generate a major portion of the lift. Such self-stabilizing rotating toys should be inexpensive and relatively noncomplex.

SUMMARY OF THE INVENTION

In accordance with the present invention a self-stabilizing rotating flying toy that includes a main rotor is attached to a main body with a plurality of blades fixed with respect to the main body. The blades and main body rotate in a opposite direction caused by the torque of a motor mechanism used to rotate the main rotor positioned below the blades. The blades extend from a inner hub to an outer ring. The main hub connected above the inner hub is positioned above the blades and main body such that the Center of Gravity is above the center of lift, to provide a self-stabilizing rotating toy.

Numerous other advantages and features of the invention will become readily apparent from the following detailed description of the invention and the embodiments thereof, from the claims, and from the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

A fuller understanding of the foregoing may be had by reference to the accompanying drawings, wherein:

FIG. 1 is a perspective view of a flying rotating toy in accordance with the preferred embodiment of the present invention;

FIG. 2 is an exploded view of the flying rotating toy from FIG. 1;

FIG. 3 is a sectional view of the flying rotating toy from FIG. 1;

FIG. 4 is a partial sectional view of the relationship between the counter rotating blades and the main rotor;

FIG. 5 is a cross sectional view of another gear reduction box which may be incorporated by the present invention illustrating a dome section with a off-center motor placement;

FIG. 6 is a cross sectional view of a trigger mechanism designed to remotely control the speed of the motor mechanism; and

FIG. 7 is another trigger mechanism incorporating a fan or blower to move the rotating toy during operation.

FIG. 8 shows an exploded perspective view of another embodiment of the present invention; and

FIG. 9 shows a cross section view of a gear reduction box used in the embodiment of FIG. 8.

DETAILED DESCRIPTION OF THE EMBODIMENTS

While the invention is susceptible to embodiments in many different forms, there are shown in the drawings and will be described herein, in detail, the preferred embodiments of the present invention. It should be understood, however, that the present disclosure is to be considered an exemplification of the principles of the invention and is not intended to limit the spirit or scope of the invention and/or claims of the embodiments illustrated.

Referring to FIGS. 1 and 2, in a first embodiment of the present invention a flying rotating toy 5 is provided. The rotating toy 5 includes a single main rotor 12 rotatably attached to a light weight counter rotating main body 10. The counter rotating main body 10 includes a hub 14 that contains the drive and control mechanisms. The hub 14 is defined as having a lower hub section 16 and an upper hub section 18 that are received by an inner hub 20. A plurality of blades 22 extend outwardly and downwardly from the hub 14 to an outer ring 24. The lower hub section 16 houses a motor mechanism 26 that is used to rotate a main rotor 12, while the upper hub section 18 houses at least a power supply 28 and a circuit board 30. A clear dome 32 is positioned on top of the upper hub section 18 to protect the

components and to provide a means for the reception of wireless signals, discussed in greater detail below.

Further reference is made to the cross sectional view of the rotating toy 5 illustrated in FIG. 3. The motor mechanism 26 is a planetary reduction gear box 34 that includes a motor 36. The planetary gear box 34 permits the motor mechanism 26 to be mounted along a single axis aligned with an axle 38 that is connected to the main rotor 12.

As the main rotor 12 rotates, no attempt is made to counter the torque from driving the main rotor 12, instead the torque causes the main body 10 to rotate in the opposite direction. Once the toy is flying the outer ring 24 protect the main rotor 12 and provides gyroscopic stability. As mentioned above, the outer ring 24 and hub 14 are connected by a plurality of blades 22 with lifting surfaces positioned to generate lift as the toy 5 rotates. Since the blades 22 are rotating in the opposite direction as the main rotor 12 but both are providing lift to the toy 5, the blades 22 are categorized as counter-rotating lifting surfaces. (The interrelationship between the counter rotating blades and the main rotor is illustrated in partial sectional view FIG. 4.) The induced drag characteristics of the main rotor 12 verses the blades 22 can also be adjusted to provide the desired body rotation speed.

The rotating toy 5 of the present invention has the ability to self stabilize during rotation. This self stabilization is categorized by the following: as the rotating toy 5 is perturbed in someway it tilts to one direction and starts moving in that direction. A blade, of the plurality of blades 22, that is on the higher or preceding side of the rotating toy (since the rotating toy is tilted) will get more lift that the one on the lower or receding side. This happens because the preceding blade will exhibit a higher inflow of air. Depending on the direction of rotation the lift is going to be on one side or the other. This action provides a lifting force that is 90 degrees to the direction of travel and creates a gyroscopic procession with a reaction force that is 90 degrees out of phase with the lifting force such that the rotating toy 5 self-stabilizes. The self-stabilizing effect is thus caused by the gyroscopic procession and the extra lifting force on the preceding blade. For the self-stabilizing effect to work the gyroscopic procession forces generated by the rotating body must dominant over the gyroscopic procession forces generated by the main propeller 12.

The placement of the center of gravity (CG, FIG. 3) above the center of lift was found to be very critical for the self-stabilizing effect. Experiments showed that the self-stabilizing effect depended on the aerodynamic dampening and on the relative magnitudes of the aforementioned forces. It was thus determined that the self-stabilizing effect was best when the CG is positioned above the bottom position 24*b* of the outer ring 24 at a distance which is equal to about ⅓ to ½ the diameter D of the main rotor 12 and most preferred when the distance is about 65% of the main rotor 12 radius (½ D). (It is noted that the diameter of the main rotor 12 is equal to the length of the two blades, from tip to tip). It should also be noted that the cross sectional shape of the outer ring 24 and the height of the CG is inter dependent and very critical to the stability. It was also found that if the CG is higher, the rotating toy 5 becomes unstable and if the CG is lower, the rotating toy becomes unstable. And if the rotating toy 5 becomes unstable, the rotating toy will not self stabilize, meaning that it will just spiral further and further out of control as the rotating toy 5 flies off into a larger and larger oscillations.

Since it is preferred to place the CG about 65% of the main rotor radius above the bottom of the outer ring 24, most

of the components are placed above the main body 10. The motor 36 thus drives the main rotor 12 through a longer driveshaft. In addition, the weight contributes to the CG placement, thus, it is preferred to have the main body 10 including the blades 22 made from a light weight material.

The present invention is also particularly stable because there is a large portion of aerodynamic dampening caused by the blades 22. As mentioned above, the entire blades 22 are curved and turned downwardly from the hub 14 to an outer ring 24, and preferably inclined downwardly at about 20 to 30 degrees, which may be measured by drawing an imaginary line through an average of the curved blades. This causes dampening that resists sideward motion in the air because there's a large frontal area to the blades.

During operation, the main rotor 12 is spinning drawing the air above the toy downwardly through the counter rotating blades 22 within the outer ring 24. The air is thus being conditioned by the blades before hitting the rotor. By conditioning the air it is meant that the air coming off the blades 22 is at an angle and at an acceleration, as opposed to placing the main rotor in stationary air and having to accelerate the air from zero or near zero. The efficiency of the main rotor 12 is thereby increased. It was found that the pitch on the main rotor 12 would have to be a lot shallower if the blades 22 were not positioned above the main rotor.

During various experiments the main rotor 12 and the main body 10 were rotated separately and together at about 600 rpms and the lift generated by the main rotor 12 and main body 10 were measured. It was found that when rotated separately, the main rotor 12 only generated about 60% of the lift exhibited by the combination of the main rotor 12 and the body 10 (with blades 22). However, it would be incorrect to state that the blades 22 generate the remaining 40% of the lift, because it was also found that the blades 22 spinning at the same speed by themselves only generated about 5 to 10% of the lift exhibited by the combination. Since separately the main rotor generated 60% and the blades generated 5 to 10% there is 30–35% of lift unaccounted. However, when the main rotor 12 is rotating separately the air that it is using is unconditioned or static (zero acceleration). Since the blades 22 are positioned on top of the main rotor 12, the blades 22 will still only generate 5–10% of the lift in the combined state; concluding that the blades 22 increase the efficiency of the main rotor by conditioning the air before it is used by the main rotor 12. Thus the combination of the two (the main rotor 12 and the blades 22) must generate the additional 30–35% of the lift when acting in concert and utilizing the conditioned air.

In another embodiment, an offset reduction gear box 60 (FIG. 5) may also be used that have an offset motor 36 mounted off of the axle 38. In an offset mount, a counter-weight (not shown) may be placed on the outer ring 24 about 180 degrees from the motor, to keep the balance of the rotating toy centered.

To control the motor mechanism 26 an IR sensor 40 or receiver is positioned in the dome 32 and is used in concert with an outside remote IR transmitter. The transmitter 52 may be positioned in a remote control unit 50, illustrated in FIG. 6. The remote control unit 50 has a simple trigger mechanism 54 designed to emit a signal when pushed inwardly by the user's finger. In addition, the self stabilizing effect will cause the rotating toy 5 to stabilize even when pushed by air currents, which will initially move the rotating toy 5 but eventually the toy 5 will stabilize to a substantially horizontal flying position. Referring to FIG. 7, the remote control mechanism 50 may include a fan 56 that is able to

be activated by the user. Activating the fan **56** will permit the user to blow a stream of air at the rotating toy **5** and push it around, providing a simple means of moving the rotating toy around.

In another embodiment of the present invention, referred to FIGS. **8** and **9**, a battery pack **80** is used to counter the weight of an offset motor **36**. As illustrated, the battery pack **80** is arranged such that a motor **36** in the motor mechanism **26** is offset to counter balance each other such that the rotating toy is balanced. Moreover, in this embodiment the upper hub section **18** and the lower hub section **16** are integrally formed as a single piece; and an on/off switch **82** is attached to the circuit board **30** and positioned to be manipulated by a user through an aperture **84** in the dome **32**.

It should be further stated the specific information shown in the drawings but not specifically mentioned above may be ascertained and read into the specification by virtue of simple study of the drawings. Moreover, the invention is also not necessary limited by the drawings or the specification as structural and functional equivalents may be contemplated and incorporated into the invention without departing from the spirit and scope of the novel concept of the invention. It is to be understood that no limitation with respect to the specific methods and apparatus illustrated herein is intended or should be inferred. It is, of course, intended to cover by the appended claims all such modifications as fall within the scope of the claims.

I claim:

1. A rotating toy comprising: a hub having a central axis and a center portion; a plurality of counter rotating lifting blades extending outwardly from the center portion of the hub, the plurality of counter rotating lifting blades having a tip connected to an outer ring; a single means for rotating the hub and blades sufficiently to generate a major portion of the lift through the single rotating means; and the hub having an upper portion above the plurality of counter rotating blades and above the single rotating means such that the toy includes a center of gravity above the plurality of counter rotating blades to provide a self-stabilizing rotating toy.

2. The rotating toy of claim **1**, wherein the single rotating means is secured on the central axis and positioned below the counter rotating blades.

3. The rotating toy of claim **2**, wherein the single rotating means is a pair of main blades secured on said central axis, the pair of main blades include a total length that defines a diameter of the single rotating means.

4. The rotating toy of claim **3**, wherein the center of gravity that is positioned above a bottom portion defined by the outer ring at a distance that is between about ⅓ to ½ the diameter defined by the pair of main blades.

5. The rotating toy of claim **3**, wherein the center of gravity that is positioned above a bottom portion defined by the outer ring at a distance that is about 65% of one-half the diameter defined by the pair of main blades.

6. A rotating toy comprising:

a hub having a lower portion, an upper portion and a center portion;

a plurality of counter rotating lifting blades extending outwardly and downwardly from the center portion of the hub;

an outer ring having a bottom portion and being positioned below the center portion of the hub and connected to the plurality of counter rotating lifting blades;

a main pair of blades secured on an axle and positioned below the plurality of counter rotating lifting blades, the pair of main blades include a total length that defines a diameter of the main pair of blades;

a motor mechanism secured within the lower portion of the hub and when activated rotates the axle, wherein when the motor mechanism is activated the main pair of blades rotate in a first direction and the torque created by the rotation thereof rotates the counter rotating lifting blades in a direction opposite the first direction; and

the upper portion of the hub positioned above the plurality of counter rotating lifting blades such that a center of gravity defined by the toy is positioned at a distance above the bottom portion of the outer ring to improve self stabilization of the toy.

7. The rotating toy of claim **6**, wherein the distance the center of gravity is above the bottom portion is about 65% of one-half the diameter of the main pair of blades.

8. The rotating toy of claim **7**, wherein the plurality of counter rotating lifting blades extend downwardly at about 20 to 30 degrees.

9. A rotating toy comprising:

a hub having a central axle extending downwardly from the hub;

a plurality of primary blades extending outwardly and downwardly from the hub to secure to an outer ring that is positioned below the hub;

a pair of secondary blades mounted to the central axle below the plurality of primary blades; and

a motor mechanism secured within the hub for rotating the central axle and thus the pair of secondary blades and creating a torque that rotates the plurality of primary blades in a counter rotating direction than the pair of secondary blades such that the rotating primary and secondary blades generate lift,

wherein the primary blades being positioned above the pair of secondary blades condition air flowing through the primary blades to the secondary blades such that the efficiency of the lift generated by the pair of secondary blades is increased sufficiently such that 90% of the lift generated is generated by the pair of secondary blades.

10. The rotating toy of claim **9**, wherein the hub includes an upper portion positioned above the plurality of counter rotating lifting blades such that a center of gravity defined by the toy is positioned at a distance above a bottom portion defined by the outer ring to improve self stabilization of the toy and the distance is about 65% of one-half a total length defined by the pair of main blades.

11. The rotating toy of claim **9** further comprising a wireless receiver to receive remote signals to control the motor mechanism.

12. A rotating toy in combination with a remote control mechanism comprising:

the rotating toy including a hub having an upper portion, center portion and a lower portion; a plurality of counter rotating lifting blades extending outwardly and downwardly from the center portion of the hub to an outer ring positioned below the center portion of the hub; a motor mechanism secured to the hub for rotating an axle, a pair of main blades secured to the axle below the counter rotating lifting blades, wherein when the motor mechanism rotates the main blades and the counter rotating lifting blades, the counter rotating lifting blades condition the air such that a major portion of lift generated by the rotating toy is generated by the main blades;

the rotating toy further including a receiver in communication with the motor mechanism to receive commands for controlling a rotational speed of the rotating toy, and further including a center of gravity positioned above the plurality of counter rotating blades to provide a self-stabilizing rotating toy; and

the remote control mechanism including a transmitter for sending commands to the receiver that control the rotational speed of the rotating toy.

13. The combination of claim 12, wherein:

the rotating toy is made of a light weight foam material such that the rotating toy is susceptible to being moved by air currents, and the remote control mechanism includes a fan activated by said remote control mechanism for blowing air towards the rotating toy.

* * * * *

US00D496695S1

(12) United States Design Patent

Davis

(10) Patent No.: US D496,695 S
(45) Date of Patent: ** Sep. 28, 2004

(54) FLYING TOY

(76) Inventor: Steven Davis, Suite 701-3 Wing On Plaza, 62 Mody Road, TST East (HK)

(**) Term: 14 Years

(21) Appl. No.: 29/177,740

(22) Filed: Mar. 14, 2003

(51) LOC (7) Cl. 21-01
(52) U.S. Cl. D21/444; D21/441
(58) Field of Search D21/436–455, D21/458–464; 446/34–68; 473/569–571, 588–590

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Primary Examiner—Stella Reid
Assistant Examiner—C. Tuttle

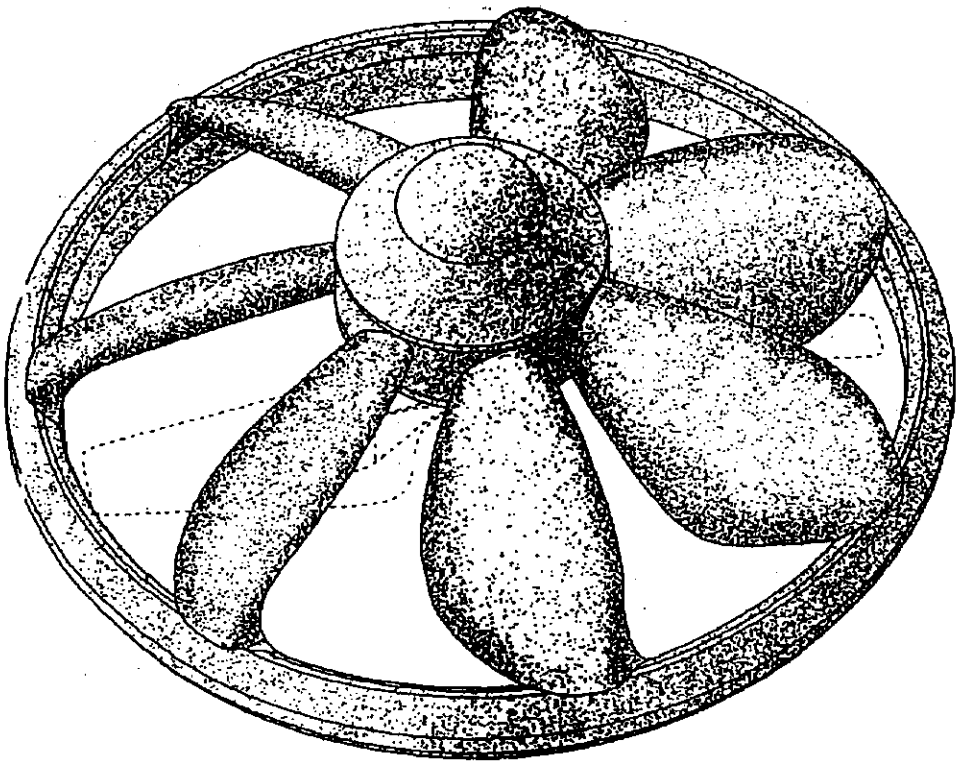
(57) CLAIM

The ornamental design for a flying toy, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of the flying toy showing the new design;
FIG. 2 is a top plan view of the flying toy shown in FIG. 1;
FIG. 3 is a bottom plan view of the flying toy shown in FIG. 1; and,
FIG. 4 is a side view of the flying toy shown in FIG. 1.
The portions shown in broken lines are for illustrative purposes only; and form no part of the claimed design.

1 Claim, 4 Drawing Sheets



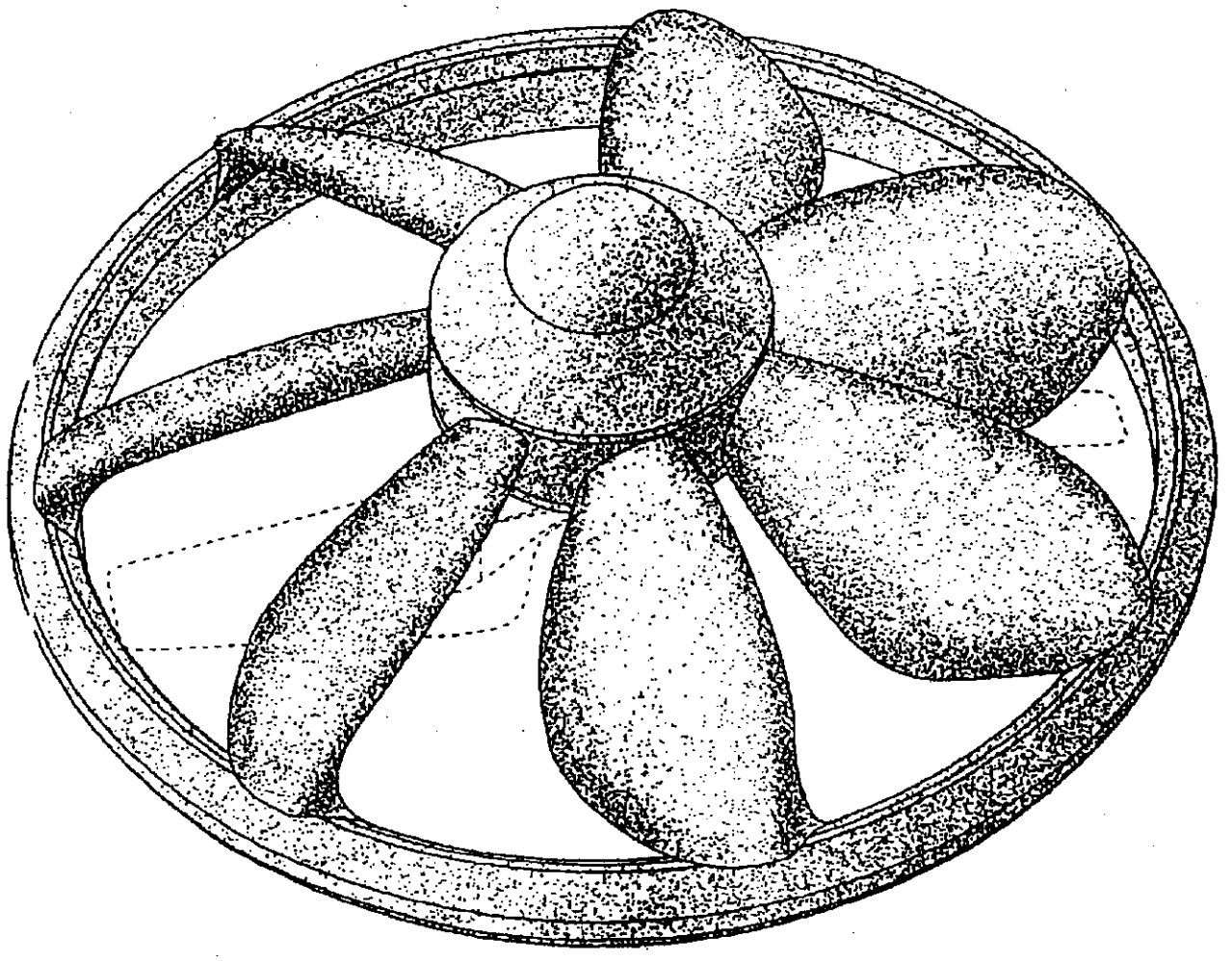


FIG. 1

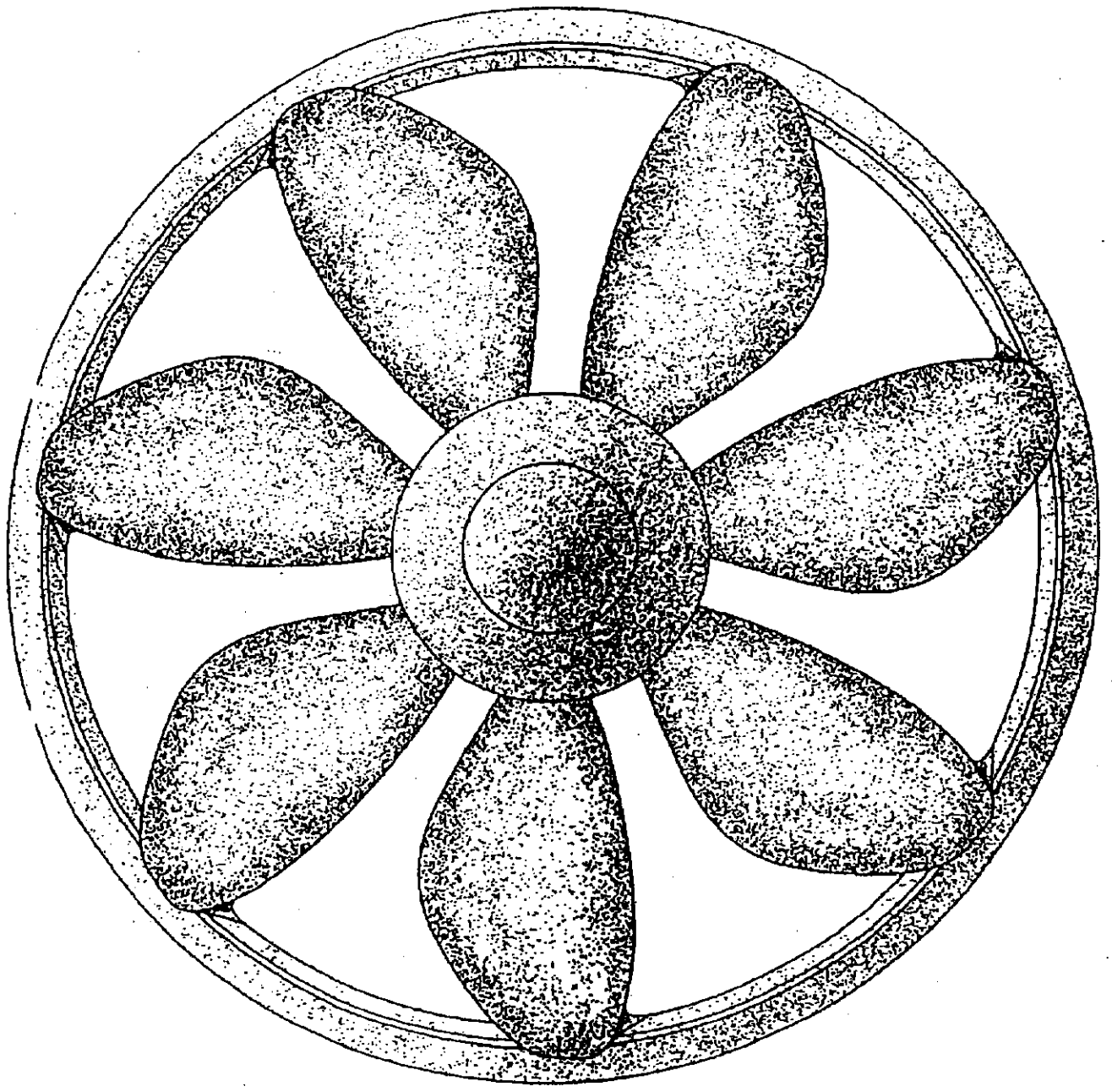


FIG. 2

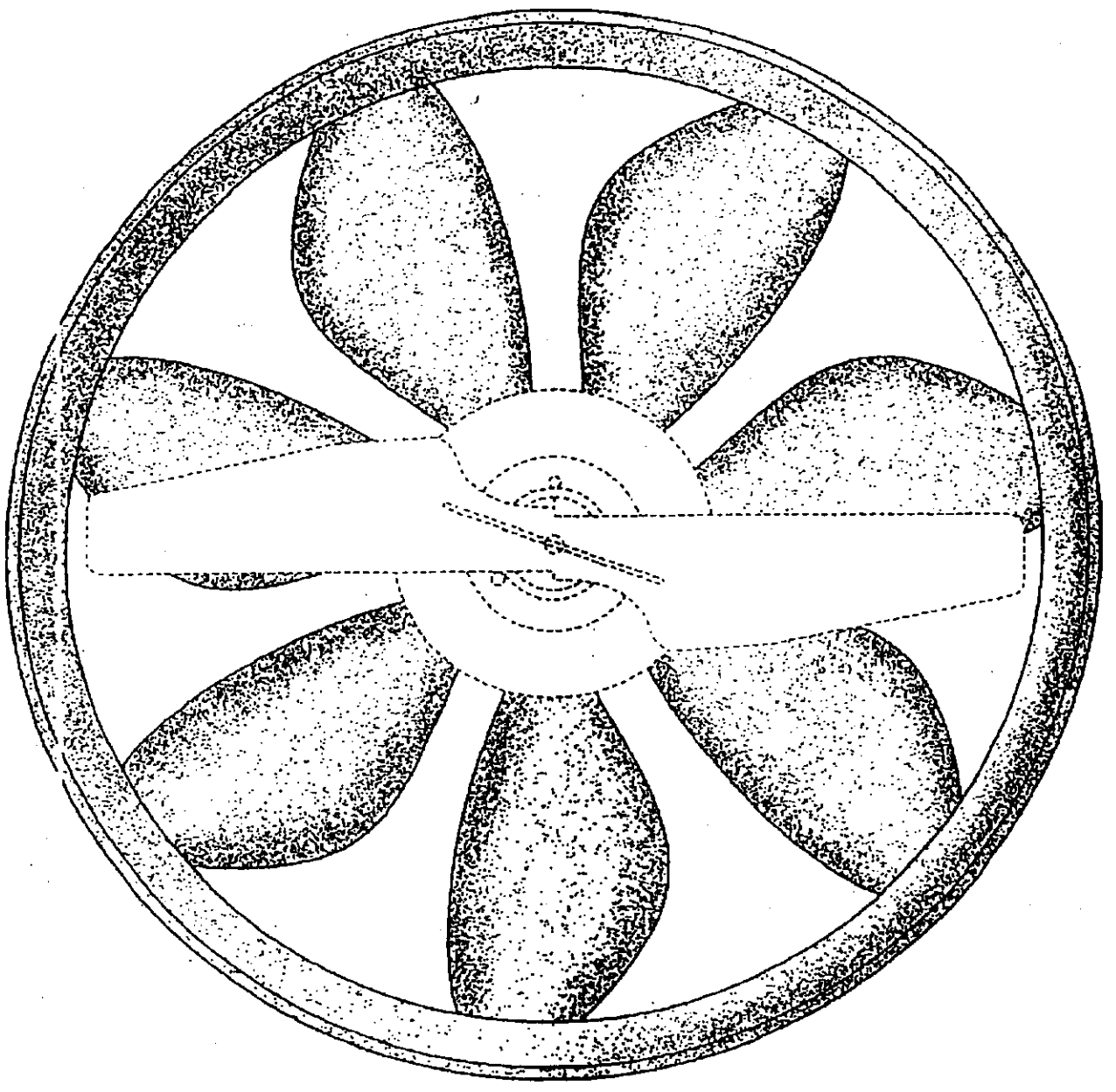
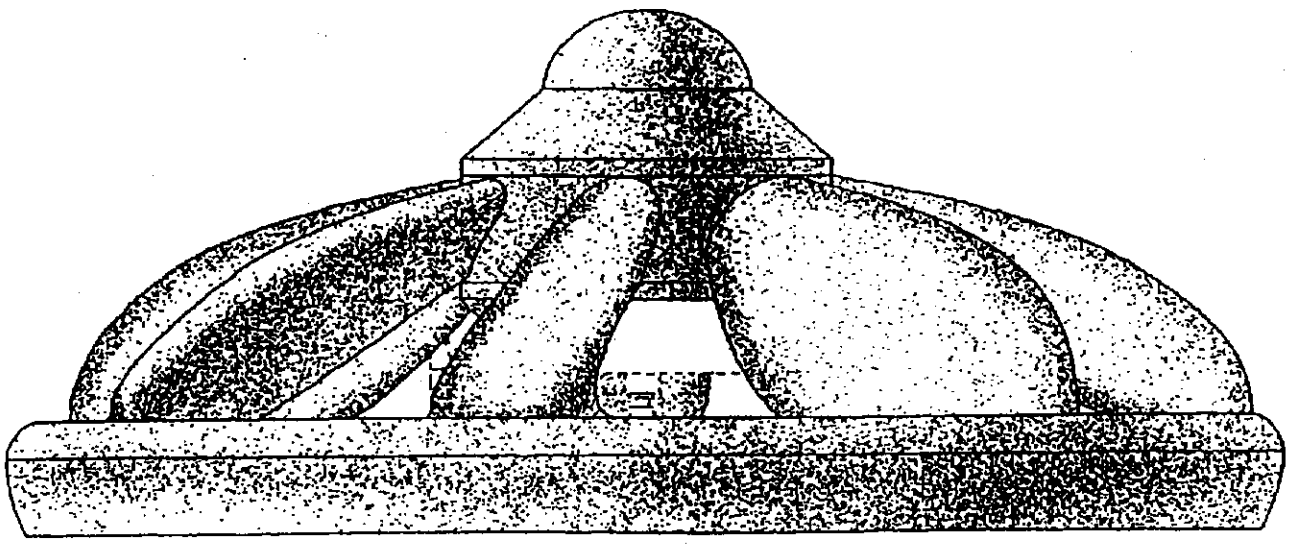


FIG. 3



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☑ 3-Dimensional sculpture ☐ Map ☐ Technical drawing
☐ 2 Dimensional artwork ☐ Photograph ☐ Text
☐ Reproduction of work of art ☐ Jewelry design ☐ Architectural work

b Name of Author ▼
Barry Burbson

Dates of Birth and Death
Year Born ▼ 1941 Year Died ▼

Was this contribution to the work a "work made for hire"? ☐ Yes ☑ No

Author's Nationality or Domicile
Name of Country
OR Citizen of: United States
Domiciled in: United States

Was This Author's Contribution to the Work
Anonymous? ☑ Yes ☐ No
Pseudonymous? ☐ Yes ☑ No
If the answer to either of these questions is "Yes," see detailed instructions.

Nature of Authorship Check appropriate box(es). See instructions
☑ 3-Dimensional sculpture ☐ Map ☐ Technical drawing
☐ 2 Dimensional artwork ☐ Photograph ☐ Text
☐ Reproduction of work of art ☐ Jewelry design ☐ Architectural work

3 a Year in Which Creation of This Work Was Completed: 2002 (This information must be given in all cases.)

b Date and Nation of First Publication of This Particular Work
Complete this information ONLY if this work has been published. Month February Day 16 Year 2003
Nation: United States

4 See instructions before completing this space

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
Edu-Science (H.K.) Ltd.
Suite 701, 7/F, Wing On Plaza
62 Mody Road, Tsim Sha Tsui East Kowloon, Hong Kong

Transfer If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼
Work For Hire / Assignment

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MAY 01 2004
TWO DEPOSITS RECEIVED
FUNDS RECEIVED

EXAMINED BY — FORM VA

CHECKED BY

☐ CORRESPONDENCE Yes — FOR COPYRIGHT OFFICE USE ONLY

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PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office? **5**

☐ Yes ☑ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼

a. ☐ This is the first published edition of a work previously registered in unpublished form

b. ☐ This is the first application submitted by this author as copyright claimant

c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▼ Year of Registration ▼

DERIVATIVE WORK OR COMPILATION Complete both space 6a and 6b for a derivative work; complete only 6b for a compilation. **6**

a. Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

a

See instructions before completing this space

b. Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

b

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. **7**

Name ▼ Account Number ▼

a

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼

b

Christopher J Bischoff / Bischoff & Associates, Ltd
1731 Central Street
Evanston, IL 60201

Area code and daytime telephone number (847) 491-9800 Fax number (847) 491 9801

Email bischofflaw@yahoo com

CERTIFICATION* I, the undersigned, hereby certify that I am the **8**

check only one ▶
- ☐ author
- ☐ other copyright claimant
- ☐ owner of exclusive right(s)
- ☑ authorized agent of Author and Copyright Claimant

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date

Christopher J Bischoff Date April 27, 2004

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address **9**

Name ▼
Christopher J Bischoff

Number/Street/Apt ▼
1731 Central Street

City/State/ZIP ▼
Evanston, IL 60201

[redacted]
Complete all necessary spaces
Sign your application in space 8
[redacted]
1. Application form
2. Nonrefundable filing fee in check or money order payable to Register of Copyrights
3. Deposit material
[redacted]
Library of Congress
Copyright Office
101 Independence Avenue S.E.
Washington D.C. 20559-6000

Fees are subject to change. For current fees, check the Copyright Office website at www.copyright.gov, write the Copyright Office, or call (202) 707-3000.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

Certificate of Registration

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Marybeth Peters

Register of Copyrights, United States of America

Form TX
For a Nondramatic Literary Work
UNITED STATES COPYRIGHT OFFICE

RI TX 5-871-587

EFFECTIVE DATE OF REGISTRATION
JAN 27 2004
Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼

INSTRUCTION MANUAL FOR VECTRON ULTRALITE

PREVIOUS OR ALTERNATIVE TITLES ▼

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2 a NAME OF AUTHOR ▼

EDU-SCIENCE (H.K.) LTD

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☒ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ HONG KONG
Domiciled in ▶ HONG KONG

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☒ Yes ☐ No
Pseudonymous? ☐ Yes ☒ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼
Entire Text, Drawings, Compilation, Layout, Formatting and Revision

NOTE
Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶
Domiciled in ▶

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
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c NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

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☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶
Domiciled in ▶

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3 a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED
2003 ◀ Year
This information must be given in all cases.

b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK
Complete this information ONLY if this work has been published.
Month ▶ June Day ▶ 19 Year ▶ 2003
United States & Hong Kong ◀ Nation

4 See instructions before completing this space.

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
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62 Mody Road, Tsim Sha Tsui East
Kowloon, Hong Kong

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

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APPLICATION RECEIVED
JAN 27 2004

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TWO DEPOSITS RECEIVED
JAN 27 2004

FUNDS RECEIVED

*Amended by G.O. authority per telephone conversation of 2-6-04 with Christopher Bischoff

EXAMINED BY

CHECKED BY

CORRESPONDENCE
☑ Yes

FORM TX

FOR COPYRIGHT OFFICE USE ONLY

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PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?
☐ Yes ☒ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼
a ☐ This is the first published edition of a work previously registered in unpublished form.
b ☐ This is the first application submitted by this author as copyright claimant.
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5

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Preexisting Material. Identify any preexisting work or works that this work is based on or incorporates. ▼

a 6

See instructions before completing this space.

Material Added to This Work: Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

b

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.
Name ▼ Account Number ▼

a 7

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼

b

Christopher J Bischoff
Bischoff & Associates, Ltd
1731 Central Street
Evanston, IL 60201

Area code and daytime telephone number ▶ (847) 491-9800 Fax number ▶ (847) 491-9801

Email ▶ bischofflaw@yahoo.com

CERTIFICATION* I, the undersigned, hereby certify that I am the
Check only one ▶
☐ author
☐ other copyright claimant
☐ owner of exclusive right(s)
☒ authorized agent of Author & Copyright Claimant
Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

8

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

Christopher J Bischoff Date ▶ 01/21/2004

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address:

Name ▼ Christopher J Bischoff
Bischoff & Associates, Ltd.
Number/Street/Apt ▼ 1731 Central Street
City/State/ZIP ▼ Evanston, IL 60201

9

Complete all necessary spaces
Sign your application in space 8

1. Application form
2. Nonrefundable filing fee in check or money order payable to Register of Copyrights
3. Deposit material

Library of Congress
Copyright Office - TX
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Washington, D.C. 20559-6228

Fees are subject to change. For current fees, check the Copyright Office website at www.copyright.gov, write the Copyright Office, or call (202) 707-3000.

17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

DESIGN PATENT ASSIGNMENT

FLYING TOY

The below Assignor(s) having made and created the invention/ornamental design entitled above, and filed a design patent application for said design within the United States thereon, and the Assignee being desirous of acquiring the same; in consideration of and in exchange for the sum of One Dollar ($1.00) and other good and valuable consideration, of the Assignor(s) hereby assigns to the Assignee, including its successors, assigns, heirs, administrators, all of the Assignor's right, title and interest in and to the invention/ornamental design and the design patent application therefore identified herein and to any and all patents which may evolve therefrom:

The Assignor(s) also assign all of their right, title and interest in and to said invention in all foreign countries, all applications for Letters Patent in foreign countries on said invention and any Letters Patent which may evolve therefrom, including the right to claim International Convention priority; and

The Assignor(s) agrees to execute any papers or perform any acts required to establish, vest or protect the Assignee's rights therein or required by Assignee to obtain said patent, without any additional payment therefore, but without any expense to Assignor.

Inventor/Assignor

INVENTOR/ASSIGNOR: Steven Davis
Address: 25266 NW Dixie Mt. RD. Scapoose OR 97056

By: _____ Dated: Dec 29 - 2003

ASSIGNEE: Edu-Science (H.K.) Ltd. Address: Suite 701, 7/F Wing On Plaza 62 Mody Road, Tsim Sha Tsui East Kowloon, Hong Kong

By: _____ Dated: Dec - 29 - 2003.

Title: Managing Director

POPULAR Science
NOVEMBER 2003 SPECIAL ISSUE T[illegible]

THE NEW POWER PLAY

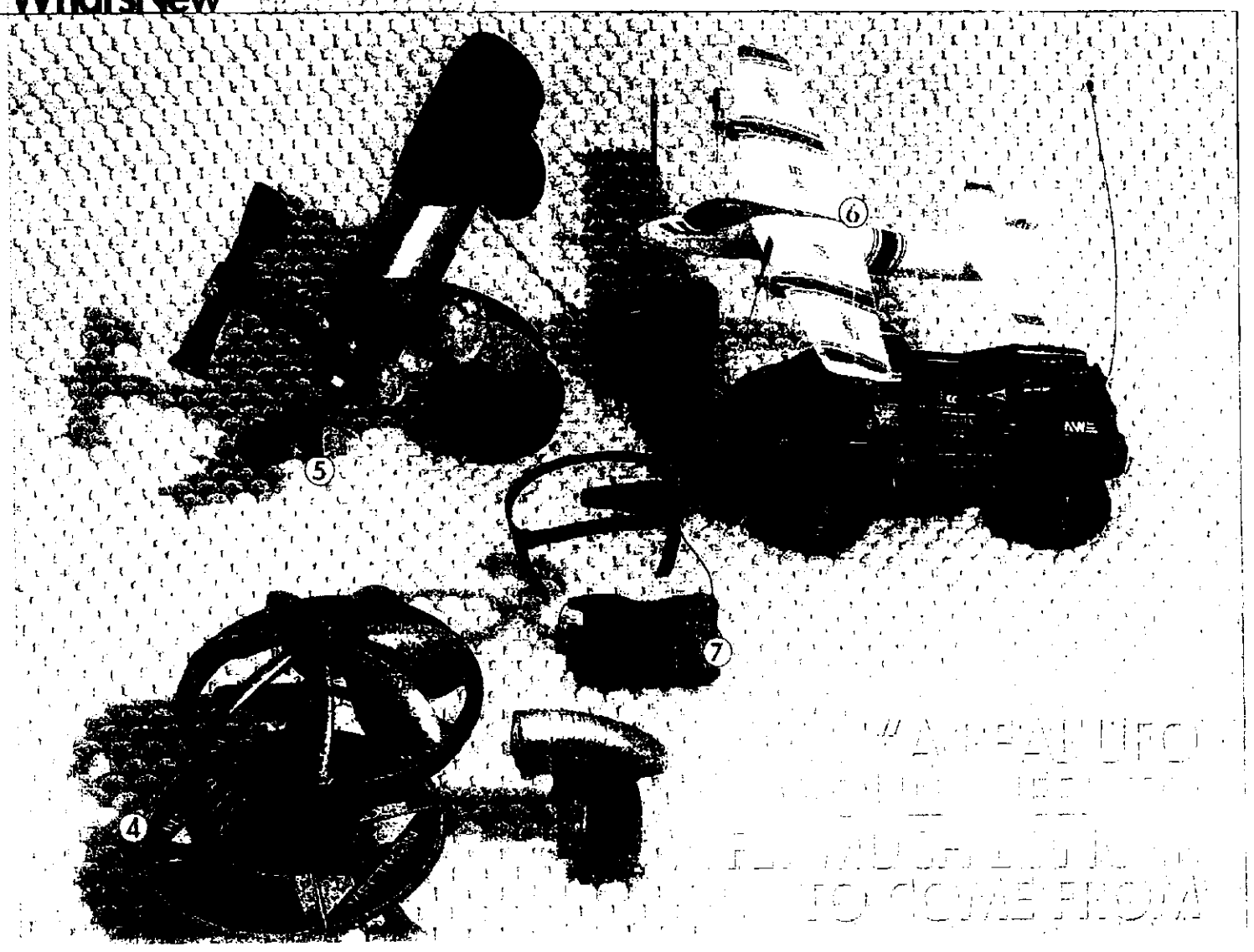
THEY DON'T MAKE TOYS LIKE THEY USED TO. AND WE COULDN'T BE HAPPIER ABOUT THAT.

Thanks to the wonders of technology you no longer need to give your spouse gifts you secretly want for yourself. Now you can give them to your children. Cutting-edge innovations are constantly trickling down into the kids' market, and all those smarts are starting to translate into some serious fun. Here are seven holiday gifts you may end up keeping for yourself. —JENNY EVERETT

4 SCIENCE TECH VECTRON ULTRALITE [$35; AGES 10 AND UP]

The Vectron Ultralite is the world's only untethered flying saucer. Unlike remote-control planes, the Vectron is a cinch to operate: Press the trigger slowly and the little craft climbs to over 35 feet. You can't steer, but it'll drift with the breezes. A 3-minute charge gets 3 minutes of flying time. *taisun.com/vectron-ultralite.html*
TECH FACTOR: **An infrared remote activates an airfoil-shaped rotating blade to quickly launch the saucer.**
COOL 9: SAYS: "Kind of unrealistic. A real UFO would need to fly much longer to come from Mars."

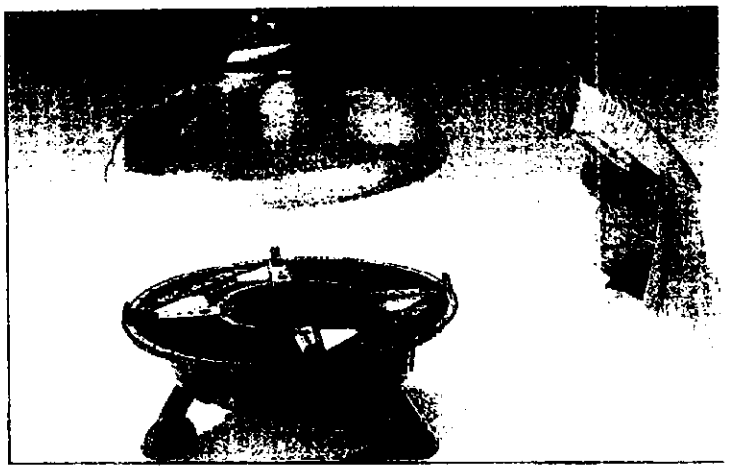
What's New



PENTHOUSE

HOT Holiday Gifts

SERVICE BY ANDY PARGH



FLYING SAUCER

Is this a kid's toy or an adult fascination? Science Tech's Vectron Ultralite is the first and only flying saucer that lifts off and flies with no wires, cords, or tethers. So amazing, it looks like a magic trick. Just place the saucer on its docking base and use the remote to control height and speed. Can be enjoyed indoors or outdoors. $40. We like

EXCLUSIVE NEOPETS OFFER!

Toy Tests™

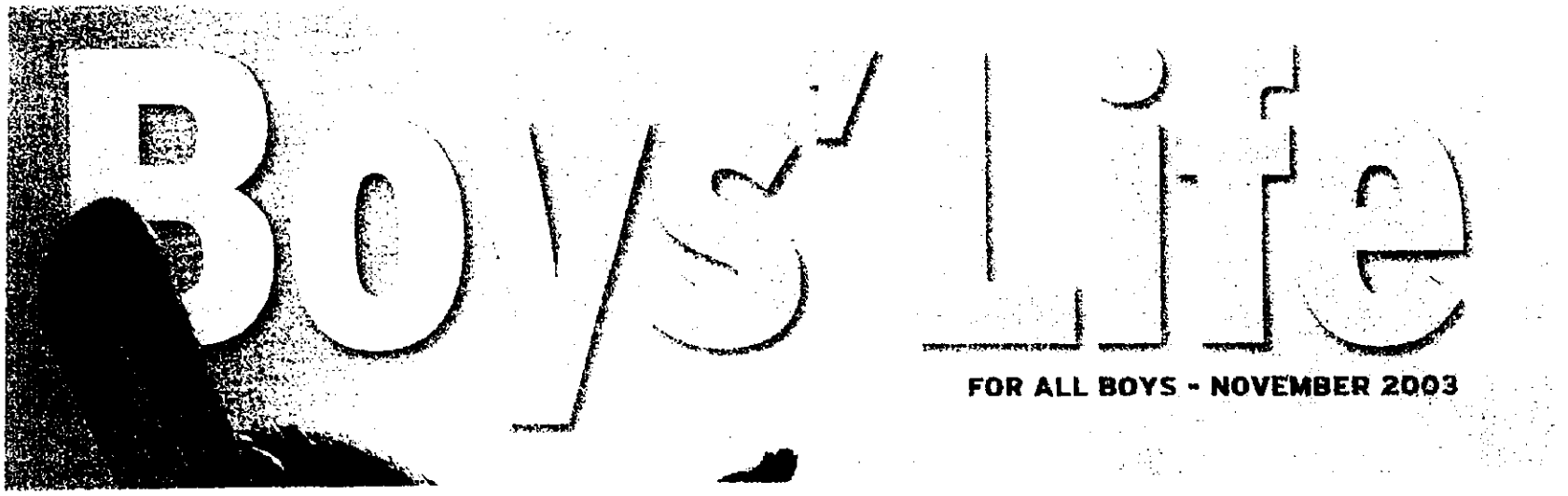
radio-controlled toys

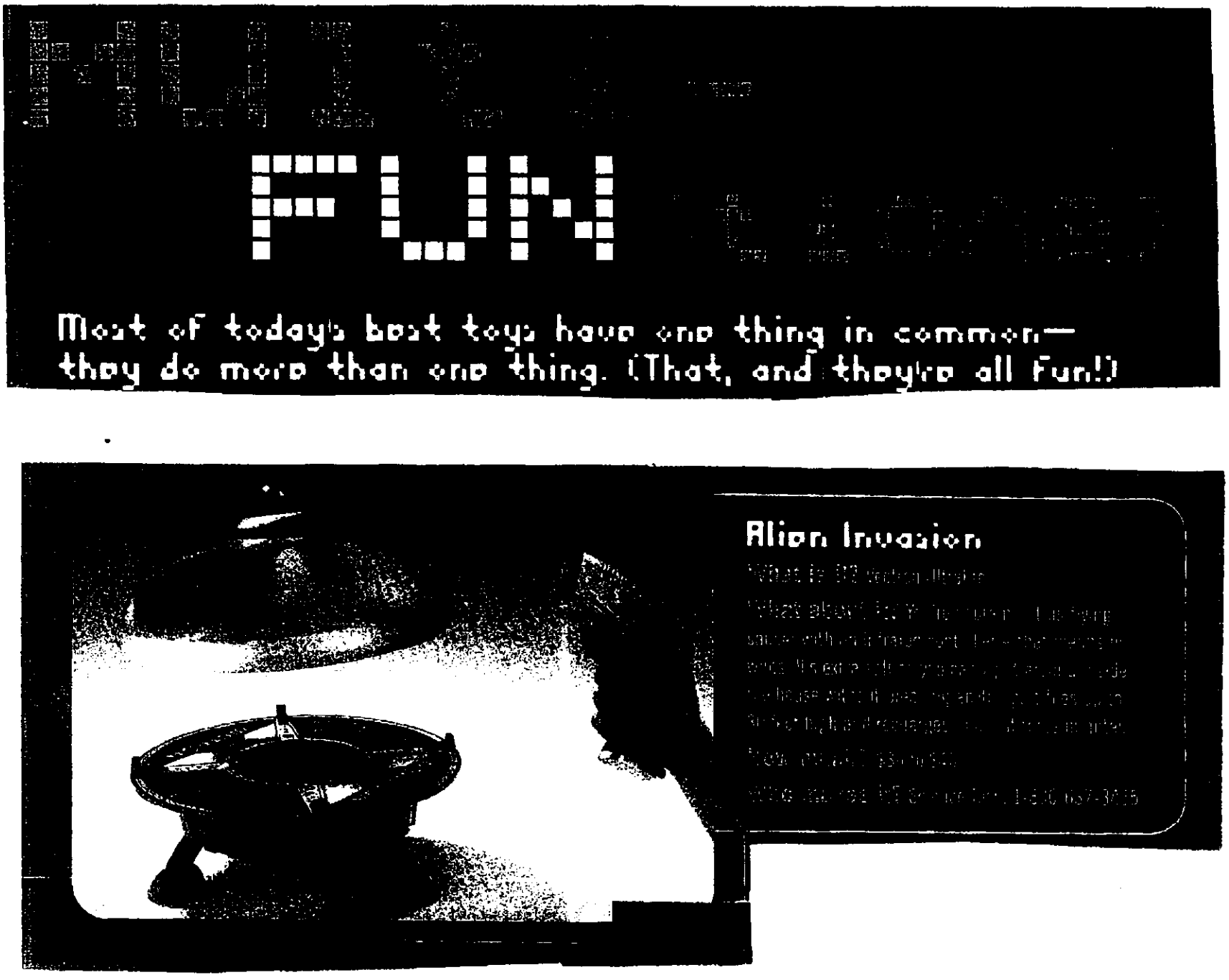
Not just for hobbyists, the thrill of driving by radio control is enjoyed by everyone!

great new innovation

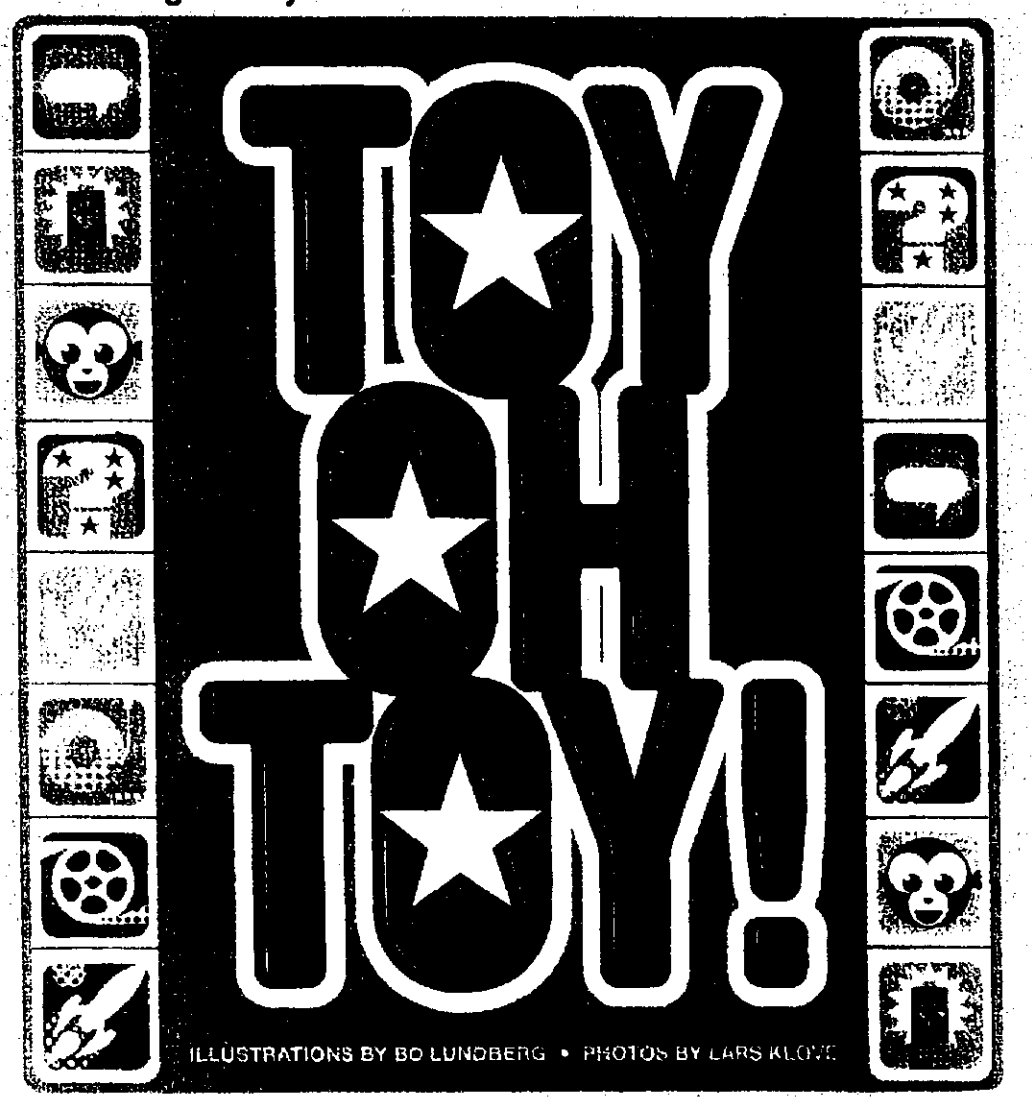
VECTRON ULTRALITE Science Tech has the first-ever cordless flying saucer! It lifts off, flies and hovers using an infrared handheld device. Indoors or outdoors, it's easy to use and made of safe, durable materials. **10+ $29.99-$39.99**

What's "in" in the world of R/C this year? Miniaturization. But you'll also see R/C applications in other toys. Kids love these toys because they feel in control; luckily for them, the R/C category has recently gotten much more sophisticated, less expensive and more feature-oriented. But when you buy R/C, check to be sure you've got all the necessary batteries and chargers. That gets the fun going—and keeps it going.


Boys' Life
FOR ALL BOYS - NOVEMBER 2003


FUN
Most of today's best toys have one thing in common—
they do more than one thing. (That, and they're all Fun!)
Alien Invasion

Have you made your holiday wish list? Then take our test now to figure out which **TOY** or **GADGET** is right for you! BY JULIE HAIRE



The holidays are tough enough as is — what with all that eating, snowball-throwing and holiday-movie watching. . . . So to make things easy, we've found the coolest stuff out there. All you have to do is answer a few true/false questions to find out which ones are right for you! What more could you ask for?

NATIONAL GEOGRAPHIC

Awesome Animals COLLECTOR'S CARDS

kids

DARE TO EXPLORE

BY MARK HAVERSTOCK

Coolest Toys

aybe you made your holiday toy list two months ago—you know, just to give your friends and family plenty of time to save up. (You are so considerate!)

But toy stores began making their lists *nine* months ago! That's when they decided what toys—everything from Hulk Hands to Ballet Barbie—would make kids' wish lists this year.

The hottest trend, though, isn't a toy—it's what's *inside* the toy. Like a minicomputer, microchips tell toys how to work. They can be programmed to produce sounds and pictures, respond to your voice, and much more. "It's all about making toys so intelligent that they play with you as you play with them," says gadget guru Michael Hawley, founder of the Toys for Tomorrow research lab at the Massachusetts Institute of Technology.

Not all of the toys on these pages use microchips. But all of them use science. Check out some of the newest toys of the season.

Vectron Ultralite

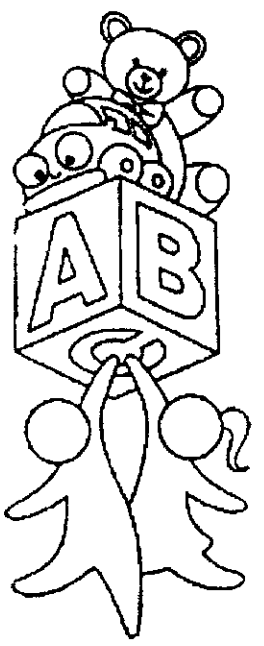
Hovering aircraft

Thrust and lift

Inside this tiny UFO is a propeller spun by a motor, like the blades of a ceiling fan. This propeller pushes the air down, creating thrust. The Ultralite lifts and hovers because it floats on the "pocket" of moving air generated by its propeller. It's the same force that helps real aircraft overcome gravity to fly. What would power a real UFO? Aliens, of course!

NOMINATION

T.O.T.Y. Award



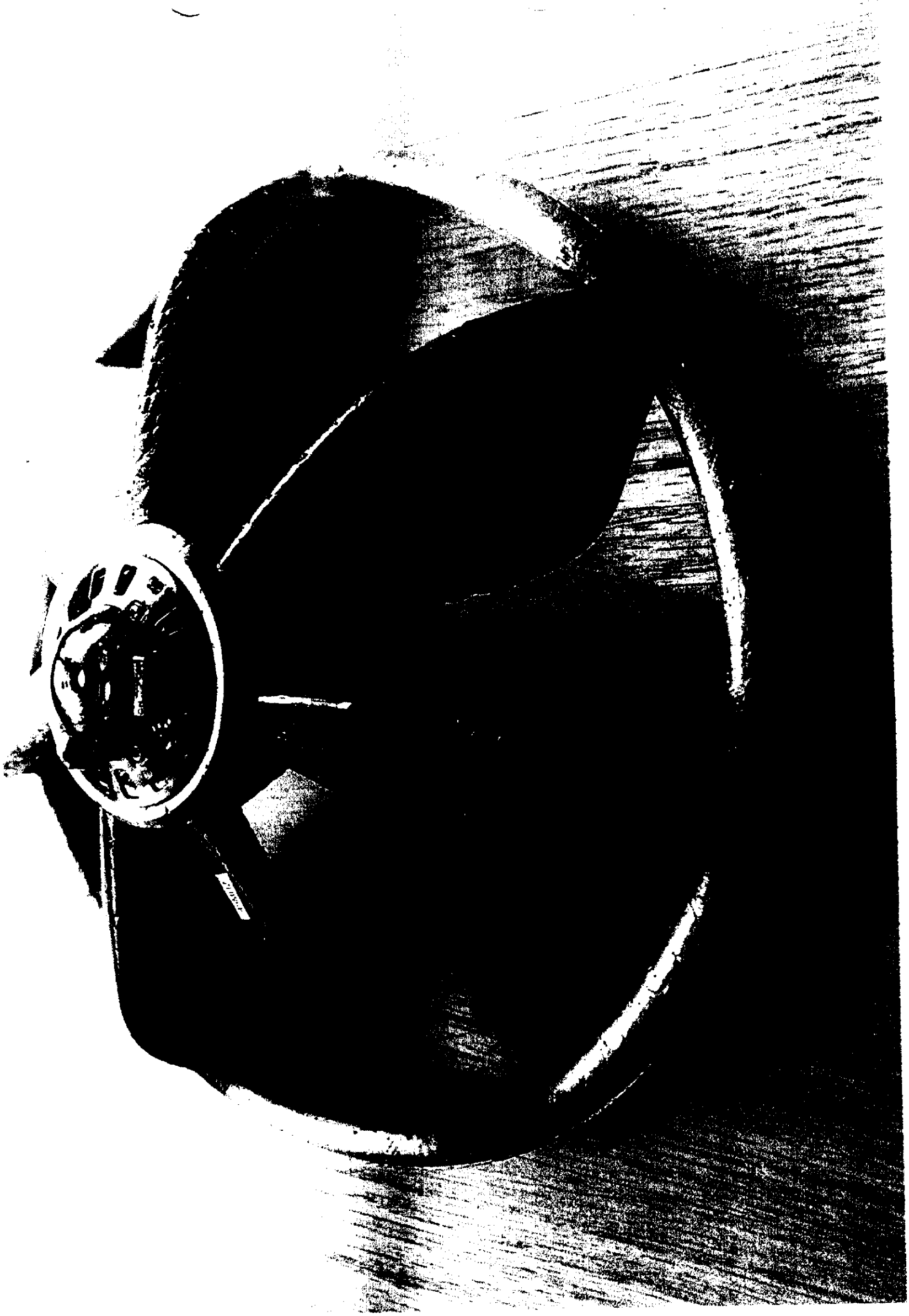
2003
T.O.T.Y.

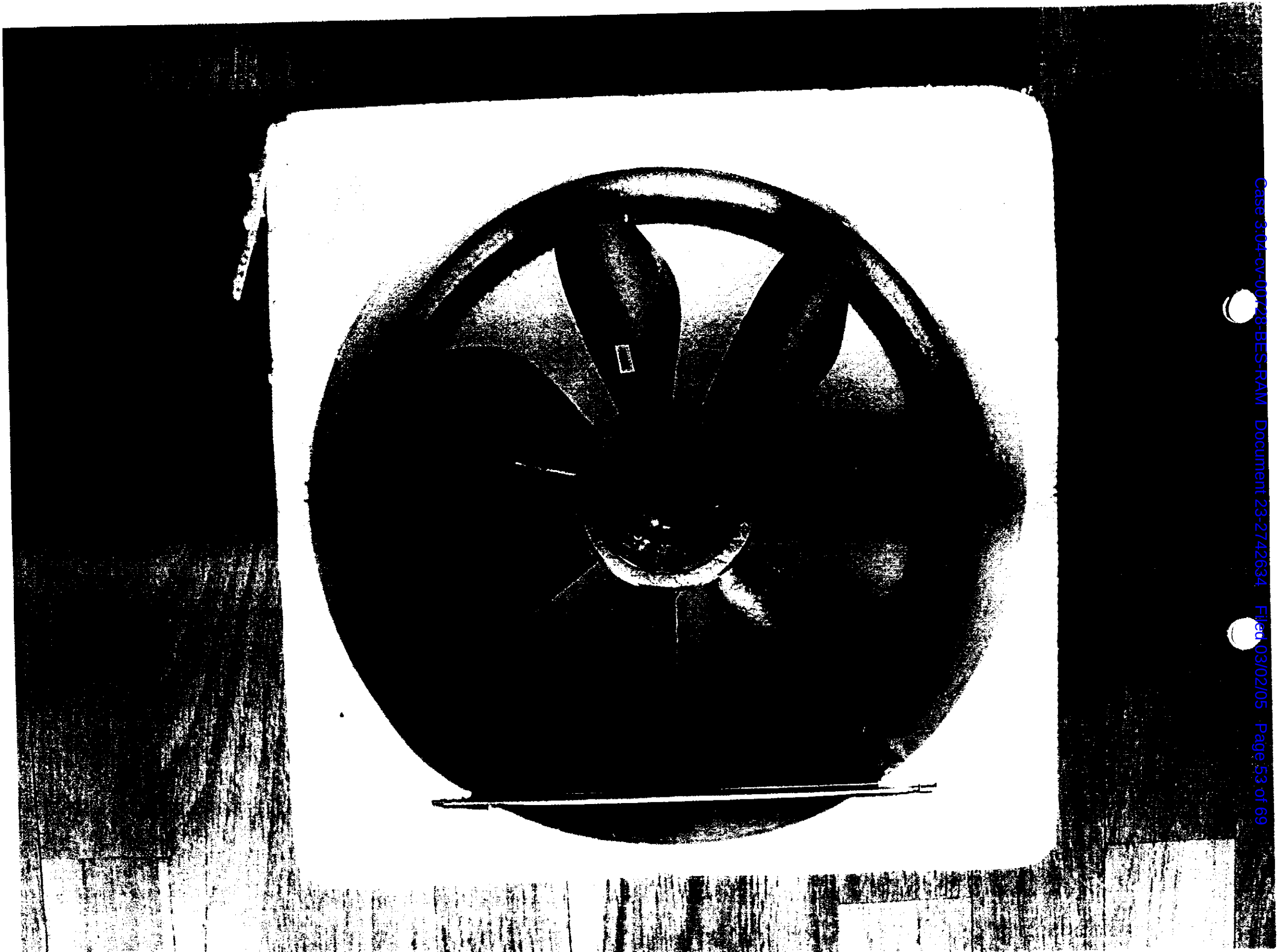
Most Innovative Toy Of The Year

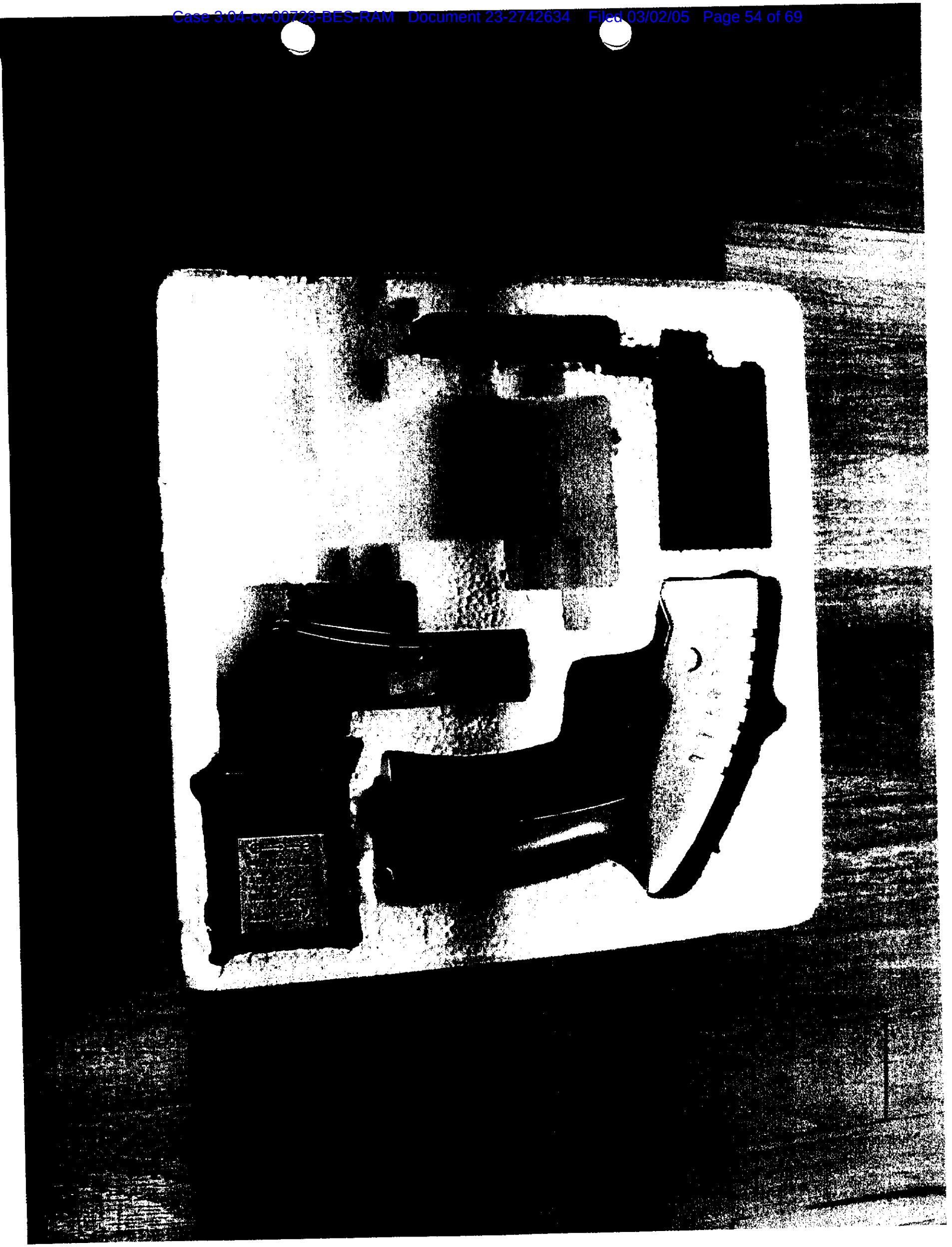
Vectron Ultralite

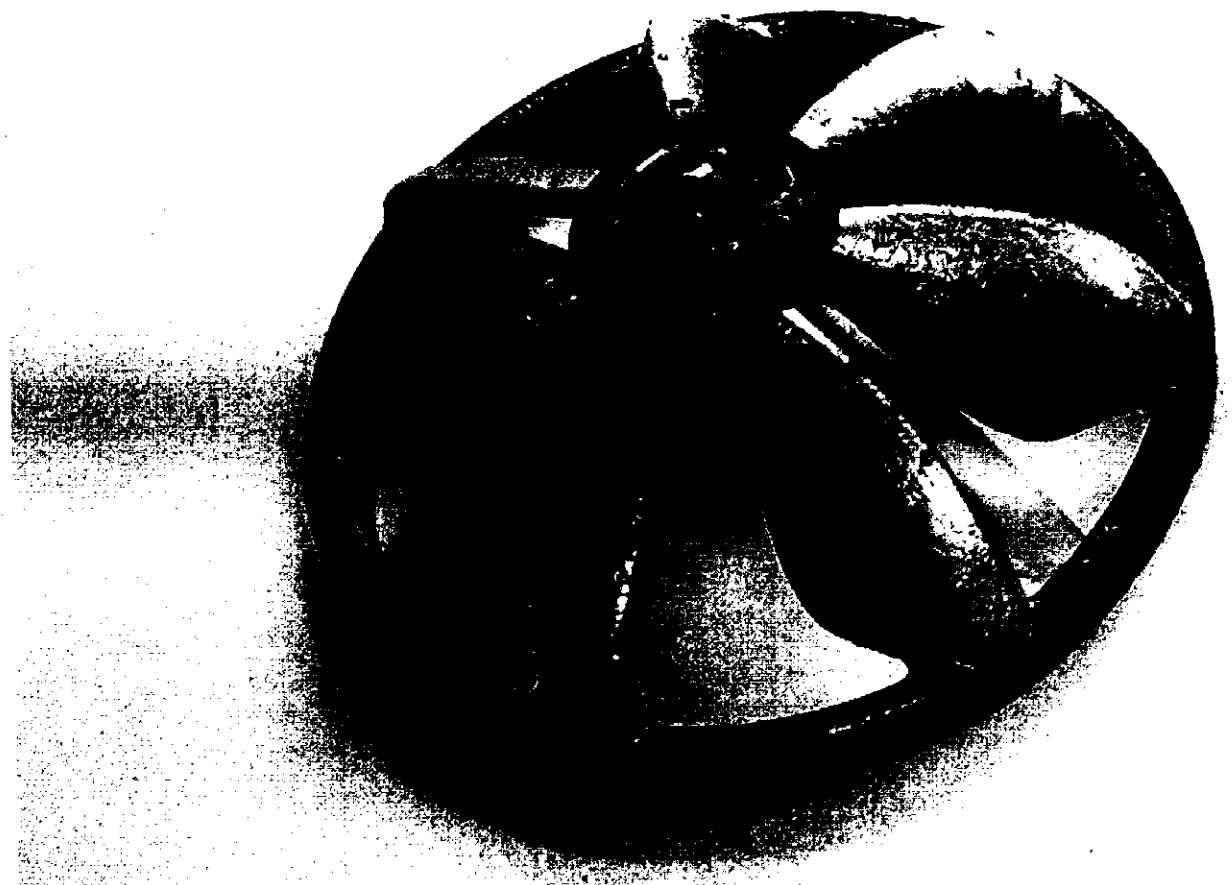
Science Tech


香港工業總會
Federation of
Hong Kong Industries
2003
Hong Kong Awards for Industry
Consumer Product Design
Certificate of Merit
Vectron Ultralite
Edu-Science (HK) Ltd
2003
香港工業獎
消費產品設計優異證書
Vectron Ultralite

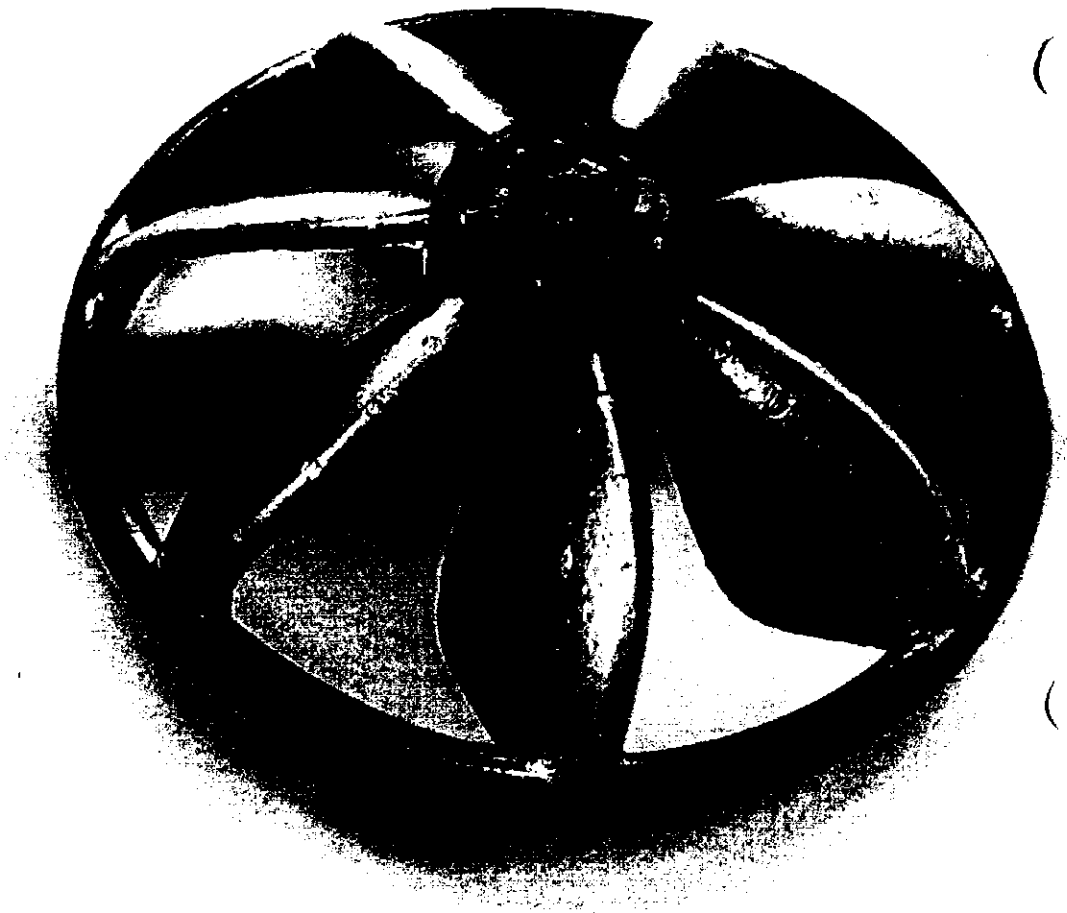








VECTRON



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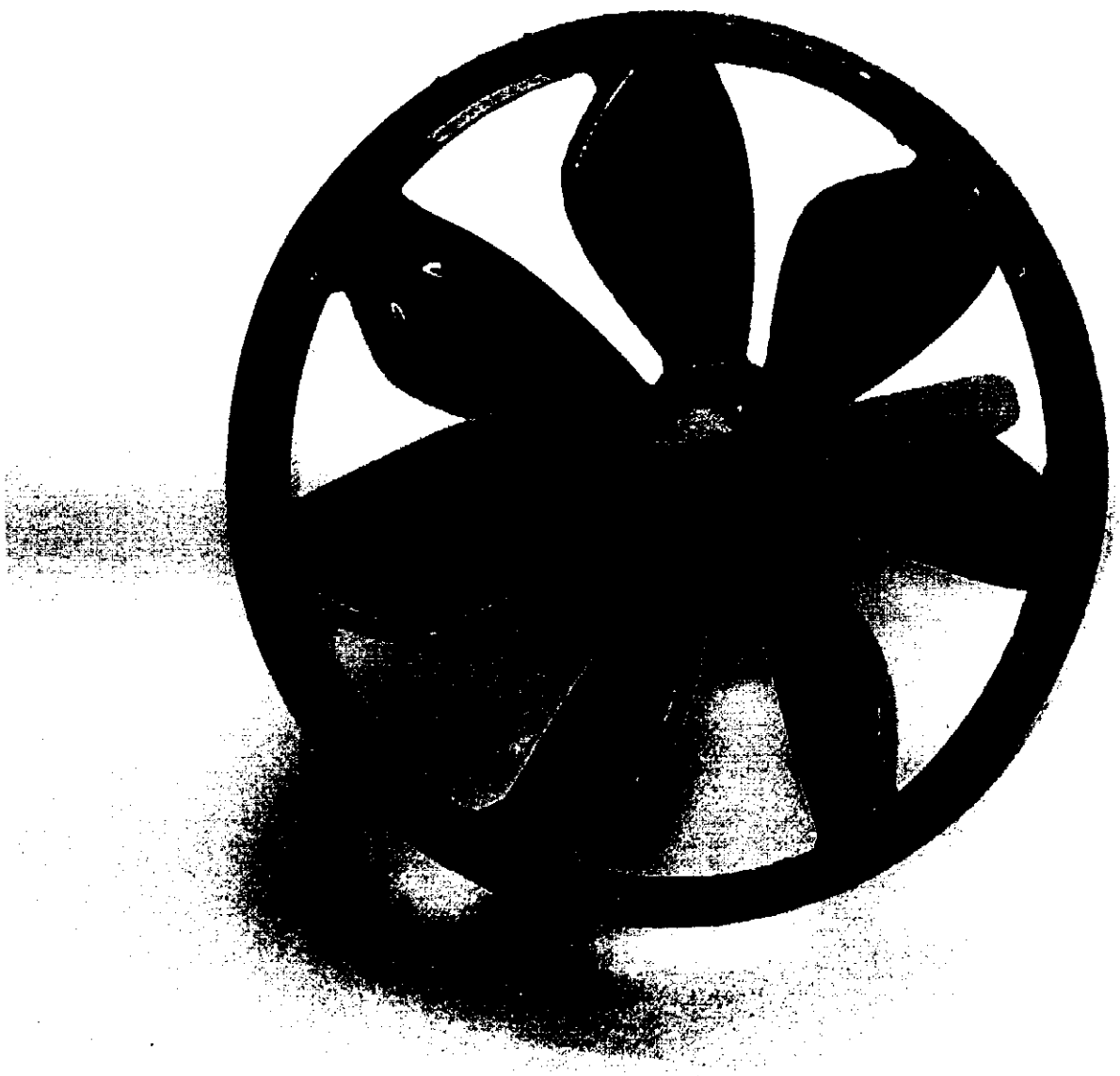
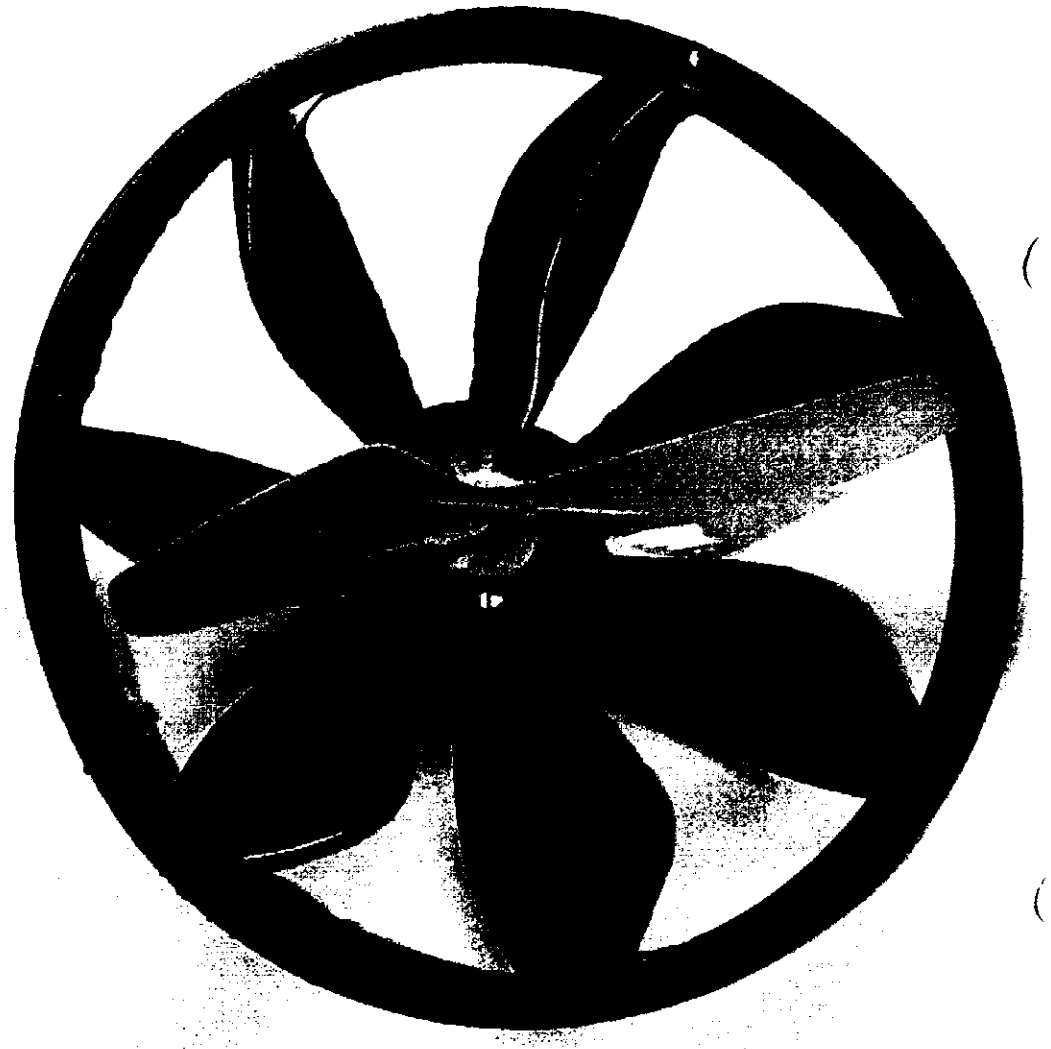


VECTRON



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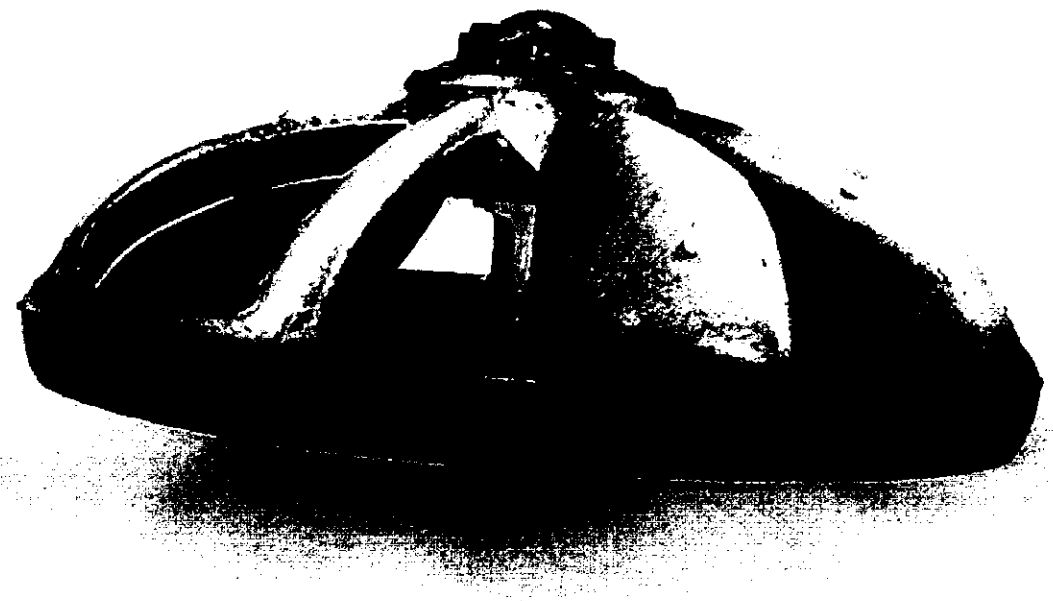


KNOCK OFF

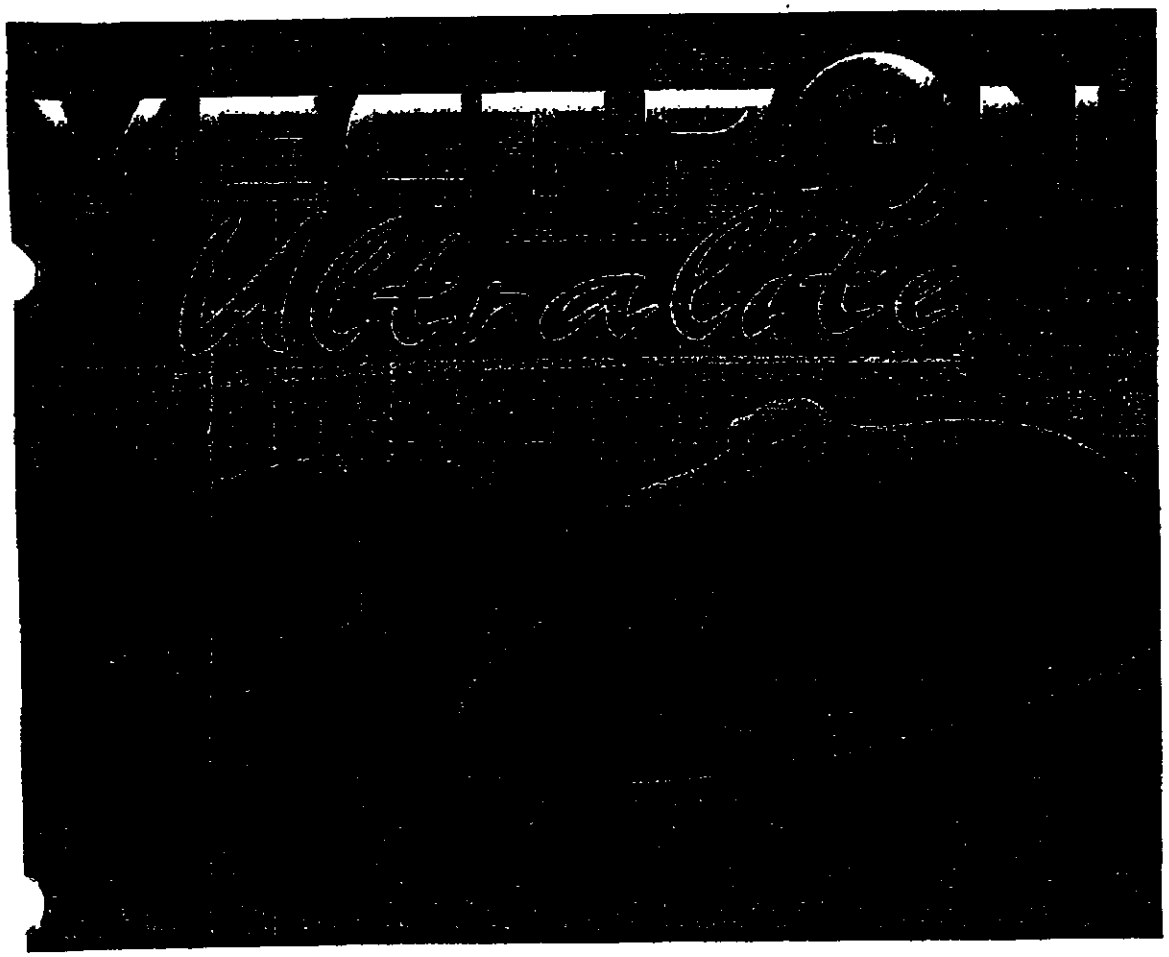
KNOCK OFF

INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

ORIGINAL TEXT

VECTRON ULTRALITE

Excitement in the air!



The next generation of flying toys has arrived.

The World's Smallest Wireless Flying Saucer!

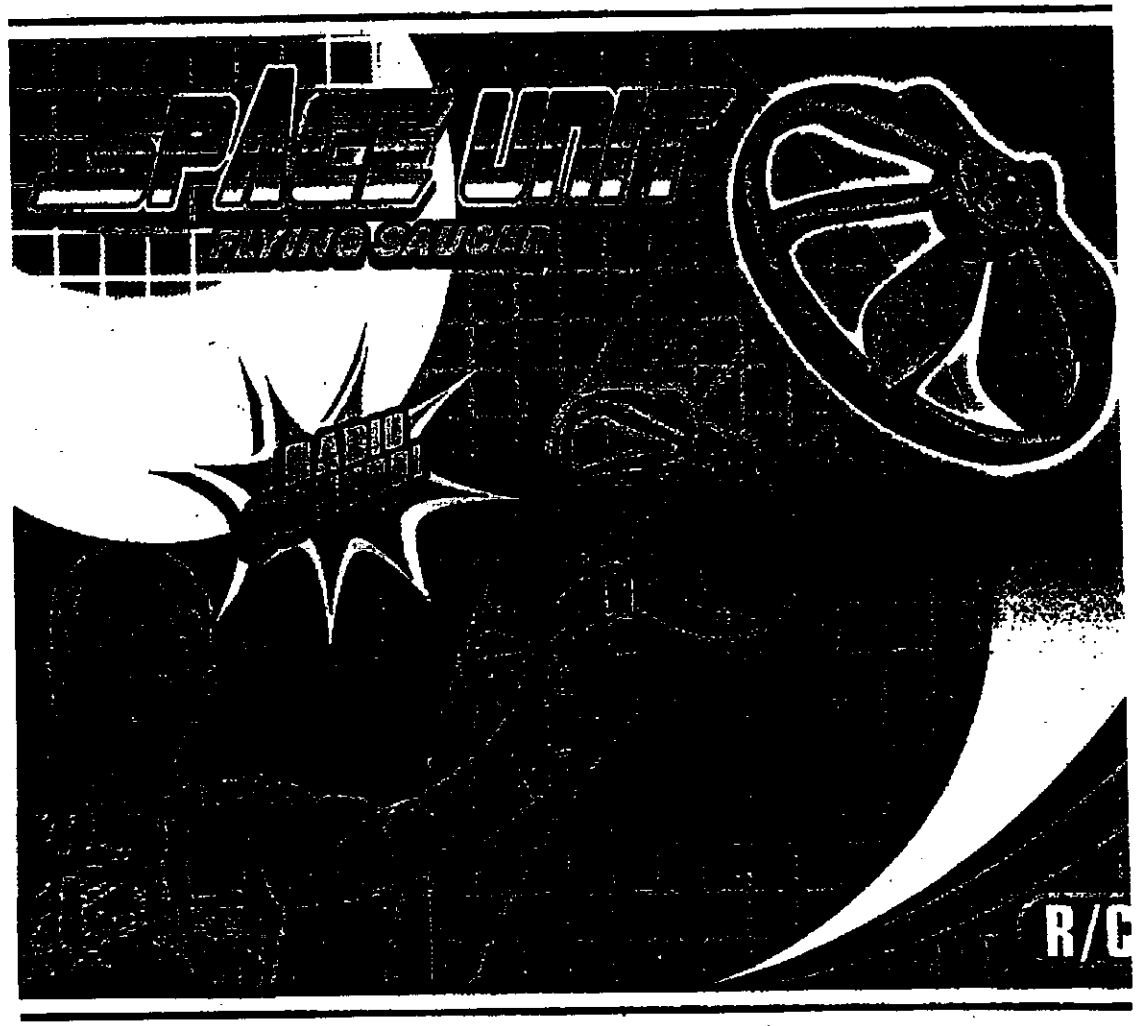
Your Vectron Ultralite is wireless with infrared control.
The patented aero gyro technology
keeps the saucer straight and level.
You control the altitude with your thrust transmitter.
Just charge the battery and it is ready to fly, hover and dive!

INSTRUCTION MANUAL

INFRINGING TEXT

SPACE UNIT

FLYING SAUCER INSTRUCTION MANUAL



NO.332

THE NEXT GENERATION OF FLYING TOYS HAS ARRIVED

THE WORLD`S SMALLEST WIRELESS FLYING SAUCE

Your fly saucer is radio control.
The patented aero gyro technology
keeps the saucer straight and level.
You can control the altitude with your thrust transmitter.
Just charge the battery and it is ready to fly,hover and dive!

INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

ORIGINAL TEXT

VECTRON ULTRALITE

WARNING!

CAUTION: Electrically operated product. Not recommended for children under 10 years of age. As with all electric products, precautions should be observed during handling and use to prevent electric shock.
Keep face, eyes, fingers, hair, body parts etc. away from the propeller and other moving parts.
Always fly the Vectron Ultralite with 10 feet (3 meters) of open space.
Fly your Vectron Ultralite indoors only.
Do not expose your Vectron Ultralite to rain or moisture.
Do not fly in a crowded environment.
Do not fly in a dusty area.
Do not fly in complete darkness.
Ensure people know that you are flying the Vectron Ultralite.
Use only your Ultralite controller included in this package.
Always turn your Vectron Ultralite "OFF" when not in use.

General

Your Vectron Ultralite must not be used if there is any damage to the AC adaptor, charging cord, charging socket, rechargeable battery, propeller, ring or other parts of the Vectron Ultralite.
Do not attempt to lift objects with your Vectron Ultralite.
Infrared frequencies (TV remote control, infrared RC car, etc.) may interfere with proper infrared signal.
Flying under direct sunlight or bright lights may interfere with the infrared signal.
Vectron Ultralite is a high tech precision instrument and is vulnerable to misuse Protecting all components is an essential part of flight maintenance.

INFRINGING TEXT

SPACE UNIT

WARNING!

- **CAUTION:** Electrically operated product. Not recommended for children under 10 years of age. As with all electric products, precautions should be observed during handing and use to prevent electric shock.
- Keep face, eyes, fingers, hair, body part etc. Away from the propeller and other moving parts.
- Do not expose your flying saucer to rain or moisture.
- Do not fly in a crowded environment.
- Do not fly in a dusty area.
- Do not fly in complete darkness.
- Use only your flying saucer controller included in this package.
- Always turn your flying saucer "OFF" when not in use.

GENERAL

- Your flying saucer must not be used if there is any damage to the AC adaptor, charging cord, charging socket, rechargeable battery, propeller, ring or other parts of the flying saucer.
- Do not attempt to lift objects with your flying saucer.
- Flying saucer is a high tech precision instrument and is vulnerable to misuse protecting all components is an essential part of flight maintenance.
- Avoid usage of same frequency flying saucer at one place, it can affect the flying function due to interference, of radio active range, to avoid this interference, there should be at least distance of 60 meters with in 2 flying saucers of same frequencies

INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

ORIGINAL TEXT

VECTRON ULTRALITE

AC Adaptor Important Information

This toy is not intended for children under 3 years old.
The instruction manual contains important information and must be kept.
This toy only operates with supplied AC adaptor.
The use of the AC adaptor should be supervised by an adult and examined regularly.
This toy must not be used if there is any damage to the power cord, plug and other
ts of the transformer.
The AC adaptor must be disconnected before cleaning.

Battery Safety Guidelines

- To prevent battery leakage: Be sure to insert batteries correctly.
- Batteries should be replaced by adult.
- Never dispose of batteries in fire as this may cause them to explode.
- Do not mix old and new batteries (replace all batteries at the same time)
- Do not mix Alkaline, standard (Carbon-Zinc) or rechargeable
) (Nickel-Cadmium) batteries (or equivalent). Only batteries of the same
or equivalent type as recommended are to be used.
- Non-rechargeable batteries are not to be recharged.
- Always remove exhausted or dead batteries from product. Remove
batteries from product which is not going to be used for a long time.
Otherwise the batteries may leak and cause damage.
- The supply terminals are not to be short-circuited.
- Make sure battery compartment is secure.

Do not immerse battery operated toys. Wipe clean only.

INFRINGING TEXT

SPACE UNIT

AC ADAPTOR IMPORTANT INFORMATION

- This toy is not intended for children under ten years old.
- The instruction manual contains important information and must be kept.
- This toy only operates with supplied AC adaptor.
- The use of the AC adaptor should be supervised by and adult and examined regularly.
- This toy must not be used if there is any damage to the power cord, plug and other parts of the transformer.
- The AC adaptor must be disconnected before cleaning.

BATTERY SAFETY GUIDELINES

- To prevent battery leakage: Be sure to insert batteries correctly.
- Batteries should be replaced by adult.
- Never dispose of batteries in fire as this may cause them to explode.
  Do not mix old and new batteries (replace all batteries at the same time)
  Do not mix Alkaline, standard (Carbon-Zinc) or rechargeable. (Nickel-Cadmium) batteries (or equivalent). Only batteries of the same or equivalent type as recommended are to be used.
- Non-rechargeable batteries are not to be recharged.
- Always remove exhausted or dead batteries from product. Remove batteries fro product when is not going to be used for a long time. Otherwise the batteries ma leak and cause damage.
- The supply terminals are not to be short-circuited.
- Make sure battery compartment is secure.
- Do not immerse battery operated toys in water. Wipe clean only.

INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

ORIGINAL TEXT

VECTRON ULTRALITE

Battery Safety

- Your Vectron Ultralite is only to be charged under adult supervision.
- Never expose the Vectron Ultralite battery pack to direct sun, hot areas, or fire as it may explode.
- The Ultralite charger and battery may become warm during charging.
- The Ultralite charging cord must be disconnected from the Vectron Ultralite when it is fully charged.
- Never leave your Vectron Ultralite connected to the AC adaptor overnight.
- Never overcharge the Vectron Ultralite as it can damage the rechargeable battery.

Battery Care

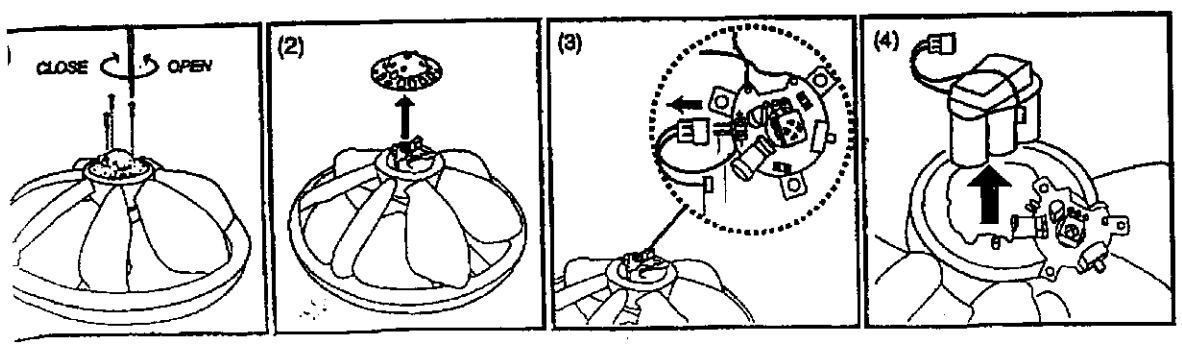
- For maximum performance, always allow your battery of the Vectron Ultralite to drain before recharging.
- Never charge a second time without discharging first. This will affect or damage the battery.

Battery Disposal

- Do not dispose of the battery in your regular household waste.
- Contact your local waste management officials for information on environmentally sound disposal of rechargeable batteries.
- If a battery leak develops, avoid contact with leaking fluid. Place the damaged battery in a plastic bag for proper disposal.
- If fluid comes in to contact with skin or eyes, wash with cool water for at least 15 mins.

Battery Removal

- Remove the 3 screws on the top of the Vectron Ultralite with a Philips screwdriver, disassemble the unit and remove the rechargeable battery.



INFRINGING TEXT

SPACE UNIT

BATTERY SAFETY

- Your flying saucer is only to be charged under adult supervision.
- Never expose the flying saucer battery pack to direct sun, hot area, or fire as it may explode.
- The flying saucer charger and battery may become warm during charging.
- The flying saucer charging cord must be disconnected from the fly saucer when it is fully charged.
- Never leave your flying saucer connected to the AC adaptor overnight.
- Never overcharge the flying saucer as it can damage the rechargeable battery.

BATTERY CARE

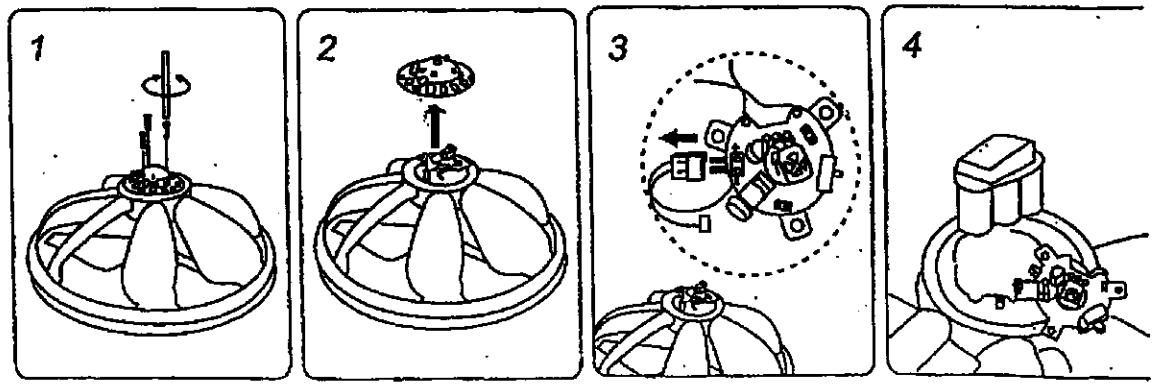
- For maximum performance, always allow your battery of the flying saucer to drai before recharging.
- Never charge a second time without discharging first. This will affect or damage, the battery.

BATTERY DISPOSAL

- Do not dispose of the battery in your regular household waste.
- If a battery leak develops, avoid contact with leaking fluid. Place the damaged battery in a plastic bag for proper disposal.
- If fluid comes in to contact with skin or eyes; wash with cool water for at least 15 minutes.

BATTERY REMOVAL

Remove the 3 screws on the top of flying saucer with a screwdriver, disassemble the unit and remove the rechargeable battery.

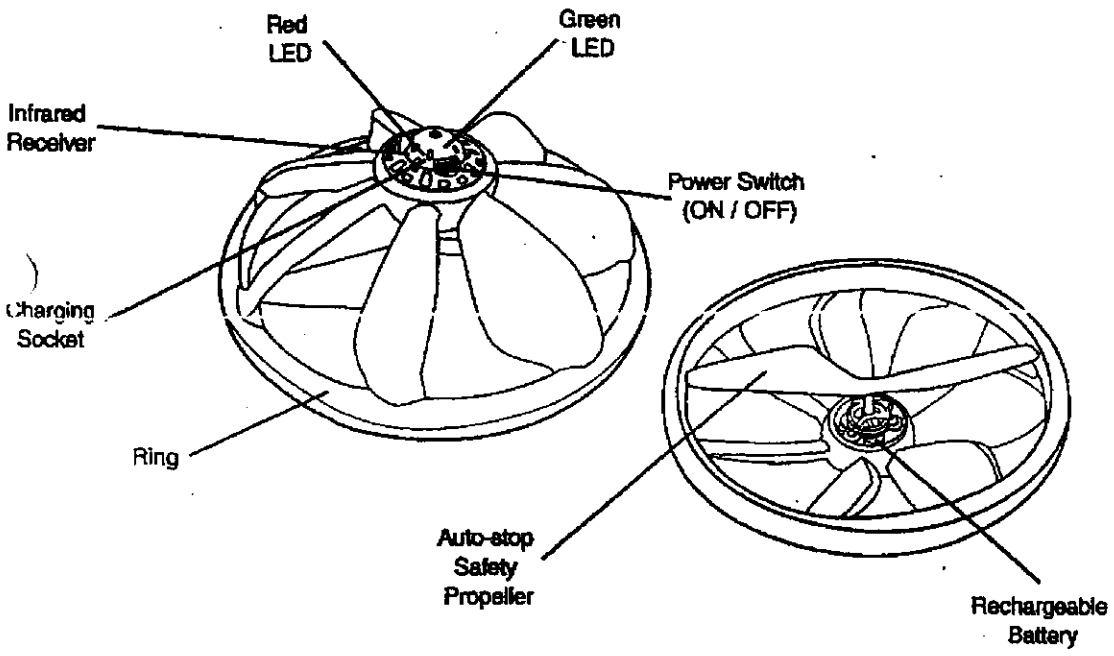


INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

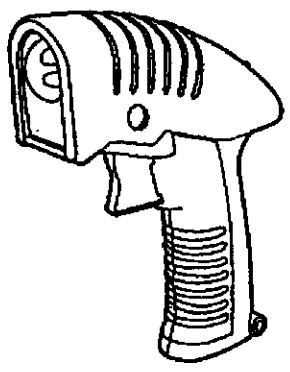
ORIGINAL TEXT

VECTRON ULTRALITE

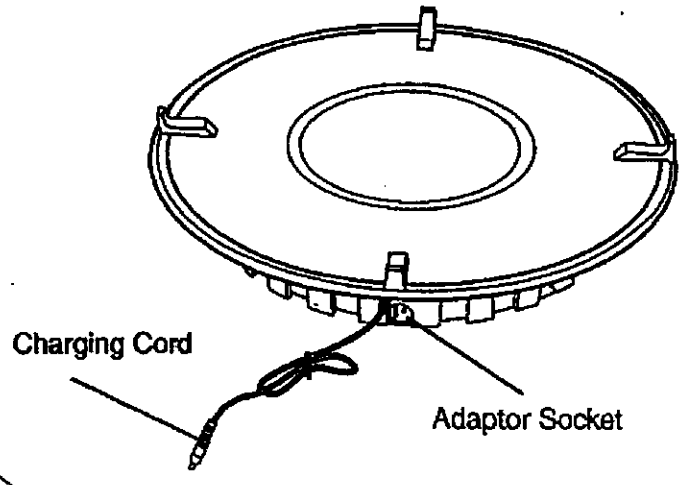
Contents



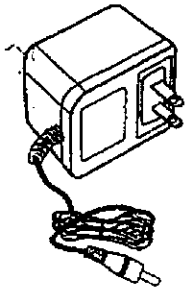
Thrust Transmitter



Launch Platform



AC Adaptor



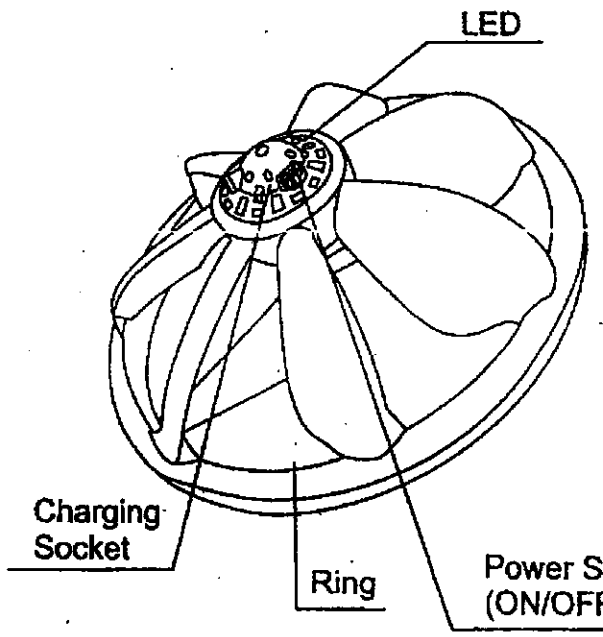
Legs  **x 3**

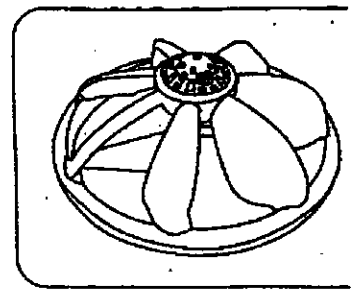
INFRINGING TEXT

SPACE UNIT

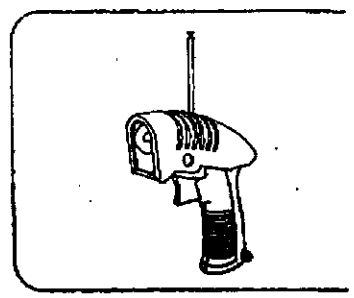
CONTENTS:

1.FLY SAUCER

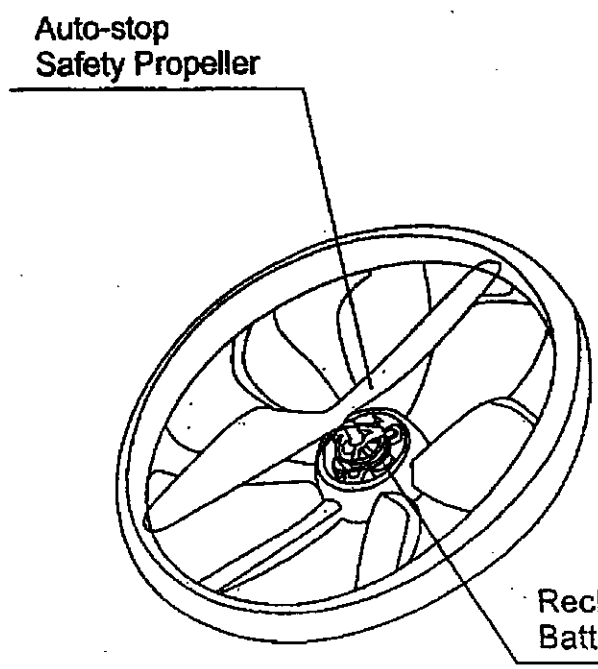


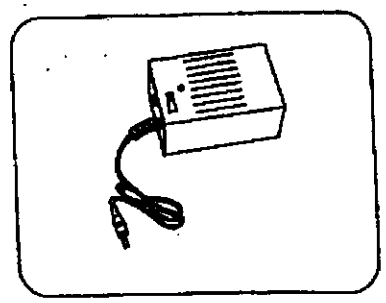


Fly saucer

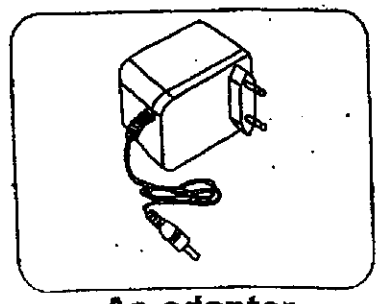


Thrust transmitter





Charger



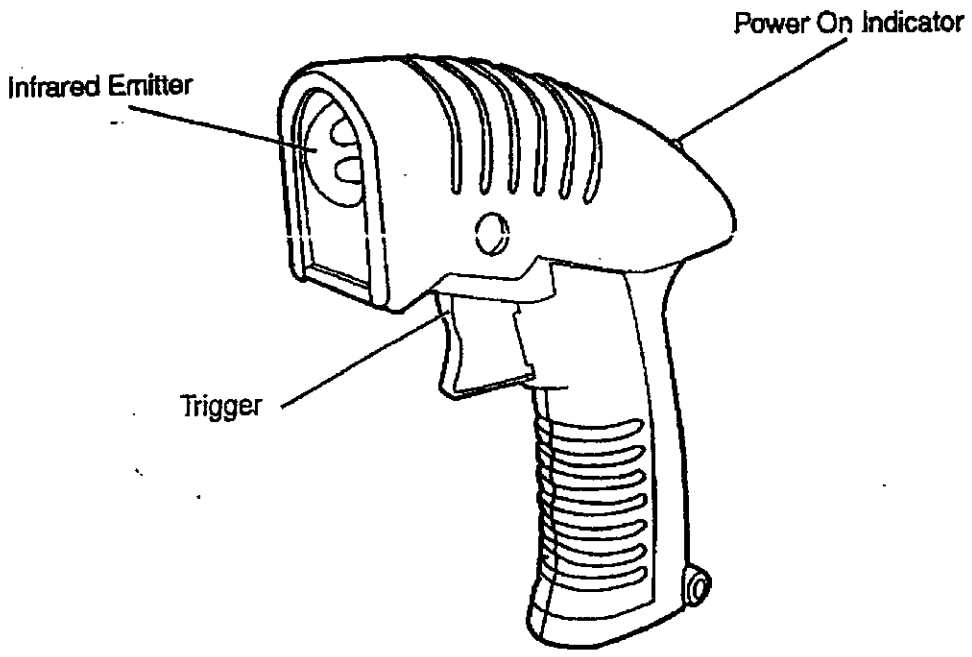
Ac adaptor

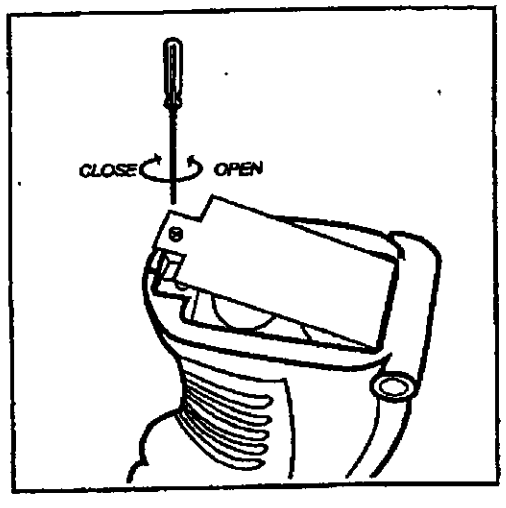
INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

ORIGINAL TEXT

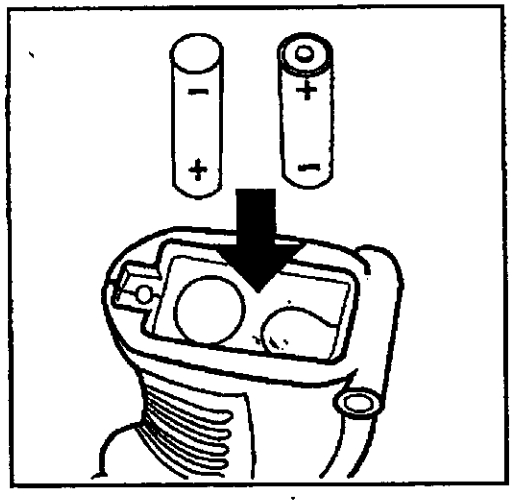
VECTRON ULTRALITE

I) Thrust Transmitter





1) Open or close the cover with a Philips screwdriver.

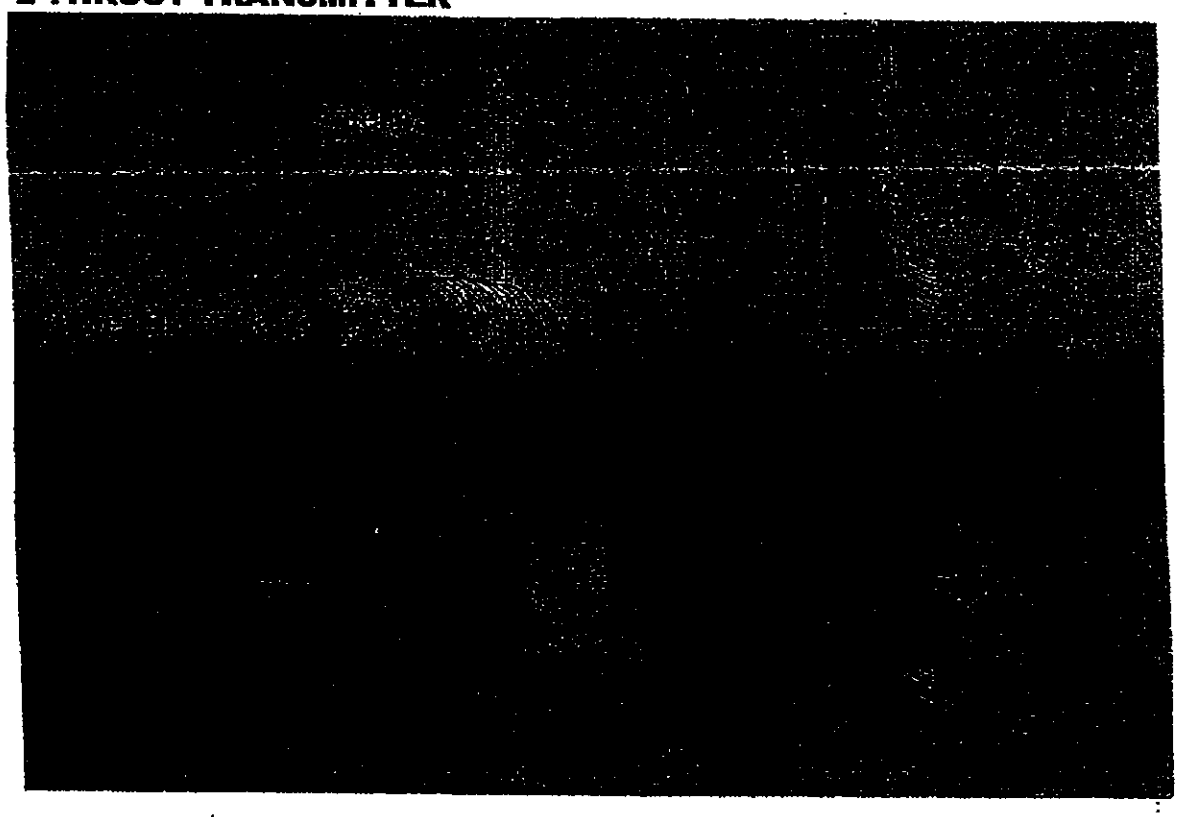


2) Insert 2 size "AA" (LR6) 1.5 V batteries.

INFRINGING TEXT

SPACE UNIT

2 THRUST TRANSMITTER



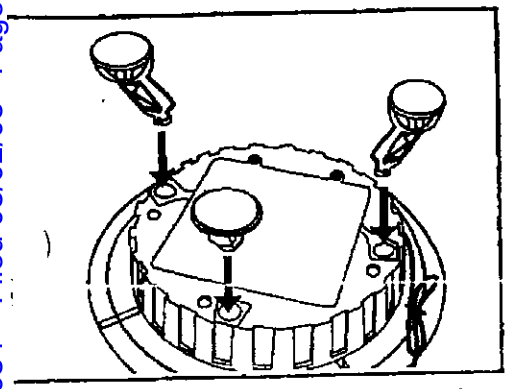
INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

ORIGINAL TEXT

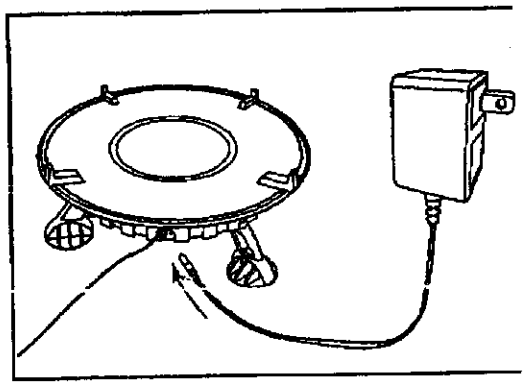
VECTRON ULTRALITE

II) Flight Preparation

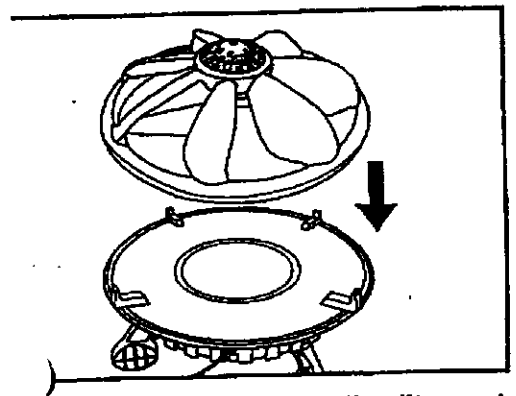
IMPORTANT: Ensure the AC Adaptor voltage and plug is suitable for your area.



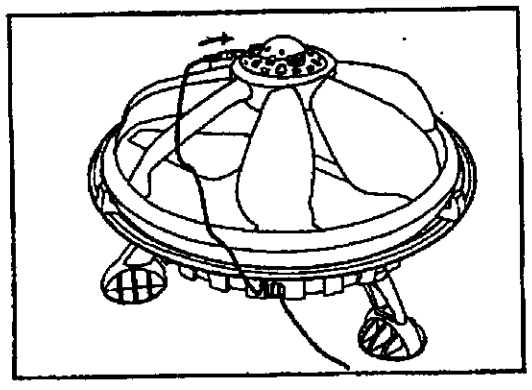
1) Insert the legs into the launch platform.



2) Connect the AC Adaptor to the charging socket and to the wall outlet.



3) Place your Vectron Ultralite on to the launch platform.



4) Ensure your Vectron Ultralite is switched OFF, then connect the charging cord to your Vectron Ultralite.

NOTES:

- ***The red and green LED will blink alternately. It will take approximately 10 minutes to charge your Vectron Ultralite completely; at this point the green LED will flash continuously.***
- ***When your Vectron Ultralite is new or has not been flown for a long time it will take several charge/discharge cycles for the battery to reach its full flight time.***

WARNING: Never recharge your Vectron Ultralite a second time without having flown first. Continuous recharging without discharging first, will damage the Ultralite battery.

INFRINGING TEXT

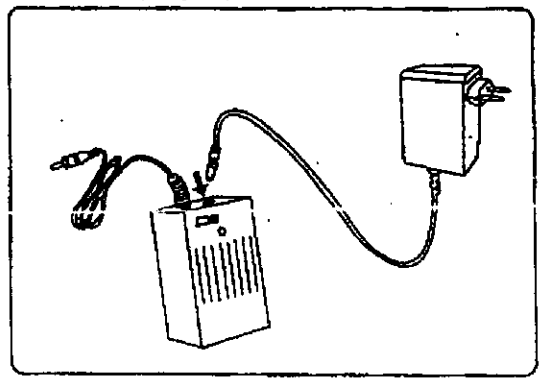
SPACE UNIT

FLIGHT PREPARATION

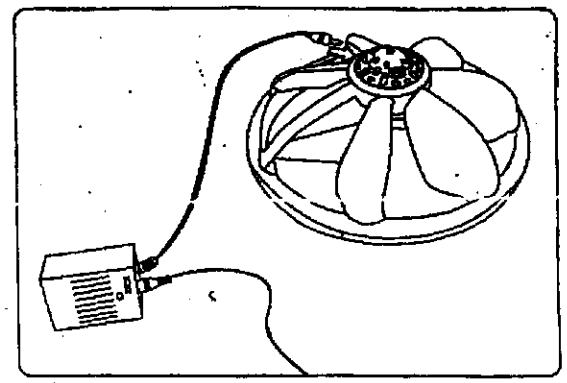
IMPORTANT:

★ Ensure the AC Adaptor voltage and plug is suitable for your area.

★ While playing indoor use charger A, and while playing outdoor use charger B.



Connect the AC Adaptor to the charging socket and to the wall outlet. Slide the power switch, on charger, to "ON" position.



Ensure your flying saucer is switched "OFF". While charging it.

NOTES:

While charging, the LED, on charger, will start blinking and will turn off when the flying saucer is fully charged.

WARNING:

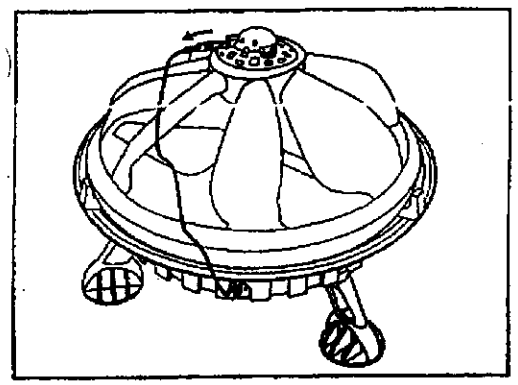
Never recharge your flying saucer a second time without having flown first. Continuous recharging without discharging first, will damage the fly saucer battery.

ORIGINAL TEXT

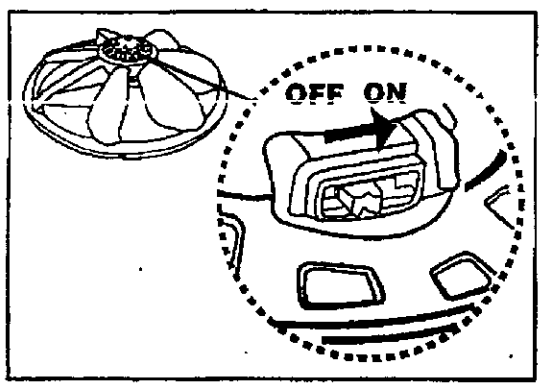
VECTRON ULTRALITE

III) Flying, Hovering and Landing Your Vectron Ultralite

IMPORTANT: Ensure your Vectron Ultralite is fully charged for first time use and that you have a least 10 ft. (3 m) of clear area.

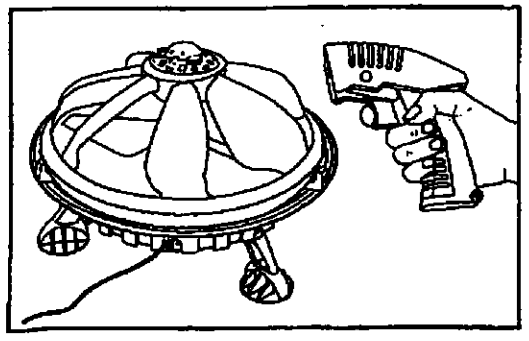


1) With your Vectron Ultralite on the launch platform, unplug the charging cord.

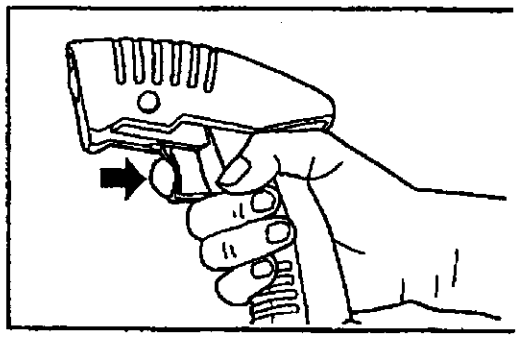


2) Switch on your Vectron Ultralite.

NOTE: After the red and green LED blink alternately, the red LED will start to flash slowly. At this time your Vectron Ultralite is ready for take off.



3) Point the thrust transmitter to your Vectron Ultralite.



4) Press the trigger slowly to allow your Vectron Ultralite to take off.

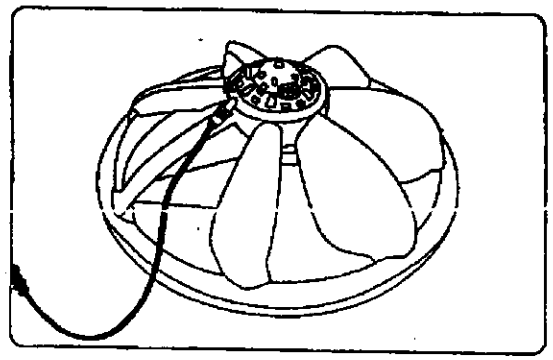
INFRINGING TEXT

SPACE UNIT

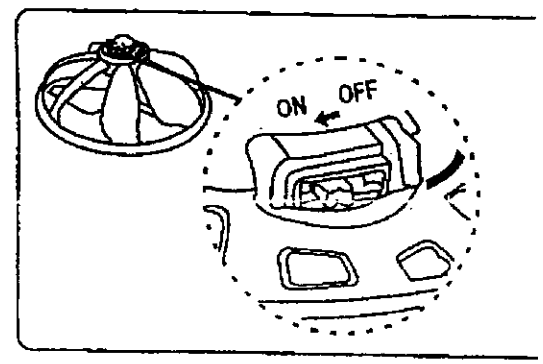
FLYING, HOVERING AND LANDING YOUR FLY SAUCER

IMPORTANT:

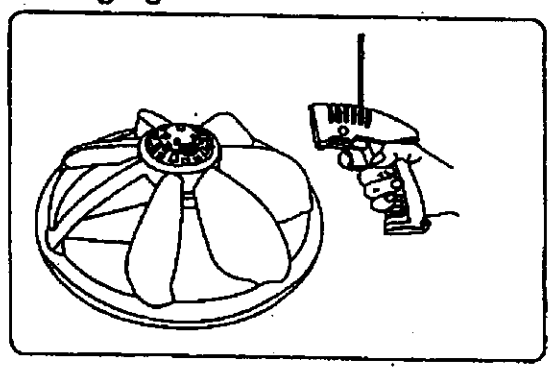
Ensure your flying saucer is fully charged for first time use and that you have a lea
10 ft. (3m) of clear area.



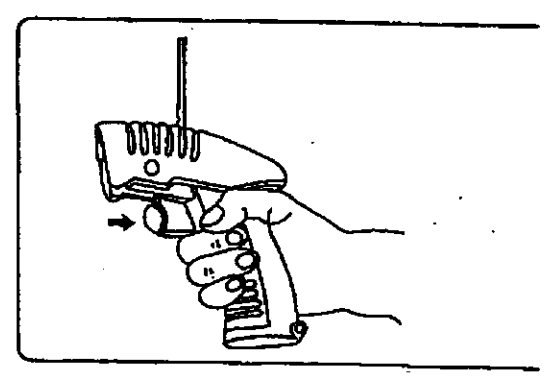
After got fully charged unplug the charging cord.



Switch on your flying saucer.



Point the thrust transmitter to your flying saucer.



Press the trigger slowly to allow your flying saucer to take off.

INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

ORIGINAL TEXT

VECTRON ULTRALITE

Troubleshooting

No power to the propeller.	Your launch platform's batteries are empty preventing it from charging the Vectron Ultralite.	Replace 8 size "C" (LR14) 1.5V Alkaline batteries.
	Your launch platform batteries are inserted improperly.	Check and reinsert the batteries with the proper polarity as per the markings in the launch platform.
	Your AC Adaptor is the wrong type or damaged preventing it from charging your Vectron Ultralite.	Contact your support team at service@bhsciencetech.com stating the voltage and plug type required. Do not return your Vectron Ultralite to the retail store.
	Power switch is not turned on.	Slide the power switch to the ON position.
	Your Ultralite battery is not charged.	Charge your battery fully before flying.
	The propeller auto-stop feature is activated. This feature is activated when the propeller is obstructed by body parts or objects. If your Vectron Ultralite crashes on to the floor, this may trigger the auto-stop feature as well. The red and green LED will blink alternately.	Reset your Vectron Ultralite by switching it off and turning it back on again to resume flight.
	The battery power is low.	Recharge the battery fully.
	Your Vectron Ultralite is not placed properly onto the launch platform.	Place your Vectron Ultralite properly sitting in the middle of the launch platform.
	The thrust transmitter is not pointed directly to the Vectron Ultralite. The green LED does not come on which means there is no signal transmission.	Point the thrust transmitter directly to your Vectron Ultralite.
	The trigger is not depressed far enough on the thrust transmitter.	Depress the trigger at least half way.
	The room may have drafts from windows, fans, air conditioner and ventilation systems.	Minimize the drafts before take off.
	Operator error.	Wait for the red LED to flash before trying to take off.
Your Vectron Ultralite does not respond to the thrust transmitter.	The thrust transmitter batteries are low. The red LED does not flash after depressing the trigger.	Replace 2 size "AA" (LR6) 1.5 V Alkaline batteries with new ones.
	The thrust transmitter batteries are inserted improperly.	Check and reinsert the batteries with the proper polarity as per the markings in the holder.
	Your Vectron Ultralite is out of range.	Move closer to your Vectron Ultralite.
	You are outdoors or flying in a large room with high ceiling.	Fly indoors with the appropriate ceiling height.

NOTE: The transparent labels underneath the ring are for protection against the propeller. A damaged ring can be repaired with transparent

INFRINGING TEXT

SPACE UNIT

TROUBLESHOOTING

Problem	Possible Cause	Solution
No power to the propeller	Your charger batteries are empty Preventing it from charging the flying saucer	Replace 8 "AA" size 1.5 V alkaline batteries.
	Your charger batteries are inserted improperly	Check and reinsert the batteries with the proper polarity as per the markings in the launch platform.
	Power switch is not turned on.	Slide the power switch to th ON position.
	Your flying saucer battery is not charged.	Charge your battery fully before flying.
Not flying normally	The battery power is low.	Recharge the battery fully.
	Your flying saucer is not placed properly onto the launch platform.	Place your fly saucer properly sitting in the middle of the launch platform.
	The trigger is not depressed far enough on the thrust transmitter.	Depress the trigger at least half way.
	The room may have drafts from windows, fans, air conditioner and ventilation systems.	Minimize the drafts before take off.
	Operator error.	Wait for the red LED to flash before trying to take off.
Flying saucer does not respond to the thrust transmitter	The thrust transmitter batteries are low.	Replace 2 size "AA" (LR6) 1.5V alka batteries with new ones.
	The thrust transmitter batteries are inserted improperly.	Check and reinsert the batteries with the proper polarity as per the markings in the holder.
	Your flying saucer is out of range.	Move closer to your flying saucer.

INSTRUCTION MANUAL COPYRIGHT INFRINGEMENT COMPARISON

ORIGINAL TEXT

VECTRON ULTRALITE

TIPS:

- For your first flight, ensure there are no strong air currents from fans, air conditioners or open windows.

- Adjust the trigger to find the correct position so your Vectron Ultralite will hover preventing it from flying too high or too low. It will take some practice to get the hang of it.

- Always point the thrust transmitter towards your Vectron Ultralite to ensure a steady controllable flight.

- Do not try to land your Vectron Ultralite on to the launch platform. Try to land on any open floor area.

- Your Vectron Ultralite can also take off from any smooth flat surfac Do not try to take off from deep pile carpet or soft furniture. This may jam the propeller before take off.

INFRINGING TEXT

SPACE UNIT

TIPS:

- For your first flight, ensure there are no strong air currents from fans, air conditioners or open window
- Adjust the trigger to find the correct position so your flying saucer will hover preventing it from flying to high or too low. It will take some practice to get the hang of it.
- Always point the thrust transmitter towards your flying saucer to ensure a steady controllable flight.
- Try to land on any open floor area.
- Your flying saucer can also take off from any smooth flat surface. Do not try to take off from deep pile carpet or soft furniture. This may jam the propeller before take off.

WARNING:

★ Avoid recharging battery pack and flying saucer at same time.

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Summer 2004

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Bruce Singer and Jay Oxenhorn

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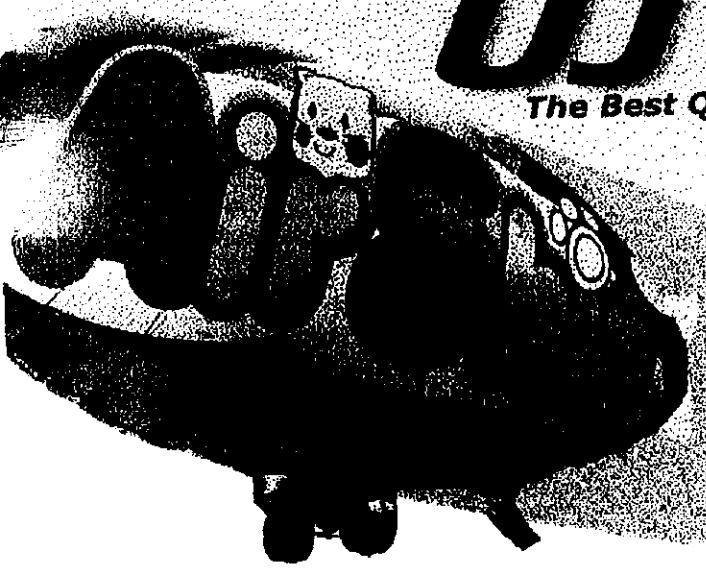
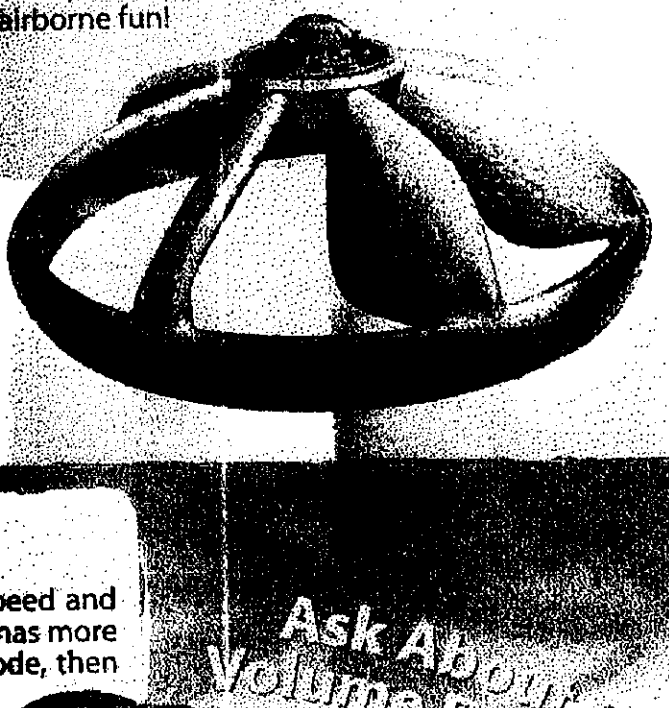


New Flying Saucer!

Like everyone else who sees it, your customers will be absolutely delighted and amazed by our new UFO. Many manufacturers have tried to design a flying saucer, but this is the first to really take off! It's solid yet ultra-lightweight construction makes our flying saucer both sturdy and safe, while the unique design provides hours and hours of stable, airborne fun!



lew Flying Air Ship!

ther breakthrough in flying toys, the Air Ship is destined to be a vd-pleaser. The controller directs three propellers which give aralleled freedom (Up & Down, Forward & Back, Left & Right), while Air Ship's bright, colorful design will also attract attention to your ness. Call UJ Trading today to place an order!

New Rewinder Car!

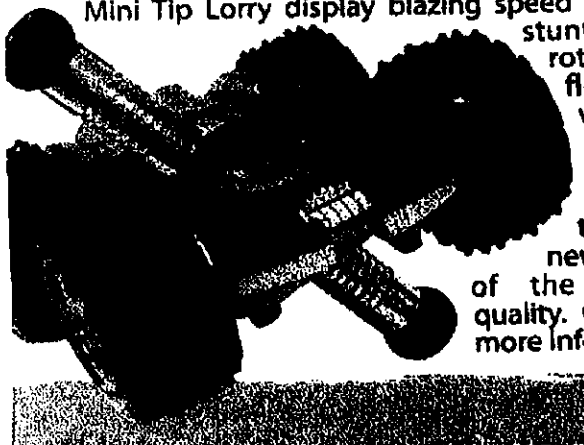
ıe new Rewinder is unlike any other R/C car. With the same blazing speed and visting & tumbling abilities of previous stunt vehicles, the Rewinder still has more offer. From its compact form it morphs into a second tumbling mode, then exes into a wild stretch racer. The Rewinder represents another first from UJ Trading. Call today to order: (713) 977-2764 www.ujtrading.com

Ask About Volume Discounts!

300% MARKUP

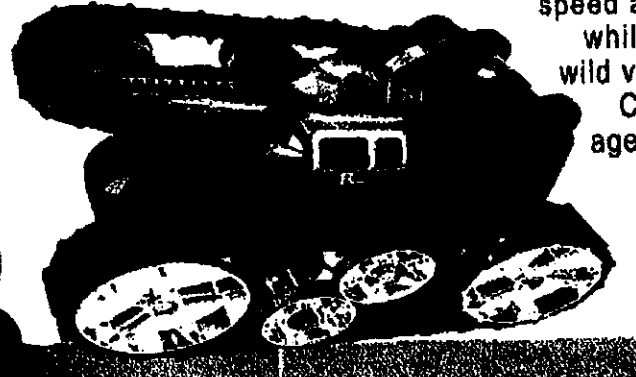
Shuttle Car & Mini Tip Lorry

Like last year's bestselling Twisters, the new Shuttle Car and Mini Tip Lorry display blazing speed & perform amazing stunts. The Shuttle's rotating stunt bar & flush design make it virtually unstoppable. And as with every UJ Trading product, both of these great new cars are of the highest quality. Call us for more info!



Fire Engine

The fire engine has a fully function transmitter with variable tracks for any position. This remote control toy has amazing speed and flips over while performing wild vertical walks. Children of all ages would have a great time with this toy! Call us for more info!



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