

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

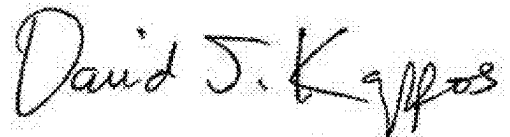
PATENT NO. : 8,043,177 B2
APPLICATION NO. : 12/168189
DATED : October 25, 2011
INVENTOR(S) : Edward Flanagan

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 2, line 46: replace "FIG. 8 with" with -- FIG. 7 with --
Col. 3, line 8: replace "to spaced" with -- to be spaced --
Col. 3, line 47: replace "form or" with -- form of --

Signed and Sealed this
Thirty-first Day of January, 2012

A handwritten signature in black ink, reading "David J. Kappos". The signature is written in a cursive, flowing style with a large initial "D".

David J. Kappos
Director of the United States Patent and Trademark Office

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
Edward Flanagan

Patent No.: 8,043,177

Issued: October 25, 2011

For: ARROWHEAD HAVING COLLAPSIBLE
AND OUTWARDLY BIASED BLADES

**REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.323**

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted typographical errors which should be corrected.

The errors were found in the application as filed by applicant. Payment in the amount of \$100.00 covering the fee set forth in 37 CFR 1.20(a) is being paid herewith by credit card.

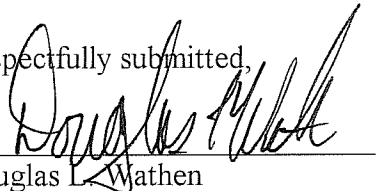
The errors now sought to be corrected are inadvertent typographical errors the correction of which does not involve new matter or require reexamination.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 07-1180, under Order No. FLA-10102/49.

Dated: January 4, 2012

Respectfully submitted,

By 

Douglas L. Wathen

Registration No.: 41,369

GIFFORD, KRASS, SPRINKLE, ANDERSON
& CITKOWSKI, P.C.

2701 Troy Center Drive, Suite 330

Post Office Box 7021

Troy, Michigan 48007-7021

(248) 647-6000

(248) 647-5210 (Fax)

Attorney for Applicant

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 8,043,177
APPLICATION NO. : 12/168,189
ISSUE DATE : October 25, 2011
INVENTOR(S) : Edward Flanagan

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 2, line 46: replace "FIG. 8 with" with -- FIG. 7 with --
Col. 3, line 8: replace "to spaced" with -- to be spaced --
Col. 3, line 47: replace "form or" with -- form of --

MAILING ADDRESS OF SENDER (Please do not use customer number below):
Douglas L. Wathen
GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C.
2701 Troy Center Drive, Suite 330
Post Office Box 7021
Troy, Michigan 48007-7021

1

Electronic Patent Application Fee Transmittal

Application Number:	12168189			
Filing Date:	07-Jul-2008			
Title of Invention:	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES			
First Named Inventor/Applicant Name:	Edward Flanagan			
Filer:	Julie K. Staple/Ann Andrusiak			
Attorney Docket Number:	FLA-10102/49			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Certificate of correction	1811	1	100	100
Extension-of-Time:			EX. 2002 05	

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				100

Electronic Acknowledgement Receipt

EFS ID:	11774254
Application Number:	12168189
International Application Number:	
Confirmation Number:	7038
Title of Invention:	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES
First Named Inventor/Applicant Name:	Edward Flanagan
Customer Number:	25006
Filer:	Julie K. Staple/Ann Andrusiak
Filer Authorized By:	Julie K. Staple
Attorney Docket Number:	FLA-10102/49
Receipt Date:	06-JAN-2012
Filing Date:	07-JUL-2008
Time Stamp:	11:35:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 100
RAM confirmation Number	8479
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part (if appl.)	Pages (if appl.)
				EX-2002-07	7

1	Request for Certificate of Correction	doc20120106113745.pdf	105091 a1bfa1150b732a41717b9af6685721ae6b37a8e	no	3
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30391 88f6472bb5f73a1205c7d96284c8cbb5965a5777	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			135482		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/168,189	10/25/2011	8043177	FLA-10102/49	7038

25006 7590 10/05/2011
GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C
PO BOX 7021
TROY, MI 48007-7021

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 630 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Edward Flanagan, Oakley, MI;

PART B -FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571) 273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

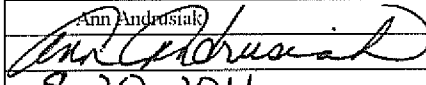
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

25006
 GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C.
 2701 Troy Center Drive, Suite 330
 Post Office Box 7021
 Troy, Michigan 48007-7021

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Ann Andrusiak (Depositor's name)
 (Signature)
 9-20-2011 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/168,189	07/07/2008	Edward Flanagan	FLA-10102/49	7038

TITLE OF INVENTION: ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
Non-Provisional	yes	\$755.00	\$300.00	\$1,055.00	
EXAMINER		ART UNIT	CLASS-SUBCLASS		
J. A. Ricci		3711			

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.	2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.	1. Gifford, Krass, Sprinkle, Anderson & Citkowski, P.C. 2. Douglas L. Wathen 3.
---	---	---

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

- ☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order -# of Copies _____

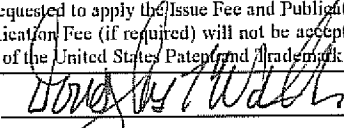
4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
☒ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 07-1180

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature  Date September 20, 2011
 Typed or printed name Douglas L. Wathen Registration No. 41,369

Electronic Patent Application Fee Transmittal

Application Number:	12168189			
Filing Date:	07-Jul-2008			
Title of Invention:	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES			
First Named Inventor/Applicant Name:	Edward Flanagan			
Filer:	Douglas Lessel Wathen/Ann Andrusiak			
Attorney Docket Number:	FLA-10102/49			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	755	755
Publ. Fee- early, voluntary, or normal	1504	1	300	300

EX. 2002 11

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1055

Electronic Acknowledgement Receipt

EFS ID:	10986571
Application Number:	12168189
International Application Number:	
Confirmation Number:	7038
Title of Invention:	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES
First Named Inventor/Applicant Name:	Edward Flanagan
Customer Number:	25006
Filer:	Douglas Lessel Wathen/Ann Andrusiak
Filer Authorized By:	Douglas Lessel Wathen
Attorney Docket Number:	FLA-10102/49
Receipt Date:	20-SEP-2011
Filing Date:	07-JUL-2008
Time Stamp:	11:48:52
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 1055
RAM confirmation Number	18857
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part (if appl.)	Pages (if appl.)
				EX-2002-13	7

1	Issue Fee Payment (PTO-85B)	SCAN_5035_032151.pdf	72936 9488c290f44c04546041dfa693595da289b3a5e8	no	1
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32163 c7c0b6c550d22122fbd83f5f6f1a4c492137df0	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			105099		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

25006 7590 07/21/2011
GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C.
PO BOX 7021
TROY, MI 48007-7021

EXAMINER

RICCI, JOHN A

ART UNIT

PAPER NUMBER

3711

DATE MAILED: 07/21/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/168,189

07/07/2008

Edward Flanagan

FLA-10102/49

7038

TITLE OF INVENTION: ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	10/21/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

25006 7590 07/21/2011
GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C
PO BOX 7021
TROY, MI 48007-7021

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

12/168,189 07/07/2008 Edward Flanagan FLA-10102/49 7038

TITLE OF INVENTION: ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
-------------	--------------	---------------	---------------------	----------------------	------------------	----------

nonprovisional YES \$755 \$300 \$0 \$1055 10/21/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
RICCI, JOHN A	3711	473-583000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EX. 2002 16



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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/168,189	07/07/2008	Edward Flanagan	FLA-10102/49	7038
25006 7590 07/21/2011 GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C PO BOX 7021 TROY, MI 48007-7021			EXAMINER RICCI, JOHN A	
			ART UNIT 3711	PAPER NUMBER
DATE MAILED: 07/21/2011				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 520 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 520 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No.	Applicant(s)	
	12/168,189	FLANAGAN, EDWARD	
	Examiner	Art Unit	
	JOHN RICCI	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment of May 9, 2011.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. ☐ Notice of References Cited (PTO-892) | 5. ☐ Notice of Informal Patent Application |
| 2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. ☐ Examiner's Amendment/Comment |
| 4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. ☐ Examiner's Statement of Reasons for Allowance |
| | 9. ☐ Other _____. |

/John Ricci/
Primary Examiner, Art Unit 3711

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	398	((473/583) or (473/584)). CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/07/15 21:09
L2	115	l1 and pivot\$3	US-PGPUB; USPAT; USOCR	ADJ	ON	2011/07/15 21:09

07/ 15/ 2011 9:43:42 PM

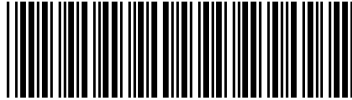
Search Notes 	Application/Control No. 12168189	Applicant(s)/Patent Under Reexamination FLANAGAN, EDWARD
	Examiner John Ricci	Art Unit 3711

SEARCHED			
Class	Subclass	Date	Examiner
473	582, 583, 584	12/02/2010	/jr/

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Search	07/15/2011	/jr/

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
EAST		07/15/2011	/jr/

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<i>Index of Claims</i> 	Application/Control No. 12168189	Applicant(s)/Patent Under Reexamination FLANAGAN, EDWARD
	Examiner John Ricci	Art Unit 3711

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☒ Claims renumbered in the same order as presented by applicant				☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE							
Final	Original	12/02/2010	07/15/2011						
	1	✓	=						
	2	✓	=						
	3	✓	=						
	4	✓	=						
	5	✓	=						
	6	✓	=						
	7	✓	=						
	8	✓	=						
	9	✓	=						
	10	O	=						
	11	✓	=						
	12	✓	=						
	13	✓	=						
	14	✓	=						
	15	✓	=						
	16	✓	=						
	17	✓	=						

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Utility Application of:
Edward Flanagan

Application No.: 12/168,189

Confirmation No.: 7038

Filed: July 7, 2008

Art Unit: 3711

For: ARROWHEAD HAVING COLLAPSIBLE AND
OUTWARDLY BIASED BLADES Examiner: J. A. Ricci

AMENDMENT IN RESPONSE TO NON-FINAL
OFFICE ACTION UNDER 37 C.F.R. 1.111

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Office Action dated February 9, 2011, please amend the above-identified U.S. patent application as follows:

AMENDMENTS TO THE CLAIMS

1. (Original) A broadhead for an arrow having a shaft, the broadhead comprising:
a ferrule having a rearward end configured for attachment to the shaft and an opposite forward end with a ferrule body extending therebetween;

a first blade member having a first end pivotally interconnected with the ferrule body and an opposite second end, the first blade member having a retracted position wherein the second end is spaced from the ferrule body at a first distance and an extended position wherein the second end is spaced from the ferrule body by a distance which is greater than the first distance;

a second blade member having a first end pivotally interconnected with the ferrule body and an opposite second end, the first blade member having a retracted position wherein the second end is spaced from the ferrule body at a first distance and an extended position wherein the second end is spaced from the ferrule body by a distance which is greater than the first distance; and

at least one biasing member biasing the first and second blade members towards the extended positions, the biasing member being the only element operable to hold the blade members in the extended position.

2. (Original) A broadhead in accordance with claim 1, wherein:
the pivotal interconnection between the first blade member and the ferrule body is at a fixed position relative to the ferrule body; and

the pivotal interconnection between the second blade member and the ferrule body being at a fixed position relative to the ferrule body.

3. (Original) A broadhead in accordance with claim 2, wherein:
the pivotal interconnection between the first blade member and the ferrule body and the pivotal interconnection between the second blade member and the ferrule body are substantially equidistant from the forward end of the ferrule.

4. (Original) A broadhead in accordance with claim 1, wherein:

the first ends of the first and second blade members are forward ends and the second ends are rearward ends.

5. (Original) A broadhead in accordance with claim 1, wherein:
each blade member include a travel limit interacting with the ferrule body so as to define a maximum distance between the second end of the blade member and the ferrule body.

6. (Original) (Original) A broadhead in accordance with claim 5, wherein the travel limit is a tab extending from the first end of each blade member, the ferrule body having an abutment that is engaged by the tabs.

7. (Original) A broadhead in accordance with claim 1, further comprising:
a retaining element engaging the blade members to maintain the blade members in the retracted position.

8. (Original) A broadhead in accordance with claim 7, wherein:
the retaining element is a ring engaging the second end of the blade members.

9. (Original) A broadhead in accordance with claim 1, wherein:
the biasing member is a coil spring.

10. (Original) A broadhead in accordance with claim 1, wherein the at least one biasing member comprises two biasing members, each member biasing one of the blade members.

11. (Currently Amended) A broadhead for an arrow having a shaft, the broadhead comprising:

a ferrule having a rearward end configured for attachment to the shaft and an opposite forward end with a ferrule body extending therebetween, the forward end of the ferrule defining the forward tip of the arrow and being fixed with respect to the ferrule body;

a first blade member having a forward end pivotally interconnected with the ferrule body and an opposite rearward end, the first blade member having a retracted position wherein the rearward end is spaced from the ferrule body at a first distance and an extended position wherein the rearward end is spaced from the ferrule body by a distance which is greater than the first distance, the pivotal interconnection between the first blade member and the ferrule body being at a fixed position relative to the ferrule body;

a second blade member having a forward end pivotally interconnected with the ferrule body and an opposite rearward end, the second blade member having a retracted position wherein the rearward end is spaced from the ferrule body at a first distance and an extended position wherein the rearward end is spaced from the ferrule body by a distance which is greater than the first distance, the pivotal interconnection between the second blade member and the ferrule body being at a fixed position relative to the ferrule body; and

at least one biasing member biasing the first and second blade members towards the extended positions.

12. (Original) A broadhead in accordance with claim 11, wherein:

the pivotal interconnection between the first blade member and the ferrule body and the pivotal interconnection between the second blade member and the ferrule body are substantially equidistant from the forward end of the ferrule.

13. (Original) A broadhead in accordance with claim 11, wherein:

each blade member includes a travel limit interacting with the ferrule body so as to define a maximum distance between the rearward end of the blade member and the ferrule body.

14. (Original) A broadhead in accordance with claim 13, wherein the travel limit is a tab extending from the first end of each blade member, the ferrule body having an abutment that is engaged by the tabs.

15. (Original) A broadhead in accordance with claim 11, further comprising:
a retaining element engaging the blade members to maintain the blade members in the retracted position.

16. (Original) A broadhead in accordance with claim 15, wherein:
the retaining element is a ring engaging the second end of the blade members.

17. (Original) A broadhead in accordance with claim 11, wherein:
the biasing member is a coil spring.

REMARKS

Applicant thanks the Examiner for holding a telephonic interview with Applicant's representative on May 6, 2011. The following remarks summarize the substance of the interview.

During the interview, the distinctions between the Tentler reference were discussed. These distinctions are further discussed below. It was discussed that the arguments presented, and the clarifications to claim 11, overcome the rejections based on Tentler. As such, it appears that the application is in condition for allowance. The remarks from the proposed amendment are reproduced below for completeness of the record.

Independent claims 1 and 11 stand rejected as anticipated by U.S. Patent No. 7,713,152 to Tentler.

Independent claim 1 is directed to a broadhead having moveable blade members that are biased towards an extended position. A biasing member biases the blade members towards the extended position and is the only element operable to hold the blade members in the extended position. As explained in the specification, the blade members are free to move back to the retracted position when the arrowhead encounters a dense material, such as bone.

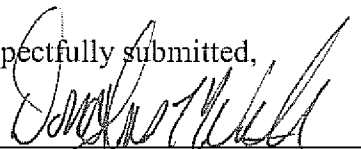
Tentler, in contrast to the present invention, provides an arrowhead with a movable tip that locks moveable blade members in an extended position when the tip moves rearwardly, due to contact with the target. Once the tip encounters a target, it is moved rearwardly and this movement causes the blade members to be locked in the outward position. The blade members are not free to move to a retracted position so as to pass through a dense material. The Tentler design does not meet the requirement of at least one biasing member being the only element operable to hold the blade members in the extended position. Instead, the blade members are locked in an extended position by the land 138 being disposed between the abutment surfaces 170 of the blade members.

Independent claim 11 also stands rejected over the Tentler reference. Claim 11 and dependent claim 2 both require that the pivotal interconnection between the blade members and the ferrule body is at a fixed position relative to the ferrule body. As shown in the figures, the

ferrule 12 includes the pointed forward tip 14, with this tip 14 not being moveable with respect to the pivotal interconnection with the blades or the remainder of the body. This differs from the Tentler design, wherein the tip of the arrowhead is moveable with respect to the remainder of the device and moves the blades to the extended position and locks them in that position. In order to clarify the distinction between claim 11 and the Tentler reference, claim 11 has been amended to provide that the forward end defines the forward tip of the arrow and is fixed with respect to the remainder of the ferrule body. This clarifies that the tip does not move with respect to the pivots.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Dated: May 9, 2011

Respectfully submitted,
By 
Douglas L. Wathen
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GIFFORD, KRASS, SPRINKLE, ANDERSON
& CITKOWSKI, P.C.
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(734) 913-6007 (Fax)
Attorney for Applicant

Electronic Acknowledgement Receipt

EFS ID:	10048778
Application Number:	12168189
International Application Number:	
Confirmation Number:	7038
Title of Invention:	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES
First Named Inventor/Applicant Name:	Edward Flanagan
Customer Number:	25006
Filer:	Douglas Lessel Wathen/Ann Andrusiak
Filer Authorized By:	Douglas Lessel Wathen
Attorney Docket Number:	FLA-10102/49
Receipt Date:	09-MAY-2011
Filing Date:	07-JUL-2008
Time Stamp:	15:47:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		SCAN_5035_027885.pdf	272516 8201f147a8a6979bbaa932a5e3062884820377d0	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Miscellaneous Incoming Letter	1	1
	Amendment/Req. Reconsideration-After Non-Final Reject	2	8

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Information:

Total Files Size (in bytes):	272516
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

AMENDMENT TRANSMITTAL LETTER			Docket No. FLA-10102/49	
Application No. 12/168,189-Conf. #7038	Filing Date July 7, 2008	Examiner J. A. Ricci	Art Unit 3711	

Applicant(s): Edward Flanagan

Invention: ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES

TO THE COMMISSIONER FOR PATENTS

Transmitted herewith is an amendment in the above-identified application.
The fee has been calculated and is transmitted as shown below.

CLAIMS AS AMENDED					
	Claims Remaining After Amendment	Highest Number Previously Paid	Number Extra Claims Present	Rate	
Total Claims	17	- 20 =	0	x 26.00	0.00
Independent Claims	2	- 3 =	0	x 110.00	0.00
Multiple Dependent Claims (check if applicable) ☐					
Other fee (please specify):					
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT:					0.00

☐ Large Entity
 ☒ Small Entity

☒ No additional fee is required for this amendment.

☐ Please charge Deposit Account No. _____ in the amount of \$ _____.

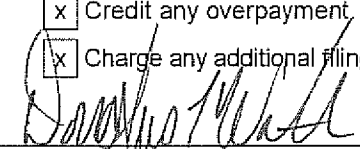
☐ A check in the amount of \$ _____ to cover the filing fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☒ The Director is hereby authorized to charge and credit Deposit Account No. 07-1180 as described below. A duplicate copy of this sheet is enclosed.

☒ Credit any overpayment.

☒ Charge any additional filing or application processing fees required under 37 CFR 1.16 and 1.17.


 Douglas L. Wathen
 Attorney/Agent Reg. No.: 41,369

 GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C.
 2701 Troy Center Drive, Suite 330
 Post Office Box 7021
 Troy, Michigan 48007-7021
 (248) 647-6000

Dated: May 9, 2011

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 12/168,189		Filing Date 07/07/2008		☐ To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)			SMALL ENTITY ☒ OR		OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*	X \$	=	OR	X \$	=			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$	=		X \$	=			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
			TOTAL			TOTAL				
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	05/09/2011	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 17	Minus	** 20	=	0	OR	X \$	=	
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	=	0	OR	X \$	=	
☐ Application Size Fee (37 CFR 1.16(s))										
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR			
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE		
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=		OR	X \$	=	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		OR	X \$	=	
☐ Application Size Fee (37 CFR 1.16(s))										
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR			
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/168,189	07/07/2008	Edward Flanagan	FLA-10102/49	7038
25006	7590	02/09/2011		
GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C			EXAMINER	
PO BOX 7021			RICCI, JOHN A	
TROY, MI 48007-7021				
			ART UNIT	PAPER NUMBER
			3711	
			MAIL DATE	DELIVERY MODE
			02/09/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	12/168,189	FLANAGAN, EDWARD	
	Examiner	Art Unit	
	John Ricci	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-17 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/5/09</u> . | 6) ☐ Other: ____. |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 9, 11-15, & 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Tentler 7,713,152.

Tentler shows an arrow head including a ferrule 104; blades 168 pivotally connected to the ferrule at fixed points 146; and a spring 116 for biasing the blades to an extended position (Figure 1D).

Note the blades may include tabs to limit travel (figure 2B).

Note retaining element 160 which engages the blades to maintain the blades retracted.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tentler et al in view of Armstrong et al 6,554,727.

In Tentler, the blades are held retracted with a spring 118 and plunger 160, which may be complicated. Armstrong shows that pivotal blades on a ferrule may be held retracted with a band 20. This band would be less complicated than the spring of Tentler, so would be an obvious substitution.

* * * * *

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

* * * * *

This letter was prepared by Examiner John Ricci, who can be reached at:

Voice: 571-272-4429

Fax: Use 571-273-8300 for papers to be delivered directly to the mail room, like formal amendments and responses, change of address, power of attorney, petitions.

Art Unit: 3711

Use 703-783-0439 for papers to be delivered directly to the Examiner, like informal or proposed responses for discussion, or notes in preparation for an interview.

Response by Fax is encouraged to reduce mail processing time. Please don't send duplicate papers by mail and Fax.

PTO main switchboard: 800-786-9199.

Visit our Web site at www.uspto.gov.

**/JOHN RICCI/
PRIMARY EXAMINER
ART UNIT 3711**

Notice of References Cited	Application/Control No. 12/168,189	Applicant(s)/Patent Under Reexamination FLANAGAN, EDWARD	
	Examiner John Ricci	Art Unit 3711	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-3,036,395	05-1962	NELSON ERLO C	43/6
*	B	US-4,973,060	11-1990	Herzing, Mathew J.	473/583
*	C	US-6,554,727	04-2003	Armstrong et al.	473/584
*	D	US-7,713,152	05-2010	Tentler et al.	473/583
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 12168189	Applicant(s)/Patent Under Reexamination FLANAGAN, EDWARD
	Examiner John Ricci	Art Unit 3711

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	12/02/2010							
	1	✓							
	2	✓							
	3	✓							
	4	✓							
	5	✓							
	6	✓							
	7	✓							
	8	✓							
	9	✓							
	10	O							
	11	✓							
	12	✓							
	13	✓							
	14	✓							
	15	✓							
	16	✓							
	17	✓							

Search Notes 	Application/Control No. 12168189	Applicant(s)/Patent Under Reexamination FLANAGAN, EDWARD
	Examiner John Ricci	Art Unit 3711

SEARCHED			
Class	Subclass	Date	Examiner
473	582, 583, 584	12/02/2010	/jr/

SEARCH NOTES		
Search Notes	Date	Examiner

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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 Alexandria, Virginia 22313-1450
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BIB DATA SHEET

CONFIRMATION NO. 7038

SERIAL NUMBER 12/168,189	FILING or 371(c) DATE 07/07/2008 RULE	CLASS 473	GROUP ART UNIT 3711	ATTORNEY DOCKET NO. FLA-10102/49		
APPLICANTS Edward Flanagan, Oakley, MI; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 07/19/2008						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and Acknowledged <u>/JOHN A RICCI/</u> Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY MI	SHEETS DRAWINGS 4	TOTAL CLAIMS 17	INDEPENDENT CLAIMS 2
ADDRESS GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C PO BOX 7021 TROY, MI 48007-7021 UNITED STATES						
TITLE ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES						
FILING FEE RECEIVED 435	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit			

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete If Known Application Number 12/168,189-Conf. #7038 Filing Date July 7, 2008 First Named Inventor Edward Flanagan Art Unit N/A Examiner Name Not Yet Assigned Attorney Docket Number FLA-10102/49	
Sheet	1	of	2		

[illegible][illegible]

Examiner Signature	/John Ricci/	Date Considered	12/04/2010
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.88(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IPW. ¹ Applicants unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Receipt date: 02/05/2009

PTO/SB/06b (01-09)

Approved for use through 02/28/2009. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete If Known	
				Application Number	12/168,189-Conf. #7038
				Filing Date	July 7, 2008
				First Named Inventor	Edward Flanagan
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	2	of	2	Attorney Docket Number	FLA-10102/49

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²

Examiner Signature	/John Ricci/	Date Considered	12/04/2010
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. EX-2002-45/J.R./



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/168,189	07/07/2008	Edward Flanagan	FLA-10102/49

CONFIRMATION NO. 7038

25006
GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C
PO BOX 7021
TROY, MI 48007-7021

PUBLICATION NOTICE



OC000000039530880

Title: ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES

Publication No. US-2010-0004078-A1

Publication Date: 01/07/2010

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	12/168,189-Conf. #7038	
	Filing Date	July 7, 2008	
	First Named Inventor	Edward Flanagan	
	Art Unit	N/A	
	Examiner Name	Not Yet Assigned	
Total Number of Pages in This Submission		Attorney Docket Number	FLA-10102/49

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☐ Amendment/Reply ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☒ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☐ Power of Attorney, Revocation Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☐ Other Enclosure(s) (please identify below):
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C.		
Signature	/Douglas L. Wathen/		
Printed name	Douglas L. Wathen		
Date	February 5, 2009	Reg. No.	41,369

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Edward Flanagan

Application No.: 12/168,189

Confirmation No.: 7038

Filed: July 7, 2008

Art Unit: N/A

For: **ARROWHEAD HAVING COLLAPSIBLE
AND OUTWARDLY BIASED BLADES**

Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

In accordance with 37 CFR 1.98(a)(2)(ii), Applicant has not submitted copies of U.S. patents and U.S. patent applications. Applicant submits herewith copies of foreign patents and non-patent literature in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 07-1180, under Order No. FLA-10102/49. A duplicate copy of this paper is enclosed.

Dated: February 5, 2009

Respectfully submitted,

Electronic signature: /Douglas L. Wathen/
Douglas L. Wathen
Registration No.: 41,369
GIFFORD, KRASS, SPRINKLE, ANDERSON
& CITKOWSKI, P.C.
2701 Troy Center Drive, Suite 330
Post Office Box 7021
Troy, Michigan 48007-7021
(734) 913-9300
(734) 913-6007 (Fax)
Attorney for Applicant

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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete If Known	
				Application Number	12/168,189-Conf. #7038
				Filing Date	July 7, 2008
				First Named Inventor	Edward Flanagan
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
				Attorney Docket Number	FLA-10102/49
Sheet	2	of	2		

[illegible]

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

Electronic Acknowledgement Receipt

EFS ID:	4738056
Application Number:	12168189
International Application Number:	
Confirmation Number:	7038
Title of Invention:	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES
First Named Inventor/Applicant Name:	Edward Flanagan
Customer Number:	25006
Filer:	Douglas Lessel Wathen/Ann Andrusiak
Filer Authorized By:	Douglas Lessel Wathen
Attorney Docket Number:	FLA-10102/49
Receipt Date:	05-FEB-2009
Filing Date:	07-JUL-2008
Time Stamp:	10:10:13
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	SCAN_5035_3837_000.pdf	125062 ceadf7f907db49ce3c0b79855af45d09430e0d9c	no	5

Warnings:

Information:

EX. 2002 52

Total Files Size (in bytes):

125062

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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United States Patent and Trademark Office
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
12/168,189	07/07/2008	3711	435	FLA-10102/49	17	2

CONFIRMATION NO. 7038

25006
GIFFORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C
PO BOX 7021
TROY, MI 48007-7021

FILING RECEIPT



OC000000031074939

Date Mailed: 07/22/2008

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Edward Flanagan, Oakley, MI;

Power of Attorney: The patent practitioners associated with Customer Number 25006

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted: 07/19/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/168,189**

Projected Publication Date: 01/07/2010

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES

Preliminary Class

473

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER**Title 35, United States Code, Section 184****Title 37, Code of Federal Regulations, 5.11 & 5.15****GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

UTILITY PATENT APPLICATION TRANSMITTAL (ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))		Attorney Docket No. FLA-10102/49	
		First Inventor Edward Flanagan	
		Title ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES	
		Express Mail Label No.	

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	Commissioner for Patents ADDRESS TO: P.O. Box 1450 Alexandria, VA 22313-1450
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1. ☒ Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing) 2. ☒ Applicant claims small entity status. See 37 CFR 1.27. 3. ☒ Specification [Total Pages <u>12</u>] Both the claims and abstract must start on a new page (For information on the preferred arrangement, see MPEP 608.01(a)) 4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets <u>4</u>] 5. Oath or Declaration [Total Sheets <u>2</u>] a. ☒ Newly executed (original or copy) b. ☐ A copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 18 completed) i. ☐ DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b). 6. ☒ Application Data Sheet. See 37 CFR 1.76 7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) ☐ Landscape Table on CD 8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. - c. are required) a. ☐ Computer Readable Form (CRF) b. Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies	ACCOMPANYING APPLICATION PARTS 9. ☐ Assignment Papers (cover sheet & document(s)) Name of Assignee 10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney (when there is an assignee) 11. ☐ English Translation Document (if applicable) 12. ☐ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of citations attached 13. ☐ Preliminary Amendment 14. ☐ Return Receipt Postcard (MPEP 503) (Should be specifically itemized) 15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed) 16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 17. ☐ Other:
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18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation
 ☐ Divisional
 ☐ Continuation-in-part (CIP)
 of prior application No.: _____
 Prior application information: Examiner _____ Art Unit: _____

19. CORRESPONDENCE ADDRESS			
☒ The address associated with Customer Number:		25006	OR ☐ Correspondence address below
Name			
Address			
City	State	Zip Code	
Country	Telephone	Email Address	
Signature		Date	
Name (Print/Type)		Registration No. (Attorney/Agent)	
/Douglas L. Wathen/		July 7, 2008	
Douglas L. Wathen		41,369	

Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818). FEE TRANSMITTAL For FY 2008		Complete if Known	
☒ Applicant claims small entity status. See 37 CFR 1.27		Application Number	Not Yet Assigned
		Filing Date	Concurrently Herewith
		First Named Inventor	Edward Flanagan
		Examiner Name	Not Yet Assigned
		Art Unit	N/A
TOTAL AMOUNT OF PAYMENT		(\$)	435.00
		Attorney Docket No.	FLA-10102/49

METHOD OF PAYMENT (check all that apply)	
☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____	
☐ Deposit Account Deposit Account Number: <u>07-1180</u> Deposit Account Name: <u>Gifford, Krass, Sprinkle, Anderson & Calkowski, P.C.</u>	
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)	
☐ Charge fee(s) indicated below ☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17	☐ Charge fee(s) indicated below, except for the filing fee ☒ Credit any overpayments

FEE CALCULATION							
1. BASIC FILING, SEARCH, AND EXAMINATION FEES							
Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	310	155	510	255	210	105	435.00
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	510	255	620	310	
Provisional	210	105	0	0	0	0	
2. EXCESS CLAIM FEES							
						Small Entity	
Fee Description						Fee (\$)	Fee (\$)
Each claim over 20 (including Reissues)						50	25
Each independent claim over 3 (including Reissues)						210	105
Multiple dependent claims						370	185
Total Claims		Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims		
<u>17</u> - 20 = _____		x _____	= _____		Fee (\$)		Fee Paid (\$)
HP = highest number of total claims paid for, if greater than 20.							
Indep. Claims		Extra Claims	Fee (\$)	Fee Paid (\$)			
<u>2</u> - 3 = _____		x _____	= _____				
HP = highest number of independent claims paid for, if greater than 3.							
3. APPLICATION SIZE FEE							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof			Fee (\$)	Fee Paid (\$)	
<u>12</u> - 100 = _____	/50 = _____	(round up to a whole number) x _____			= _____		
4. OTHER FEE(S)							
Non-English Specification, \$130 fee (no small entity discount)							
Other (e.g., late filing surcharge): _____							

SUBMITTED BY			
Signature	/Douglas L. Wathen/	Registration No. (Attorney/Agent)	41,369
Telephone	(734) 913-9300		
Name (Print/Type)	Douglas L. Wathen	Date	July 7, 2008

UTILITY PATENT APPLICATION TRANSMITTAL (ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))		Attorney Docket No. FLA-10102/49	
		First Inventor Edward Flanagan	
		Title ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES	
		Express Mail Label No.	

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	Commissioner for Patents ADDRESS TO: P.O. Box 1450 Alexandria, VA 22313-1450
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1. ☒ Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing) 2. ☒ Applicant claims small entity status. See 37 CFR 1.27. 3. ☒ Specification [Total Pages <u>12</u>] Both the claims and abstract must start on a new page (For information on the preferred arrangement, see MPEP 608.01(a)) 4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets <u>4</u>] 5. Oath or Declaration [Total Sheets <u>2</u>] a. ☒ Newly executed (original or copy) b. ☐ A copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 18 completed) i. ☐ DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b). 6. ☒ Application Data Sheet. See 37 CFR 1.76 7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) ☐ Landscape Table on CD 8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. - c. are required) a. ☐ Computer Readable Form (CRF) b. Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies	ACCOMPANYING APPLICATION PARTS 9. ☐ Assignment Papers (cover sheet & document(s)) Name of Assignee 10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney (when there is an assignee) 11. ☐ English Translation Document (if applicable) 12. ☐ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of citations attached 13. ☐ Preliminary Amendment 14. ☐ Return Receipt Postcard (MPEP 503) (Should be specifically itemized) 15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed) 16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 17. ☐ Other:
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18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation
 ☐ Divisional
 ☐ Continuation-in-part (CIP)
 of prior application No.: _____
 Prior application information: Examiner _____ Art Unit: _____

19. CORRESPONDENCE ADDRESS			
☒ The address associated with Customer Number:		25006	OR ☐ Correspondence address below
Name			
Address			
City	State	Zip Code	
Country	Telephone	Email Address	

Signature	/Douglas L. Wathen/	Date	July 7, 2008
Name (Print/Type)	Douglas L. Wathen	Registration No. (Attorney/Agent)	41,369

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Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818). FEE TRANSMITTAL For FY 2008		Complete if Known	
☒ Applicant claims small entity status. See 37 CFR 1.27		Application Number	Not Yet Assigned
		Filing Date	Concurrently Herewith
		First Named Inventor	Edward Flanagan
		Examiner Name	Not Yet Assigned
		Art Unit	N/A
TOTAL AMOUNT OF PAYMENT		(\$)	435.00
		Attorney Docket No.	FLA-10102/49

METHOD OF PAYMENT (check all that apply)	
☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____	
☐ Deposit Account Deposit Account Number: <u>07-1180</u> Deposit Account Name: <u>Gifford, Krass, Sprinkle, Anderson & Calkowski, P.C.</u>	
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)	
☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee	
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments	

FEE CALCULATION							
1. BASIC FILING, SEARCH, AND EXAMINATION FEES							
	FILING FEES		SEARCH FEES		EXAMINATION FEES		
		<u>Small Entity</u>		<u>Small Entity</u>		<u>Small Entity</u>	
<u>Application Type</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fees Paid (\$)</u>
Utility	310	155	510	255	210	105	435.00
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	510	255	620	310	
Provisional	210	105	0	0	0	0	
2. EXCESS CLAIM FEES							
						<u>Small Entity</u>	
<u>Fee Description</u>						<u>Fee (\$)</u>	<u>Fee (\$)</u>
Each claim over 20 (including Reissues)						50	25
Each independent claim over 3 (including Reissues)						210	105
Multiple dependent claims						370	185
<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>		<u>Multiple Dependent Claims</u>		
17	- 20 =	x	=		<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	
HP = highest number of total claims paid for, if greater than 20.							
<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>				
2	- 3 =	x	=				
HP = highest number of independent claims paid for, if greater than 3.							
3. APPLICATION SIZE FEE							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
<u>Total Sheets</u>	<u>Extra Sheets</u>	<u>Number of each additional 50 or fraction thereof</u>			<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	
12	- 100 =	/50 =			(round up to a whole number) x	=	
4. OTHER FEE(S)							
Non-English Specification, \$130 fee (no small entity discount)						<u>Fees Paid (\$)</u>	
Other (e.g., late filing surcharge):							

SUBMITTED BY			
Signature	/Douglas L. Wathen/	Registration No. (Attorney/Agent)	41,369
Name (Print/Type)	Douglas L. Wathen	Telephone	(734) 913-9300
		Date	July 7, 2008

Application Data Sheet

Application Information

Application Type::	Regular
Subject Matter::	Utility
Suggested Group Art Unit::	N/A
CD-ROM or CD-R?::	None
Sequence submission?::	None
Computer Readable Form (CRF)?::	No
Title::	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES
Attorney Docket Number::	FLA-10102/49
Request for Early Publication?::	No
Request for Non-Publication?::	No
Total Drawing Sheets::	4
Small Entity?::	Yes
Petition included?::	No
Secrecy Order in Parent Appl.?::	No

Applicant Information

Applicant Authority Type::	Inventor
Primary Citizenship Country::	US
Status::	Full Capacity
Given Name::	Edward
Family Name::	Flanagan
Street of mailing address::	19420 S. Oakley Rd.
City of mailing address::	Oakley
State or Province of mailing address::	MI
Postal or Zip Code of mailing address::	48649

Correspondence Information

Correspondence Customer Number:: 25006

Representative Information

Representative Customer Number:: 25006

Domestic Priority Information**Foreign Priority Information****Assignee Information**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
DECLARATION FOR PATENT APPLICATION

As the below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES

the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by an amendment, if any, specifically referred to herein.

I acknowledge the duty to disclose all information known to me that is material to patentability as defined in 37 CFR 1.56.

FOREIGN PRIORITY CLAIM

I hereby claim foreign priority benefits under Title 35, United States Code § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

☒ no such foreign applications have been filed

CLAIM FOR BENEFIT OF EARLIER U.S. PROVISIONAL APPLICATIONS

I hereby claim priority benefits under Title 35, United States Code §119(e), of any United States provisional patent application(s) listed below:

☒ no such U.S. provisional applications have been filed.

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S)

I hereby claim the benefit under Title 35, United States Code, §120 of the United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose all

information that is material to patentability as defined in 37 CFR 1.56 which became available to me between the filing date of the prior application and the national or PCT international filing date of this application:

☒ no such U.S./PCT applications have been filed.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint: All practitioners at Customer Number 25006

all of **Gifford, Krass, Sprinkle, Anderson & Citkowski, P.C.**, 2701 Troy Center Drive, Suite 330, Post Office Box 7021, Troy, Michigan 48007-7021, jointly, and each of them severally, my attorneys at law/patent agent(s), with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the U. S. Patent and Trademark Office connected therewith.

Please mail all correspondence to Douglas L. Wathen, whose address is:

Gifford, Krass, Sprinkle, Anderson & Citkowski, P.C.
2701 Troy Center Drive, Suite 330
Post Office Box 7021
Troy, Michigan 48007-7021

Please direct telephone calls to: Douglas L. Wathen at (734) 913-9300. Please direct facsimiles to: (734) 913-6007.

Full name of sole or first inventor Edward Flanagan	
Sole or first inventor's signature 	Date 6-28-08
Residence 19420 S. Oakley rd Oakley Mi 48649	
Citizenship US	
Mailing Address 19420 S. Oakley Rd. Oakley, Michigan 48649	

ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES

FIELD OF THE INVENTION

[0001] The invention relates to arrowheads and, more particularly, to arrowheads with blade members that are collapsible to allow the arrow to pass through bone and outwardly biased to increase the amount of flesh cut by the blade members after passing through the bone.

BACKGROUND OF THE INVENTION

[0002] Many hunters attempt to shoot an animal through the shoulder blade in hopes that the arrow will pass therethrough and penetrate the animal's heart and/or lungs. This results in a fast kill and minimizes the amount of suffering experienced by the animal. Conventional blade designs are known, which purport to penetrate flesh and pass cleanly through bone to continue penetrating flesh on the other side. Yet, in use in the field, it is widely known that these designs do not reliably ensure clean penetration of the bone. In many instances, conventional arrowhead designs gets stuck in the bone, which results in an animal that is wounded but not mortally wounded. Such an animal may suffer and/or run away to escape capture by the hunter.

[0003] Thus, it remains desirable to provide an improved arrow and arrowhead design that provides reliable penetration of bone and maximizes cutting of soft flesh on either side of the bone to increase the likelihood of a successful kill and minimize undue suffering of the animal.

SUMMARY OF THE INVENTION

[0004] According to one embodiment of the invention, a broadhead for an arrow with a shaft includes a ferrule and first and second blade members. The ferrule has a rearward end configured for attachment to the shaft of the arrow and an opposite forward end with a ferrule body extending therebetween. The first blade member has a first end pivotally interconnected with the ferrule body and an opposite second end. The first blade member has a retracted position wherein the second end is spaced from the ferrule body at a first distance and an extended position wherein the second end is spaced from the ferrule body by a distance which is

greater than the first distance. The second blade member has a first end pivotally interconnected with the ferrule body and an opposite second end. The first blade member has a retracted position wherein the second end is spaced from the ferrule body at a first distance and an extended position wherein the second end is spaced from the ferrule body by a distance which is greater than the first distance. The broadhead also includes at least one biasing member for biasing the first and second blade members towards the extended positions. The biasing member is the only element operable to hold the blade members in the extended position.

[0005] In some versions, the pivotal interconnection between the first blade member and the ferrule body is at a fixed position relative to the ferrule body and the pivotal interconnection between the second blade member and the ferrule body is at a fixed position relative to the ferrule body. In some versions, the pivotal interconnections are each substantially equidistant from the forward end of the ferrule.

[0006] According to another embodiment of the invention, a broadhead has a ferrule, a pair of blade members and at least one biasing member. The ferrule has a rearward end configured for attachment to the shaft of an arrow and an opposite forward end with the ferrule body extending therebetween. The first blade member has a forward end pivotally interconnected with the ferrule body and an opposite rearward end. The first blade member has a retracted position wherein the rearward end is spaced from the ferrule body at a first distance and an extended position wherein the rearward end is spaced from the ferrule body by a second distance which is greater than the first distance. The pivotal interconnection between the first blade member and the ferrule body is at a fixed position relative to the ferrule body. The second blade member has a forward end pivotally interconnected with the ferrule body and a rearward end. The second blade member has a retracted position wherein the rearward end is spaced from the ferrule body at a first distance and an extended position wherein the rearward end is spaced from the ferrule body by a distance which is greater than the first distance. The pivotal interconnection between the second blade member and the ferrule body is at a fixed position relative to the ferrule body. The biasing member biases the first and second blade members towards the extended positions.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] Advantages of the present invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings, wherein:

[0008] Figure 1 is a cross sectional side view of a broadhead according to a first embodiment of the present invention with the blade members in a retracted position;

[0009] Figure 2 is a view similar to Figure 1 with the blade members in an extended position;

[0010] Figure 3 is a cross sectional side view of a broadhead according to a second embodiment of the present invention with the blade members in a retracted position;

[0011] Figure 4 is a view similar to Figure 3 with the blade members in an extended position;

[0012] Figure 5 is a cross sectional side view of a broadhead according to a third embodiment of the present invention with the blade members in a retracted position;

[0013] Figure 6 is a view similar to Figure 5 with the blade members in an extended position;

[0014] Figure 7 is a cross sectional side view of a broadhead according to a fourth embodiment of the present invention with the blade members in a retracted position; and

[0015] Figure 8 is a view similar to Figure 8 with the blade members in an extended position;

DETAILED DESCRIPTION OF THE INVENTION

[0016] Referring to Figures 1 and 2, an arrowhead according to one embodiment of the invention is generally indicated at 10. This type of arrowhead is generally referred to as a broadhead. The arrowhead 10 includes a generally cylindrical body or ferrule 12. A pointed tip 14 is formed at the forward end of the ferrule 12 and an attachment portion 16 is formed at the rearward end of the ferrule 12. The portion between the ends may be called a ferrule body.

[0017] The arrowhead 10 includes at least one blade member 20 movably coupled to the ferrule 12 for movement between a retracted position, as shown in Figure 1, and an extended position, as shown in Figure 2. Preferably, blade members 20 are provided in generally symmetrically opposite pairs, e.g. two or four blade members spaced equidistantly in a rotational sense about the ferrule 12, though an odd number is also possible. A front end 22 of each blade

member 20 is movably coupled to the ferrule 12 nearer to the tip 14 than the attachment portion 16. In the retracted position, the length of the blade member 20 is disposed along side of or adjacent to the ferrule 12. In the extended position, the blade member 20 is generally rotated forwardly so that a rear end 24 of the blade member 20 is spaced apart from the ferrule 12. In the retracted position, the rear end 24 of the blade member may be said to be spaced from the ferrule 12 by a first distance and in the extended position the rear end 24 may be said to spaced from the ferrule by a distance greater than the first distance.

[0018] In the illustrated embodiment, the front end 22 of the blade member 20 is pivotally coupled to the ferrule 12 for movement about a fixed pivot 26 between the retracted and extended positions. A tab 28 extends outwardly from the front end 22 of each blade member 20 and contacts an abutting surface 30 on the ferrule to limit outward travel for the blade member 20 and define the extended position of the blade member 20. Alternatively, the travel limit provided by the tab 28 and abutting surface 30 may be provided in other ways, or there may not be a travel limit. Also, any position of the blade members 20 wherein the rear ends 24 are spaced from the ferrule by a distance greater than the first distance may be considered to be the extended position even if the travel limit is not reached.

[0019] It should be appreciated that the front end 22 of the blade members 20 may be coupled to the ferrule 12 near the tip 14 by other arrangements, such as by a pivot pin pivotally and/or slidably coupled in a slot. The pin and slot may be provided interchangeably on the ferrule and blade member. It should also be appreciated that Figures 1 and 2 are cross sectional views and the forward ends of the blade members are disposed in a slot formed in the ferrule body. The slot may have a different shape than illustrated, and may allow more of the blade members to nest into the slot in the retracted position.

[0020] A biasing member 40 continuously biases each blade member toward the extended position. In this embodiment, the ferrule 12 has a pair of spring-receiving bores 18 defined therein and the biasing members 40 are coil springs disposed in the bores. The blade members 20 each further include an arm 42 that engages one of the springs 40. In the retracted position, the arms 42 extend into the bores 18 and compress the springs 40. The springs 40 expand,

thereby pushing the arms 42 and blade members 20 outwardly as the blade members move to the extended position.

[0021] Preferably, a retaining element 50 initially retains the blade members 20 in the retracted position, as shown in Figure 1. The retaining element may take the form of a metal, plastic or elastomer ring that engages recesses 52 in the second end of the blade members. Alternatively, the ring may be wrapped about the second end 24 of the blade members. As a further alternative, each blade member may have its own retaining element. As yet a further alternative, the retaining element may take other forms such as a lever or latch that initially retains the blade members 20 in the retracted position. As will be described in further detail below, the retaining element 50 is designed to disengage from the blade members 20 when the broadhead 10 punctures a target. For example, the material penetrated by the broadhead may push the retaining element 50 rearwardly to disengage it from the blade members.

[0022] In assembly, the arrowhead 10 is fixedly secured to an end of a longitudinally extending shaft forming a body of an arrow. In the illustrated embodiment, the attachment portion 16 of the arrowhead 10 is a threaded male portion that is threaded into a threaded receiving hole formed in the end of the rod. It should be appreciated that other attachment arrangements may be provided for fixedly securing the arrowhead to the rod.

[0023] In use, the arrow 60 is fired toward an animal. The blade members 20 are preferably initially maintained in the retracted position as the arrow is in flight toward the animal. The retracted position reduces the size of the broadhead thereby increasing accuracy. As the tip 14 and blade members 20 penetrate the skin of the animal, the blade members 20 remain in the retracted position until the retaining element 50 is removed by the penetration. The blade members are then urged to the extended position due to the outward bias of the biasing members 40. As the tip 14 and blade members 20 encounter a bone in the animal, such as a shoulder blade, the blade members 20 collapse toward the retracted position to allow the arrow to continue progress through the bone. As the ferrule 12 passes through the bone, the blade members 20 return to the extended position due to the force applied by the biasing member 40. The biasing member 40 is provided with a predetermined spring force that allows the blade members 20 to

move to the retracted position as the ferrule 12 passes through the bone and to return to the extended position after the ferrule 12 has passed through the bone. Thus, the blade members 20 are in the extended position on either side of the bone to maximize the cutting surface of the arrowhead 10 through the soft flesh of the animal.

[0024] Referring now to Figures 3 and 4, a second embodiment of an arrowhead according to the present invention is generally shown at 60. This embodiment is similar to the embodiment of Figures 1 and 2. However, it differs from the earlier embodiment in that the biasing member 62 is disposed in a central axial bore of the ferrule 64. The biasing member 62 engages a sliding element 66 which is also disposed in the bore. Articulating arms 68 interconnect the sliding element 66 with the blade members so as to bias them from the retracted position shown in Figure 3 to the extended position shown in Figure 4.

[0025] Referring now to Figures 5 and 6, a third embodiment of an arrowhead according the present invention is generally shown as 70. This embodiment differs from the earlier embodiments in that the biasing member 72 is disposed in a coaxial bore adjacent the forward end of the ferrule 74. The biasing member is illustrated as a coil spring which engages a sliding element 76 also disposed in the bore. The sliding element 76 engages inwardly extending tabs 78 on the blade members. These tabs 78 extend inwardly from the pivotal connection between the blade members and the ferrule. By pushing rearwardly on the tabs 78, the sliding element 76 urges the blade members outwardly from the retractable position shown in Figure 5 to the extended position shown in Figure 6. As also shown, the blade members in this embodiment have a somewhat different shape than the earlier embodiments. The blade shapes in all of the embodiments of the present invention may be altered from the illustrated versions.

[0026] Referring now to Figures 7 and 8, a fourth embodiment of an arrowhead according to the present invention is generally shown at 80. The biasing member takes the form of a pair of leaf springs that urge the blade members outwardly from the retractable position shown in Figure 7 to the extended position shown in Figure 8. The biasing members may also take other forms, for example, the leaf springs may interconnect with the ferrule body ahead of the pivotal interconnection between the blade members and the ferrule and extend rearwardly to a position

between the blade members. Other versions will also be clear to those of skill in the art. As also will be clear to those of skill in the art, the blade members may be disposed more closely to the ferrule in the retractable position than illustrated in the various embodiments. The blade members may also be shaped so as to nest more closely to the ferrule and/or the ferrule body may have slots into which the blade members are partially disposed when in the retractable position.

[0027] Preferably, the various embodiments of the present invention utilize only the biasing member or members to urge and hold the blade members into the extended position. No latch or locking element is provided to hold the blade members in the extended position. Therefore, the blade members are free to move back to the retracted position when the arrowhead encounters a dense material such as bone.

[0028] The invention has been described in an illustrative manner. It is, therefore, to be understood that the terminology used is intended to be in the nature of words of description rather than of limitation. Many modifications and variations of the invention are possible in light of the above teachings. Thus, within the scope of the appended claims, the invention may be practiced other than as specifically described.

[0029] I claim:

CLAIMS

1. A broadhead for an arrow having a shaft, the broadhead comprising:

a ferrule having a rearward end configured for attachment to the shaft and an opposite forward end with a ferrule body extending therebetween;

a first blade member having a first end pivotally interconnected with the ferrule body and an opposite second end, the first blade member having a retracted position wherein the second end is spaced from the ferrule body at a first distance and an extended position wherein the second end is spaced from the ferrule body by a distance which is greater than the first distance;

a second blade member having a first end pivotally interconnected with the ferrule body and an opposite second end, the first blade member having a retracted position wherein the second end is spaced from the ferrule body at a first distance and an extended position wherein the second end is spaced from the ferrule body by a distance which is greater than the first distance; and

at least one biasing member biasing the first and second blade members towards the extended positions, the biasing member being the only element operable to hold the blade members in the extended position.

2. A broadhead in accordance with claim 1, wherein:

the pivotal interconnection between the first blade member and the ferrule body is at a fixed position relative to the ferrule body; and

the pivotal interconnection between the second blade member and the ferrule body being at a fixed position relative to the ferrule body.

3. A broadhead in accordance with claim 2, wherein:

the pivotal interconnection between the first blade member and the ferrule body and the pivotal interconnection between the second blade member and the ferrule body are substantially equidistant from the forward end of the ferrule.

4. A broadhead in accordance with claim 1, wherein:
the first ends of the first and second blade members are forward ends and the second ends are rearward ends.
5. A broadhead in accordance with claim 1, wherein:
each blade member include a travel limit interacting with the ferrule body so as to define a maximum distance between the second end of the blade member and the ferrule body.
6. A broadhead in accordance with claim 5, wherein the travel limit is a tab extending from the first end of each blade member, the ferrule body having an abutment that is engaged by the tabs.
7. A broadhead in accordance with claim 1, further comprising:
a retaining element engaging the blade members to maintain the blade members in the retracted position.
8. A broadhead in accordance with claim 7, wherein:
the retaining element is a ring engaging the second end of the blade members.
9. A broadhead in accordance with claim 1, wherein:
the biasing member is a coil spring.
10. A broadhead in accordance with claim 1, wherein the at least one biasing member comprises two biasing members, each member biasing one of the blade members.
11. A broadhead for an arrow having a shaft, the broadhead comprising:

a ferrule having a rearward end configured for attachment to the shaft and an opposite forward end with a ferrule body extending therebetween;

a first blade member having a forward end pivotally interconnected with the ferrule body and an opposite rearward end, the first blade member having a retracted position wherein the rearward end is spaced from the ferrule body at a first distance and an extended position wherein the rearward end is spaced from the ferrule body by a distance which is greater than the first distance, the pivotal interconnection between the first blade member and the ferrule body being at a fixed position relative to the ferrule body;

a second blade member having a forward end pivotally interconnected with the ferrule body and an opposite rearward end, the second blade member having a retracted position wherein the rearward end is spaced from the ferrule body at a first distance and an extended position wherein the rearward end is spaced from the ferrule body by a distance which is greater than the first distance, the pivotal interconnection between the second blade member and the ferrule body being at a fixed position relative to the ferrule body; and

at least one biasing member biasing the first and second blade members towards the extended positions.

12. A broadhead in accordance with claim 11, wherein:

the pivotal interconnection between the first blade member and the ferrule body and the pivotal interconnection between the second blade member and the ferrule body are substantially equidistant from the forward end of the ferrule.

13. A broadhead in accordance with claim 11, wherein:

each blade member includes a travel limit interacting with the ferrule body so as to define a maximum distance between the rearward end of the blade member and the ferrule body.

14. A broadhead in accordance with claim 13, wherein the travel limit is a tab extending from the first end of each blade member, the ferrule body having an abutment that is engaged by the tabs.

15. A broadhead in accordance with claim 11, further comprising:
a retaining element engaging the blade members to maintain the blade members in the retracted position.

16. A broadhead in accordance with claim 15, wherein:
the retaining element is a ring engaging the second end of the blade members.

17. A broadhead in accordance with claim 11, wherein:
the biasing member is a coil spring.

ABSTRACT OF THE DISCLOSURE

A broadhead for an arrow has a ferrule and a pair of blade members. Each blade member has a first end that is pivotally interconnected with the ferrule body and an opposite second end. The blade members each have a retracted position and an extended position. A biasing member biases the blade members toward the extended positions and is the only element operable to hold the blade members in the extended position.

FIG - 1

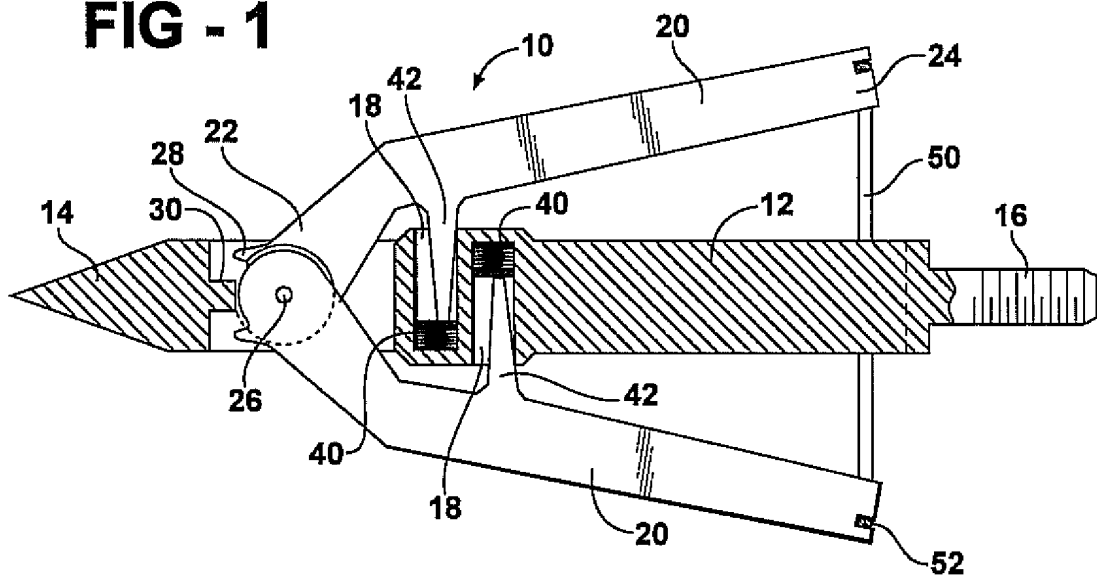


FIG - 2

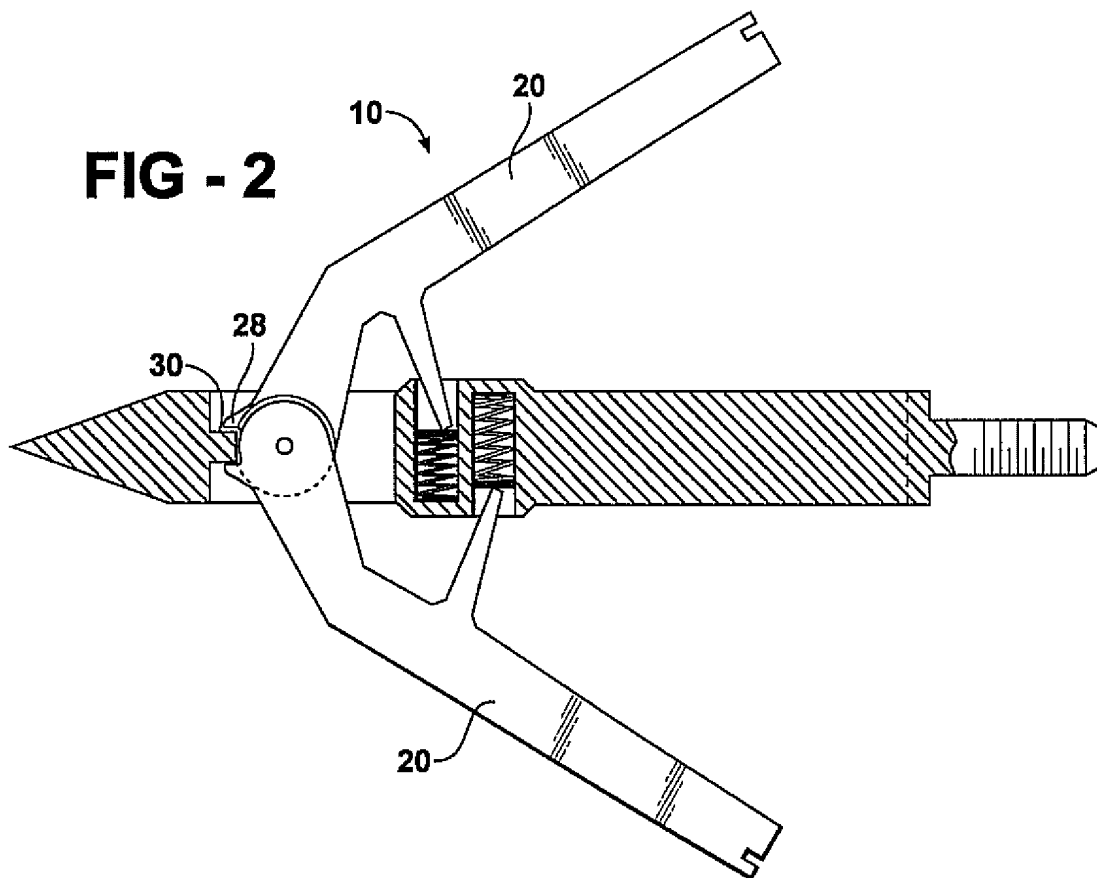


FIG - 3

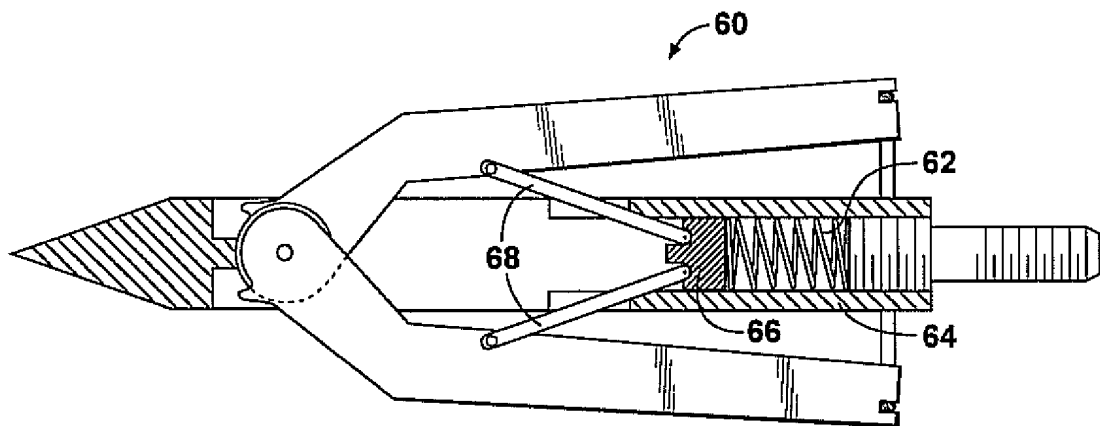


FIG - 4

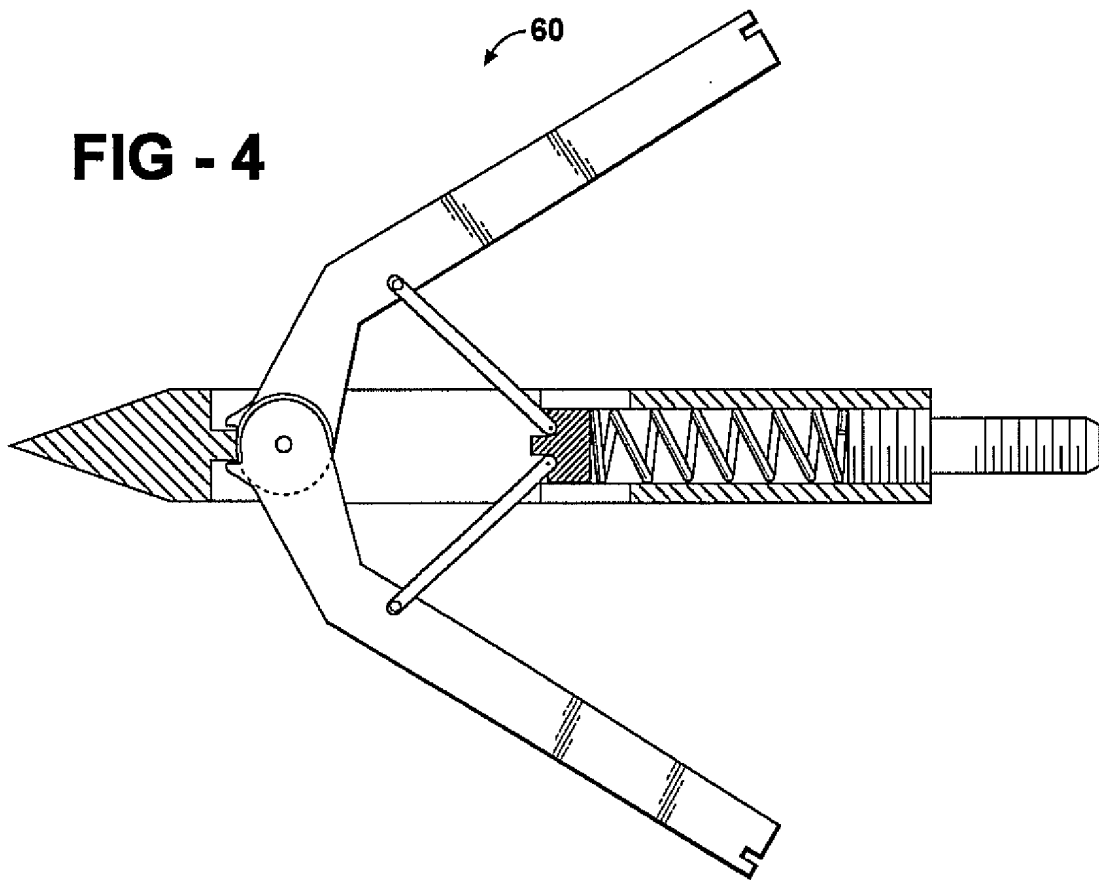


FIG - 5

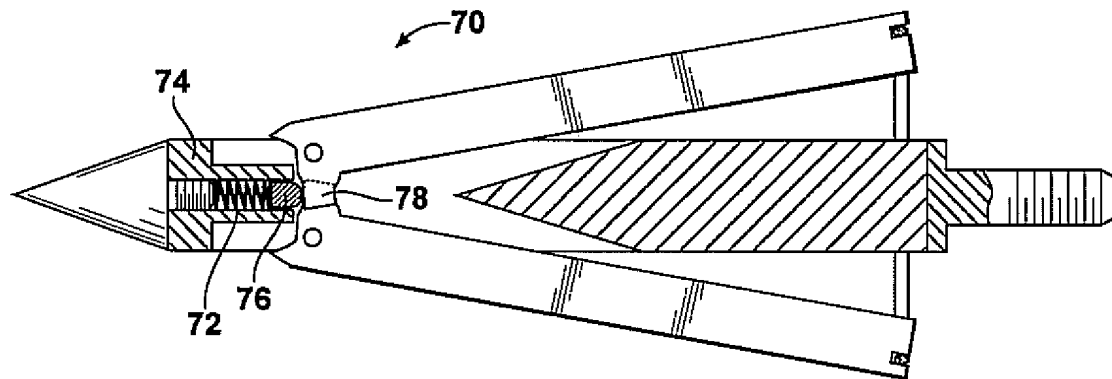


FIG - 6

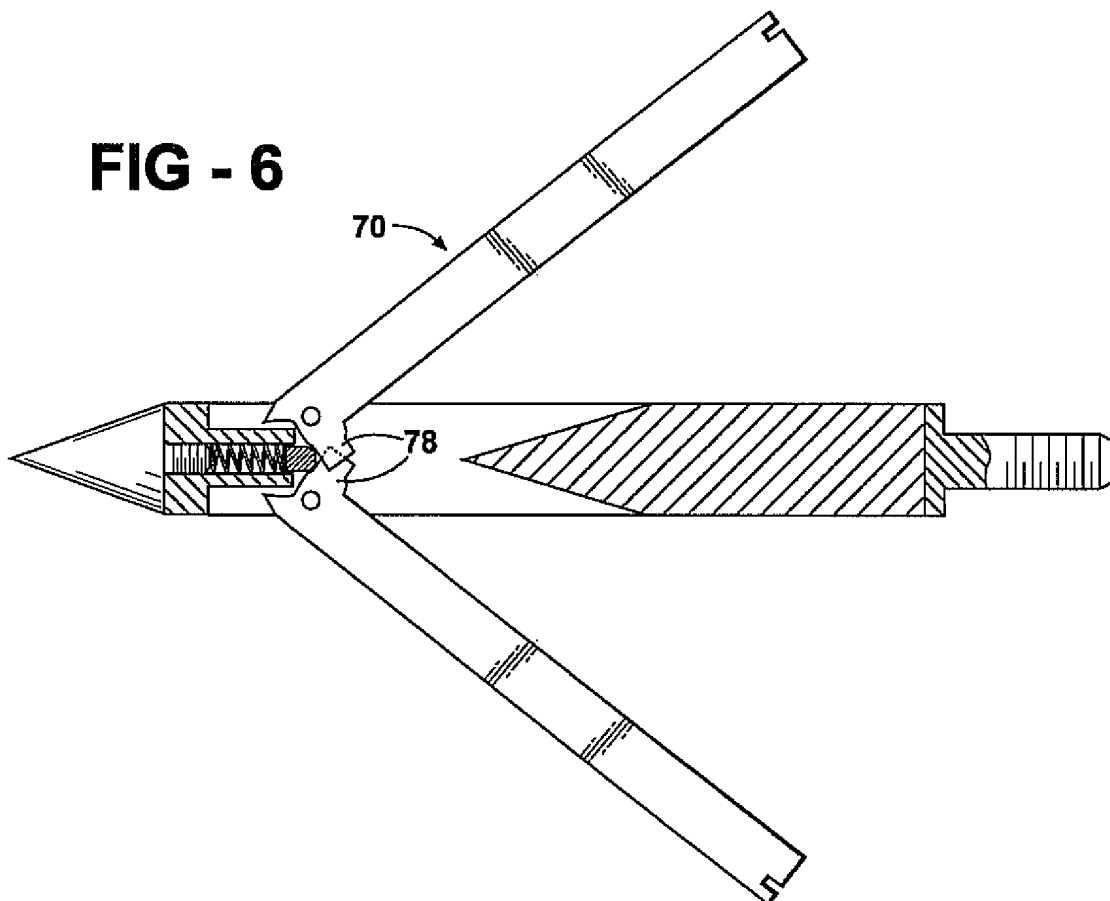


FIG - 7

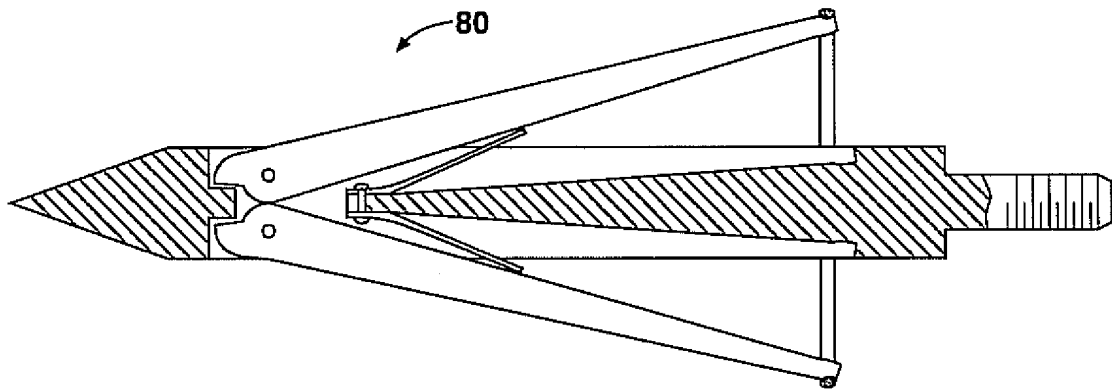
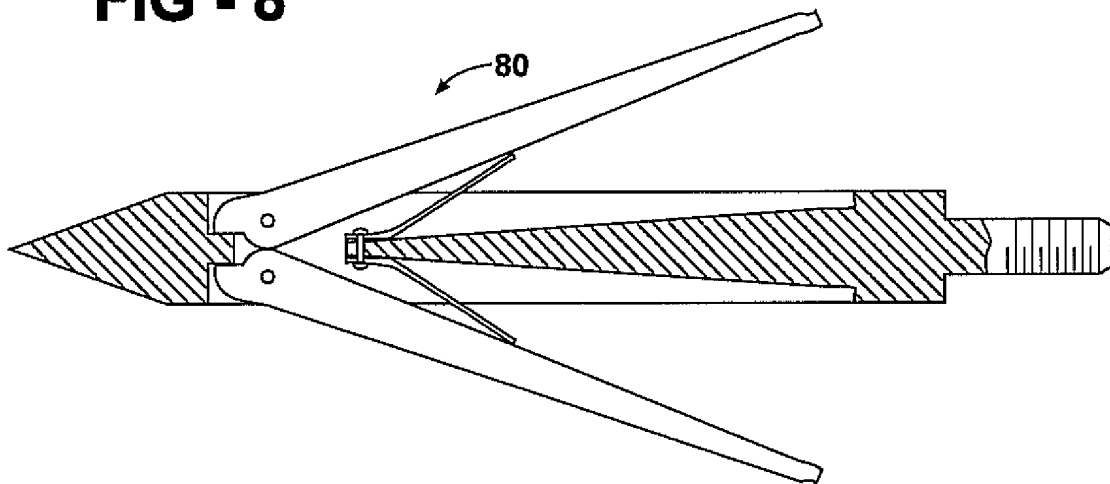


FIG - 8



Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES			
First Named Inventor/Applicant Name:	Edward Flanagan			
Filer:	Douglas Lessel Wathen/Ann Andrusiak			
Attorney Docket Number:	FLA-10102/49			
Filed as Small Entity				
Utility Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	75	75
Utility Search Fee	2111	1	255	255
Utility Examination Fee	2311	1	105	105
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				435

Electronic Acknowledgement Receipt

EFS ID:	3570478
Application Number:	12168189
International Application Number:	
Confirmation Number:	7038
Title of Invention:	ARROWHEAD HAVING COLLAPSIBLE AND OUTWARDLY BIASED BLADES
First Named Inventor/Applicant Name:	Edward Flanagan
Customer Number:	25006
Filer:	Douglas Lessel Wathen/Ann Andrusiak
Filer Authorized By:	Douglas Lessel Wathen
Attorney Docket Number:	FLA-10102/49
Receipt Date:	07-JUL-2008
Filing Date:	
Time Stamp:	10:40:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$435
RAM confirmation Number	7639
Deposit Account	071180
Authorized User	WATHEN, DOUGLAS L.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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File Listing:					
Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		SCAN_5035_2650_000.pdf	551098	yes	22
			fbafe500efa94493cf006c2efa1bc3504e86ce4d		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal of New Application		1	2	
	Application Data Sheet		3	4	
	Oath or Declaration filed		5	6	
	Specification		7	13	
	Claims		14	17	
	Abstract		18	18	
	Drawings-only black and white line drawings		19	22	
	Warnings:				
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	8413	no	2
			eb00a86da6cfe0bb337cf1caa1b976feac933928		
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Total Files Size (in bytes):			559511		

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

7/7/2008

Approved for use through 7/31/2006. OMB 0651-0032

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

12,168,189**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE		
SEARCH FEE (37 CFR 1.16(k), (l), or (m))		
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		
TOTAL CLAIMS (37 CFR 1.16(j))	17	minus 20 =
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 = *
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))		

RATE (\$)	FEE (\$)
	75
	255
	105
X\$ 25	
X\$105	
180	
TOTAL	435

RATE (\$)	FEE (\$)
X\$50	
X\$210	
360	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

(Column 1)

(Column 2)

(Column 3)

SMALL ENTITY

OR

SMALL ENTITY

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(i))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				

RATE (\$)	ADDITIONAL FEE (\$)
X =	
X =	
180	
TOTAL	
ADD'T FEE	

RATE (\$)	ADDITIONAL FEE (\$)
X =	
X =	
360	
TOTAL	
ADD'T FEE	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(i))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				

RATE (\$)	ADDITIONAL FEE (\$)
X =	
X =	
N/A	
TOTAL	
ADD'T FEE	

OR

RATE (\$)	ADDITIONAL FEE (\$)
X =	
X =	
N/A	
TOTAL	
ADD'T FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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