

BOW & ARROW

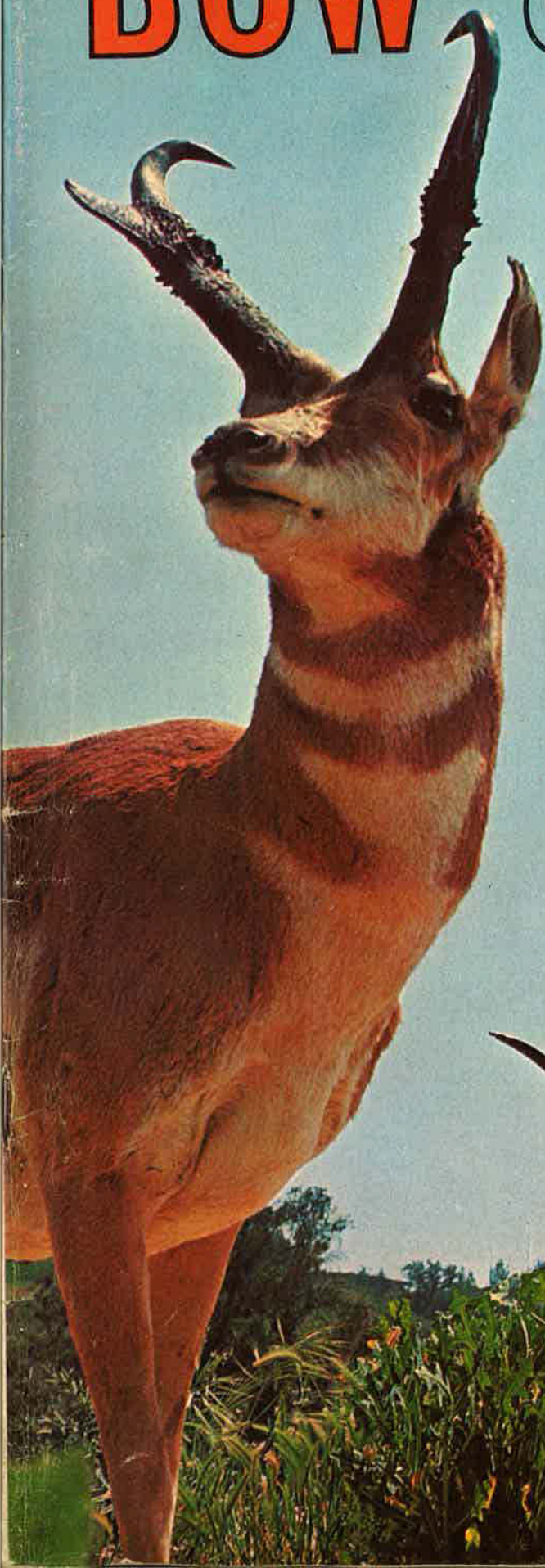
JULY-AUGUST 1964

50 CENTS

**WYOMING
SAGE HEN
SHOOTING**

WOMEN BOWHUNTERS

**FORGET
ABOUT
SHOOTING
'SECRETS'**



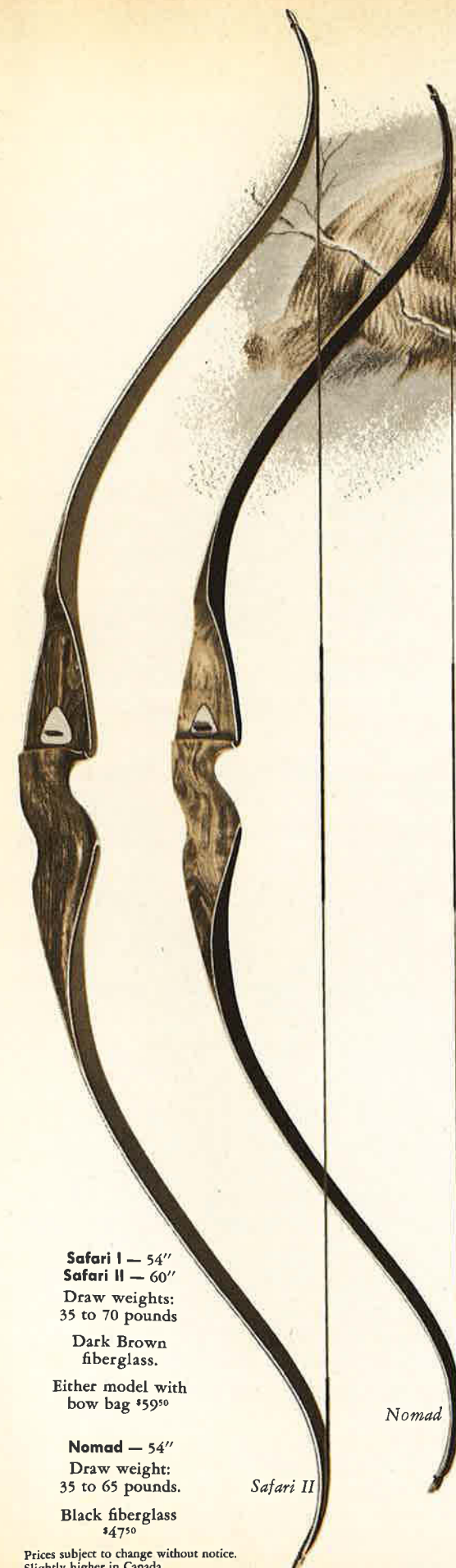


when
you go
for
game...

go with
GOLDEN SOVEREIGN

More bow hunting pleasure is yours when you go with Golden Sovereign. That's because Golden Sovereign puts more "success" into bow hunting by offering two superb bows . . . the incomparable Golden Conqueror and the stout and sturdy Golden Crusader. These are designed especially for the game trails and feature Sovereign's exclusive new Gyro-Flex design to deliver almost unbelievable smoothness, balance and stability. See them at your nearest Golden Sovereign dealers . . . then go for game in a big way!

Golden Sovereign Division
Ben Pearson, Inc.
Pine Bluff, Arkansas



Safari I — 54"
Safari II — 60"
Draw weights:
35 to 70 pounds
Dark Brown
fiberglass.
Either model with
bow bag \$59⁵⁰

Nomad — 54"
Draw weight:
35 to 65 pounds.
Black fiberglass
\$47⁵⁰

Prices subject to change without notice.
Slightly higher in Canada.



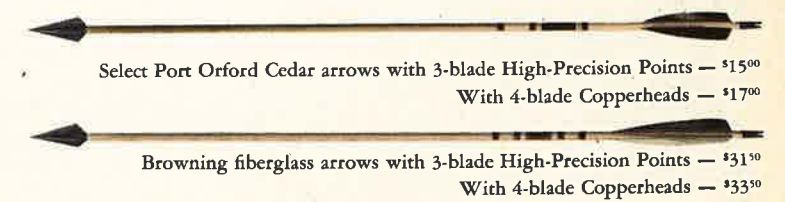
**CONFIDENCE
TO SPARE**

Good equipment is fundamental to self-assurance and a hunter needs both to shoot his best. Were you to nock a broadhead and check its flight from a Browning hunting bow, you would sense a driving power and velocity that inspires *confidence to spare*.

Broad, contoured limbs in full working recurve design provide flat trajectory and sure penetration. Complex laminations of select hardwoods and both bilateral and unidirectional fiberglass contribute great strength and positive stability, with minimal recoil shock. All are essential to the right combination of power and true flight characteristics with the heavier hunting shafts. A full pistol grip and large center shot sight window assist fast, natural aiming.

Browning hunting arrows of select Port Orford Cedar or its own exclusive, durable fiberglass are exactly crafted to an ideal combination of weight and strength. Electronic inspection assures perfect concentricity and straightness. 28 to 30 inch lengths. Spines from 35 to 70 pounds. Crest and fletching in yellow, red, or black.

Plan your hunting forays this year with Browning tackle. It inspires confidence.



YOUR **Browning** DEALER

Write for Free Catalog showing all
Bows, Arrows, Accessories in full color.
Browning Arms Co., Dept. A45 1706 Washington Ave., St. Louis, Mo. 63103
In Canada: Browning of Canada, Dept. A45P, O. Box 991, Montreal 9, P. Q.



**NEW
Bear Films
NOW AVAILABLE**

"Land Of The Tiger"
16mm Sound & Color
25 minutes

Thrilling action of shooting the **BENGAL TIGER** plus hunts for Sambur—Nilgai—Axis Deer See the country, the peoples and the animals of India.



and
"KODIAK COUNTRY"
16mm Sound & Color
25 minutes

Exciting sequence of shooting a monster Alaskan Brown Bear at 20 feet.

Scenic trip up Alaskan coastline. See whales, sea lion, otter, fox, eagle, spawning salmon and other wildlife in magnificent surroundings.

Rental Fee: \$10.00 each

SEE YOUR BEAR DEALER
or write Dept. BA-7

**Grayling
Film Service**
Rural Route One, Grayling, Michigan

**BOW & ARROW
CONTENTS**

FEATURES:

FORGET ABOUT SHOOTING SECRETS... *Gene Jones*14
 PROFILE OF A CHAMP: BILL BEDNAR... *Joseph Higgins*18
 WYOMING SAGE HEN SHOOTING... *Gary Swanson*22
 DIAL YOUR OWN SCORE.....26
 BOWHUNTING FOR DISTAFFERS... *C. R. Learn*.....28
 THE ODD BOW INCIDENT... *Corky Johnson*.....33
 VANES ARE NOT IN VAIN... *Max Hamilton*.....36
 BOW TEST: HOWATT MONTEREY & DIABLO... *Jim Dougherty*...38
 ON THE TOURNAMENT TRAIL... *Martin Haynes*.....44
 ODDITY IN ARCHERY... *Tommy L. Bish*.....62

DEPARTMENTS:

MAIL POUCH 6
 HUNTING WITH KITTREDGE..... 8
 TECH TALK10
 TACKLE TIPS12
 BOW BITS50

PUBLISHERS: *Ray Rich & Jack Lewis*
EDITORIAL DIRECTOR: *Jack Lewis*
TECHNICAL EDITOR: *Tom Jennings*
HUNTING EDITOR: *Doug Kittredge*
ART DIRECTOR: *Jan Stiles*
STAFF PHOTOGRAPHER: *Tommy L. Bish*
Advisory Editors:
Don Cavallero, Jim Dougherty, Hank Krohn
Advertising Director: *Robert Arsenault*
Telephone (213) EDgewood 2-0252



VOL. II, NO. 2 JULY-AUGUST 1964

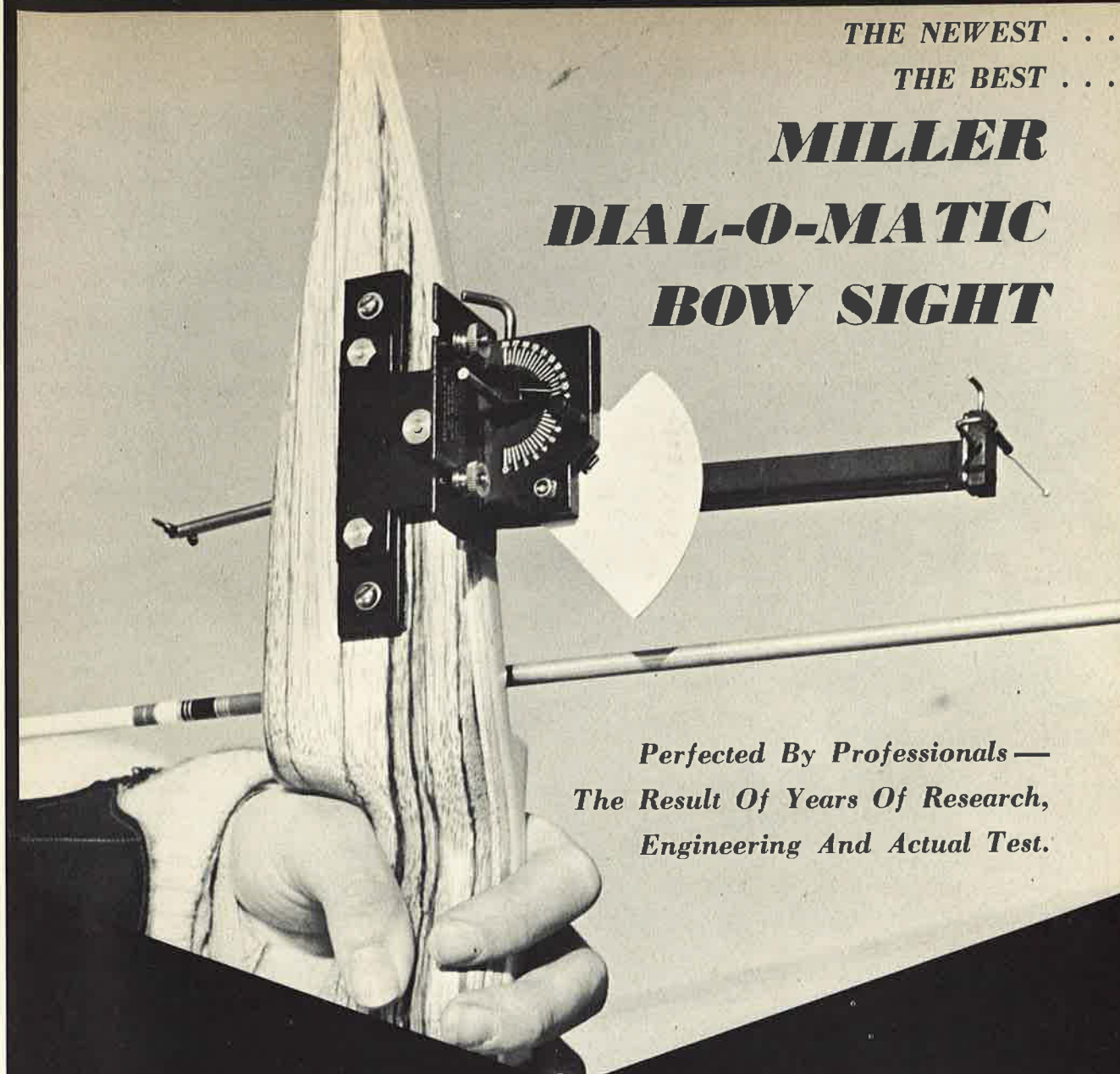
ON THE COVER: It won't be long before antelope season is upon us and in this set-up, Gary Swanson and Jim Dougherty try their "luck" with Howatt bows and Swanson's life-size mounted pronghorn.

BOW & ARROW is published bi-monthly by Gallant Publishing Company, 550-A S. Citrus Ave., Covina, Calif. Business and editorial offices: 550-A S. Citrus Ave., Covina, Calif. Single copy price: 50 cents; subscription rate: \$3 per year. Application to mail at second class postage rates is pending at Covina, Calif., with additional entry at Sparta, Ill. COPYRIGHT 1964 by Gallant Publishing Company. No part of this magazine may be reproduced without permission. Publishers can accept no responsibility for manuscripts or photos and all submissions should include return postage. CHANGE OF ADDRESS: Give six weeks notice. Send both old and new address, and address imprint from recent issue.

THE NEWEST . . .

THE BEST . . .

**MILLER
DIAL-O-MATIC
BOW SIGHT**



*Perfected By Professionals —
The Result Of Years Of Research,
Engineering And Actual Test.*

• Increases sight-on-target range of any bow. • Universal mount — fits any bow — tape on or attach with screws. • Precision dials and calibrations engraved on three surfaces plus write-on venier plates. • Positive arm locks with choice of constant pressure or positive lock controls. • Constructed of black anodized, high tensile strength, aircraft quality aluminum. Write-on venier plates are high impact

styrene, not affected by temperature or weather. • Professional/Trainer Kit includes rear sighting bar that provides 10' sighting plane for increased accuracy — \$4.95 each. • Sight may be removed for storage, later re-mounted without need for re-calibration. Additional mounting plates available — \$2.50 each. Equip all your bows to use same sight.

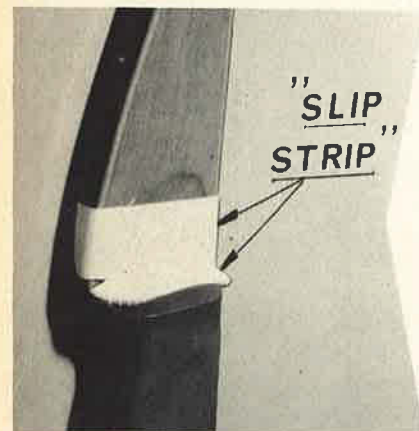
MILLER DIAL-O-MATIC BOW SIGHT \$19.95 (mount included)
(available at your dealer or write)

Manufacturer:
ACADEMY ARCHERY COMPANY
Post Office Box 3297
ANAHEIM, CALIFORNIA

National Distributor:
KITTREDGE ARCHERY CO.
757 West Woodbury Road
ALTADENA, CALIFORNIA

SENSATIONAL! NEW! "SLIP STRIPS"

UP TO 1000% MORE SLIPPERY THAN USUAL ARROW REST MATERIALS (Leather, Wood, Plastic, Metal, Etc.). "SLIP STRIPS" ARE PRACTICALLY FRICTIONLESS . . . THE SLIPPERIEST OF ALL MATERIALS KNOWN! AN ENGINEERING BREAKTHRU . . . FOR HI-SPEED ARROW DELIVERY!



THE FASTEST, MOST ACCURATE ARROWS IN THE WORLD WILL BE GLIDING OVER "SLIP STRIPS" . . . WILL YOURS? "SLIP STRIPS" ARE MADE OF THE MOST EXOTIC POLYMER "TEFLON" EVER CREATED IN DU PONT'S MULTI-MILLION DOLLAR RESEARCH LABORATORIES!

"SLIP STRIPS" ARE STRONG AND DURABLE, UNAFFECTED BY EXPOSURE OR AGE! THEIR AMAZINGLY SLIPPERY MOLECULAR STRUCTURE NEVER CHANGES.

••••• SELF-ADHERING! •••••

Apply "SLIP STRIP" in minutes, like a form fitting tape. Fits any arrow rest, cut or trim to size desired. One-inch by six-inch long strip allows material to spare. \$1.50 ppd AIRMAIL, or save by including friends needs . . . five strips for \$5.00 ppd AIRMAIL. YOU MUST BE THRILLED AFTER EXAMINING, OR RETURN UNUSED FOR FULL REFUND.

CUPMASTER,
Box A-5, Versailles, Kentucky

Gentlemen: Rush my "SLIP STRIP." Enclosed find check or money order.

NAME _____

ADDRESS _____

CITY _____ STATE _____

(Dealers Inquire On Letterhead)

Mail Pouch

DOWN, BOY

Anyone who would shoot alligators or snapping turtles with a sling shot is a nincompoop in my estimation and this is what Bruce J. Morgan of Rockville, Maryland is. (See *Mail Pouch*, Page 58, May-June '64 issue.)

You have to give the publishers of BOW & ARROW a real pat on the back for publishing such trash and from whom. What has Bruce Morgan ever shot with a bow and arrow or rather his sling-shot? I shot two black bear with my bow just in case Mr. Morgan wants to retaliate. I could go on but I become nauseous just thinking about it, so keep up the terrific work in your magazine, because I know that it is helping Canadian archery grow in leaps and bounds.

Bert Saunders, Secretary,
Pinewood Bowmen,
North Bay, Ontario

(We don't really think Bruce Morgan was serious about the sling shot bit. He was just going to extremes to ridicule our story, "Gator Grabbin," in the March-April '64 issue. At least, we hope he wasn't serious.)

DOUBLE PURPOSE

I just want to compliment you on your fine magazine and hope you keep up the good work. This may seem strange, but I am not an archer, yet find much to learn from your articles.

I am a hunter with rifles and realize that an archer certainly has to take much more into consideration in order to get his game. If a rifle hunter took the time to secure the skills of an archer, his success ratio would rise considerably.

Paul Prato,
Revere, Massachusetts

SELF-HELP PROGRAM

Your magazine, just discovered in this neck of the woods, is just what the doctor ordered. The pointers and stories are just what we needed to help us keep our club going.

This club got started about two years ago and is still operating on a shoestring. For a year and a half we had only twelve members. Now we have about thirty-five out each week. We are called the Barrie YM-YWCA Field Archery Club, mainly a junior club.

We would like to have any archer from the United States, who hap-

pens this way in the summer, to look us up. We would really like to know how our range stacks up. All they would have to do is ask for us at the "Y."

R. H. Owen,
Chief Instructor,
Barrie, Ont., Canada

B&A CONVERT

I killed a deer in my first year of hunting with bow and arrow. I previously killed twenty-six deer with a rifle, but none of these afforded the thrill of the buck taken with an arrow.

This Columbia blacktail four-point was shot in Los Angeles County. The shot was made through the neck at twenty yards with complete penetration.

The equipment used included a Smithwick Citation Mark II bow with sixty-pound pull. The arrow was of Easton 2020 aluminum with a Bodkin three-blade head.

Leon Johnson,
Orange, California



GOOD GO

Enclosed is a picture of me taken recently during the January archery season on javelina in Globe Arizona, on the San Carlos Indian Reservation.

This was during a hunt with members of the Apache Bow Hunters Club. The pig was killed with a forty-five pound York Thunderbolt fifty-four-inch hunting bow.

Frank W. Barclay,
Kansas City, Missouri

(Continued on page 43)

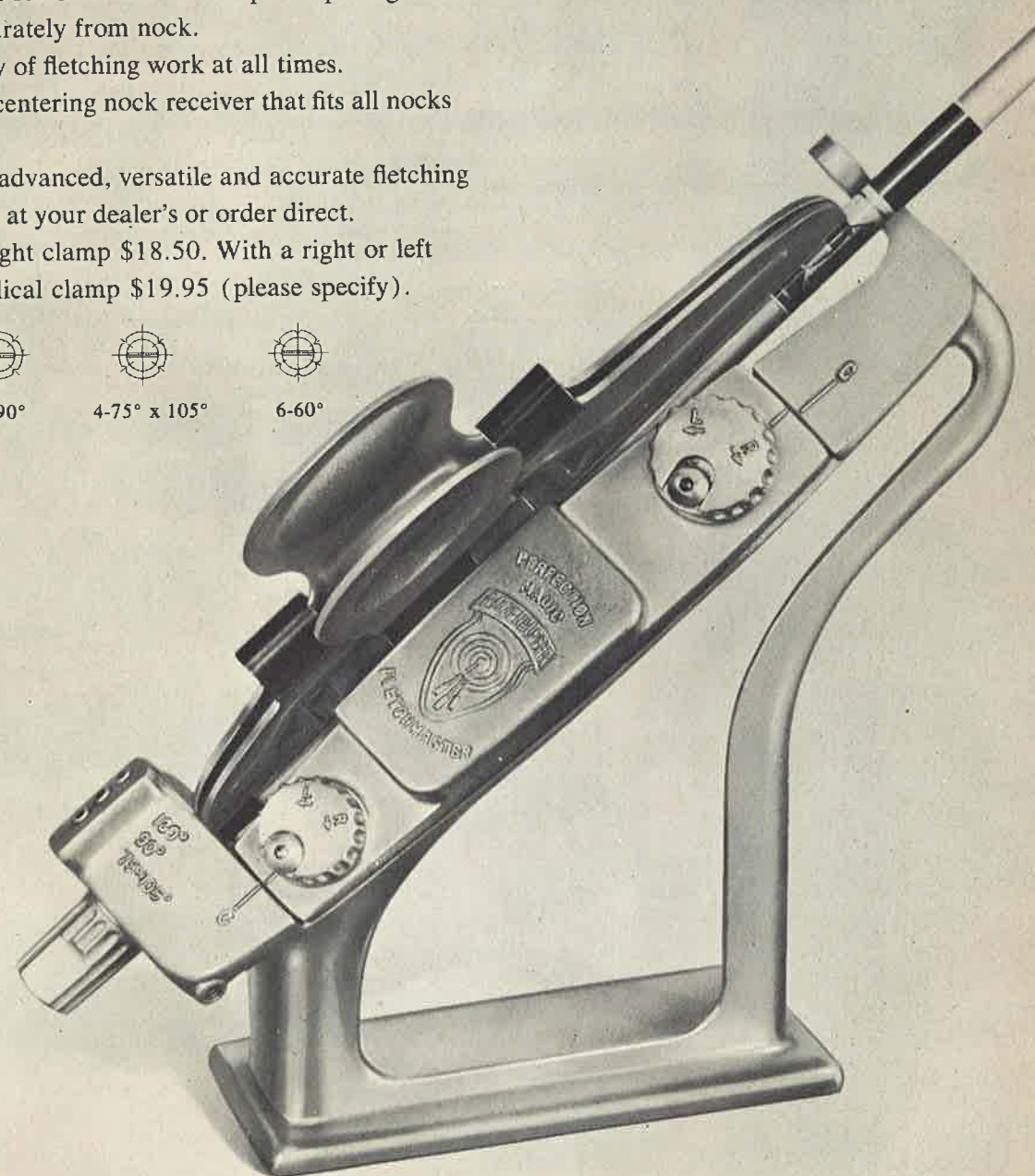
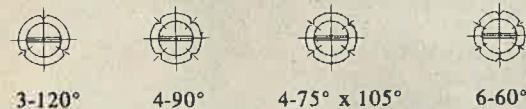
The most famous name in fletching equipment announces the all new Bitzenburger DIAL-O-FLETCH with these seven all new features:

1. Just dial your setting and you can fletch your arrows either diagonally, straight, or true helical fletch right hand or true helical fletch left hand.
2. Will space feathers or vanes 120°, 90°, 75° x 105°, or 60°.
3. Precisioned die cast, form fitted thumb controlled clamps.
4. Knife edge on base of clamps eliminates build up of surplus glue.
5. Graduated scale on side of clamp for spacing feathers or vanes accurately from nock.
6. Clear view of fletching work at all times.
7. New self-centering nock receiver that fits all nocks of any size.

See the most advanced, versatile and accurate fletching jig in archery at your dealer's or order direct.

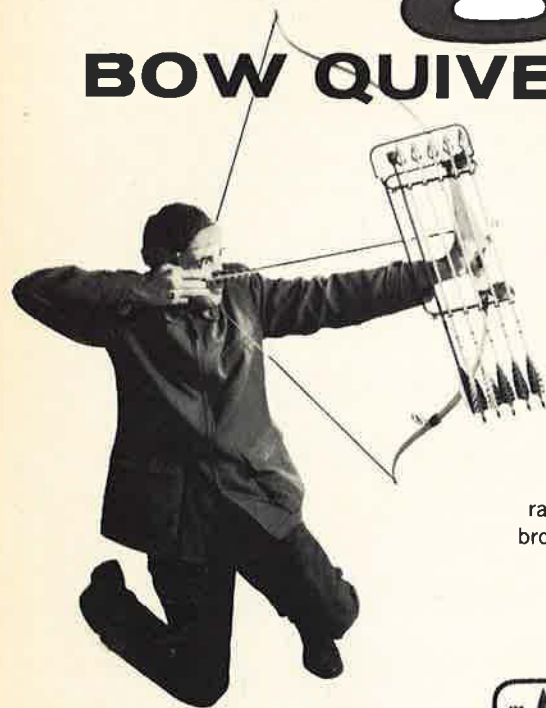
Jig with straight clamp \$18.50. With a right or left

hand true helical clamp \$19.95 (please specify).



Henry A. Bitzenburger 800 East 4th Street, Los Angeles, California 90013 Dept. B

NEW "BQ8" BOW QUIVER



Holds 8 arrows SAFELY — a full day's supply

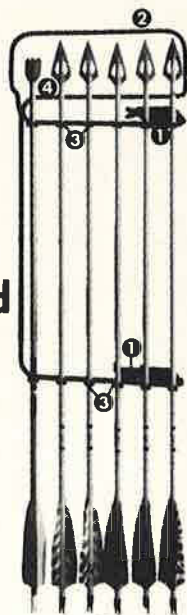
Guard protects against razor sharp broadheads!

A safe, practical, reasonably priced bow quiver that won't interfere with your bow action. Rugged, one-piece anodized aluminum construction, built to last you a lifetime!

Here are the features bowhunters want and need

- 1 Floating clamps quickly attach unit to the non-working section of bow (will not mar bow).
- 2 Guard avoids danger (carrying hunting points uncovered is trusting luck!)
- 3 Black vinyl-coated spring steel arrow clips can't mar arrows.
- 4 Special rubber-coated push-off bar for easy withdrawal—arrow fairly leaps into your hand!

Lightweight — 1 lb., 1 oz.



ONLY \$11.95

Make a date with a "BQ8"...for your next hunting trip!

for more archery fun own a SAUNDERS Matt Guaranteed to outlast other matts by 3 to 1



HUNTING WITH Doug Kittredge

ALUMINUM FOR HUNTING

Don Carey in San Francisco, California, writes: "I have heard that aluminum arrows do not break off in deer like other materials and for this reason are not humane to hunt with. What do you think and what do you hunt with yourself?"

Don has presented a pretty common question and one about which there is a lot of confusion among bowhunters as well as fish and game management people. First off, aluminum arrows do break off in game . . . both through the muscle tension within the body of the animal and by a protruding arrow striking brush.

Aluminum is available in a tremendous number of different alloys, each with different metallic qualities. One of the requirements for aluminum used as an arrow shaft is its spring quality, a quality which tends also to make the metal brittle. The muscle pressure in an animal body when he moves is considerable . . . certainly more than enough to bend and crumple the thin walled, small diameter tubing used in arrow shafting. When bent severely, aluminum arrow shafting crazes and soon breaks. The proof of the pudding is in the actual use . . . and over the years we have seen countless cases of aluminum hunting arrows breaking off in the animals they hit. Doug Easton, the major manufacturer of aluminum shafting, has a vast number of shafts so broken in game.

Furthermore, a high percentage of hunting arrows striking game, actually pass completely through the animal and do not remain in the body at all. Another good percentage of those which do lodge in the body are shaken out as the animal runs or are pulled out by brush. For the most part, arrows which remain sticking out of a game animal's body for any length of time are the result of active imagination by persons not familiar with the actual process of killing by bow and arrow. This applies to arrows of any material used today. I personally feel aluminum arrows to be fully as humane as either wood or fiberglass.

My own big game hunting arrows are 2018 Easton aluminum shafts. I decided to use aluminum by weighing its cost against the fact that when I've finally arrived at the point where I can take a shot, I want all the possible odds of hitting in my favor.

There is no argument about the fine accuracy derived from aluminum arrows. This has resulted in my spending more time looking for lost arrows, as my Scotch nature revolts at losing one, but through experience I find the average arrow shot is located and my overall loss runs about four to eight arrows per year, some of which are lost or broken in hitting game. For small game hunting and just plinking around, I use woods, considering them more or less expendable.

ED CUNNINGHAM of Detroit, Michigan writes: "Is it alright to wash out game or does water spoil the meat?" The section on preparing wild game in the popular GENTLEMAN'S COMPANION EXOTIC COOKERY BOOK is well worth quoting on this subject: "WORDS TO THE WISE ON THE FALLACY OF WASHING GAME. Beyond wiping with a damp cloth no game seems to gain from washing in water, although everyone does it everywhere, thus sending much flavour down the drain. Wet down game can easily change to quickly spoiling meat. The earliest game receipt in our collection, dating to 1650, clearly states — Wipe joints or game full well, but do not in enny conscience washe the game in water." ●

The SUPERB Del Rey

The rare beauty of the HOWATT Del Rey is challenged only by

its dazzling performance. To shoot a Del Rey is to discover

a unique inherent stability. For here is true stability,

in and of the bow itself . . . carefully engineered into

design . . . not artificially added as an after-

thought. You feel this difference at once and your

scores show it as each skillfully hand-crafted

curve and recurve contributes to the

performance. And what beauty, with solid

Brazilian Rosewood custom handles

brilliantly finished to matchless perfection.

It's yours to enjoy as the "standard

of excellence" and comes complete

with its own padded suede fabric carrying

case in befitting royal purple.

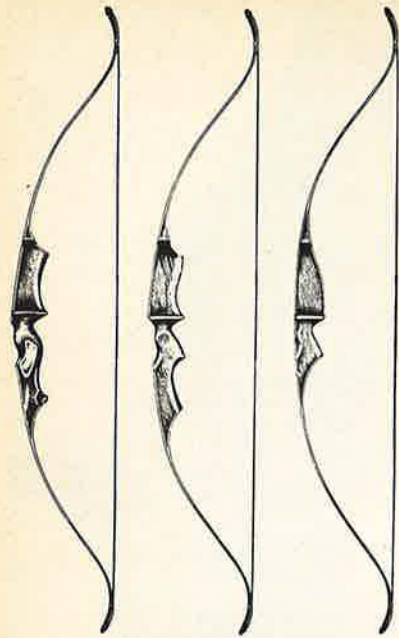


62", 66" and 69"
150.00

DAMON HOWATT
Archery Manufacturing, Inc.
ROUTE 8, YAKIMA, WASHINGTON

Enjoy America's newest family fun at your nearby indoor archery lanes.

FREE CATALOG



Send for our FREE Wholesale Catalog. Bows, Arrows, Fletching tools, Shafts, Points, Nocks, Quivers, Clothing Kits, The Finest in Archery plus Guns; Reloading Tools; Fishing Rods, Reels, Tackle Components; Boats; Snow and Water Skis. Over 250 Pages.

FINNYSPO RTS

9564 Sports Bldg. Toledo 14, Ohio



The S-K-A INTEGRATED TELESCOPI C SIGHT offers Better Scores with the Best combination of Optics and Mounting.

BUSHNELL 1.3 X PHANTOM SCOPE — S-K-A SCOPE MOUNT & PRISM BRACKET and the Exclusive METRIC BOW SIGHT (Modified) \$70.90

S-K-A Scope Mount, Inc.
c/o Spokane Archery Lanes
Box 69 Opportunity Branch
Spokane, Washington 99241

TECH TALK

QUESTIONS & ANSWERS

ANOTHER THEORY

Having digested the article by Martin Haynes, *Operation Experiment* (B&A July-Aug. '63 issue), I feel compelled to disagree on his conclusions on such raw data. The velocities he measured are strictly what rifle shooters would term as "muzzle" velocities at point-blank range. So to compare velocities of arrows of different fletchings and weights, he will need to time the shots over the various ranges the shots were actually made.

You'll appreciate the fact that velocities at the point of impact are more important than "muzzle" velocities, which depend strictly upon the weight of the arrow and force of the bow driving it. If you go over ballistic charts of firearms cartridges, you'll find that bullets with sharp points reach a target at a higher velocity than blunt points, both being fired from the same rifle with the same powder charge.

Haynes concluded that plastic vaned shafts are slower, contrary to popular beliefs, at point-blank range. But if he measures the velocity of such a shaft against feathered shafts at 100 yards, he will find the former faster.

Bill Wee, President, Sydney University Co. of Bowmen, Summer Hill, NSW, Australia

(We turned this one over to Doug Kittredge to mull, asking him to keep in mind that at the time this experiment was undertaken, little scientific work had been reported regarding velocities and that Martin Haynes, by his own admission, was more interested in preliminary data and developing a "starting point" than in offering final conclusions.

(Kittredge reports: "Mr. Wee's idea about the importance of measured velocity at the point of impact is well taken and in my opinion quite right; however, the measuring at the 'muzzle' does give a relative comparison of the effect of different factors of both bow and arrow on the initial velocity . . . it is only that also a series should be run at different yardages to get the complete story.

("As pointed out, there are fac-

tors which contribute to drag and slowing down of the arrow over the flight path which could offset any increase obtained at the 'muzzle.' Both factors have to be in balance to give the best results with equipment design.

("My findings with plasti-fletch and feathers are the same as this correspondent's. The plastic works fine over any distance, but the feathers collapse when first shot and give less resistance at first.")

WHAT RANGE?

I am writing for information for the Western Ohio Fish & Game Association of which I am a member.

We are going to construct an archery range at our club grounds. What we would like to know is the distance at which we should place four targets that would run parallel. We thought there might be certain distances which are more popular in competitive shooting.

Ralph J. Wolfe Jr.,
St. Marys, Ohio

(From your letter, it sounds like you have a target range in mind rather than a roving or field range, which requires more targets and varied distances.

(For a practice target range, establish whatever distances you can, using chalk lines at 20, 30, 40, 50, 60, 80 and 100 yards. If you can get in this entire distance schedule, you have a standard target range suitable for any target round. If you can only get up to and including 60 yards, you have a standard range for the popular American Round and a number of others.

(If you don't have that much range, it won't be standard, but with distances chalked at every ten yards, you can achieve suitable practice.)

LENGTH PROBLEM

I seem to have a problem. The right arrow length for me is twenty-six inches, but I seem to get better accuracy with a twenty-eight incher. Is this common? What should I stick with?

William Easterling,
Brooklyn, New York

(This problem may have to do with the correct matching of the arrow shaft to your bow weight. The 26-inch shafts probably are not the correct spine for your combination, while the 28-inch are perhaps too stiff, but the extra length makes them bed correctly. We'd suggest trying a new set of 26-inch arrows made by a reputable maker for your bow weight (as measured at your 26-inch draw) and you'll probably find that this will clear up your problem and that you'll shoot even better.) (Continued on page 60)

FAST RUGGED DEPENDABLE

Here is a bow that is FAST, RUGGED and DEPENDABLE . . . the Bowhunter's choice.

Designed to meet all the requirements of a perfect hunting bow . . . giving the archer a feel never before experienced with a short bow. Its exceptional speed, combined with the smoothness of a long bow, makes this Red Wing Hunter the thoroughbred of hunting bows.

RED WING HUNTER \$49.95

In selecting a hunting bow the experienced archer and bowhunter has found that the requirements are few but very important. The hunting bow should be one not affected by weather changes, one that maintains its power in heat and cold alike. It should be fast and smooth, with an even draw, regardless of the draw length. Beauty is not to be overlooked, because hand in hand with beauty go the flowing graceful lines reflecting the fine craftsmanship that goes into making such a bow. The Red Wing Hunter's short length of 58", and very light in the hand feel, makes it ideal for brush country where maneuverability, fast handling and getting off an accurate shot are of prime importance. The riser is made of beautiful Brazilian Rosewood, combined with dark brown glass, giving it a rich beauty that goes with this gem of hunting bows.

Other models from \$29.95 to \$100. Write for Wing's 1963 catalog today. See the Red Wing Hunter and other models at your Wing Dealer today.

WING ARCHERY CO. 7106 MAPLERIDGE ST., HOUSTON 36, TEXAS



WHY

you save 30-80%
when you buy a
bow made by

USAC

No mumbo-jumbo, just plain common sense!

WHAT WE DO:

We import the finest lumber in large quantity lots and process it through every step of production. In fact, we re-sell wood to other bow manufacturers.

We impregnate our own glass and laminate it. It's so good other bow manufacturers buy from us.

We process and produce our own tapered laminations; we also sell to other manufacturers.

We have our own designing, engineering and testing staff to guarantee top performance from every USAC bow.

WHAT WE DON'T DO:

We don't plant our own trees, but we do process our own logs.

We don't buy any finished materials for use in our bows. This would only increase the price.

We don't take expensive hunting trips. The people who would buy our bows would have to pay for them in increased prices.

We don't publish big or unnecessarily expensive catalogues. The catalogue we do offer is colorful, easy to read and to the point — there's no waste.

We don't pay professional archers with big expense accounts to shoot our bows. We prefer to put this money into our bows.

CONVINCED?

Want to save 30% to 80%? Buy a bow made by USAC — from the franchised dealer nearest you. You'll be getting one of the "World's Finest Bows" . . . truly a masterful blending of top design, beauty and performance and solid economy!



**UNITED STATES
ARCHERY CO.**

7 East Franklin St.,
Danbury, Connecticut

A DIVISION OF TRI-STATE
ARCHERY CORPORATION

Write for our new Color Catalogue

TACKLE TIPS

Tom JENNINGS

HOW LONG AND WHAT KIND?

The new archer now is standing in Ima Sharp's little archery store, clutching his newly purchased super-duper recurved reflexed bow. His next question is, "How long an arrow and what kind of arrow should I get?"

If Ima is just interested in making a sale and not fitting the man properly, he will probably say, "Hold the nock end of this arrow against your chest and stretch your arms out along the shaft."

How this method of deciding the draw length of an arrow ever came about, I will never know. It proves absolutely nothing. You could reach into a barrel of mixed arrows and be more likely to draw out a correct one for an archer than using this method. All right, how do we go about matching an arrow to this new archer?

First, the archer will notice a bunch of markings along the side of the riser section or on the face glass just below the riser section. Some manufacturers put catalog numbers, serial numbers, length of bow, draw length, and draw weight. The ones that interest us are the draw weight and the draw length. Most production bows are marked so many pounds at twenty-eight inches in the case of men's bows.

In the case of women's bows, sometimes they mark the weight at twenty-six inches. This does not mean that you can only draw the bow 26 or 28 inches as some people think. This is an arbitrary figure and was arrived at because it is, roughly, the average draw of a man and a woman.

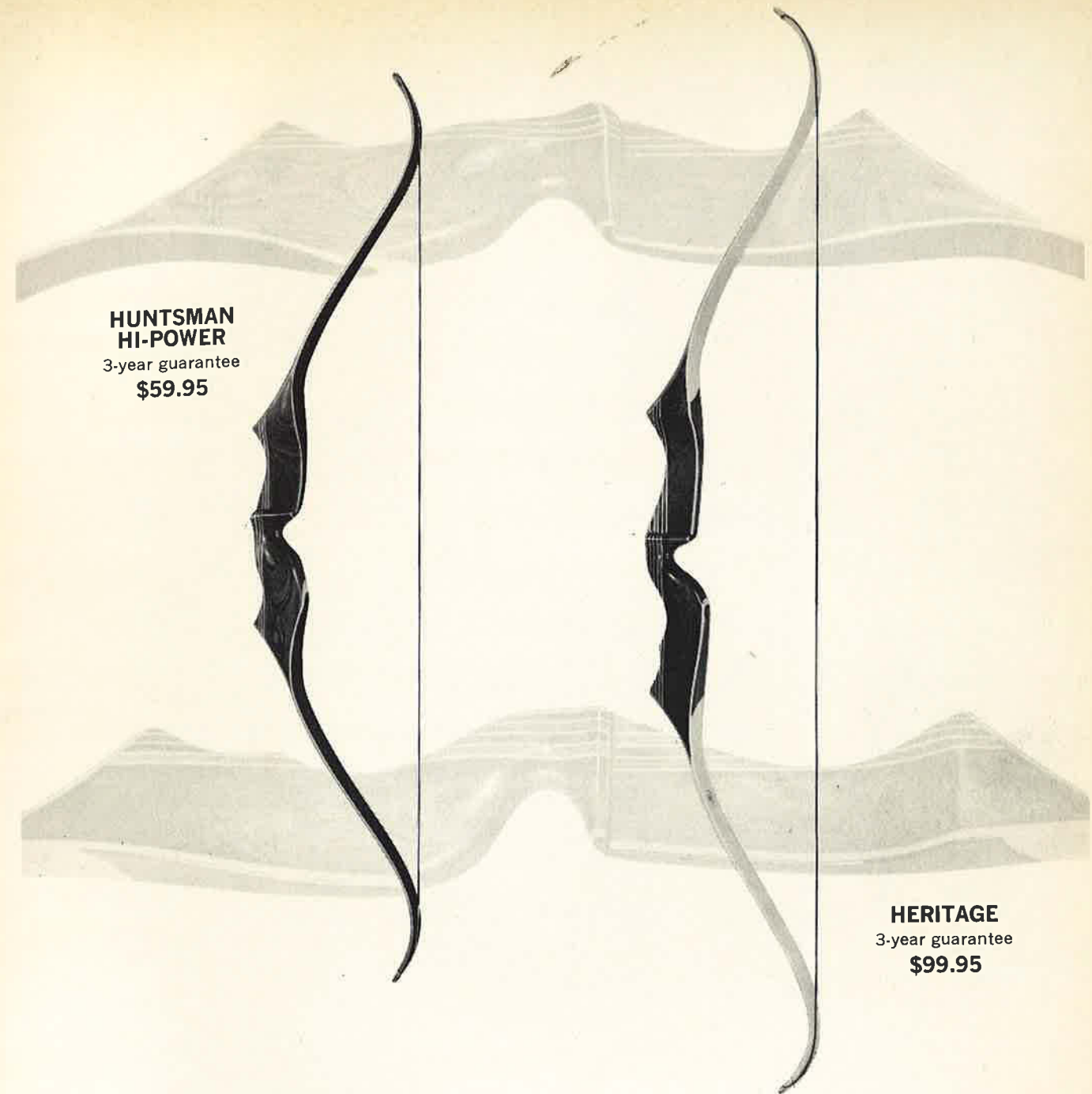
Look in the catalog and find out if the manufacturer actually is restricting the draw length of this bow to the stated length. In most cases, they do not. Many manufacturers will allow you to pull their fifty-two-inch hunting bow as far as you want. However, you must figure that if you are going to draw past this point, you will increase the draw weight of the bow approximately two pounds per inch. This amount is strictly a rule of thumb and is not really accurate but it is close enough in most cases to match arrows to. This draw distance is measured from the back of the bow (the back is the side that is away from the archer when he is holding the bow as if he is going to shoot it).

If the archer is a rank beginner, I take an arrow that is full length and I know will be longer than his draw. I have him draw this blank arrow to what he normally would feel would be his anchor point. Putting a light pencil line right opposite the back of the bow, I have the archer draw the bow several more times, as if he were going to shoot. Depending on how comfortable the archer looks pulling the bow and how good a form he has assumed, I usually add from one to two inches to this particular mark.

Invariably, an archer's draw length will grow for the first month to six weeks of his shooting. It is far better to have an arrow that is adequately long than to have one that restricts the archer's draw and makes him assume a poor form.

The next question is: What kind of arrow? There are three different materials used in arrows, wood, fiberglass, and aluminum. There are two basic types of shooting that make a radical difference in the way you set up an arrow, hunting and target shooting. If the archer is a rank amateur, I do not think you should attempt to set him up with either big game broadhead arrows or even practice hunting arrows. He has so many other problems in learning good form and technique that having his arrows weighted exactly right that he is far better off with a set of plain target arrows.

I think the novice should start with a set of good matched wood arrows. The beginning archer seldom really
(Continued on page 48)



**HUNTSMAN
HI-POWER**
3-year guarantee
\$59.95

HERITAGE
3-year guarantee
\$99.95

Two new champions from Colt

New Colt Huntsman Hi-Power, a husky 56" hunting bow with big-game accuracy and power. Easy to handle in brush. Can be shot from any position. Modern stabilized design with man-sized handle of rich, laminated woods. Quiet carpet-type arrow rest and leather arrow plate. Draw weights 40-60 lbs. **New Colt Heritage**. A showpiece of tourna-

ment precision. Balanced deflex-reflex limb with full-working recurve. Forward-flowing handle of tough imported woods provides exceptional stability without compensators. Hand-tailored thumb rest. Lengths: 66" and 68"; draw weights: 30-50 lbs. Other Colt bows, all designed, developed and tested by Colt, from \$5.95.

Colt's Patent Firearms



Hartford 14, Connecticut.

At America's side since 1836

This Expert Insists There Is No Mysterious Route To Championships; Just Good Form!

Forget about shooting 'SECRETS'

Dave Keaggy Jr., amateur men's winner of the 1963 NAA tourney and consistently a top competitor, boasts near perfect form taught by father.

By Gene Jones

ABOUT THE AUTHOR: Gene Jones has been shooting for more than twenty years and was state champion for several years in both Colorado and Wisconsin, as well as being ranked among the Top Ten competitive archers for successive years, winning one national record.

For the last year, he has been associated with indoor archery lanes development and has been involved in teaching both beginners and more advanced archers. As a result of watching and working with thousands of novices, he has drawn the conclusions reflected in this article: Anyone can shoot well if he will concentrate upon a few basic rules.



In the past, there seems to have been an aura of mystery surrounding every champion's shooting secrets. Actually, good shooting form — that which makes champions — is little different than just plain good posture.

In short, the so-called "secrets" of champions and certain coaches are nothing more than certain "feelings" of good form, which to them are something to be closely guarded and doled out in small doses so the uninitiated will not learn too much and present competition.

This article will deal with the shooting techniques that may be considered basic, but we will carry it beyond, so that all physical aspects are covered. Mental attitudes are important, but are so closely coupled to the confidence one may gain from correct form that form must be first and foremost for the serious archer.

We will attempt to show that, by concentrating upon good posture, and by taking logical steps, good shooting form — and good shooting — are attainable by anyone with normal facilities. I realize that I may be unleashing a tempest among some competitive shooters, but I firmly feel that there are no "secrets" to good shooting; only good, sound, logical form, and the confidence and mental outlook resulting from this.

Probably the greatest single drawback to the development of an up-and-coming archer is the inept advice always available from the well meaning but unqualified and self-styled coaches.

The first lesson for the individual who wants to learn to shoot correctly is to ignore all advice given by anyone other than the qualified coach involved. All of this may seem extremely basic, but I've seen hundreds of instances wherein mental confusion and lower scores have been derived from inept advice, thus discouraging a promising shooter to the point of giving up archery entirely. In short, there is no room in the learning schedule for the novice to include a lot of experimentation — only practice on the proper form. Leave the experimenting for the experts!

Let's break the elements of shooting form into two parts: First, we'll discuss the basics of such

form, step by step, as simply as possible. Then we will get into the various problems and their cures.

I agree that, on some points, there may be differences of opinion among the experts, but I have found the following method to work well and have learned that it is much the same as other professionally recommended shooting methods. It differs primarily in that this is a simple approach — with the so-called mystery taken out.

Correct shooting form may be broken down into a number of basic steps. We, however, will limit our study to four such steps, using the theory that the fewer steps, the less effort required by the neophyte to remember them in proper sequence. The steps are as follows: (1) Preparation for the Draw; (2) Draw and Anchor; (3) Hold and the Aim; (4) Release and Follow-Through.

But before we discuss each step, let us dwell briefly upon the difference between shooting with



a sight and shooting without. The primary difference is the fact that, without a sight, the archer is visually shooting the arrow. He is dependent upon seeing the arrow for his alignment and elevation. Small variations in the cant of the bow, and even in his anchor, usually are compensated for instinctively.

When shooting with a sight, the archer is dependent only upon the sight for his aim, so the anchor and bow position are more critical. The sight shooter also is more aware of variations in his aim. Consequently, he is under more mental stress in his form.

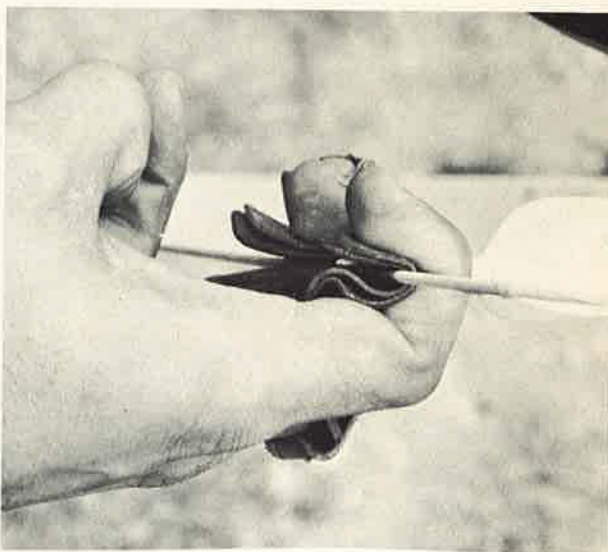
Usually, the sight shooter will anchor lower than the bare bow shooter, because he needs the lower anchor to obtain more distance from his sight, and because a multiple-point anchor is usually easier to obtain from a lower anchor. One more difference is that many bare bow shooters do not find it necessary to align the string (place it in the same relationship between eye and bow), whereas the sight shooter

must align it. This, again, is due to the fact that the bare bow shooter gets his alignment from the arrow, itself.

With these thoughts in mind, here are listed the basics for proper form — and the ultimate scores:



PREPARATION FOR THE DRAW: The feet should be in line between 45 and 90 degrees to the target, but not over 90, with the shoulders in the same line as the feet. The head should be held erect and facing directly at the target. The chin should be parallel with the ground, not raised or lowered. And it should be kept in mind that the head should serve as an independent unit to which you draw. It should not be moved into the anchor; instead, the anchor should be brought to the head.



THE DRAW: Place the drawing fingers on the string so that the string is well into the first joint, then wrap the fingers well around the string so that the grip on the string is strong.

With the bow arm, elevate the bow until the sight is on the target without elevating the bow shoulder. This will create the feeling that your head is well above the bow shoulder. Be certain that the bow is being held perpendicular.

Draw the string with the drawing arm, being certain you are doing three things: (1) Draw directly to the anchor, not coming in from the top, bottom or side. (2) As the draw is being made, try to feel that your back muscles are doing most of the drawing. It is important that all of the pulling and pushing feels as though it is directly in line with the target. (3) Be certain your bow shoulder moves only slightly from its original position at the start of the draw. It may move inward slightly, but definitely should not move up or down.



THE HOLD AND THE AIM: This is probably the most complicated of the four basic steps under discussion, but don't let it throw you. Take it easy, and follow these instructions.

The line of tensions (pushing and pulling, if you want it simplified) again is directly toward the target. This can be seen by the tendency for the sight to settle easily.

Any undue movement of the bow shoulder during the draw will destroy this line. Also, any attempt to hold by pulling with the arm instead of holding with the back will destroy this line.

Undoubtedly the most difficult part of holding is the ability to hold with the muscles in the back of the drawing shoulder rather than the drawing arm. This is accomplished by a smooth, even transfer of the tension in the arm to the back, during and after the draw. The result is an almost relaxed feeling during the draw and hold. If too much tension is held in the upper arm for too long, this transfer to the back becomes almost impossible.

It is difficult, even for an expert, to tell the difference between faulty use of the bow shoulder and a fault in the drawing arm and shoulder. (We can speak of this fault as a broken line of tension; not enough, or even too much tension. This tension should be only enough to keep the arrow from creeping forward.)

A faulty bow shoulder generally will cause your arrows to scatter more wildly. Faulty tension in the drawing shoulder will cause a collapse; this may still group your arrows — but not in the center of the target.



A sight that stays in a particular spot outside of the target center usually indicates fault in use of the bow shoulder. A sight that centers but will not sit still usually is due to one holding with the arm rather than the back.

Sighting is so tied to proper tension that all that can be said is for the shooter to use mental as well as physical patience to wait until his sight has settled on the center.

A too common fault is to shoot too soon, when the sight first touches the target center, or when it is in the area but has not stopped moving.

All too often, a shooter says that he has a problem in freezing off the center, then finally finds that, due to improper tension or line of tension, he is torquing the sight off center. Of course, psychological freezing does happen, but this, more often than not, is started by the incorrect line of tension; many times the mental attitude can be solved by correcting the physical problem.



RELEASE AND FOLLOW THROUGH: If all of the previous steps have been carried out correctly, the release will follow easily. There are a few subtle points regarding good release, however, which might help in mental attitude.

First and foremost, keep in mind the earlier discussed matter of tension being held in the back. Good sighting is a must, as discussed. The sight must be steady in the center of the target. Flinched releases usually are caused by poor sighting.

In regard to mental attitude, it would appear from experience that one should concentrate upon tightening the back of the drawing shoulder rather than the actual opening of the fingers. Those who concentrate upon opening the fingers often cause a loss of this tension just prior to release.

The release hand should move to the rear easily. This must be a result of good tension and must not be forced. The effort to make the hand move to the rear without the proper tension will cause one to flinch.

The follow through, again, is a result rather than a true function in itself. Good tension, aiming and release will result in good follow through. The lack of a follow through will indicate poor form in one of the other facets.

That's the system. I'm certain there will be those in the top competitive ranks who will find fault with it, complain that I've neglected to offer the secrets of good shooting, but these are the secrets, if there really are any.

In working with thousands of beginning archers, I have found that I can have them shooting respectable scores in but a few hours if they will follow the basics outlined here.

So give it a try and don't worry about the secrets. You will find them for yourself. ●

Profile
Of A
Champ:

**BILL
BEDNAR**

**PEARSON
PE\$O\$
WINNER**

BY JOSEPH HIGGINS

WILLIAM BEDNAR of Suf-field, Ohio, "a man who can never stay still," received a Christmas present from his wife, Edith. It was a fiberglass bow.

"I thought it would interest him," said Mrs. Bednar.

It did.

That was six years ago. It interested Bill Bednar to such an extent that on April 12, this year, Bednar, strictly a form shooter, a man who considers every arrow he lets fly as a "nine," a man who during a major tournament will bawl himself out verbally (and audibly) for what he calls "boo-boos" in shooting, became the Number One professional archer of the United States. Behind that title is the Indoor-Outdoor Championship, recognized by the Professional Archers Association.

He did it at the Sixth Annual \$10,000 Ben Pearson Open archery tournament, held in Detroit's \$55,000,000 Cobo Hall, and he walked off with the top prize of \$1,000 in cash, plus the complete

admiration of all who had watched his remarkable shooting.

Bill Bednar's shooting is remarkable; in six short years, he not only perfected his style and skill, but won several major tournaments. Look at this scoreboard:

Ohio State indoor flint round, 1963-1964.

Ohio State indoor target, 1963-1964.

West Virginia Centennial, 1963.

PAA, 1963

Monroe Bowl Open, 1963.

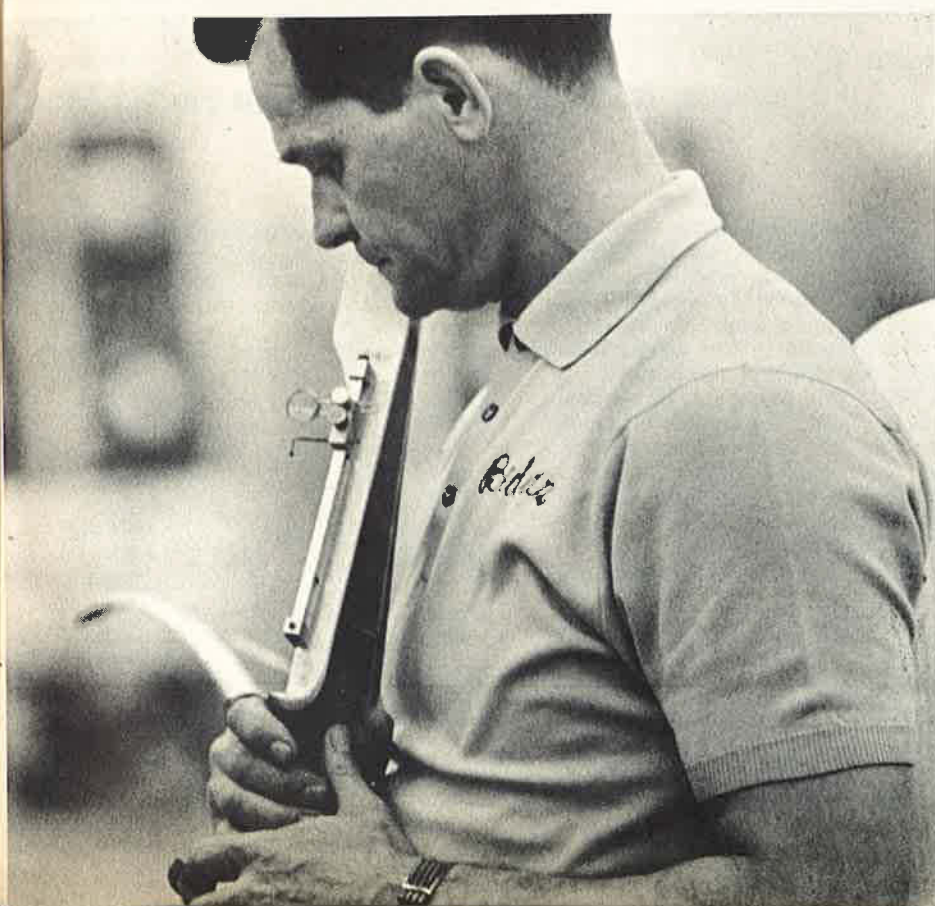
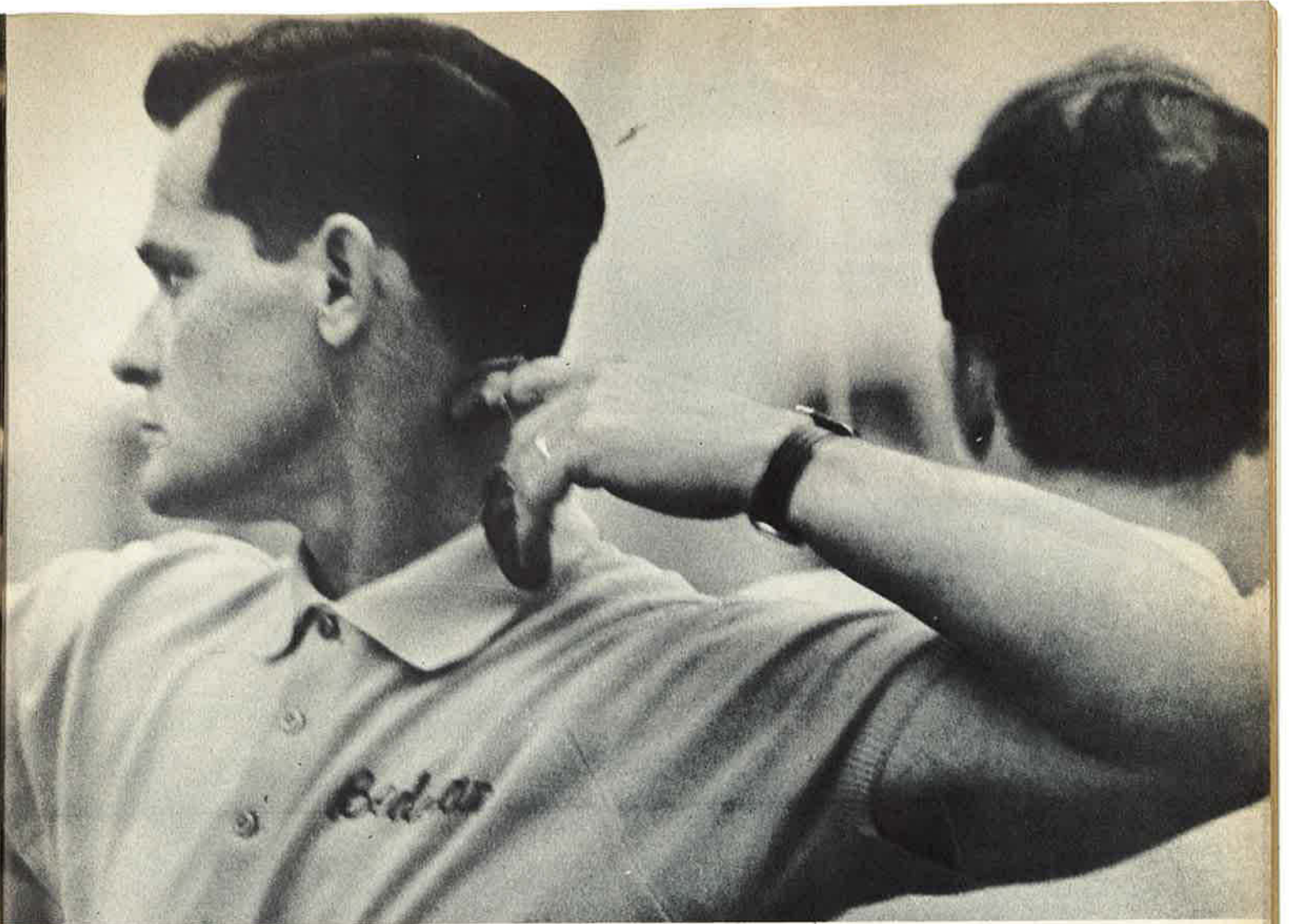
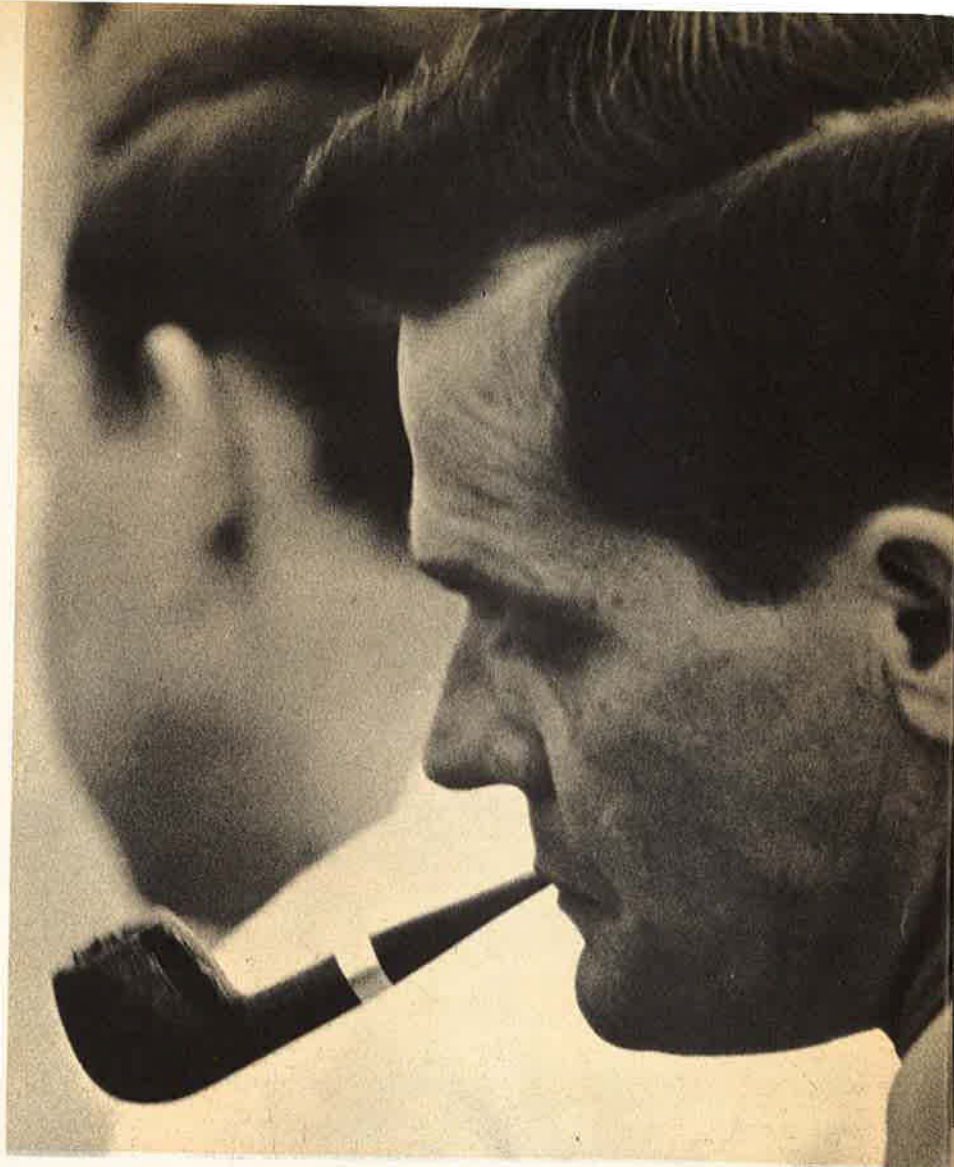
Monroe Bowl, 2500, 1964.

In FITA competition, in 1961, he was on the second qualifying team in Chicago; third on the world team, which shot in Oslo, Norway, and the tenth shooter in the nation.

An operating engineer in heavy construction, Bednar has a deft, light and skillful touch with his bow, using it as easily as a doctor uses a scalpel, with as deadly an accuracy as a battle-trained sniper. The bow he used to become top professional archer in the country is a forty-two pound at twenty-seven-

inch Amarco made by the American Archery Company. Bednar draws a twenty-six-inch 1716 Easton three-fletch aluminum arrow. His winning shafts were fletched with three straight feathers, with a four-degree spiral. And he draws them well indeed; when he gets into competition, he figures the "only one to beat is myself," and he proceeds to do just that.

In six short years, he perfected his form to such an extent that at the Portage Archery Lanes, which he operates, he shot 860 in a Chicago round, only four points under perfection. At the state tourney in Finlay, Ohio, in 1963, the thirty-nine-year-old champion shot a 556 flint round; in 1964 at the state competition in Warren, Ohio, he shot the same score in the same round. At Columbus, Ohio, where he became Ohio state champion, in 1963, he shot field round scores of 526 in field, 526 in hunter and 534 in animal, for a total of 1586, beating his nearest competitor by one point!

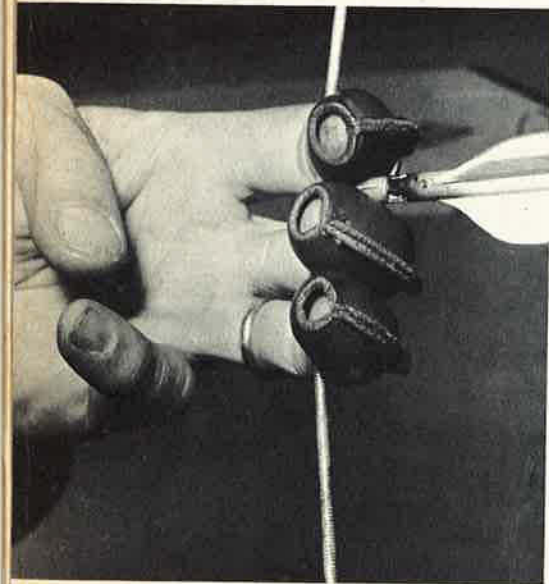
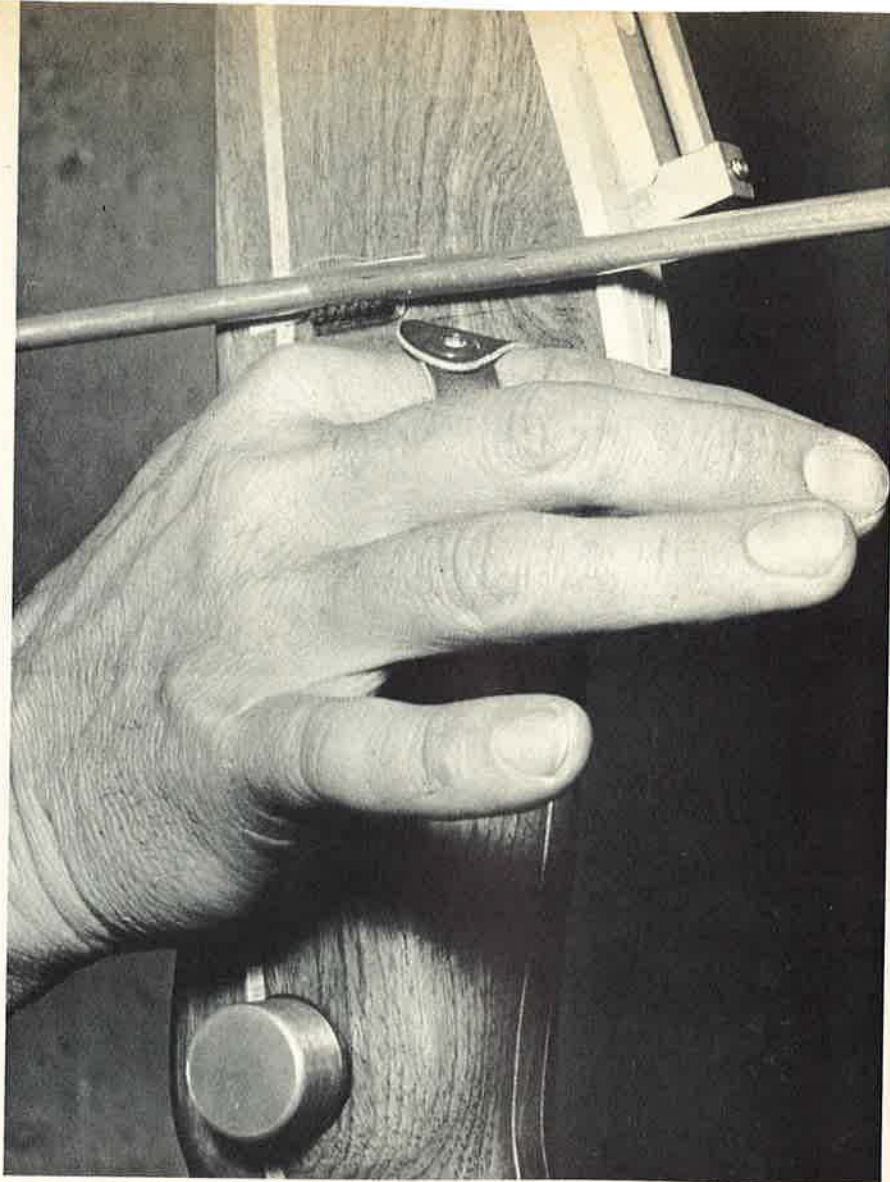


These photos of Bill Bednar show him in action during the Ben Pearson Open. Lower left: He concentrates, almost in attitude of prayer between shots. Below: All smiles, he clutches winner's trophy and his pet bow.



Right: The new big money winner uses a relaxed grip on the bow handle to allow the bow to recover with shots.

Below: Position of fingers on the bow-string as he is ready to shoot is illustrated. Finger stalls protect hand.



He Practiced Only One Day Before The Big Shoot,

Probably one of his greatest shooting qualities is concentration. Once he's in competition, his only world is his target; his only ambition is to fill its center.

Does he worry? He admits it cheerfully.

"I worry every minute," he says. "I try not to let the score enter my mind. I'm strictly a form shooter. If I boo-boo, I talk to myself, discipline myself, work out my own problems as I go along."

Obviously, when a man reaches the top, his background is of interest and inspiration, for it can easily serve as an incentive for others. Particularly, in Bill's case, it may serve as one for beginners who might feel the urge to try competition, but who may figure they are much too inexperienced, lack too much knowledge of this fast growing sport.

"Bill," says his wife, who is an archery enthusiast, "is dead serious about anything he does. He puts his heart into everything, right to the frost; he never wants to sit and he drives himself in his work. That's why I bought him the bow.

"We didn't know anything about archery being organized, but it did not take Bill long to learn after he got the bow. I don't believe he has missed a tournament since!"

Continues Mrs. Bednar, whose wifely and staunch support of her husband is evident in every tone she uses:

"I bought the fiberglass bow from a department store, and it was right-handed, because Bill is right handed. He opened the package, but it just wasn't right — we found he was right handed in everything else except archery!

"The store didn't stock left-hand-

ded bows, so we found an archery shop in Talmadge, Ohio, run by Eli Berry at the time. Eli didn't have one, but ordered one promptly. And when it came, he gave Bill some good advice. He told him not to take the bow into the back yard and pick up bad habits. He said join a club and learn to shoot correctly.

"Then we learned of the Portage Archers target club at Ravenna, Ohio, with one hundred members. Bill joined and learned a great deal from the others, and particularly from Harry Gilcrest, coach of Ravenna City High. He's never forgotten what Harry taught him — and one thing was utter concentration. When Bill shoots, he loses sight of everything except what he's doing. I don't think he'd notice if the building caught on fire!

Bednar himself, adds to his



Left: After being awarded a check for \$1,000 as top money winner at 1964 Ben Pearson Open, Bill Bednar receives a kiss from his wife, who bought him his first tackle.

Below: Multi-million dollar Cobo Hall in Detroit was again the scene for the big money shoot. Lighting was good and the competition set-up considered outstanding.



But Spent A Lot Of Time Concentrating Upon Winning!

wife's fond memories of her part in his new career. A question was put to him as to what he considered his goal when he started bending a bow.

"That's easy," says the new champion. "When I started, my goal was to make the United States Archery team. It was in the club that I first heard about FITA. Then it was later, and due to much controversy over amateurs and professionals, I decided to join the professional archers. I feel the future of the sport is in this group. Professional archery will bring the sport to public attention, just as professional golf has done in that popular sport. The more money shoots, the better. After all, few incentives are greater than a tangible reward for hours of practice and for money spent on a sport. I have, for instance, spent a great deal of

time to perfect my shooting and money in obtaining good equipment, and I'd like an opportunity of getting some of it back."

Is he a hunter? The transition is an easy one for target shooters.

"Yes," says Bednar, "I started hunting about three years ago. I've shot deer and quite a bit of small game."

A man with \$1,000 in cash must have some idea of how he's going to spend it.

"That's not my sole problem," says Bednar with a grin. "It's going to be a joint effort; I have a boss in the family called Edith! She's in charge of the spending department. And then there are the youngsters, Joanna Lynn, 4, Ricky Lee, 7, and Cindy Marie, 10. I guess I'll leave it up to all of them. I know they'll do a good job; they've all been an inspiration to me all

along and I'm prouder of them than I am of the championship. How can a guy lose with troops like this behind him?"

One additional question was put to the new champ:

How long did you practice for the Ben Pearson Tournament? (Remember, it started Saturday, April 11).

Bednar thought this one over for a few seconds.

"Friday," he said. The interviewer, properly enough, was astonished. The day before!

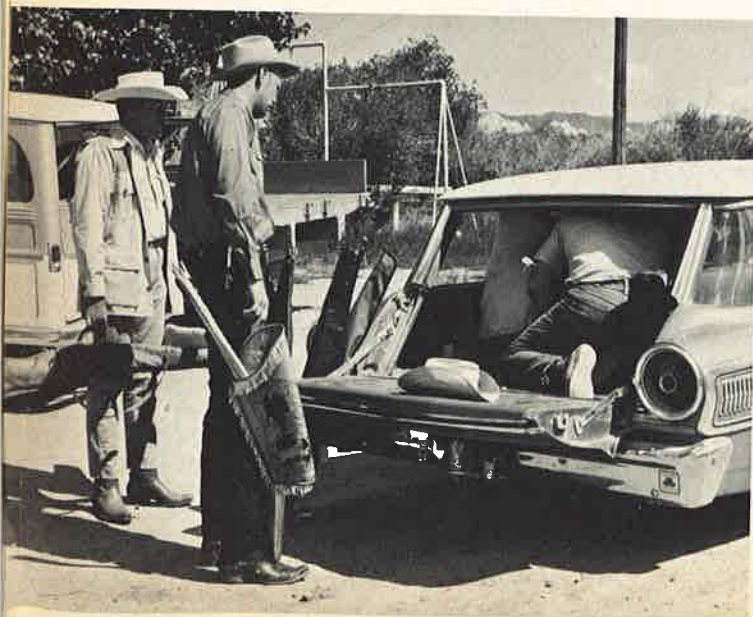
"Yes, on Friday," repeated Bednar. "I spent about three hours. But, of course, I usually spend about a half hour or hour every day just to keep in form. It's all form, from start to finish. It's the only way to win. If you shoot for score, you'll never make the grade."

True to form, Bill Bednar made it.



The rifles that were brought along were for the antelope just in case they refused to cooperate with the author and his attempt to down a fleet-foot with bow and arrow.

Even in a four-wheel drive vehicle, the going can be rough in the Wyoming high country's terrain. It's a good idea to take along a shovel for such situations as this.



Bowhunting Wyoming Sage Hens

The Feast Is Worth The Harassments In This Brand Of Hunting!

By Gary Swanson

Riding the rear of the truck through the rough sagebrush country afforded the author an opportunity to scan the terrain and select likely areas for hunting sage chickens.



Since he came equipped only with broadheads, Swanson used them in hunting this type of small game. Bow handle is wrapped with calf skin for appearance and good grip.



I was in Wyoming for the purpose of taking an antelope with the bow and possibly a deer. This, in itself, was a problem, as in Wyoming there is a great deal of wind and open country. Of course the antelope uses both to his advantage.

The editor and publisher of BOW & ARROW were to meet me in Rawlins in three days to field test some equipment recently put on the market, but meantime, I had a few days to relax and enjoy the beautiful weather in the North country.

The weather was something a king might order and not necessarily receive. The sun would come up over a large red butte, going through its many colors. As the day progressed, the wind would come up and the air was crisp and clean. The sunset were something to behold.

The area in which I was hunting was the Ferris Mountain Ranch out of Lamont, Wyoming. The ranch property covers many square miles of country grazed by beef, antelope, deer and elk. The home ranch is nestled in a small canyon at the base of the Ferris Mountains, the only mountains on the continent that run directly east and west. The ranch is owned and operated by B. A. Raymond and his two sons, Ken and Roy. The latter two, fully familiar with the terrain and habits of local game, have developed excellent reputations as guides.

I early learned to be proficient with the bow when it is most important, one needs to keep in practice. Since sage hen season was just drawing to a close and I had a license, Ken Raymond suggested that before we invaded the antelope country, I try my luck at them. I had not come prepared at all for bird shooting but decided that if that broadhead went through a bird, it would have to kill.

I was using a Jack Howard recurve hunting bow. In the pictures you may not recognize it as I have built it up slightly to fit my hand. The covering is of cowhide I lifted from stock at my taxidermy studio. This makes a sweat-free handle and I like the feel of it. There also are those who tell me I can't shoot wearing a ten-gallon hat, but it hasn't interfered yet.

The arrows were selected for me by the Kittredge Archery Company, and were a 11/32-inch shaft thirty-one inches long. The broadheads were of a razor insert variety and open up a dandy area when a hit is scored.

It was four in the morning when Ken was shaking me around to consciousness, an ultimate state aided by the smell of good ranch cooking. Shortly after 6:30, we were watching the sunrise and preparing for our trek into the sage hills.

From our four-wheel drive truck, I could see that the more colorful of the specie — the male — were sticking well out into the far reaches of the sage-

brush; only the hens and an occasional young rooster were spotted.

As we proceeded into a sixty-acre hay field, large numbers of antelope, deer and elk could be seen grazing and slowly making their way back to the mountains to bed down for the day. This only made the blood run through my cold veins a little faster. This was good in the cold morning air but made it harder to shoot.

Soon after entering the field we immediately spotted a group of hens about one hundred yards, feeding on a slope. Ken pulled the truck to a halt and we disembarked. I set an arrow and we circled the knoll to come within 30 yards without being spotted. This is a fair shot for me — especially at that small a target. As we approached, Ken and I went to our bellies in the wet hay. At this point I debated with myself whether it could be worth it just to practice, but the hens were now in full view.

I slowly raised to my knee and made the mistake

of shooting at the flock rather than picking one bird. The first arrow was a clean miss. Two birds dodged it and the rest weren't even close enough for that. About three-quarters of them took to the air. I tried another arrow at the remainder but found I underestimated the distance.

I now realized that one might have a hard time procuring a limit on hens with a bow and arrow. The flock by now had broken into bunches of three to eight. Ken said to hold until we could figure a way to approach the largest bunch. This soon was solved as they fed their way across a sharp knoll.

A person might say to himself, shooting birds on the ground is unsportsman like. For those who haven't tried bird shooting with a bow, I can see their point, but I'm sure I could make a believer if they wish to join me this fall.

Slowly we made an approach over the knoll to find that the birds were out about forty yards. I picked a young looking hen and released, and it was Thanks-

giving time on the prairie, even though a couple of months premature. As luck would have it, the broadhead nearly severed the head.

I quickly nocked another arrow as the birds took to the air. Their flight is similar to that of a turkey — slow, noisy and more or less straight away. I picked up a fairly large hen and raised above her about two feet. The arrow went within inches under her feet.

We picked up the dead bird and cleaned it on the spot, as Ken claimed this was the secret of good sage hen. The meat later proved his contention.

On the way back to the truck, we ran into three young hens at about twenty yards range. I hurriedly released another arrow as they took off, and this one went through the last hen the long way. She partially folded, as she hit the ground, then ran for approximately thirty yards before she was dead. This gave me two for four.

I would love to have maintained that average, but the birds took to the sagebrush and this made it hard

for approaches. I went through many broadheads before I finally ended up with three birds. I worked harder for those three birds than I did trying to get an antelope or at least I felt like it.

A spit barbecue, we found, works very nicely. You bind the sage hen just as you do a chicken and keep it turning slowly close to the fire. When it begins to crust over slightly brush on some melted butter. This will keep it moist. Sprinkle on a great deal of monosodium glutamate but no salt. For those who care for barbecue sauce, now is the time. I found that the birds cooked themselves nicely in their own juices; when they begin to crust, raise them from the fire and do them even more slowly.

But as with all good things, I suspect the problem of getting the game improves the joy of the feast. ●

Here's the mark of success: The downed bird. Sage hens are plentiful in Wyoming country, and when properly prepared make excellent eating, as explained in this article.



Upper right: Antelope are easily spooked, taking advantage of winds, are difficult quarry for an archer.

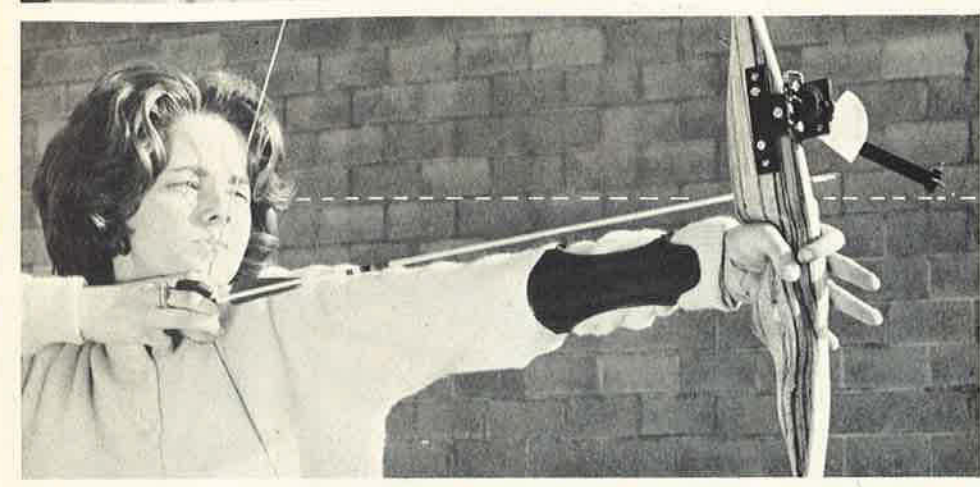


Right: Swanson gathers up sage hen after downing it with an arrow. His quiver is a hand-tooled custom model.



Below: A miss on a sage hen can have bad effect on a broadhead. This one was bent in ricochet against a rock.



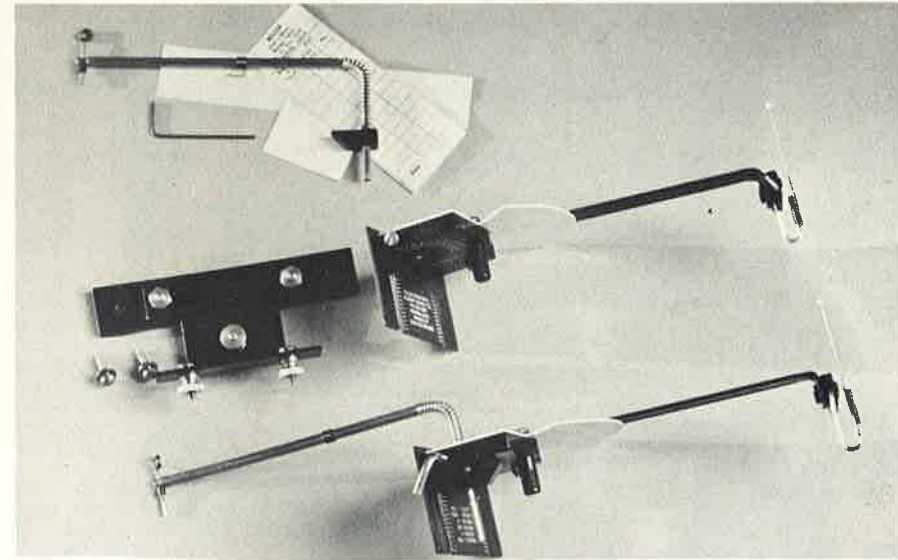
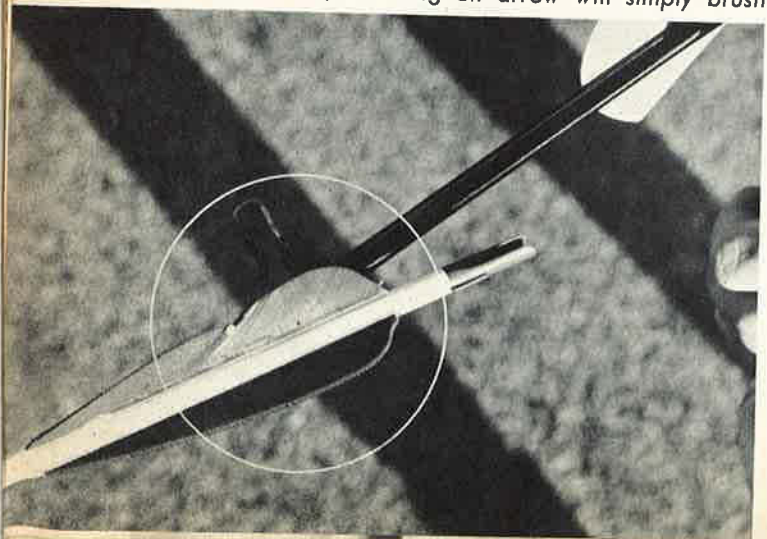


In upper photo at left, Cathy Clark uses sight to shoot at the standard thirty-yard distance. At lower left, sight has been adjusted for target out at sixty yards.

DIAL YOUR OWN SCORE!

It's Not Quite That Simple, But This Sight Saves A Lot Of Wear And Tear On Your Memory!

As shown, fletching on arrow will simply brush the bead of the sight out of its way, bending the spring.



Shown from top are: The Pro Training Kit alone; the bow sight with bracket, and at bottom, the sight with the professional training aid attached. Kit affords a long sighting radius, helping neophyte to establish his anchor.

TO paraphrase the words of Bobby Burns, the best laid plans of mice and inventors often go astray, and this was the case in the development of a new bowsight that is just being introduced.

When Bill Miller of Academy Archery in Anaheim, California, showed us the prototype of his new sight, we were impressed, and he

was impressed that we were impressed. We took a whole raft of photos of the device and even tried it out to be certain it would do all the things he said it would do. He was going into full production within the next week, but just as we were ready to run the story in the last issue, he called and in crest-fallen fashion explained:

"There's a bug. We're working it out now."

It seemed as though one of the two sights on the device had proven itself a minor hazard. This was the sight, extending some six inches ahead of the bow and featuring a crosshairs type device. In tests, an archer had inadvertently put an arrow through these crosshairs.

So today, the latest version is minus crosshairs. Instead, it utilizes a spring equipped pin that one can shoot against and the sight will simply spring out of the way.

But more important is the Dial-O-matic feature of the sight. Properly numbered, one has only to find where his sights are properly set so that he is on target, then remember these settings. Or if you're lousy even on your own telephone or Social Security number, there is yet another aid. This is a white shield upon which one can mark or write the proper settings for various ranges. Then all that is required is to select the correct marking for the proper range and shoot. In short, assuming you can hold on target, you can literally dial your own score!

The mechanism is easily installed upon the bow, and if you want to shoot bare bow, the device can be removed simply by loosening the thumb screws, leaving the mounting plate in place.

The sight is adjustable for horizontal differentiation as well as vertical changes in range or sight picture, too. The basic sight sells for \$19.95, according to Miller. However, there is an additional sight, which may be extended to the rear, which is called the Professional Training Kit. Hank Krohn and others who have tried this particular facet of the kit feel that it will be of excellent value in helping the novice to learn to shoot, and particularly in helping him to establish his own anchor point. Once the anchor point has been found, this device then can be removed.

Miller, the inventor, is frank in stating that "with this sight, if you are inclined to be sloppy in your shooting, you will shoot off. The sight, we have found, tends to cause the shooter to make his shots more carefully, thus tightening up his groups." ●

By C. R. Learn

ONE facet of archery in which women are becoming ever more evident is one that leaves no trophies to collect dust, no scores to be tallied at the end of the shoot — and leaves no doubt as to ability with the bow.

The only score in hunting is the game you bring back. Many a doubtful husband, out of kindness of his heart, has allowed the wife to tag along on the annual hunt. He even goes so far as to get her a heavier bow so she can compete. To some of these men has come a rude and abrupt awakening. Some have been completely blanked by the wife, bagging nothing, while she brought home the game.

Some women become interested in hunting with the husband, but the husband makes the mistake of over-bowing them and they become easily discouraged. This

usually is not intentional, since most states require a minimum bow weight for hunting big game.

Most women make better hunters than men since they have more patience. Tell a woman to sit on a stump by a deer trail, and that a deer will be along soon, and she will sit on that stump and wait. Women are not as fidgety as men, and when it comes to stalking, they are more cautious than any of the husbands encountered. Women will walk along, watching the birds, the trees and all the wildlife around and take their time. They aren't as impatient as men to see what lies over the hill.

The girls get as much enjoyment out of a good stalk as getting their game — well almost as much. They feel the challenge lies in getting as close as possible to the game and they do a good job of it. When a wife takes up hunting with the husband, she usually becomes another member of the hunting group. The girls join in the bragging sessions after a day's hunt, talking about the shots they made — and missed.

One problem, as indicated, is getting the proper weight bow. Arizona, for example, requires a minimum of forty pounds draw weight for hunting deer and javelina. If a woman is systematically conditioned to the heavier bow, she can manage it with little difficulty. When they get their form developed, they have little trouble keeping in condition.

Many hunting archers are not interested in target shooting. Instead of going to an all-day shoot at butts and targets, they will take a picnic lunch and go where they can get some hunting practice. Jackrabbits are always a good target in many states and they are fair game all year, if you have a license. The greatest challenge for most hunters is the ground squirrel. Take a look at a ground squirrel sitting on his rock and see the size target you have to hit. It can provide many hours of enjoyable hunting — and many broken shafts from missing.

Women usually start hunting to be with the man of the house when he takes off for a weekend of shoot-

ing and to join him on the family vacation which he usually spends hunting big game. One such participant is Rene Giardina.

She's almost as tall as her hunting bow and shorter than her target bow, but Rene places an arrow where it counts. Two years ago she was the first to bring in her deer among the hunters in the Elk Ridge country out of Monticello, Utah. Her barren doe field dressed at one hundred forty pounds, a good deal heavier than Rene.

The Giardinas are an archery family. Husband Nick is a hunter with good deer to his record and daughter Sandy is now old enough to take her try at deer.

Relating the incident of Rene's first deer hunt in Utah, Nick Giardina admits, "It was a thrill to see her get her deer, but still exasperating. Hunting together, we saw this doe at about forty-five yards. We both shot at the same time, we saw a hit and I yelled, 'I've got my deer!'

"When we went to look for the blood in a foot of new snow, we saw where the doe had jumped a log about forty yards from the hit. The doe was giving her last kick when we saw her a few yards away, but it wasn't my arrow in the deer. Rene's arrow had severed the femoral artery, I had shot under her neck and found my arrow in the snow by a tree. Most exasperating."

The doe was so big they had trouble loading it onto a *Tote Gote* to get it into camp. Five days later, Nick bagged his deer.

The tackle Rene Giardina uses for hunting includes a forty-one-pound, fifty-six-inch Drake bow. Her arrows are custom made by her husband and are 21/64 Port Orford cedar with a three-feather helical fletch. The broadhead is a two-bladed Black Diamond with the total weight of the hunting arrow adding to 450 grains.

While waiting for big game season, Rene maintains her hunting eye by shooting jackrabbits, ground squirrels and targets, both the American and field rounds. For target shooting, Rene uses a thirty-five-pound, sixty-six-inch Fasco bow and Easton 1616XX75 aluminum arrows. When there are no rabbits and the squirrels are underground, the family packs up and heads for the Colorado River and carp shooting.

Nick claims that he would be the best hunter in the world if he had the patience and stalking ability of his wife. She is ninety percent more patient and is as good, if not better, at stalking than he. Nick starts on a hunt and sends Rene around the other way. He stops, looks and listens and purposely kills time, feeling that he will meet her at the designated spot. He has yet to succeed.

When he arrives, he can see Rene, still off about a quarter of a mile, looking at trees and cautiously mov-

When
It
Comes
To
Bringing
Home
The
Venison,
Wives
Sometimes
Outshoot
Their
Husbands!

Bowhunting For Distaffers

Bettye Farmer killed this buck in Utah at 38 yards. She was the only one of a party of 13 hunters to score.



Nick Giardina offers pointers to his wife, Rene, and their daughter, Sandy. All three practice for big game season by hunting jackrabbits and ground squirrels. (Below) Rene Giardina displays her first deer kill, which dressed out at 140 pounds. Taken near Monticello, Utah.



ing forward. "There's nothing to do but sit down and wait. She'll get there in her own good time."

When Rene shot at her very first deer, she started out that day with a new pair of slacks on. They spotted a deer and Nick moved up close to it. He would make hand signals to Rene since he wanted her to make the kill. When the deer put its head down to browse, Nick would motion Rene forward, and when the deer's head came up, he would motion her to wait. This stop-and-go technique brought Rene within forty-five yards of the buck. It was impossible to get closer, since there was a shale slide between them and the deer. Rene had made the one-hundred yard stalk on her stomach. She got her shot at the deer but went between the deer's legs. After such diligent crawling, she had big holes in the knees of the new slacks.

This family plans vacations around the hunting seasons as much as possible.

"I enjoy hunting. Camping out is fun and even when I don't get my deer it is almost as much of a thrill to stalk them and see how close you can get. That's fun and takes some patience, too. When I shot my deer, I was thrilled to know I had made my kill but was a little sorry, too. But I got over that," Rene says.

She takes great pains with her stalking since she

wants to be as close as possible when she shoots. "A hit in the leg would worry me since it wouldn't do more than cripple the deer. With good equipment, it is up to me to make the best possible shot. When I miss, it's me, not the tackle," she concludes.

Another modern Diana with a deer trophy hanging in her home is Bettye Farmer.

"Charles started me out right by giving me the right tackle. Too many husbands give their wives discarded bows and mismatched arrows. With gear like that they lose interest."

Bettye took up archery to be with her husband, Charles, on weekends and during vacations. She started target shooting seven years ago with a thirty-pound Corky bow and fiberglass arrows. When hunting interest was aroused, Charles bought a heavier fifty-four-inch Browning forty-pound bow.

Bettye's first javelina hunt amused and vexed the group she was with. They spotted a herd of javelina and Charles made her stalk on all fours for about thirty feet to get close enough to shoot. The pigs were in front and Charles kept telling her to stand up and shoot. After several minutes, it finally registered and Bettye jumped up like a jack-in-the-box and spooked the pigs so no one got a shot.

Bettye had better luck in 1960 when a group from San Diego went to Northern Kaibab in Arizona for deer. Thirteen hunters packed into this deer rich country. Bettye operated under a time handicap since she had to be back at work in 4½ days. They hunted the first four days and saw nothing but some mangy looking does which they passed up. On the fifth and final day, Bettye allowed herself until one o'clock to give it a last try.

All during the hunt, they had been plagued by a group of joiners who would cruise the road and when they saw parked cars, they would stop to hunt. They figured there must be deer if there were hunters. This had gone on for the previous four days.

Below: Dixie Sharman checks out the equipment she needs for hunting, including Fasco bow. The arrow is intentionally longer than her draw in order to keep the razor sharp broadhead from coming too close to her fingers.

On the fifth and final day, the hunters decided to outwit the joiners, so got out earlier and picked an area. But right on schedule, the joiners appeared and started slamming car doors.

Bettye and Charles went their way and Charles told her to whistle if she got a hit. She carries a police whistle to signal when she gets a hit, so he can help her track and clean the kill.

Bettye was moving through the timber when she



Whether male or female, there is nothing like a hot cup of coffee at the campfire. Dixie Sharman became interested in hunting as a means of weekending with her husband.



saw some deer ahead of her. She went down to one knee to look the situation over. Suddenly an arrow whistled by, and when she turned toward the sound, she saw two does coming up the hill. These had been startled by another hunter below her. Following behind the does was a nice forked horn buck.

There were two pines along the trail and, even though she doesn't like a moving shot, she decided to shoot when the buck cleared the largest pine, regardless. As the buck passed the marked tree, he stopped and turned his head left. Bettye made her shot from the kneeling position and scored a hit. Not waiting for the deer to go down or do more than jump, Bettye jerked out her police whistle and started blasting with it.

After the initial excitement of hitting her game, she decided to nock another arrow. Reaching over her shoulder, she discovered she had left her quiver in the car and had no more arrows. She marked the line of her shot, and still whistling, started to track her buck. Another hunter came up and asked her if she had seen any deer.

"I shot a buck," was her calm reply.

By this time there were hunters converging on the kill from all directions. One hunter asked her if she had been blowing the whistle and she admitted she had.

"Do you know you have been blowing the international distress signal of three long blasts?"



Mrs. Sharman is fortunate in that she has only to step out of her back door in order to practice upon ground squirrels. Home is built on edge of a deep canyon area.

Her enthusiasm with the whistle had turned the hunter into the hunted.

Investigation showed she had taken the buck with a lung shot, from a distance of thirty-eight yards, using a Black Diamond broadhead on a cedar shaft. Her buck was the first to be shot during the first five days in Kaibab and dressed at one hundred and forty pounds.

Still pressed for time, Bettye returned to camp, then started home. The worst part of the hunt was not being able to stay in camp after making her kill and be in on the bragging sessions. She was the only one in the group of thirteen archers to get her deer that year, hubby included in the blanks. The mounted, forked horn head of Bettye's buck has a corner of the wall in the Farmer residence.

Since her one arrow kill and the incident of the forgotten quiver, Bettye has switched to a bow quiver that holds seven custom-made arrows.

When Bettye started archery, she tried a shooting glove and a tab but had little success with either. Now she uses a bow lock. There is some argument among archers about the noise this device makes but she has had little trouble. She stalked a deer and it stood and calmly watched while she shot seven arrows at it, missing each time. Then the deer bounced out of sight.

She did miss a shot at a buck because of the bow lock, however. She and Charles were resting in a draw when deer appeared right above them. Charles kept telling her to shoot but she couldn't find her bow lock and didn't think of a bare-fingered shot. Charles missed, too.

They seldom hunt together since Charles prefers to move faster than Bettye. She likes to take her time and as seems to be the case with women, makes a better stalk. This husband and wife really work as a team. They both carry a compass to prevent getting lost. Bettye carries her police whistle to signal a hit. When they hunt javelina they carry walkie talkies. They take off in different directions and when one spots game, they use the modern communications system to call the other one to it.

Bettye gave up target shooting about two years ago and concentrates on hunting. She and Charles go after rabbits, ground squirrels and carp. Occasionally they will go to a broadhead shoot since most of these are similar to hunting conditions.

Perseverance is one of the attributes of all hunters. Still hunting for her first big game kill is red-headed Dixie Sharman.

"Perhaps the best thing about hunting, other than the camping fun and excitement of hunting, is the fact that I can buy all my vacation clothes in a surplus store, mostly Marine green dungarees."

Like other wives, she started her archery to be with her husband on weekends and vacations. A comparative newcomer to the field, she has been shooting about four years and three of the four has gone to Utah and Arizona for deer.

Her husband, Les, started her with a thirty-three pound Fasco target bow and glass arrows. The two of them would go on picnics and Les would shoot squirrels. Dixie didn't join in the hunting at first but went along for the outing. Soon she started carrying her bow and the hunting interest took claim of another victim. Les bought her a forty-four-pound fifty-four-inch Fasco hunting bow and equipped her with broadheads and blunts. Now when they go picnicking on a weekend, she participates in the shooting.

Dixie has made two trips to Utah and one to Arizona for deer. Her first deer encounter came when she and one of the other women were casually walking down a road outside of camp, when they became aware that a buck was standing broadside in front of them.

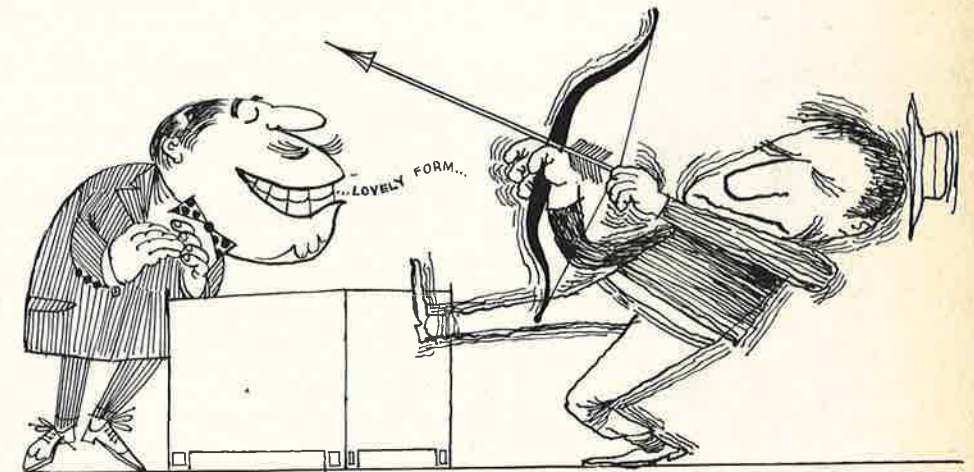
Dixie just stood there with a true case of buck fever, too excited to do anything but look back at the

(Continued on page 57)

THE ODD BOW INCIDENT

By Corky Johnson

This Bowyer Feels Inadequate Salesmen Are Harming Archery!



AN incident occurred in the shop the other day that reminded me of a broken record player that keeps playing the same old record over and over again. This situation did not have anything to do with music, but the implications were the same in the repetitious manner in which they were presented. It has happened many times in the past and it will continue on this plane unless something is done about it.

I am referring to the needless and unnecessary selling of unmatched archery equipment to the would be archer by untrained sales people more or less new in this archery field.

Maybe I should backtrack and bring you the highlights of the incident. A young man came into the shop the other day and inquired about archery tackle in general. After I had given him a rundown on the bows and arrows and local

archery activities in the area, he thanked me for the information and turned and walked out of the door. He returned a short time later with a complete archery outfit and asked me to check it over and give him my opinion as to its condition and value.

I could see from first glance that the equipment was almost new and commented on this. He then informed me that he had purchased everything about two weeks prior at a sporting goods store in his hometown. The bow was a new model in one of the leading production bow lines. The wooden arrows were in the ten or twelve dollar category which meant that they were a matched set. The total value of the complete outfit came to right around one hundred dollars and it seemed in excellent shape.

I asked him why he wanted a rundown, and he explained that the

string had come off the bow the last two times he had attempted to shoot it, and that he could not find the cause. I had noted when I first handled the bow that it was fifty-five pounds at twenty-eight inches, and keeping this in mind, I asked him to string it. He immediately stepped through the string and wrapped the lower recurve around his other ankle. Even using this simplest — and incorrect method — of stringing the bow, he still had quite a time in placing the upper



string loop in the string grooves on the bow and he was shaking from head to toe after this effort.

I then handed him one of his own arrows and asked him to draw the bow. As I expected, he really had to put everything into it to get the bow back to his full draw. When he let the string down I took the bow from his hands and started a visual routine check.

The lower limb was severely twisted and this was why it was throwing the string. This condition was caused probably by his incorrect method of stringing the bow. The string was at least two inches too high for a bow of this type and length and there was no nocking point on the string. I then asked the obvious: Why he had bought this particular bow?

Like many people, he had thought of starting in archery many times but had done nothing about it. One day, to get the ball rolling, he decided at that moment to do something about it.

He visited the local sporting goods store and asked to be shown some archery tackle. The salesman inquired as to whether he wanted a bow for hunting or one for target purposes and he replied that he would like an all-around bow that he could use in both fields. The sales person then handed him the

fifty-five pound bow and commented that it should serve the purpose very well. This fifty-five pound bow sounded like a nice round figure to him so he asked the salesman to string the bow so he could try it out. After several pathetic attempts at trying to string the bow, the salesman admitted that he knew very little about archery and handed the bow over for the man to try his luck. This act should have sounded a warning bell to the buyer, and at the time, it did, but he



shrugged it off as he wanted to buy an archery outfit that day, as he had the money in his pocket.

He finally managed to string the bow, but when he drew, it felt quite heavy for him and he commented on this to the sales person. His fears of the bow being too heavy for him were quelled by the salesman's assurance that this was natural and that he would pull into it in no time at all.

At this point, I wondered to myself just what weight bow the salesman would have recommended had he stated he wanted a bow strictly for hunting.

After buying a dozen wooden arrows, an armguard and a glove, he left to try out his newly purchased items. He was disillusioned from the start, as the bow was hard for him to pull and the arrows were not flying well at all. He was not hitting even close to his target and finally quit for the day.

The next few practice sessions did not afford any marked improvement in his shooting, and when the bow started throwing the string, he was about ready to give the whole affair up as a bad and costly experiment. He returned to the store where he had purchased the outfit and they told him to ship the bow to the manufacturer if he felt that something was wrong with it, as it did carry a guarantee. I can imagine just what must have been going through his mind at this time. Here he had invested almost a hundred dollars in tackle and it was worth absolutely nothing to him.

At this time, I checked his arrows on the spine tester and they

were matched with one another, but were about ten pounds underspined for his bow weight and draw length. I also pointed out to him the absence of a nocking point and explained its function. He said that he was going back to the sporting goods store armed with the information that I had given him and seek some kind of settlement.

Actually, this man should have been put into a 40 or 45-pound bow and with arrows matched to this bow weight and his draw length he could have achieved good enough results in his first few practice sessions to keep him coming back for more. As things stood, he had his back against the door and no place to go but out. I could have told him bluntly that he had been taken, but this would have rubbed salt in the wound.

The equipment was all quality merchandise, and when purchased, was in good shape. The twisted limb, I feel, was due to the incorrect method used in stringing, but with a lighter weight bow it no doubt would have been possible for him to string the bow in a correct manner. Therefore, the blame for the whole affair lies strictly on the shoulders of the outfitter.

You might ask just how can a person protect himself from a situation similar to this and my advice would be to know your supplier. If you are not satisfied with the first person that you might visit for information, then shop until you are sure you have the right party for your needs. In a way, it is tragic that archery tackle is available to the public through stores with a shortage of trained personnel in



this line of merchandise. If there was some way that sales persons in these establishments could be given a short course in correctly outfitting a person with archery gear, this situation could be eliminated.

Trained instructors from the companies supplying these stores, working with the sales persons in the archery departments, might be a partial answer. Even supplying these stores with informative and illustrated literature would be a step in the right direction. ●

magic?

NO -- JUST ADVANCED DESIGN PRINCIPLES

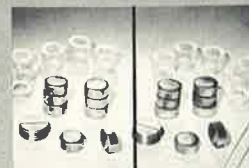
Constellation

by YORK

with new Equi-Poise Design

A most important advancement in archery technology

There's no magic here . . . Only through engineering and the application of sound principles of design. You might call it YORK know-how.



Equi-Poise Design is truly functional. And the Constellation is all the more remarkable when you discover that eye-appealing, symmetrical beauty has been skillfully combined with the functional aspects of this new development. This bow provides for perfect vertical balance, in addition to maximum stability, cast and smooth shooting.

Now, for the first time, the archer can actually "tune" his bow . . . custom balance it to suit himself. The exclusive forward placed balancing projections have capped ports, each of which will hold as many as eight lead discs. Thus the individual archer can add the exact number and combination of weights to customize his bow to his shooting style and to maintain perfect vertical balance in the bow at whatever brace height he prefers.

Equi-Poise Design, along with extra deflex for stability and extra reflex for cast, provides a bow with the inherent characteristics necessary for consistent accuracy and flat trajectory. The serious archer will have a real appreciation for the Constellation and the shooting pleasure it will deliver.

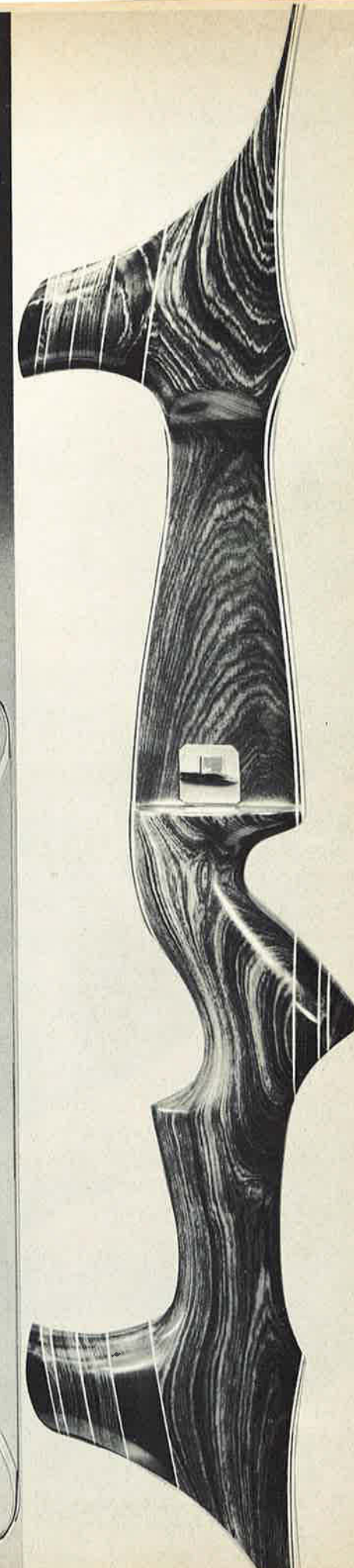
The Constellation has an oversize handle section of Brazilian Rosewood with White Holly feature stripes and is finished in satin gloss obtained through buffing. Available in both 64 inch and 68 inch lengths. \$129.50

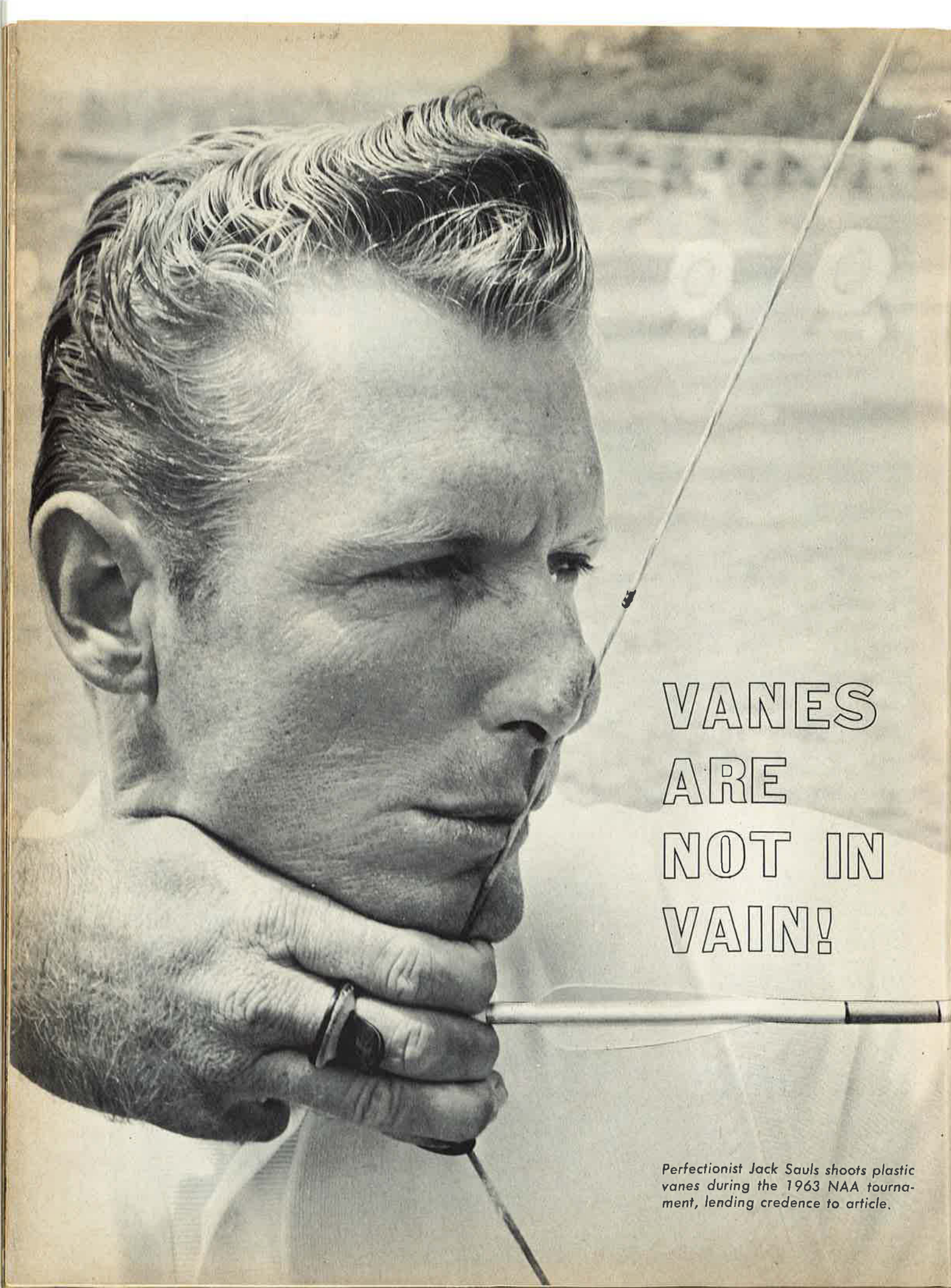


The Nation's Oldest Manufacturer of a Complete Line of Quality Archery Equipment.

Woodcraft Equipment Company ● P.O. Box 367 ● Independence, Missouri

See your dealer . . . or write for a free catalog.





VANES ARE NOT IN VAIN!

Perfectionist Jack Sauls shoots plastic vanes during the 1963 NAA tournament, lending credence to article.

THIS EXPERT
OFFERS TIPS
ON HOW TO
IMPROVE
NOT ONLY
YOUR SCORE,
BUT YOUR
SHOOTING!

By Max Hamilton

“SET UP” is a term which Jack Sauls, the old pro from down Florida way, uses in reference to the preparation of archery tackle to achieve top potential. This includes finding the proper nocking point, the best fistmele and the right build out at the arrow plate.

Some bow manufacturers now are making a built-in adjustable arrow plate that simplifies this problem — a factor that in far too many cases has been ignored.

Most of us would like to see the day when all tournaments are won purely on individual ability, with the tackle so completely foolproof that all archers have the same chance to win. The situation is far from that state now, but progress is being made each day in that direction. That day can be hastened by learning more about the mechanics of shooting the bow and by taking advice from those definitely qualified to offer it. The best archers are not necessarily the best coaches, and you must be your own judge. There are many club champions, endowed with tremendous natural ability, who do not actually know why they shoot well.

Those clubs with a good coach in their midst are extremely lucky. A good and willing coach can practically eliminate the lower classes if the students really want to shoot well. One or two shots and his experienced eye may see something that would almost double the score. Left to his own devices, it might take the student years to find it.

To shoot championship scores, the set up must be perfect. To state the idea simply, the set up assures that the arrow comes out of the bow without any flirt. Few arrows

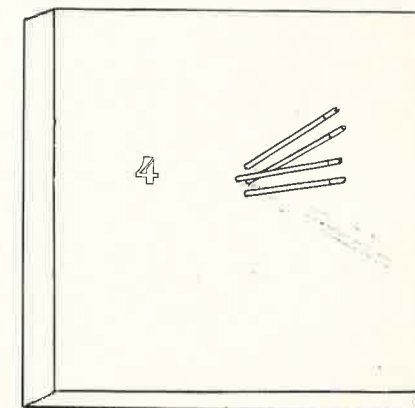
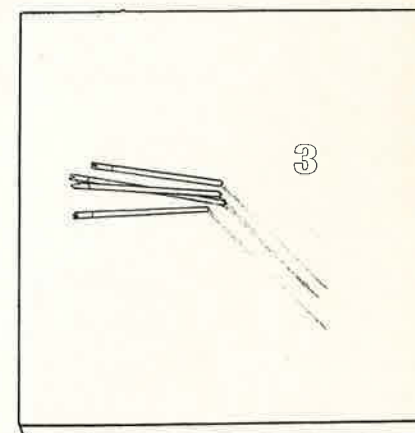
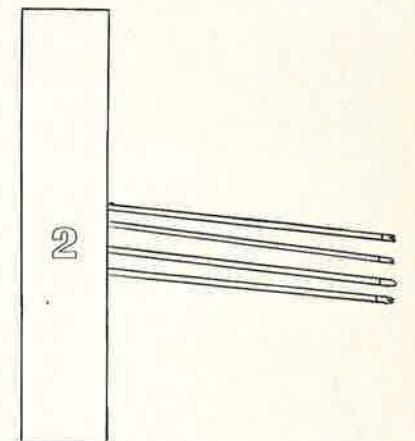
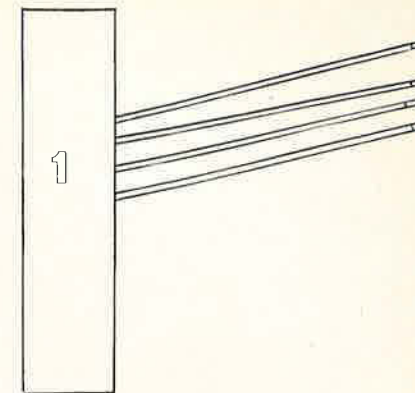
actually do, and an archer may shoot for years and not be aware of having a flirt as it often is difficult to detect. Too often the archer is lulled into a sense of false security by resorting to large feathers, heavily spiraled. The enormous drag of this fletch straightens the arrow up quite rapidly in flight and the archer assumes that his set up is okay.

Of course, on longer shots, he pays the penalty of drift and dispersion, as the larger the feathers, the more difficult it is to keep them uniform. A rippled feather here, a frayed one there will spread the grouping.

If any archer requires fletching on target arrows larger than 3½ inches in length and three-eighths of an inch in height, he had better find out why.

If you must use feathers, by all means keep them within these dimensions, as a larger rudder area, like an obsolete aircraft, is a step rearward; the needless drag is a poor substitute for good arrow flight. Big fletching is fine for a beginner or for indoor shooting, but too many young archers with terrific potential will emerge from indoor shooting in the spring and be sorely disappointed at his outdoor performances.

I have been asked many times: “Just what advantages do vanes have over feathers?” True, I’m interested in vanes, since I market the *Plastifletch* variety, but my answers are the result of ten years of reading and experimentation. Note that, when I make a dogmatic statement, I suggest you try it yourself. (Continued on page 56)



(1) Arrows enter target withnock end up, you are nocking too high on string. (2) Arrows enter target withnock end low, you are nocking too low. (3) Nock end is to left, add to the build-out or spining point at arrow plate. (4) Nock end is to the right, reduce thickness at the arrow plate.

By Jim Dougherty

ONLY fifteen miles east of the headquarters of BOW & ARROW lies the quiet green beauty of the Chino Valley. This may not seem startling to some, but when one considers that it's only forty minutes from the heart of Los Angeles with her millions upon millions of struggling confused souls, it's nice to know about. I like it there; you still see horses in the back yards and the kids feed chicken and raise dogs without cooping them in a tiny square of a backyard and ride the bus to school.

Basically the industry here is the dairy business, rather a far removed field from testing bows, but actually it fits right in. There are pastures here deep in green grass and clover from well irrigated fields, bean and barley crops prosper and a little rodent known as the ground squirrel goes hog wild reaping the benefits of plenty.

It has been a habit of those with whom I hunt to wage an annual Spring campaign against these little diggers in order to sharpen up for the coming hunting season. One gets sharp, too, as the shooting is plentiful and the targets as hard to hit as any I

Howatt's MONTEREY & DIABLO

The Wily Ground Squirrel

Put These Bows To The

Best Test: Actual Hunting!

1964 Monterey model (at left) is compared with the '63 model, showing a fancier handle riser incorporated this year. Dougherty feels this frill is out of place on bow that will be misused by normal hard knocks of hunt.

know. Shooting can be from point blank ranges out to one hundred yards, depending upon the cover and your ability to get right down and crawl like a snake into a colony before opening up.

The thoughts of Ron Holdstock and myself had been meandering in this direction with each new Spring day when the B & A office called and mentioned that they had a couple of hot missile flippers they'd like a report on. No one has to twist our arms very hard.

The bows in question were a dazzling pair of beauties that one immediately hated to get fingerprints on: New 1964 Howatt *Monterey* and *Diablo* models. There are those who can take things and put them together and come up with a piece of artistry or a garish mistake. The Howatt bowmakers long have been in the former category and I personally feel that this line of bows is one of the most beautiful to be found anywhere. The blending of Brazilian rosewood is truly spectacular.

The *Diablo* is the short hunter in the line and our model was fifty-eight inches in length, while the

Monterey was sixty-two inches. I should mention that the *Diablo* also is available in a fifty-four inch length for those who really want to shorten up for compactness. Ron and I both prefer our bows in lengths on the plus side of sixty inches. This is probably due to past experience with excessive finger pinch with our longer than average draws. Both of us shoot a little over twenty-nine inch shafts which is possibly unusual for our rather normal height of five feet ten inches each. We kind of get all bent out of shape when we draw one back, I guess. I've been told I resemble a soggy pretzel when at full draw.

The *Monterey*, being sixty-two inches, was as expected quite smooth to draw and we both felt that it was pleasant to handle. The *Diablo* surprised us completely as it was every bit as pleasant as the longer partner. We passed it around that evening to several fellows with from twenty-eight inch to thirty inch draws and the general comment was "above average." Checking the bows out on the scales, we found that they pulled fifty pounds for the *Diablo* and 52-1/2 pounds for the *Monterey*. This fell right into our nor-

Ron Holdstock checks over a pasture preparatory to trying out Howatt's new *Diablo* model on ground squirrels. This 58-inch hunter is equipped with leather bow saddle for easier gripping, string silencers. King center-back quiver is employed for plentiful ammo for fast action.





mal hunting weights and we decided to use our regular hunting arrows. For small game, both Ron and I usually shoot woods with either broadheads, H.T.M. blunts or magnum blunts. These arrows weigh 530 grains which fits in with a good rule of 100 grains per ten pounds. This formula is pretty sufficient for all forms of hunting up to something really really big — like elephants or freight trains.

In tuning up the weapons before shoot time, we both remarked on the quality of the finish. Although beautiful, it was glass smooth and just as slippery. For comparison's sake we attached a *Neet* bow saddle to the *Diablo* for better gripping. We left the *Monterey* as was, figuring that the *Diablo* may have a bit more torque and would be safer in our clumsy hands with the leather saddle. The Howatt bows come from the factory without any rest other than the shelf, which is good reasoning in this day and age of fifty million rests to choose from. This allows the bow owner to install a rest of his choice without marring the finish.

Our personal choices run to feather rests and we have lately taken to a combo deal put out by Nottingham Archery which features a teflon arrow plate and the rest, a real nice accessory. Having taken care of this little detail along with string silencers, which the *Diablo* needed quite badly, we were ready to make a morning jaunt to "Diggerville."

The landowners in this area have been receptive in the past decade to our overtures concerning the squirrels as long as such intent was of a hostile nature. Ground squirrels are an industrious lot, digging up every canal bank around and poking the pastures with their burrows, each one capable of breaking the leg of a cow or horse. Besides their excavating talents, they have hearty appetites and the crops suffer severely, especially in dry years of which California has her fair share.

You don't have to be an early bird to hunt squirrels of the burrowing type, as they are late risers preferring to greet the day after the sun has warmed the old front porch. Ron and I arrived at the chosen pasture land a good hour after the sun had begun its daily trek across the sky and the sight of squirrels scampering in all directions was enough to set us off with high hopes.

Ron took off with the *Diablo* while I was left with the longer and more familiar *Monterey*. To this, I attached my Bear 8-Arrow bow quiver as I have become quite used to carrying my ammo right on the bow. It slipped on as neatly as could be with no alteration of clamp length. Both the bows have quite classic handle riser designs, which although things of beauty, are not necessary on a hunting bow. In the case of my weapon the sharp edge of the flare on the backing of the bow dug into my hand as I carried it upside down in a relaxed position. One of the other disadvantages to these frills is that the sharp edges are dented easily and dinged with use in the field much more rapidly than a smooth surface. This could well be a trivial point but a man who appreciates keeping his equipment looking good will have a nervous fit each time he ventures into a rough situation. I mention this from first hand experience as it was not too long until I had rendered a new bow into a piece of "used" equipment.

Ron and I paralleled a meandering creek, slipping from tree to tree as unobtrusively as possible; the sharp whistle of alert squirrels was the only reward for our stealth for a fair piece. What shots we had at the start were of a rather long nature from 50 to 75 yards. At an eight-inch high by two-inch wide target, one cannot expect too much in the way of a full bag with this action. The *Monterey* seemed to be doing pretty well at these ranges but Ron was muttering about his bow being a heck of a lot slower than he figured on, as he was undershooting the long ones.

Realizing that our terrific strategy was not paying off, we each took stands amid a large collection of well used burrows, deciding that a waiting game would pay off with better shooting. Ron bedded down by the creek while I wandered into the open expanse of pasture and assumed a completely relaxed position by lying down on my back facing a series of burrows that had recently been filled up by fleeing diggers. This is a trick I learned years ago while slaying hundreds of squirrels with my trusty little .22 rifle. The low silhouette is hard for the critters to spot and a bow can be shot quite easily from this position at close range. It works on larger game, too, as about five years ago I nailed a fat little forked horn at fifteen yards utilizing the same trick.

From horizontal position, author launches shaft at standing squirrel. Note arrow leaving bow just over top of quiver. He feels this is good position for hunting even larger game, although it does require some practice.

Author found that Bear 8-Arrow bow quiver fit Monterey without adjustment. He prefers his arrows on his bow for all types of hunting. Change could throw off the balance.

Lying peacefully in the sweet grass it was a definite effort to stay awake, but the sound of a released string and the sudden *whopp-o* of a blunt striking home made me turn my attention to Ron, who had scored the first of the day on a neat sixty-footer. Action came pretty regularly then, as the squirrels popped in and out all around for the better part of a half hour. From my lazy man's position, I drilled one soundly and missed a half dozen easy ones; no fault of the bow, I might add.

We joined up for a conference and a smoke and decided to see what the bows would do as far as speed could best be determined. The pasture was long and straight, a natural to flight shoot the bows. Each of us took a series of shots with each bow to better evaluate their capabilities.

With the *Monterey*, the arrows launched with a slight tail wind reached out to a maximum of 186 yards and a minimum of 175 with an overall average of 183 yards.

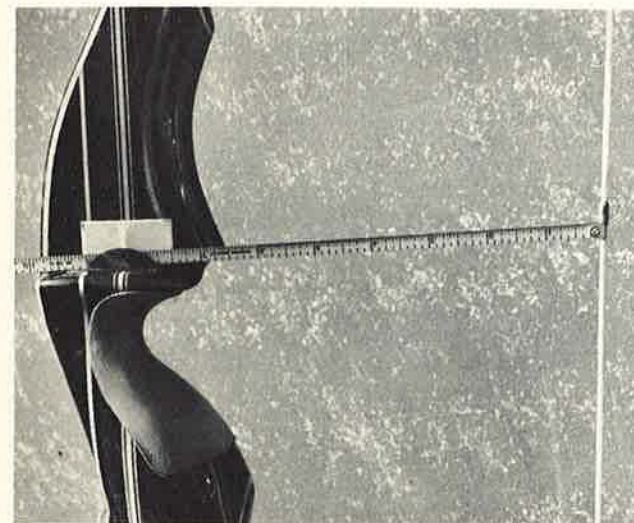
By comparison, the *Diablo* didn't have it but actually we expected no more, as this was a characteristic of the shorter bows. Running to an extreme of 167 yards and a minimum of 159, the average figured out at 164 yards. One should keep in mind that this was with our regular hunting arrows averaging 530 grains and the bows would, of course, do much better with lighter arrows.

In shooting both bows again to attempt to determine the "point on" distance, we came out to the figures of 54-56 yards for the *Diablo* against 60-63 for



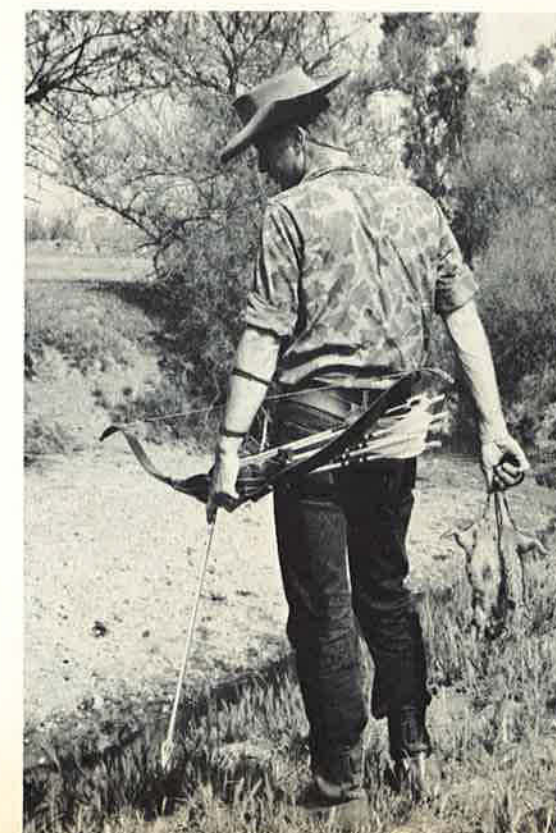
the longer and faster *Monterey*. I would have to say at this point that both bows are a bit slower than we expected but it is compensated for by the stable and smooth manner in which they handle. Speed is a point of argument for many archers, but personally, speed is of prime importance in hunting weapons. Any bowhunter who has had an animal jump his string will be forced to agree, I'm sure.

The recommended brace height of fistmele for the *Diablo* is 9-3/4 inches from the inside of the handle. A later check, indicated we could pick up an additional three yards by lowering the string to 9-1/4 inches



In flight shooting and checking respective point-on distances of the *Diablo*, string heights were varied. It was discovered short bow's speed increase with lowered string.

Easing along the creek bed, author seeks unsuspecting targets which burrow into bank, causing loss of valuable water. Farmers welcome archers to reduce squirrel count.





Holdstock prepares to loose arrow in flight test of the Diablo against the Monterey. Both archers shot a dozen arrows from each bow to learn Monterey was faster.

from the same point of measurement. This would allow the limbs a little more forward travel and additional thrust without changing the bows otherwise fine handling. In the case of the *Monterey* with a recommended 10-1/2 inches, playing with the string seemed to make no difference. A better archer might possibly note one, but we could not.

In comparing both models with the 1963 version, the limb design is pretty much the same with a tighter recurve radius the only change. The core of the limbs is hard to analyze and I do not feel qualified on such a limited association to make comment other than the Howatt bowyers know what they're doing.

By the time that we had compared the bows, the squirrels had gathered round to stand erect and chide us with their sharp squeaking whistles. As it seemed they were laughing rather than praising our attempts at being scientific, we returned to the task at hand of dropping a few shafts in their middle.

The day was warming up. Actually it was getting to be flat out hot and I was wondering whether the bows would begin to feel noticeably weaker due to the heat. This used to be a trait of much of the earlier fiberglass and it is still a situation worth considering especially for the tournament shooter under exacting conditions.

Howatt bows are backed and faced with a glass made by Minnesota Mining & Manufacturing and called "Scotchply" by the creators. It appears to be an excellent glass and has offered no problems to the Howatt people since its inception. The warm weather didn't appear to cause our bows any loss of weight or cast although we did not stay right out with it long enough to possibly create this problem.

Sustained shooting with both bows, as Ron and I switched off several times, brought the conclusion that the handle of the *Diablo* didn't fit me as well as I'd like. A little investigation along these lines and I found that each bow is individually hand crafted and the handles on all of the line from the *Hi Speed* up can be worked up to the future owner's rigid specifications. A sheet is supplied the prospective owner and he can outline his individual wants. A good firm handle fit is very important for any archer and the Howatt people have solved this situation adequately. Handles are also available in three styles, *Low California*; *three-quarter pistol* and *full pistol* grips. This would appear to me to solve a whale of a lot of problems for the tournament shooter primarily.

One more thing about the bow's design that should be mentioned is that tight recurve. High recurves are twice as easily twisted as those of flatter designs and extreme caution always should be used to keep the bow straight while stringing it up and no pressure other than straight pressure should ever be applied — be it any bow.

Getting back to the actual hunt, the bows handled well from any shooting position we could conceive, which included some pretty silly ones when you come right down to it. From kneeling, sitting or prone positions, the *Diablo* was a real jewel and nothing hindered the *Monterey* from getting a shaft out of a cramped position. Both Ron and I liked the overall feel of both models and were honestly surprised at the ease of handling the short *Diablo*.

By the time we were out of arrows — a hazard of squirrel shooting — there were only five less than originally greeted us (rodent control is not our finest function). The others were returning to their underground abodes to escape the mid-day heat, proving that they were better off than we were.

In summation based on the short time we had to really get to know the bows, it is our combined opinion that both models are top flight hunters and should stand many a bowman in good stead from ground squirrels to grizzlies. ●

MAIL POUCH

(Continued from page 6)

FROM EUROPE

I received my May-June issue of BOW & ARROW. I had to sit down and read it cover to cover as usual. Best magazine on archery I've seen yet. I especially like the articles on archery down through history like the one on *Archer's Artillery* in the current issue, also *The Crossbow: Weapon of Terror*, which appeared last year. You sure have the best in writers and editors.

Now I'll reread my new B&A several times while waiting for the next issue to reach me in Europe.

Lyle D. Gustaveson,
APO 58, New York, New York

HILL FANCIER

I enjoyed very much the article on Howard Hill (BOW & ARROW, Jan-Feb 64, *Howard Hill: The Legend That Lives*,) whom I have always considered the master of them all.

A friend of mine tells me that the movie star, Guy Madison, is quite an archer in his own right. If so, how about an article on this man in the near future, as my friend tells me he is very adept at shooting from a galloping horse, snuffing candles, et cetera. Or is this some more of that Hollywood publicity?

J. D. Rhynes,
Campo Seco, California

(It is well known that Guy Madison is an excellent hand with bow and arrow, but the part about the galloping horse is something we'll have to check on. And the last time we heard from him, he was shooting in Rome where he was making a film. But this is a story that we'll put on the hook for future use.)

BE OUR GUEST

In the July-August '63 issue of BOW & ARROW, we read the article, *How Fast Is An Arrow?* by Martin Haynes. Last year at our high school science fair, we performed a similar experiment using a thirty-three pound Pro Hoyt bow, a #4 Micro-Flite arrow with three-inch fletching, shooting at a distance of fifteen yards. The velocity of the arrow, found by using a formula and the angle of trajectory, was calculated to be 202.4 feet per second.

This year at our science fair, which is to be held May 1, we are expanding on last year's project, using six different types of arrows, finding their velocities by the use of an electronic relay and by extensively improving our bow machine.

Arnold Fulton,
Perry, Iowa

(Continued on page 55)



BOW & ARROW

The Magazine For The Archery Enthusiast

Only \$3 per year

Here is what you've been seeking: The magazine that covers ALL phases of Archery. In each packed issue, there are articles for all tastes in reading — and learning — about your favorite sport.

In future issues, you'll see more electronic tests of equipment — a first in the archery field; how-to-do-it stories for the beginner; technical information for the pro; exciting stories of hunting, local and abroad.

So get with it NOW. Fill out the coupon below and rush it with your \$3 so you'll be certain of receiving our next issue!



Circulation Department,
BOW & ARROW Magazine,
550-A S. Citrus Avenue
Covina, California

Yes, I want to subscribe immediately to BOW & ARROW, receiving the next six bi-monthly issues by mail. Enclosed is \$3 Cash Check Money Order. Two Years at \$5

NAME: _____

STREET OR RFD: _____

CITY: _____ STATE: _____

(Note: Foreign subscribers please add 50¢ for foreign postage)

ALUMINUM ARROW SHAFTS

FINEST PROCURABLE QUALITY
at low profit prices.

- MACHINE STRAIGHTENED
- SWAGED NOCK ENDS
- POLISHED SURFACE
- FULL 30 INCH LENGTHS
- AVAILABLE SIZES: 16-016, 17-016, 17-018, 18-016, 18-018, 18-020, 19-016, 19-018, 19-020, 20-018, 20-020
- UNIFORM WEIGHT AND SPINE

\$8.90

per dozen

Complete with target points or with 5" taper for broadheads, supplied loose.

SEND 25¢ FOR 500 PAGE CATALOG DEPT. 72

HERTER'S INC. SINCE 1893 WASECA, MINN.



The New York World's Fair is close to sites of both NAA and NSAA 1964 tournaments, allowing competitors to combine vacations with the contests.



Clayton Shenk (left) and Douglas Easton, top officials of NAA, will be on hand at the Jones Beach competitions to aid in overseeing the contest.



Louis Rangel, last year's NFAA bare bow champion, is expected to compete in effort to retain crown.

Deer are a common sight on the field archery course at Watkins Glen and probably will be sighted by shooters.



Well planned course at Watkins Glen, New York, is expected to be far less difficult physically than last year's rough terrain of California mountains.



On the tournament trail

*THIS YEAR, NEW YORK STATE
WILL PLAY HOST
TO NAA AND NFAA
NATIONAL CHAMPIONSHIP
COMPETITORS!*

By Martin Haynes

THE organizational brass of both the **National Archery Association** and the **National Field Archery Association**, in preparing for the 1964 national tournaments, obviously have given some extra thought to the recreation possibilities as well.

First of the two tournaments is the NFAA, which will be held at **Watkins Glen, New York**, at the head of beautiful Lake Seneca. Watkins Glen is not strange territory to many field archery competitors, as it was the site for national tournaments in both 1951 and 1957. And for those who seek to combine vacation with the business of competing, the area is less than six hours drive from the New York World's Fair, which will be under way at that time. This tournament begins **July 25**.

The **80th Annual NAA championships** will be held **August 3-7** at **Jones Beach State Park on Long Island**, which is only minutes away from the grounds of the World's Fair either by train or automobile.

Jones Beach, of course, is one of the world's best known recreation areas and has been the site of archery tourneys of national importance for more than thirty years. Prior to World War II, the Southern New York State Archery Championships were an annual event at the beach, under the direction of Centre Archers who are acting as host for the 1964 National championships.

In recent years, the Metropolitan Archery Association has conducted the annual Jones Beach Archery Championships with more than 125 shooters competing. This year's national contest is expected to draw more than that with competitors coming from all corners of the country. The defending champions from the 1963 contest held in Los Angeles should be hard put to defend their crowns.

Competitors and their families, officials and judges of the NAA will be provided free use of bath houses, lockers, showers and swimming facilities, as well as other recreational facilities.

In view of the influx of visitors expected for the World's Fair, Ethel B. Holmes, executive secretary of the National Archery Association, suggests that reservations for motels in the area be made immediately. **Full information** as to available lodgings is available through **NAA headquarters at 23 East Jackson Boulevard, Chicago 4, Illinois**.

The full schedule for the NAA shoot has been developed on a tentative basis. **Sunday, August 2** will be devoted to confirmation of registration for the shoot, weighing of flight bows at the tournament field, and a warm up **Double American Round** under the direction of the Centre Archers, **August 3** will see the annual flight

events beginning in the morning, with a team shoot in the afternoon. The other events will follow during the ensuing days through Friday on an extremely tight schedule.

Annual business meeting of the NAA will be held **Thursday, August 6** at 8 p.m., while the annual banquet will be held the following evening at 7 p.m.

The National Crossbowmen, affiliated with NAA, also have a busy schedule throughout the five days, planning to shoot nine different events.

For the National Field Archery tournament, a new archery range has been built at Watkins Glen. The site will be at the Sugar Hill Fire Tower of the New York State Conservation Department. One of those primarily responsible for development of the range is William Boyle, NFAA mid-Atlantic field director. He has planned each course with fourteen targets on each of the truck trails. The archers have to walk only seven targets on each side of the truck trails.

Important to those who suffered the steep climbs and high altitudes of the 1963 tournament at Enchanted Forest, California, this course has been designed to wind through the State hunting grounds with no steep climbs or drops.

The famed Watkins Glen Gorge winds through the



Among the nation's leading archers expected to take part in NAA tourney: (From left) Ed Rhode, Jack Sauls, Don Cavallero and William Partin.



BOW & ARROW reporters again will be on hand for full-scale coverage of the national contests in New York.

area, containing some nineteen waterfalls along its course with caverns and grottoes between.

The Sugar Hill area covers some 20,000 acres and has become a mecca for hunters of deer and other game. The ranges set up here for the coming tournament already have been "field tested," so to speak. Six courses were completed earlier and were used in the Mid-Atlantic Tournament as a test. By early July, there should be a dozen senior and one junior course ready for the expected influx of NFAA competitors.

Rather than giving the courses the usual colors or numerals, an effort has been made to give each course individual character by naming one after a state. The first courses were for New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia and West Virginia. Each has its own personal attractions.

The latest courses will be named for Connecticut, Massachusetts, Vermont, New Hampshire, Maine and Rhode Island, completing the New England complex.

One of the interesting facets of these courses is the fact that game is thick throughout the area. For example, in the Pennsylvania course, there has not been a tournament yet in which deer have not had to be chased off the course so as not to entice the bowmen. On the Delaware course, one local bowhunter last year missed a big eight-point pure albino buck at thirty yards. From all reports, this white deer is still in the area.

Careful attention has been given to the overhanging branches and trees in the shooting area and they have been cut away to make for easier shooting. Good recovery areas also have been cleared by those involved in setting up the courses.

The butts, according to officials, will be of sturdy straw, securely bound under heavy strapping to insure no leakage, but no tar products will be used on the targets, thus insuring clean arrows for competitors. And as an added aid, all supports will be hidden to insure against damage to arrows.

Unlike some of the past NFAA tournaments, a great deal of concentrated thought and preparation has been devoted to this upcoming event. Competitors also will have the advantage of shooting over a tried-and-tested course. With such tailored facilities available to all competitors, it is not unlikely that new records will be set this year. ●



Will Don Cavallero top NFAA contestants for the third consecutive year? It is rumored at this time that he may not compete in New York State.

WHIFFEN'S NEW HUSH·H·H HOOD

Hush·h·h Quiver and Hood

(As Shown)

- Snap on — snap off mounting
 - Fits all bows
 - Cannot mar or scratch
- Hood and quiver complete

\$445

Hush Hood Without Quiver

- Attaches to all present Hush·h·h quivers on the market.

Hood separate **\$150**

Hush Quiver Without Hood

- Same as quiver shown but without protective hood cover.

Quiver separate **\$295**

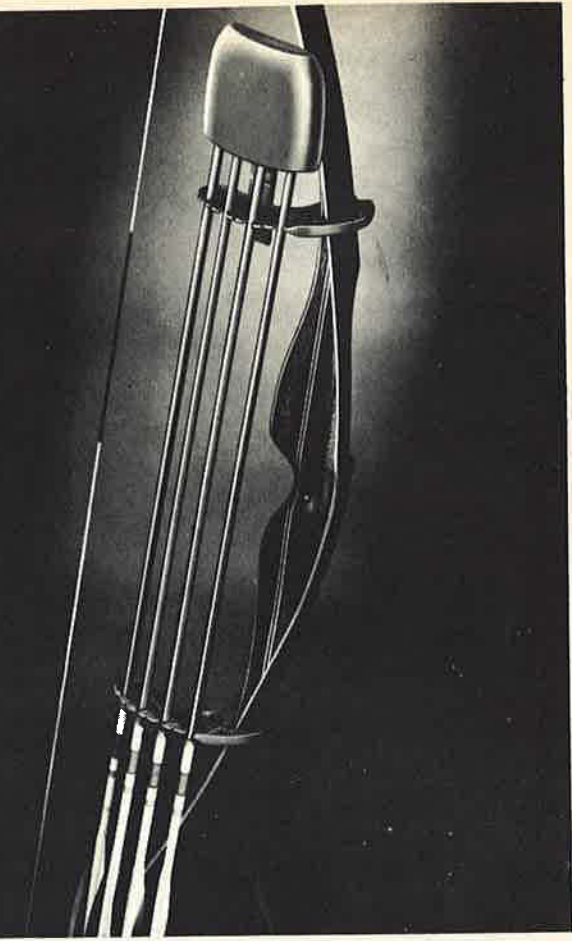
Contact your local dealer or write

L. C. WHIFFEN CO., INC.

923 South 16th Street Milwaukee, Wis. 53204



The House of Archery



WHY

DO OVER 6000 LEADING: DEALERS

ARROW MAKERS

BOW MANUFACTURERS

Buy Here?

- ★ **SERVICE** . . . Orders shipped within 24 to 48 hours.
- ★ **STOCKS** . . . Largest stock of nationally advertised lines under one roof.
- ★ **FACILITIES** . . . Beautiful modern dealer's show room— And warehouse designed for archery tackle distribution.
- ★ **EQUIPMENT** . . . Latest in electronic Equipment is utilized by this leading firm for processing and shipping orders.
- ★ **EXPERIENCE** . . . This firm is the original wholesale archery center in the world. Over 21 years experience.
- ★ **SELECTION** . . . Every major line of archery tackle manufactured is stocked and sold by this firm — over 500 different items.

- ★ **EXPORT SERVICE** . . . Complete services include shipment to all free countries.
- ★ **MAIL ORDER SPECIALISTS** . . . Mail orders are the order of the day—Experience and facilities assure you of the finest service anywhere.

DEALERS: ARROW MAKERS: BOW MFG'S: WRITE FOR FREE GIANT COLORFUL WHOLESAL CATALOG Catalog Dept. B-A

ARCHERS: SEND 50¢ FOR OUR COMPLETE ARCHERY CATALOG Catalog Dept. B-A



GRAND LEDGE MICH.

Phone: 627-2003 Area 517

If It's For Archery, We Have It



SAVE
OVER
\$50.

... BUILD

the
Ultra
BOW

The average CUSTOM BOW is 25% material cost and 75% labor. With top quality CUSTOM BOWS costing \$100.00 it is easy to see where your saving comes. You can save this labor cost and have fun doing it. In just a few hours of your spare time you can build the "ULTRA" and have a bow built individually for you.

NO EXPERIENCE NEEDED TO BUILD THE "Ultra"

THE "Ultra" BOW KIT

Only...
\$27.50

WRITE FOR INFORMATION
OR ORDER NOW FROM:

S & J ARCHERY SALES

Makers of the Citation Bow 10945 Burbank Blvd. No. Hollywood, Calif.

When your heart says, "I deserve the finest quiver." When "second-best" just won't do at all. You may have to hunt for a King dealer. King dealers know quality, sell quality. Finding your King dealer is

**GROUNDS FOR
HAPPY
HUNTING!**

King dealers stock the new #412 King Range Master quiver made of heavyweight, natural full-grain, oil-tanned Western steer hides. They're beautiful - the color of cedar. Newly designed belt loop holds quiver firm at proper angle. Pencil pocket. Large zipper pocket 8" x 4" x 1 3/4". Divider strap with sleeve separates arrows. Keeps opening firm. Length 20", opening 4" x 2", bottom 3 1/2" x 1 1/2". A dozen arrows have room to spare. Right or left hand. Catalog? Write today to:

KING SPORT-LINE CO.

212 W. Colorado, Pasadena, California



TACKLE TIPS (Continued from page 12)

knows exactly what bend his archery is going to take. Certainly it is impossible for the archery dealer to know which direction his archery is going to go. If the beginning archer invests in an expensive set of thirty dollar aluminum arrows and it turns out in a few weeks that he wants to take up hunting exclusively, he has spent his money rather foolishly. A set of inexpensive woods would allow the archer to get out on the range, do some shooting, see what the other fellows are shooting, and find out which direction his archery is going to take him. Inside of a month, he will know and he can come back and buy the fanciest set of arrows in the store and know that they will be right for him. His draw length will have stabilized and it will be much easier to match him in arrow length.

No one is more of an advocate of the finest arrows you can buy than myself. However, I do not feel that an inexpensive set of matched woods is at all wasted on the brand new archer. Archery is probably the most individual sport in the world and the only one that knows where he is going is the archer, himself. And this he only finds out after he has spent some time shooting the bow.

Arrow matching problems do not end with the new archer. Several months after Joe Doakes has purchased his bow from Ima Sharp, hunting season rolls around. Joe rushes down to Ima's shop and says, "I want some hunting arrows, I'm going deer hunting." Ima knows how to match hunting arrows to Joe's bow. Joe has been shooting forty pounds and his form has stabilized and he knows exactly how long a draw to the back of the bow. Ima selects the correct spine, makes the arrow one inch longer to the back of the broadhead, and gives the arrows to Joe.

Joe is back the next day and says, "Ima, these arrows go out about thirty yards and just die." There is no doubt that they die because a correctly matched big game hunting arrow to a forty-pound bow will weigh total arrow weight at least one hundred grains more than a comparable target arrow.

Unfortunately, there is no such thing as an all-around bow. In other words, a bow that will do the best job on target and the best job in the field. The serious archer nearly always ends up with two bows. It takes approximately ten to twelve pounds draw weight increase to shoot a heavy big game hunting arrow with the same trajectory as your target bow will shoot lightweight target arrows.

You know something about archery now so don't be afraid to ask your dealer to let you try several bows. Do a little shopping. You don't have to buy the fanciest bow in the shop to do the job. Most shops will have some good buys in close-outs or used bows. There are bows to be had under \$40 that will do a fine job in the field. They might not look as pretty or shoot as smooth as a \$150 bow, but the deer won't know the difference.

When you go out to do this shopping take along your glove and arm guard. If you have some good matched hunting arrows for the weight bow you have in mind all the better.

If you are an instinctive shooter, it would be good if you could get your hunting tackle to have the same "point on" with hunting arrows as your target tackle has with light target arrows. (Point-on is the distance you have to be from a target where the point of the arrow is in direct line with your eye and the target. This distance is different with every archer.)

This getting a matched set of arrows and a matched set of bows takes a little doing but it's worth the effort. I am often asked, "How can you shoot a light target bow all year, then come hunting season hit anything with a heavy bow and different arrows?"

It's easy with a matched set of bows and a matched set of arrows to each bow with the same point-on distance. A couple of weeks of tuning up your draw muscles and you will shoot the heavy bow just as well for a few shots as you do your target bow. It's no doubt it would wear you down on a field round, but you won't be doing this much shooting.

Be a two-bow man, but be sure you have matched bows and matched arrows. ●

"Incomparable"

THE NEW '64 TORQUE STABILIZED*

Pro Medalist

A new concept of what tomorrow's truly fine bow should be... America's most luxurious bow — engineered with a new dimension of proven performance and accuracy! It is "incomparable" and yours for exciting shooting today!

★ *new micro-rest*

Found only on the Pro Medalist Bow — an adjustable arrow rest that lets you dial the exact degree of center shot best suited to your technique. Another exclusive Hoyt patent pending feature to improve your shooting skill.

★ New sculptured and faceted design combines functional beauty and practical styling that says simply... elegance!

★ A new bow grip that literally "molds" your hand into position for consistent top performance!

★ Detachable Torque Stabilizers — the trend-setting feature of the Pro Medalist — proven so effective on the tournament fields of National and International competition!

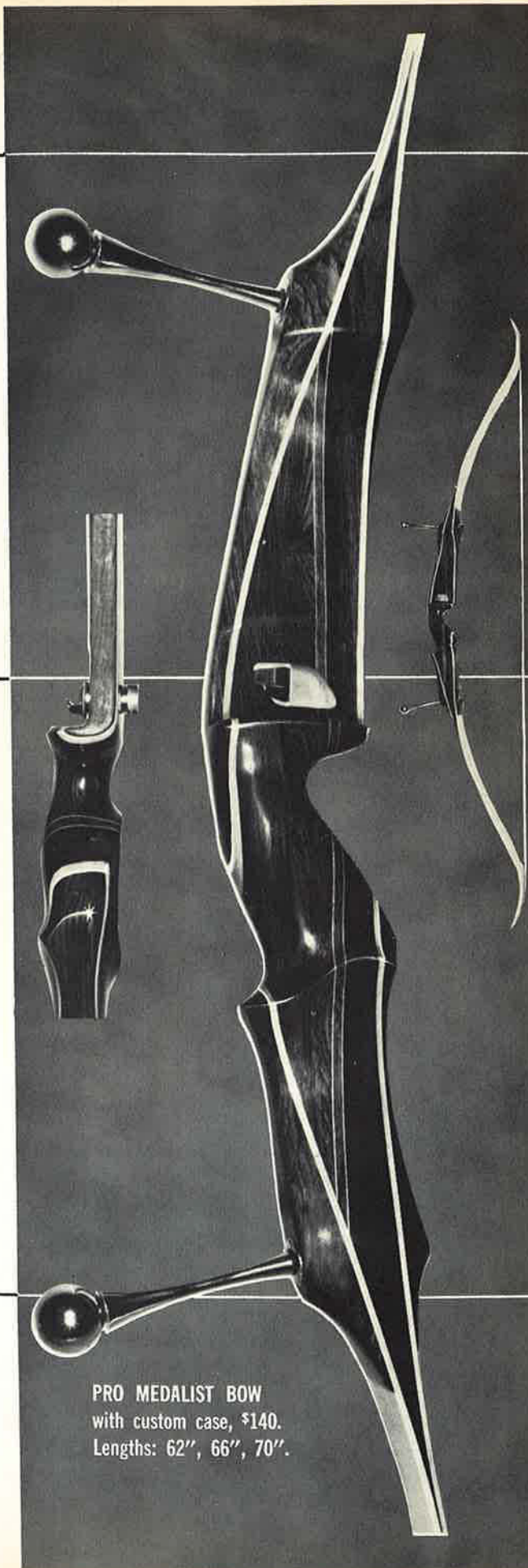
* pat. pend.

you're invited...



to try the new Pro Medalist — now — see your Hoyt Dealer for complete line.

11510 Natural Bridge Rd., Bridgeton, Mo.



PRO MEDALIST BOW
with custom case, \$140.
Lengths: 62", 66", 70".

BOW BITS

INTEGRAL STABILIZER

Ben Pearson has come up with nine new bow models for his 1964 line, and five of these utilize the new Ben Pearson Integral Stabilizer design. This design features stabilizer build-ups on both upper and lower limbs of the bow. The stabilizers are integral parts of the bow and not independent attachments.

Upon release of your arrow, the stabilizer build-ups absorb and dissipate limb vibrations before they reach the handle riser, providing smooth release and greater accuracy. The models featuring this design are the *Palomino*, *Pinto*, *Mustang*, *Stallion* and *Javelina*, ranging in price from \$90 to \$45. For information, write Ben Pearson, Inc., Dept. RP, Pine Bluff, Arkansas.



1964 KING QUIVERS

King Sport Line is introducing its 1964 designs in varied price ranges. These are engineered to stay at the proper angle for easy access to arrows, featuring a specially constructed belt loop.

The model shown is the new King Number 412 *Range Master* of heavy-weight natural, full grain, oil-tanned steer hide. A divider strap — with sleeve — separates arrows and keeps the opening firm.

A dozen arrows may be carried in this particular model, which is made for either right or left-handed shooters. For information on this and other new models, write King Sport Line, 212 West Colorado Boulevard, Pasadena, California.

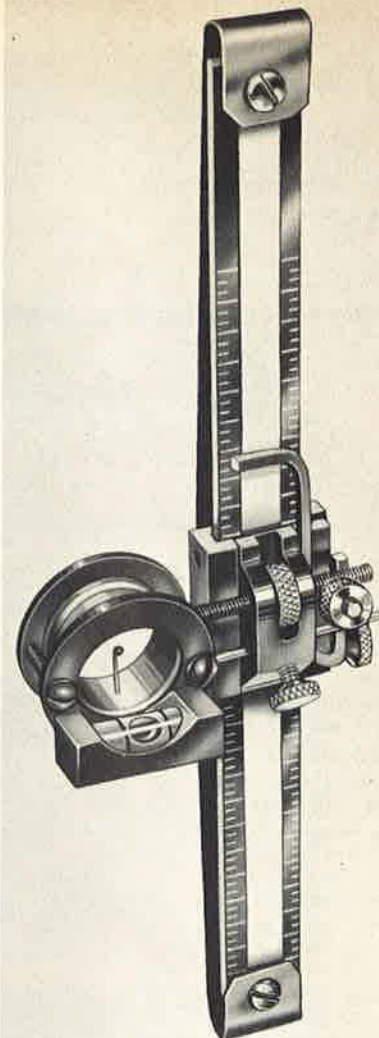
NAME CHANGE

After weeks of research, conferences, study of competitive literature, Darton, Incorporated, decided to label its new bow the *Imperial*. In fact, that was the name it carried when it was unveiled a few weeks back.

But despite Darton's efforts, this name was in use by another bow maker, and the requirement came about to change the name of this new offering.

"Henceforth," reports Ralph Darlington, Darton president, "our top bow, formerly called the *Imperial*, will be known as the Darton *Thunderbird*."

The problem could have been compounded, of course, but as it turned out, all of the other bows in the Darton line will retain the names selected for them.



FORM AID

A new instrument to help archers perfect form is the *Sight 'N Level*, which is a combination bow sight and level. The latter detects even the slightest canting of the bow and is meant to help archers boost their scores.

This new accessory has an exclusive feature known as the "master corrector." With this device, readjustment for any one distance automatically corrects the settings for all distances.

The accessory is machined from aluminum and anodized. The elevation adjustment is spring-loaded to maintain proper tension for easy operation and has a set screw lock. The threaded windage adjustment also locks in the same manner. The hood is reversible for either right or left-hand shooters. The device fits most bows by means of a pressure-sensitive surface that holds it fast to the bow without use of screws.

The complete sight and level sells for \$9.95, or if you want the sight only, it's \$8.98. For the level only, fitting any five-eighths inch hood, the price is ninety-eight cents. You can order from Saunders Archery Target Company, Columbus, Nebraska.

ARROWS VERSUS BULLETS

Here's a contest that, while not new, is always interesting. When the Otter Valley Bowmen of Middlebury, Vermont took on the Cadets of the Middlebury College ROTC pistol team, the unique contest filled the village auditorium.

The archers demonstrated their skill and sportsmanship to the spectators as they narrowly lost to the pistolmen. The half-time score was 535 to 523 in favor of the bowmen, but the final result was 1051-1023 in favor of the handgunners.

Individual high shooter for the Otter Valley club was Claire Rule of Monkton, Vermont, with a high 227 out of a possible 280. Scoring was on the standard 5-3-0 basis, with archers shooting at the twelve-inch NFAA field round target from a distance of twenty yards. The pistol team fired at the standard fifty-foot Army pistol target. Each team was composed of five members, with each participant shooting for arrows or bullets at each of fourteen targets.

BOW & ARROW BINDERS

Feeling that you may want to protect those back issues of BOW & ARROW, we now have on order heavy duty binders of brown pebble-grained material. These protective binders will hold 12 issues of BOW & ARROW.

The name of the magazine is stamped in gold across the cover and across the back, too, making it even more attractive and an item you'll be proud to have on your bookshelf.

You can order now. Send \$3.50 to Binder Department, BOW & ARROW Magazine, Covina, California. California residents should add four percent sales tax.

GAME KNIFE

Here's something that should make hunters sit up and take note. It's the new Model GK-1 game knife designed for tough skinning. The outer round edge is used to split the pelvic bones of large animals, while the hook will cut through the chest cavity. The sharp point is to cut hide bound close to the bone or to open fish.

The blade is of drop forged stainless steel and will not rust, resulting in a money-back guarantee. Price on it is \$6.95, and it can be ordered from Preston Capps Enterprises, P.O. Box 1157 (Dept. A7), Great Falls, Montana.



TENT TRAILER

The new Trade Winds Le Voyager tent trailer can sleep six people in comfort. The units offer ninety-two square feet of living space, and when erected, is seven feet in height, 6-1/3 feet wide and more than fourteen feet long.

The tent area is of mildew-resistant Vivatex treated canvas and

has four large fiberglass-screened windows and an aluminum screen door. The headroom within the tent trailer is well over six feet throughout. A marine plywood floor has a vinyl covering. This looks like just the thing for those bowhunting trips or to handle the whole family. For information, write to Trade Winds Campers, Dept. BA, Manawa, Wisconsin.

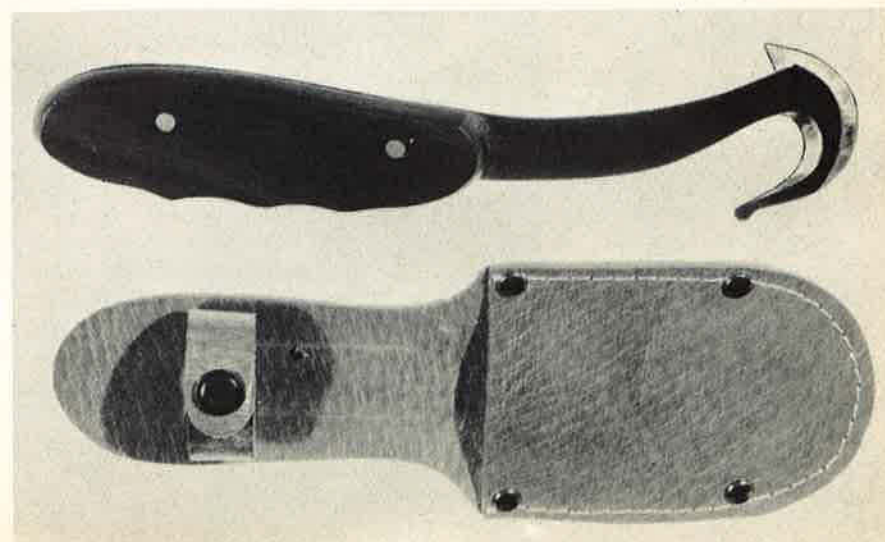
BOAR FOR BOWMEN

Santa Catalina Island, off the Southern California coast, is developing into a real mecca for archers. Herds of 150 or more Spanish goats are common on the island, with the population running into the thousands, as they graze the steep terrain.

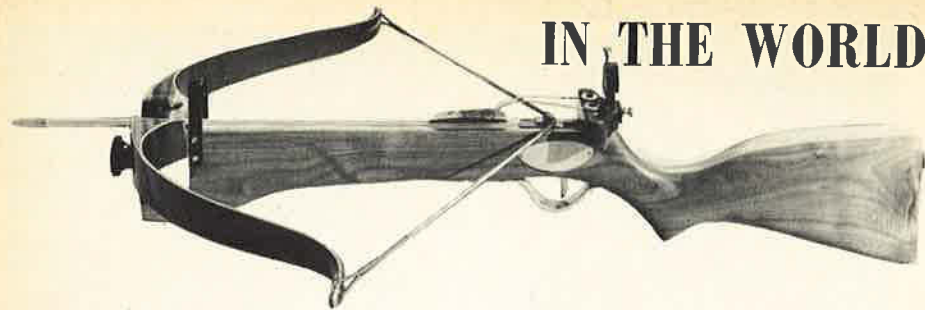
Wild Russian boar also are numerous, although they are wary and tend to hide in the dense thick-

ets of the ravines, making for challenging hunting. However, the majority of Catalina bowhunters have consistently taken goat or boar — or both, according to Fred Kindel, the island game manager.

If you're interested in hunting the island, contact Kindel at Box B-2, Avalon, Catalina Island, California, or for weekend group hunting, check with Jim Dougherty, Kittredge Archery Company, 1421 Mission, South Pasadena.



FINEST CROSSBOW IN THE WORLD



**DAVE BENEDICT
CROSSBOWS**

20601 Covello St.
Canoga Park, Calif.

CUSTOM BUILT — LATEST RECURVE DESIGN

Three Styles To Choose From

Draw Weights Available From 20 to 100 pounds

Write for FREE descriptive brochure

BOW & ARROW LIBRARY

ARCHERY BOOKS THAT SPEAK AUTHORITATIVELY!



NEW GUIDE TO BETTER ARCHERY, Second Edition, Revised and Enlarged by Thomas A. Forbes. This is an authoritative reference which deals with all phases of archery from how to select a bow to how to stage a tournament, including interesting chapters on bowhunting and woodcraft. Containing 343 pages, there are some 68 line illustrations by Ned Smith. A must for the serious archer. \$5.50.

MODERN BOWHUNTING by Hiram J. Grogan. Here is a book that is loaded with practical information; the kind you can use in the field. In the text, the author uses his own experiences to illustrate his various successes in hunting everything from crows to alligators, not to mention deer. Information on special equipment and advanced techniques for various game are spelled out. Contains 163 pages, center section of exciting hunting photos. \$4.75.

BUCKS AND BOWS by Walter Perry. The author is an ardent and successful deer hunter as well as an enthusiastic target archer. As suggested by the title, this book is devoted exclusively to hunting of deer with bow and arrow, and it includes full information on types of tackle, as well as best ways and means of downing your buck. Has 223 pages, 72 illustrations by author and Edward B. Hagey Jr. \$4.95.

LIVING OFF THE COUNTRY by Bradford Angier. This book has all of the information needed for staying alive in the woods, whether you be survival buff or simply the hunter who wants to be prepared against the possibility of being lost or running out of food. The information is practical and tried by the author and others. Contains 241 pages with humorous practical illustrations. \$5.00.

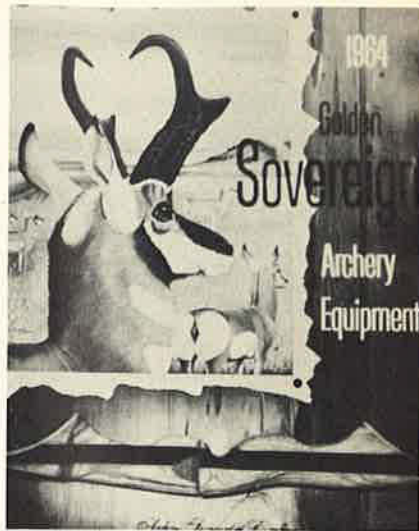
ALL ABOUT CAMPING by W. K. Merrill, U.S. Park Ranger. This book covers the field with facts and sage advice on every possibility from trailer camping through survival, touching on safety and first aid. It is certain to make your trip happier, safer, and more interesting. Has 262 pages, over 100 illustrations. \$3.95.

WILDERNESS COOKERY by Bradford Angier. Here's an amusingly written book that reads unlike any volume of recipes you've ever seen. It's based upon the author's personal experiences in living in the woods, attempting to improve upon cookery of the old frontiersmen. However, all of the recipes make extremely edible fixings. It fills 256 pages with many helpful illustrations. \$3.95.

TWO (2) PEARSON CATALOGS

The Pearson group down in Arkansas has come up with so big a line of new equipment that they must have figured one catalog wouldn't do it. Instead they're offering a pair.

One is the catalog of 1964 Golden Sovereign Archery Equipment. This division, of course specialized in custom quality archery goods distributed directly to dealers on a franchise basis. This catalog comprises a dozen pages in full color throughout.



The new twenty-eight page catalog of Ben Pearson equipment illustrates and describes the complete 1964 line of Pearson bows, arrows, archery sets, leather goods and accessories. Again, each item shown is in full color.

To order the catalogs, order from Ben Pearson, Inc., Pine Bluff, Arkansas. For the Pearson book, designate Dept. RP, and for the Sovereign catalog, use Dept. RS. It prevents confusion. You know how it can be with two catalogs.

GRANT "ARROW REPEATER"

Long ago when the Indian was the only bowhunter in America, he had a method of carrying arrows that gave him three important advantages. Carrying his arrows in his bow hand, the Indian could nock them quickly and silently and with a minimum of movement.

How he accomplished this feat is a secret that has been lost through the ages. Even with the equipment of that day, the Indian was a successful hunter because he was often able to get more than one good shot at game.

L.A. Grant of Saint Paul, Minn., manufactures an arrow holder for modern-day bowhunters which he believes comes closest to duplicating the method employed by the Indians. Grant calls his device the "Arrow Repeater." He claims an archer,

with practice, can get off four arrows in five seconds!

Grant's Repeater mounts on the back of the bow and permits arrows to be rotated into nocking position by simple finger manipulation. Features, according to the developer are: fast shooting, no game-spooking motion, eyes need never leave game or aiming spot, simple bow attachment, lightweight (2½ ounces), rubber contacts and adjustable holding clip.

The "Arrow Repeater" sells for \$3.95. Grant will furnish a free folder on his innovation to anyone writing him at the L.A. Grant Company, 1715 Roselawn St., St. Paul 13, Minn.

WORLD'S FAIR CATALOG

The Robin Hood Archery Company has come out with a World's Fair Edition of its annual catalog, this one containing some 230 profusely illustrated pages.

This thick volume contains listings and descriptions of the latest archery tackle being produced by the country's leading manufacturers. More important, it is free. To obtain a copy, write to Robin Hood Archery Company, 215 Glenridge Avenue, Montclair, New Jersey.



BOWRACK WEDDING

We note that they take their archery seriously up in Port Arthur, Ontario.

When Carol Smith and Scott Bailey decided to tangle their bowstrings and get married, members of the Canadian Lakehead Archery Club insisted that they get off to a good nocking point together.

When the happy couple came marching out the door of the church, they were surprised to find that members of the club had arrived with bows and had formed a military-type arch with these implements.

No one was cracked in the head by a falling bow handle and at last report, the happy pair were honeymooning — each with a bow.

NEW OFFICIAL TARGETS

Official forty-eight-inch faces, National Archery Association-approved, have been designed in new colors, according to C. A. Saunders.

The new colors were approved some time ago by the NAA board after an extensive study. It is believed that the colors will allow better concentration by the individual archer and aid in bringing about better scores.

Saunders is asking that archers who try this new face contact him with their comments. He can be reached at Saunders Archery Target Company, Dept. BA, Columbus, Nebraska.

ARCHERY CLUBS....

Special club subscription rates to your members!

Write today to:

Circulation Department,
BOW & ARROW Magazine,
550-A South Citrus Ave.,
Covina, California

galaxie

BY WHIFFEN

The Galaxie with its perfectly balanced construction makes each shot count — every time. One . . . two . . . three . . . four . . . five . . . six arrows right where you want them. The next six will be the same too . . . and the next! It happens every time, because the Galaxie is designed and engineered, with a thumb rest pistol grip, to meet the requirements of tournament shooting where accuracy counts. This handsome bow made of exotic, hand finished Bubinga and Rosewoods is a combination of beautiful craftsmanship and perfectly balanced construction. The beauty you can be proud of and the balanced construction makes each shot count — every time.

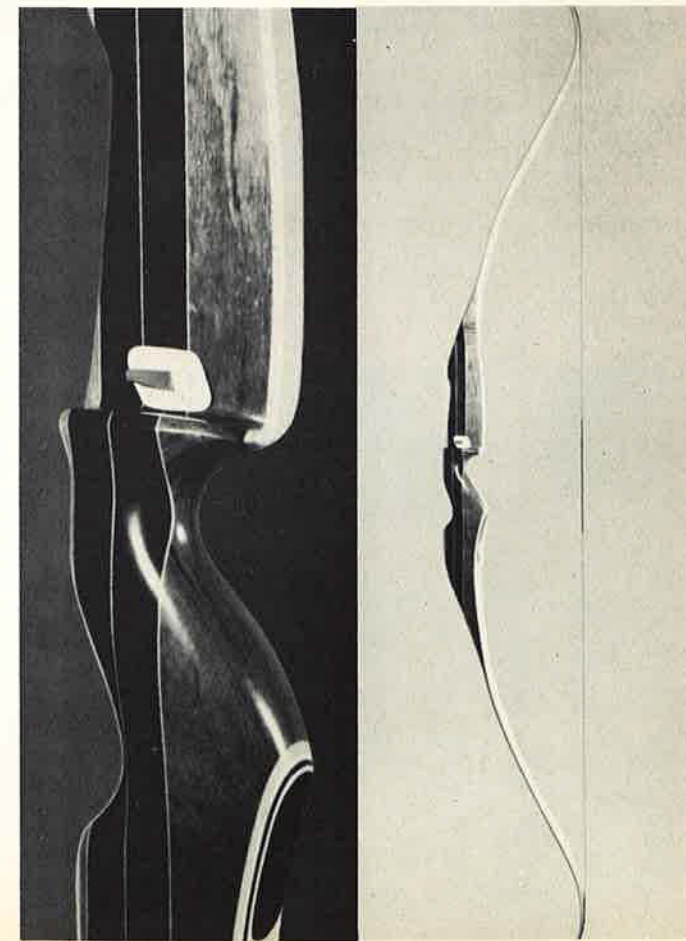
Lengths: 64" and 68", Weights to 55 lbs.
Bracing Height: 64", 71½" to 81½";
68", 7¾" to 8¾" Glass Color: White

\$79⁹⁵

Member of The House of Archery

L. C. WHIFFEN CO., INC.

923 South 16th Street • Milwaukee, Wisconsin 53204



anyone for kyudo?

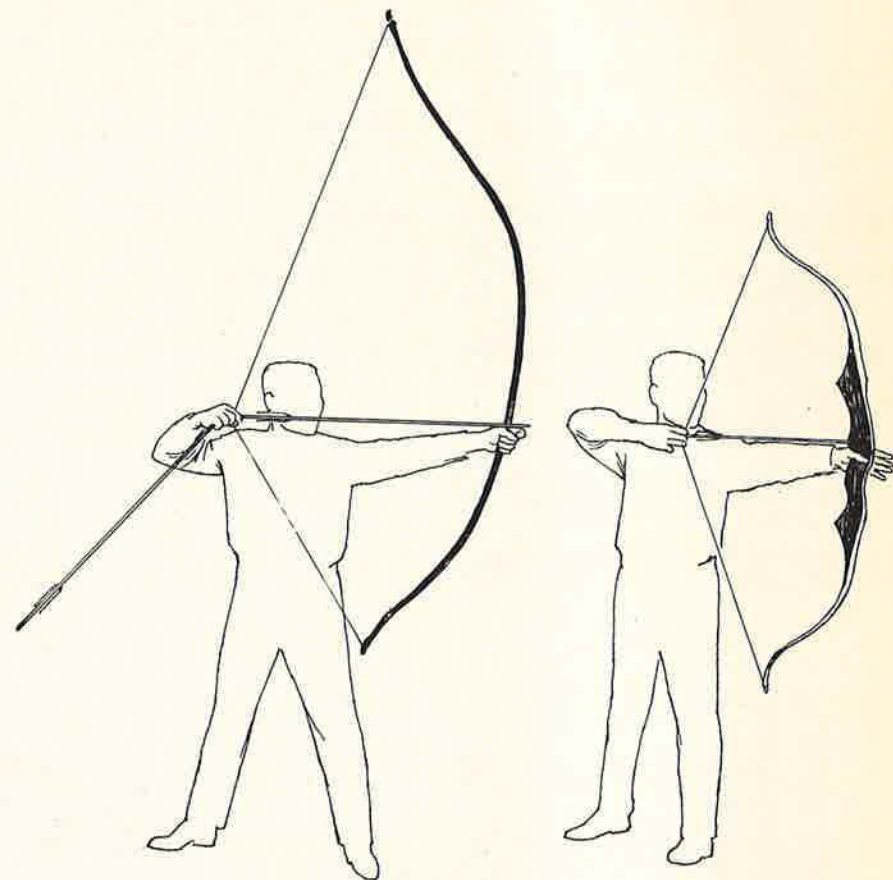
Hitting The Target In Japanese Archery Is Not As Important As Playing The Game!

EVIDENCE that the Japanese take training in archery seriously is reflected in some of the titles associated with the name of Hideharu Onuma, who has been visiting archery installations in this country and who toured the Ben Pearson plant in Pine Bluff, Arkansas.

Onuma is Archery master of Japan; professor of archery at Gaku-shuin University; vice president of the Japan Archery Association and head of the Asahi Archery Equipment Company in Tokyo. And if that isn't an impressive enough list, he is the thirteenth generation of famed Japanese archers and is noted for introducing Western style archery to his homeland.

While in the United States, however, Onuma is visiting New York, Chicago, St. Louis and Los Angeles specifically to introduce Japanese archery to interested students.

According to Onuma, Japanese archery or *kyudo* is recognized in Japan primarily as a character-making or sport-spirit development activity. This form of archery, he explains, puts great emphasis on mental and physical conditioning and is performed as a ceremony. Japanese archers must study and practice the basics of *kyudo* for several years before they are recognized as being accomplished in this sport.



During visit to Ben Pearson plant in Arkansas, Hideharu Onuma demonstrated the traditional use of long, seemingly unwieldy Kyudo bow in comparison with the new Lord Mercury model. Drawing above affords comparisons.



MAIL POUCH

(Continued from page 43)

SO THAT'S IT!

In reading your latest issue of BOW & ARROW, I read your run-down on the SKA scope and mount, and noticed you hadn't discovered the meaning of "SKA." Perhaps I can shed some light on this matter.

In my duties as weather forecaster at Malmstrom Air Force Base, I come in contact with SKA daily. This is the call sign for the Air Force Base located at Spokane, Washington. So Mr. Powell's SKA probably stands for this designation to his hometown. I hope this will prevent undue frustrations on the part of your staff and keep up the good work.

Lt. Michael T. Schwitters,
Malmstrom AFB, Montana

NEW CLUB NOTE

The following is an item which would be of interest to your readers in the Denison-Sherman, Texas area. February saw the formation of the Thunderbird Bowmen. The new club started with eleven members and is growing rapidly.

The City of Denison was most kind to permit the Thunderbird Bowmen to use an area of city property for its range. This new range is located immediately north of Denison on Highways 69 and 75. We had all twenty-eight targets in place by mid-April.

It shall be the policy of the club to schedule club shoots on the second and fourth weekends of each month. The first such shoot was scheduled for May 9-10 with medals being given in all classes. The Thunderbird Bowmen are affiliated with NFAA and TFAA.

Harry C. Smith,
Secretary-Treasurer,
Denison, Texas

(For those who might desire to get in touch with this coming group, you can write to Smith at 157 N. Imperial Avenue, Denison, Texas.)

AID TO AIDERS

We are now selling BOW & ARROW over the counter and wish to compliment you on a fine publication.

Not only do I feel it rounds out our archery department, but we here in the store have learned much from the magazine articles and I am sure it is enabling us to keep up to date on all the happenings in the world of archery; as a result, we can offer our customers a better and more complete service. Thanks for making our job easier.

Alec Gibson,
Alec Gibson Camping
Center,
Miami, Florida



Les Thoreby, Eugene, with giant Yellowstone elk he killed with 52 lb. bow and Battleshaft arrows.

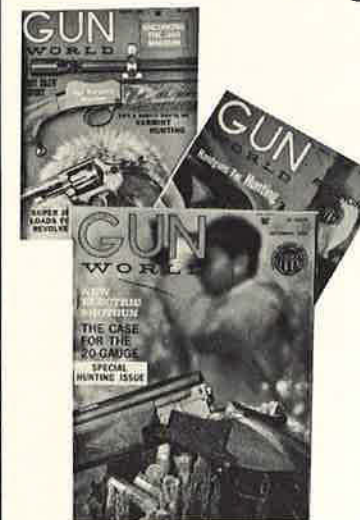
END OF A BATTLE WITH A BATTLESHAFT

For bone-smashing penetration you can't beat FORGEWOODS, those hard, tough, compressed cedar arrows. Made in 4 grades: "Supreme," "Battleshaft," "Hunter" & "Practice."

SWEETLAND PRODUCTS 2441 Hilyard St.
Eugene, Oregon



A hunger for hunting? . . .



If so, GUN WORLD is the magazine for you! As a Get Acquainted Offer, you can receive 12 big monthly issues of this leader in the Firearms Field for only \$3 — half the news stand price! And you'll be reading interesting, thought provoking, informative articles by some of the same writers and photographers you have come to know in BOW & ARROW. Among those who'll be appearing in GUN WORLD to entertain you and pass on those hunting tips are Elgin Gates, Doug Kittredge and Varmint Calling Champion Jim Dougherty. And for articles on antique firearms and how-to-do-it, you'll be able to read Tommy Bish's simple, informative prose. Jack Lewis and Col. Robert Rankin will keep you up to date on the latest — and oldest — in military weaponry, and Francis Sell and others will be in every issue to insure your knowledge of shotgunning. If you haven't tried this leader in the field, start today!

Circulation Department,
GUN WORLD Magazine, 550 S. Citrus Avenue, Covina, Calif.

- I have enclosed \$3.00 for an introductory 12-issue subscription
- Enclosed is 50¢ for a sample copy. Please rush!

NAME

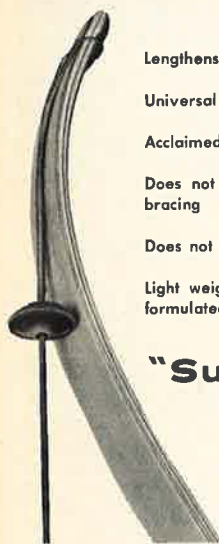
STREET OR RFD.....

CITY ZONE..... STATE/COUNTRY.....

(PLEASE PRINT PLAINLY — Foreign subscribers add \$1 for additional postage)

The Original
**BRUSH
BUTTONS**

Brushproof Any Bow
Dampen String Noise



- Lengthens string life
- Universal size - Fits all bows
- Acclaimed by bow hunters everywhere
- Does not interfere with bracing or un-bracing
- Does not interfere with cast or accuracy
- Light weight - manufactured of special formulated rubber

"Super" Mounted on
Full Working Recurve

Super - 70¢ Per Pr.
Standard - 60¢ Per Pr.
Lic. under Pat. No. 2,617,402

Feathers
Lowest Price, Highest Quality,
Fastest Service Full Length or Die Cut



Archery Necessities & Accessories
TRUE FLIGHT
MANUFACTURING COMPANY, INC.
MANITOWISH WATERS, WISCONSIN

**ARROW
SHAFT DIPPER**

\$4.95
EACH

NOW an unbreakable
dipper with a
leak proof lid.

- ★ Made of high density Poly-Ethylene.—not affected by lacquer, thinner, turpentine, gas, etc.
- ★ Store paint in dipper

MAKE YOUR OWN ARROWS
AND SAVE ENOUGH TO
PAY FOR YOUR DIPPER
WITH THE FIRST DOZEN.

DIPPING RACKS
AVAILABLE SOON

ORDER DIRECT OR ASK YOUR DEALER

Erickson's

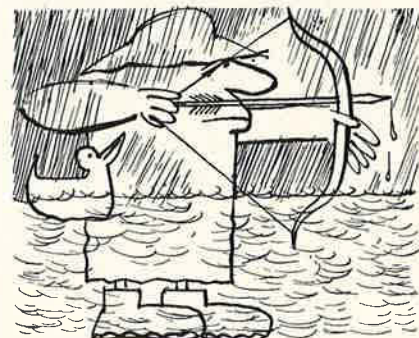
6444 South 9th East
P. O. Box 15571
Salt Lake City 17, Utah

VANES

(Continued from page 37)

To answer the question, I feel there are three advantages to plastic vanes for fletching:

1. They are rainproof, which is self-explanatory and needs no further comment, unless you never have attempted to shoot a serious match in the rain.



2. They group better at longer distances. No two feathers can be identical, and even if they were, they would not remain so. A feather that has lost its stiffness, or one that has become frayed or rippled, will not group. Sight down an arrow shaft from the front end and observe the imperfections of feathers. Vanes, however, are identical as a result of close manufacturing tolerances.

3. Wind drift is greatly reduced. As there is less drag with vanes, they drift less. This is because they maintain their speed, and wind drift hinges directly upon loss of velocity. To use an exaggerated example, try to throw a wad of cotton into a cross-wind. It loses its velocity immediately, then is at the mercy of this cross-current. The slightest breeze will cause some drift; Bill Folbreth, who originated the cut out window on center shot bows, told me years ago that his shooting machine in his factory would not shoot the best groups unless the windows all were closed.

I recommend that, when an archer changes from feathers to vanes, he leave six arrows equipped with feathers to compare in a moderate cross breeze at sixty to eighty yards. These longer shots will show up the difference. If the above is all theory, there is concrete evidence in the fact that no feathered arrows have won the NAA men's title since 1951.

Some archers try to shoot vanes without using a special rest, which is, of course, impossible. This brings us to the types of rests. I use a Walsh rest, the original, because the shelf is delicate and will yield to the slightest pressure. A stiff brush never should be used unless it is so short that the lower vanes

could not possibly touch it. A deflection of the shaft is found to occur if the bristles, extending out at a right angle, are struck by the vane. Worse yet, there is no noise to warn you of the impact. The horizontal feather rest is good but is not rainproof. The new magnetic rest also has a delicate response as do the flexible plastic types that angle forward. The rest, whatever type, should be sensitive and delicate enough that no deflection is possible.

I have seen a real good archer here in Flagstaff, Arizona, with audible clicking of vane touching the Walsh shelf, repeatedly put the arrows in the gold at one hundred yards.

Another point in shooting vanes is to realize the importance of loose fitting arrow nocks. A tight nock jerks a light arrow severely at the very instant it is bending around the bow. If you want to see this try a tight nock on a lady's arrow with vanes, and watch it jerk them into the bow with great impact. On heavy field or hunting arrows I have not noticed this, however, but on target arrows this has given us lots of trouble as so many archers will not believe it matters until you prove it to them.

When I start to help anyone who is having trouble with vanes, I often let him shoot my tackle. If he has trouble with my set up, then I know it must be him. In a few shots, I usually can spot his trouble which is, in most cases, twisting the bow to the right (counter-clockwise as viewed from above) for a right-hand shooter.

Let me contribute this as one step to better shooting: See if your arrows are coming out of the bow perfectly straight. The chances are one hundred-to-one they are not. Strip all the fletching completely from five or six arrows and shoot them into the target at a distance of two yards. Yes, six feet! For best results, the target should be at eye level.

If they go into the target with the nock end down, you are nocking too low on the string. (See illustrations.) If they enter the target with the nock end up, you are nocking too high.

Having corrected this vertical phase, go to the horizontal. If they go into the target with the nock end to the left (for a right-handed archer), add to the build out or spinning point, at the arrow plate. If they go in with the nock end to the right, reduce the thickness at the arrow plate.

These horizontal corrections seem the opposite of what should be done, but this is how it works out for me. Be sure to make this test. Don't put it off! Your scores may increase tremendously. ●

WOMEN HUNTERS

(Continued from page 32)

deer. The other woman kept telling her to shoot but she couldn't get her bow up. Finally the deer moved away and neither hunter got a shot.

Dixie hunts with Les and doesn't like to have him more than a hundred yards away. During one of their hunts, Les put her on a stand by a trail and told her to wait until he came back. Dixie waited for two hours and didn't see a deer. She worried that Les would get lost.

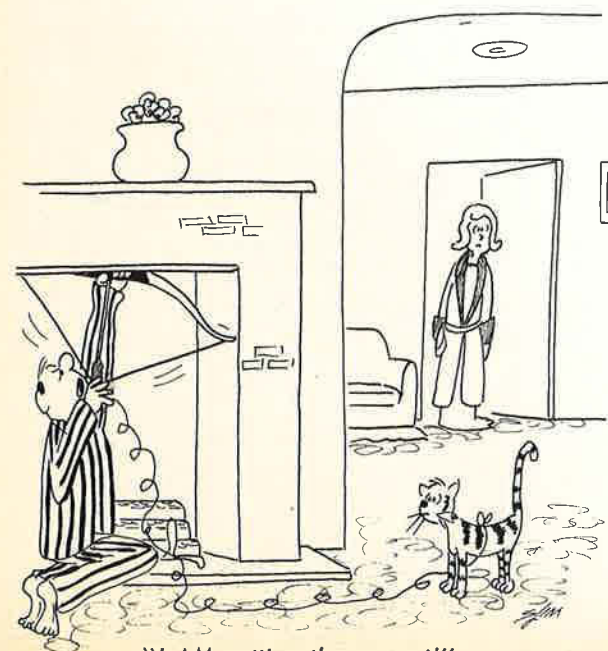
Her first reaction to the idea of hunting was without enthusiasm, but the campfire bragging sessions and the talk about the missed shots soon aroused her interest. Then her first encounter with buck fever showed her the challenge of hunting.

When the Sharman's took their hunting vacation in 1962, they went to Utah to join a group from San Diego. Dixie was determined to get her deer. She made several trips through the area with Les without success, so decided to do her hunting in the area around camp. There were deer tracks all over the camping area that morning. The other hunters headed out bright and early and when they had gone, Dixie took the hunting gear and found a log. She sat down to wait. She stayed on that log for two hours, ignoring ants that were crawling over her and kept her mind on hunting. Her wait seemed fruitless so Dixie lit up a cigarette and started walking back to camp, dangling her bow and daydreaming. Four beautiful bucks bounced from the timber about twenty yards from her, but she didn't even get a shot — and within a "half block of camp," as Dixie puts it.

Women suffer the same problems of buck fever that men do. One lady hunter spotted her buck but didn't have an arrow on the string. She frantically reached to her back quiver, pulled all the arrows out one by one and threw them on the ground, never getting one arrow near the bowstring.

But we all know of male hunters who have suffered similar reactions at sight of that first deer.

Don't we? ●



"I AM putting the cat out!"

"GLASS SMOOTH"
**PORT ORFORD
CEDAR ARROW SHAFTS**

True spined - State EXACT bow weight
ARROW SUPPLIES



Southern Oregon
ARCHERY Co.

KERBY, OREGON 97531

Prompt delivery — Write for Price List

PHONE AREA CODE 503 KERBY 1-4100

Merrill world famous **BOW SIGHTS**

U. S. PAT. 2,875,522
6526 DUDLEY AVE. NO., MPLS., MINN. 55428 PHONE 537-3596

<p>STANDARD</p> <p>\$8.50</p>	<p>PIN DOT HOODED SIGHT RINGS</p> <p>NO. 1 NO. 2 NO. 3</p> <p>"LITTLE BEAUT"</p> <p>PEEP SIGHTS</p> <p>1/8" 3/16" 7/32"</p>	<p>BAR LENGTHS</p> <p>5 1/2" 7 1/2"</p> <p>HEART SHOT</p> <p>HUNTING SIGHT</p> <p>\$3.75 \$5.50</p>
-------------------------------	---	---

ALL SIGHT PARTS INTERCHANGEABLE SEND FOR FREE BROCHURE

TRANS-CANADA ARCHERY SALES
589 UPPER WELLINGTON ST.
HAMILTON, ONTARIO, CANADA

Canadian Distributors for Jaguar, Wing, Lord Sovereign, Ben Pearson, Dunsdon, Tillmark Williams Bows.

English FireFly metal arrows
Easton and MicroFlite arrows
Accessories.

Tackle shipped anywhere.
Send 25¢ for our illustrated catalogues.
When in town, drop around. Indoor range.

Only 50c **NEW MODEL PEEP-SIGHT**
By Lee's

HUNTING — TARGET

Fits on String (either side)

Used by Champions 1961 (W.F.A.A.)
LEE'S ARCHERY, Marshfield, Wis.



MAX HAMILTON

Rt. 1, Box 401
Flagstaff, Arizona

FLETCH IN A FLASH

The Li'l Ole Fletchmaster Has Come Up With A Space Age Design!



past if you wanted more than one feather combination.

But such innovations don't just happen. Two years ago, Henry Bitzenburger and his engineers came up with a fletcher that was termed the *Perfection*. However, shortly afterwards, Bitzenburger felt there still was something to be desired in a fletching jig. It was back to the old drawing board.

Questionnaires were sent out to qualified arrow manufacturers to gain their thoughts on what facets should be incorporated, what improvements could be made. Of the ideas that were returned, all were considered and carefully tested with the best being selected. The result was the *Dial-O-Fletch*.

It was found that most of the suggestions dealt with the design of a clamp, wanting the fletching clamp canted at an angle so that

one could have a clear view of his fletching work.

A number of different clamps were made and tested until a revolutionary new design was settled upon. Instead of using metal and paper clips that were spot welded together, this new clamp was completely die cast, made so that it had perfect balance and a checkered recess for finger-tip control. The edges of the clamp are tapered to a knife edge at the base to prevent the build-up of glue that often formed on old style clamps. A graduated scale is at the rear of the clamp base so that the fletcher can space the feathers at different distances from the nock, dependent upon his personal preference.

The clamp holding device has been canted to the right at a forty-five degree angle so that the arrowmaker has the desired clear view of his work, but the big feature is the dials at top and bottom of the magnet frame holder for adjusting the angle of fletching. One has only to turn these dials clockwise to set the desired angle.

The nock receiver has been redesigned for positive self-centering and will receive nocks of any size or type. Feather spacing of 60, 90, 120 and 75 x 105 degrees can be selected by a slight turn of an adjustment screw. ●

NOW, for the first time in the history of arrow fletching, an arrowmaker can make up any combination of feathers and vanes and set them at any angle he desires within seconds.

This is one of the outstanding features of the new Bitzenburger *Dial-O-Fletch* jig, which has been designed by experienced archers of long standing for the professional and the amateur. He can do any type of fletching, left, right, helical and straight, provided he has the three necessary clamps. This device no longer requires the screws, extra nock receivers and other gadgets that have been needed in the



You'd zing too!
if you'd just shot a
DARTON bow...

The Darton Line of fine bows is one of the most complete lines on the market today. All field and target tested, Darton bows are crafted for today's archer. If you're a new archer, or hunter, or a professional, you'll find a Darton Bow to your liking.

Darton also handles a complete line of leather goods and accessories.

Pictured is the Darton Valiant Bow — AG-20 arm guard — S-700 quiver and — G-54 glove.

DARTON
Valiant



3261 Flushing Road

Flint, Michigan

WRITE FOR MORE INFORMATION — INCLUDE YOUR DEALER'S NAME

Send for new 68 page catalogue with pictures, prices, and description of following items and many, many more.

SAUNDERS target mats, faces, etc.

NFAA faces on paper or cardboard—regulation field or hunter round

EASTON shafts, glue, dacron, etc.

MICRO-FLITE shafts, components

RAW MATERIALS — wood shafts, feathers, points, etc.

KING leather goods

CARLISLE leather goods

DARTON leather goods

BOW SIGHTS by HOYT, SCHRAM, DOAN, MULLER, MERRILL, etc.

BITZENBURGER new model "Perfection" jig; also regular model jig

BOWS by BEAR, HOYT, WING, BEN PEARSON, COLT, SABRE, etc.

KINSEY'S ARROWS in wood, aluminum, glass

Kinsey's Arrow Shop

Dept. A 314 Chocolate Ave.
Mount Joy, Pa.
Dealers write to Dept. B

WORTH \$50 Special \$30
POWERMASTER hunting CROSSBOW
KILLS DEER, BEAR, ETC.
RABBITS, SQUIRRELS,
ALL SMALL GAME
COLLECTOR'S ITEM

80 LB THRUST
Centuries old, crossbow shooting is now a fast, modern sport. Powerful and silent. A precision instrument, beautiful as it is accurate. Hunters knock down game at 200 ft. Two-way sights—open and peep—windage and elevation. Anyone can target-shoot right in backyard. Harpoon fish with free line attachment. 34" hardwood stock. 33" bow. Handsome den display. Possession legal in all states. Money back if not completely satisfied. Target arrows 80c ea. Hunting and fishing arrows \$1.25 ea. Send to: WHAM-O MFG. CO., Box 20, San Gabriel, Calif. 91778

FEATHERS

FULL LENGTH GROUND	1,000	10,000
Grey Barred No. 1	\$16.90M	\$15.90M
Dyed Barred No. 1	18.90M	17.90M
Grey Barred No. 2	10.90M	9.90M
Dyed Barred No. 2	12.90M	11.90M

DIE CUTS	3"	1000	5 1/4"	1000
Grey Barred	\$1.50	\$ 9.90	\$2.50	\$18.90
Dyed Barred	1.70	10.90	2.90	14.90
White	2.25	18.90	3.50	19.90
Dyed White	2.75	14.90	3.90	21.50

(No C.O.D.'s)
UTAH FEATHERS Orem, Utah

— BOB McDONALD —
Self-adhesive SIGHTS \$1.60
(No screws, glue or tape, simple yet effective — looks good)
Professional STRING SERVER . . . \$1.75
(Takes 1 oz. spool 2 1/4" approx. — Effective for any thread even monofilament) Dealers Invited
329 Papago Dr., Tempe, Ariz.
(945-0909)

TECH TALK

(Continued from page 10)

LEFT OR RIGHT?

Do left wing or right wing feathers make any difference in the accuracy of the individual archer if there is no change in any of the tackle other than the feathers?

John W. Davison,
Fort Walton Beach,
Florida

(Which wing feather you use has no effect upon the flight of the arrow or its accuracy. This has been proven a number of times in the past decade through the use of high speed photography.

(It is important, however, that all feathers on an arrow be of the same wing and it is best for all arrows in the set to be fletched from feathers from the same side. There is a slight difference in actual flight path taken by the arrow due to use of right or left wing feathers, but as one is interested only in the same flight path being taken by each arrow, so this should cause no difficulty.)

EYE TO EYE

I have started to shoot right-handed and this seems comfortable to me. However, my left eye is much stronger than my right — so much so that with both eyes open, I pull off the target to the left at thirty yards, while wearing glasses.

Now, with my left eye closed, I can shoot well and hit the area I want consistently. In order to give myself every edge, I have extended my sight to the left about 2 1/2 inches and can shoot with both eyes open. Do you suggest this, or should I close the left eye? What will happen at long distances?

John Kress
El Paso, Texas

(The best bet for target shooting is to close the left eye. This would be based upon your right eye being strong enough to see with complete clarity. If it is not this strong, switching to a left-hand bow would be the next best. If this is not practical, the wide sight arrangement you describe should be continued.

(By closing one eye, you lose depth perception. For target shooting at fixed distances, this is no advantage. In fact, one eye closed is a help to concentration. For field shooting or hunting, where distances are not known, two eyes open are best, though a good many try closing the one eye just before shooting to be sure the correct eye is doing the sighting.

(When you switch to the other hand, you actually take advantage of the strongest arm to hold the bow. As a steady bow is the most

(Continued on page 65)

The Hardest Field Target To Hit?

The Author, An Engineer, Has Done Considerable Research To Give You These Answers By Robert A. Ghelardi

If you want to start a good argument just ask a group of archers, "Which is the easiest or hardest field round target to hit?"

They all will cite a different shot. Actually, there are two answers, depending upon whether you are considering the theoretical difficulty or are thinking about some personal *it* that afflicts you on a particular target.

The theoretical difficulty can be established by calculating the cone of fire within which the arrow must stay in order to score at least a three. The cone angles are simple to calculate from geometry. Below, they are in order of increasing difficulty. The smaller the cone angle the harder the shot. There are nineteen degrees of difficulty in the field round. When two or more shots have the same cone angle, the longer shot is listed as more difficult. It has more travel time hence more chance for outside disturbances.

Face Size in Inches	Distance	Cone Angle
6	20 Ft.	1 degree 26 min.
12	15 Yds.	1 degree 16 min.
6	25 Ft.	1 degree 10 min.
18	30 Yds.	1 degree 1 min.
6	30 Ft.	0 degree 58 min.
12	20 Yds.	0 degree 58 min.
18	35 Yds.	0 degree 54 min.
6	35 Ft.	0 degree 50 min.
12	25 Yds.	0 degree 46 min.
24	50 Yds.	0 degree 46 min.
24	55 Yds.	0 degree 42 min.
18	45 Yds.	0 degree 40 min.
12	30 Yds.	0 degree 38 min.
18	40 Yds.	0 degree 46 min.
24	60 Yds.	0 degree 38 min.
18	50 Yds.	0 degree 36 min.
24	65 Yds.	0 degree 36 min.
24	70 Yds.	0 degree 33 min.
24	80 Yds.	0 degree 29 min.

The eighty yarder is far and away the hardest shot for three reasons: It has the smallest cone and hence least margin for error. Also most archers not using prism sights have a point of aim off the bales. On strange targets, they are almost helpless. Finally, arrow travel time is greatest and hence more chance for wind drift and other disturbances.

The twenty-foot shot at a six inch face is easiest to hit, as its cone angle is three times the eighty yarder's. When you blow this one you should hang your head.

For practice butts, a twelve-inch face at thirty yards is a good compromise for tuning up the technique. It's the sixth most difficult shot. To practice for the eighty yarder try a six-inch face at twenty yards — it has the same cone of fire as the eighty yarder.

The same order of difficulty holds if you are just interested in the 5 ring. The 5 rings are all one half the face size. The angles of course reduce to one half also.

Someone is sure to remonstrate that the above neglects trajectory. It doesn't matter in calculating cone angle. Trajectory is compensated for by tilting the entire cone of fire up or down. The limits for error remain the same — the cone angle. ●

cement . . . FEATHERS
POINTS
NOCKS
ARROW RESTS

with . . . **EVER FAST**

it's . . . STRONG
WATERPROOF
FAST-DRYING
COLORLESS

Only 25¢ a tube at your archery shop

AMBROID CO.
Archery Div.
E. Weymouth 88, Mass.

Protect your magazines . . . enhance your archery library

ATTRACTIVE, STURDY BINDER

holds two-year supply of BOW & ARROW Magazines

The binders are of heavy duty quality, featuring a pebble grain finish on rich brown leather-like material, with 14-karat gold stamping. Just what you have been wanting to preserve those back issues! Order TODAY!

\$3.50 each postpaid

BOW & ARROW Magazine
Gallant Publishing Company,
Covina, California

Please send _____ binders for which I have enclosed \$_____ at \$3.50 each. (California residents please add 4% sales tax.)

Name _____

Street or RFD: _____

City _____ State _____ Zip Code _____

(Please print plainly!)



ONCE MORE ROBIN HOOD ANNOUNCES ANOTHER GREAT CATALOG NOW READY

FREE OUR WORLD'S FAIR EDITION 230 PAGES Profusely Illustrated

A SPARKLING NEW ISSUE WITH FASCINATING ILLUSTRATIONS AND DESCRIPTIONS OF ALL THE LATEST ARCHERY TACKLE PRODUCED BY THE WORLD'S MOST RELIABLE MAKERS.

DON'T DELAY — SEND FOR YOUR COPY NOW!

ROBIN HOOD ARCHERY CO.
World's Largest Archery Distributors
215 GLENRIDGE AVE. MONTCLAIR, N.J.

Metric BOW SIGHT
Optically Engineered Instrument Featuring Coaxial Prisms Making Possible SIGHTING BY TRAJECTION

\$15.95
See Your Dealer or Write Direct

Metric Bow Sight, Inc.
19795 NINE MILE ROAD
St. Clair Shores, Michigan

By Tommy L. Bish

IT REQUIRED A WEALTH OF

RESEARCH TO DETERMINE THAT THIS IS A SLURBOW PISTOL!

THE invention of the hand cannon in the Fourteenth Century marked a new era both in warfare and for sporting arms. However, this new form of weaponry was slow to gain favor with those more used to the lethal qualities of the formidable crossbow.

It may be found in recorded history that the first handguns (hand cannons) used in England were carried by the Burgundian troops under Warwick at the Second Battle of St. Albans in the year 1461. In 1471, Edward IV landed his troops at Ravenspur and among these troops were three hundred Flemish armed with the ineffective hand cannon. Also in recorded history are the facts that these sadly constructed, gun powder shooting weapons were all but useless in warfare except as a demoralizing agent.

The use of the crossbow dates as far back as the Fourth Century, according to Vegetius, an ancient

author, who in his treatise on military art and tactics dedicated to Valentinian II about the year 385, mentions the crossbow as being a manual weapon used by soldiers under light armor. To the best knowledge of historians, this is the first mention of the crossbow in recorded history, and while Vegetius failed to describe this weapon, it can safely be assumed that it was the conventional shoulder-stock design as is basically known today.

Shortly after the development of the hand cannon, which fired a weak charge of crudely concocted black gun powder, on top of which had been poured a load of pebbles or any other type of solid projectiles, the idea of the crossbow pistol began to take form in the minds of various armorers desiring to keep abreast of the times as well as to keep in the good graces of their soldier and sportsmen clientele.

The crossbow pistol — like the crossbow — was to retain the conventional cocking mechanism and other components normal to the crossbow but would be a scaled-down version with the stock designed so that it could be shot with one hand. It was designed to shoot a shortened version of the crossbow bolt, or *quarrel*, made from ash or yew wood.

Just how much popularity the crossbow pistols received from the ancients is highly debatable today due to the lack of mention of them in ancient historical documents, as well as their scarcity in collectors' hands and in museums. One such specimen recently brought to my attention is in the collection of Bruce Wilson of Ontario, California.

This finely made weapon, which appears of English origin due to its design and workmanship, is similar to the design of the finest duelling pistols of the

Eighteenth and Nineteenth Centuries in that it has a single set trigger, a duelling-type checkered grip and a finely wrought brass barrel measuring seven inches in length.

The bow of this unique weapon measures 14½ inches in length and is of fine spring steel. As this weapon has a barrel attached to its stock instead of the conventional open groove which accepts the bolt, or quarrel, its correct designation is *Slurbow Pistol* — not a crossbow pistol.

The earliest slurbows had barrels of wood attached to the stocks. This later was replaced with barrels made of metal, which was undoubtedly suggested by the hand cannon. The inside of this barrel of wood or metal was hollowed or drilled out to match the groove of the stock, thus creating a sleeve in which to place the bolt instead of an open groove. The use of feather fletch-

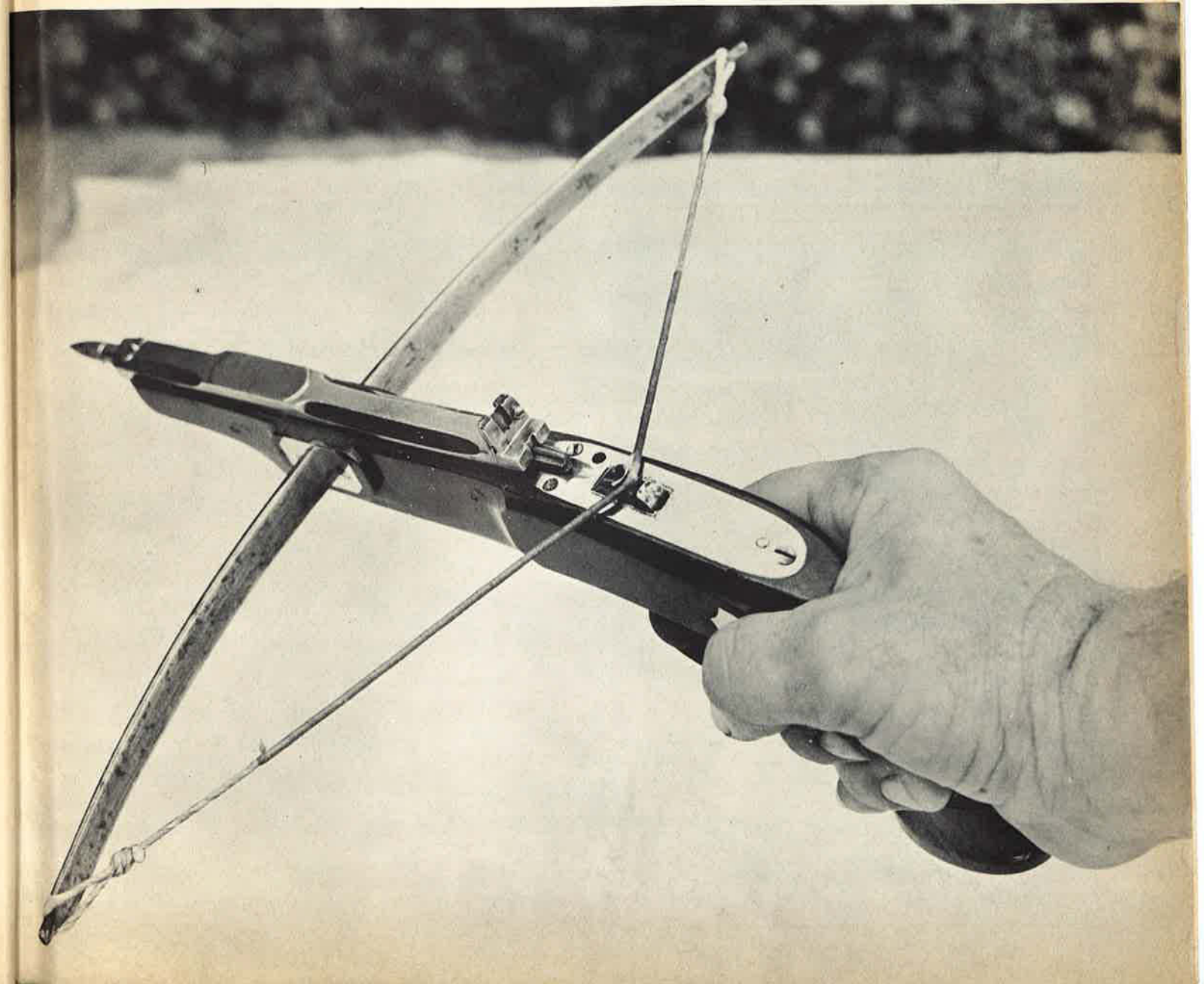
ODDITY IN ARCHERY



This miniature crossbow features a set trigger, which can be adjusted to trip the mechanism at light touch.



Above: At first, this appears to be a gun barrel. Instead, the bolt for this miniature crossbow fits into the tube. (Right) Author shot this bolt through pine board from short range.



HOW TO DO IT BOOKS

HOW TO MAKE ARROWS

Make your own arrows and save over 50%. Earn spare time money making arrows for others! A detailed, illustrated book covering all phases of how to make arrows. Over 103 professional secrets and tricks of the trade never before revealed. 75¢

HOW TO HUNT DEER

The straight dope for novice bowhunter and expert alike! Bowhunting tips never before published. How to stalk deer, hunt from blinds, calling deer, tracking, organized drives, deer habits, etc. Be a more successful bowhunter! 50¢

HOW TO MAKE BOWS

Make your own custom built laminated fiberglass bow and save over \$50. Here are complete plans & step by step detailed, illustrated instruction. Tricks of the trade other bowmakers have been afraid to reveal! Now, anyone can make a bow. \$2.95

VARMINT CALLER'S HANDBOOK

Learn to successfully call up predatory animals within easy bow range! Tells how to call up Fox, Coyote, Bobcat, Hawk, Owl, etc. 10¢

ARCHER'S BIBLE

JUST RELEASED! New giant 172 page edition. The most informative archery book ever printed! Every conceivable kind of archery and woodsman equipment illustrated and described in detail. No other catalog shows so much... over 160 different bows alone! If it's for archery, it's in the Archer's Bible, and all at the lowest possible price! Don't miss your copy of this great book! FREE

MAIL TODAY

HURRY - SUPPLY IS LIMITED! Total the cost of books wanted & add 25¢ for postage and handling.

Kittredge BOW HUT 1421 MISSION ST. SOUTH PASADENA CALIFORNIA



Nock Rite bowstring attachment FOR FAST ACCURATE SHOOTING ...

- Balanced three finger action
- Smooth arrow release
- No slippage of arrow on string
- Satisfaction guaranteed

\$1.00

Pat. Pend. See your dealer or write
Albert H. Schneider, 3720 Crestview Circle, Brookfield, Wisconsin, U.S.A.

"DURASAN, the new stabilized (no stretch) high tensile, tough bowstring fibre brings together all the known best qualities of all fibres now used for this purpose, combining them into the finest bowstring material known to date. It has the feel of flax with the durability of Dacron." So says Larry Walsh, nationally known archer. Introductory price \$2.25, white only, post-paid in U.S.

HOWARD THREADGILL
423 Stallings Bldg., Birmingham 3, Alabama

QUALITY — YES
SHOWING THE FINEST IN ARCHERY EQUIPMENT, TOURNAMENT AND HUNTING SPORTSWEAR
WING — SHOOTIN' SHIRTS — QUALITY ACCESSORIES
Write for Descriptive Information
DAVE STAPLES ARCHERY
439 SO. MAIN STREET PHILLIPSBURG, N.J. 08865

ing was all but eliminated in slurbows due to the bolt traveling through the barrel. In lieu of the feathered fletching, grooves or wind vanes were cut into the rear sections of the bolts, themselves, thus stabilizing this projectile during flight.

Possibly the earliest known slurbow is one made about 1549, currently exhibited at the Royal Armoury in Madrid, Spain. While these weapons were not mentioned in ancient documents until nearly the end of the Fifteenth Century, they are noted quite extensively in the lists of weapons stored in armouries and castles of the Sixteenth Century, along with countless slurbow bolts and slurbow arrows.

The fine slurbow pistol specimen in the Wilson collection shows the fine quality of workmanship afforded the finest pistols of from one to two hundred years ago. It has two shield-shaped silver inlays at the pistol grip, plus two silver inlays where the steel bow penetrates the stock. Inletted into the butt is an oval of elephant ivory. The single-set trigger which must be engaged, or set, before a bolt can be released by pulling the trigger. This set trigger is adjustable by a set screw so that the trigger pull may be made feather-light to the touch.

My first introduction to this rare version of a cross-bow pistol came when Bruce Wilson and I were taking inventory of his extensive collection of guns and cartridges. Amid the piled up "debris" on his desk — a normal state among collectors — I spotted what I thought to be the handle section of a fine duelling pistol but after extricating it from the bottom of the heap, I found it to be a type of crossbow pistol that was totally foreign to me.

Upon closer examination of this beautifully made and unusual weapon, I noticed that it was in need of minor repairs and a thorough cleaning which I offered to do. In spite of his ownership of this slurbow pistol for many years, Wilson had no knowledge of its background or origin.

It was his theory that this particular crossbow pistol was designed to shoot some sort of a lead or steel ball instead of a conventional bolt because of its barrel design. The ball shooting theory proved dead wrong, I learned after poring through an ancient volume on crossbows printed in England many years ago. The slurbow pistol was designed to shoot a shortened version of the conventional bolt, or *quarrel*, and was basically designed for the shooting of small game as well as for indoor target work.

The indoor target practice bit is one that is open to heated debate in that, after I had made a fair facsimile of one of the original bolts, and installed a makeshift, knotted and shortened regular bow string to the slurbow, I shot this weapon at a white pine board at about twenty-five feet. The bolt completely penetrated the board and kept right on going! This makes one wonder what the walls of one's home might look like after a few practice sessions with the slurbow pistol. Air-conditioned, no doubt!

The slurbow pistol in question has an accurate set of sights. The rear sight is adjustable for elevation and a selection of three apertures is available by merely loosening the retaining screw and sliding the desired one into position. The front sight is equipped with a brass bead and may be adjusted for windage by moving it to the right or left in its retaining slot.

The full story of the crossbow has yet to be written. Such a story would necessarily cover such little known weapons as the siege engines, ballistas, catapults, trebuchet, the spring engines and the stonebow.

The slurbow is but one small member of this large family of weapons, but today is one of the rarest. ●

TECH TALK

(Continued from page 60)

important single feature in good shooting, this is an advantage. It does feel funny at first, but within a thirty-day period, the newness wears off and you should start shooting better than before.

(The wide sight is difficult to use. You must close the right eye to have it work well. You also must develop an anchor position that never changes.)

BOW LENGTH

In the March/April issue in the Tech Talk department there is a question on bow length. Here are the conclusions to which I have come from what I read and the bows I've looked at.

The reasons for longer bows are mainly more weight for stability, more room for stabilized construction and longer bowstring.

The limbs on the longest and shortest bows are about the same, the difference in length being in the handle or riser.

In short bows, there is a more acute incidence of draw, which will give more arrow speed, but also will give more finger pinch and thus a less consistent or smooth a release, hence less accuracy. Are these the right conclusions?

Wayne Bush,
Hazel Crest, Illinois

(You've answered most of your own questions — or statements. Your conclusions about bow length are correct.

(It is normal for a short length bow to be difficult to shoot consistently with accuracy. This is particularly true when release is poor or there is some other shooting mistake. The greatest reason for this is finger pinch. Those who shoot with a hook often can handle a short bow without any difficulty, though for serious tourney shooting the lack of stable weight prevents the short bow use.

(But another important consideration is the limb design of the bow as this can have an effect on stability, or elimination of shooting difference of the arrow because of variations in shooting technique of the archer. Some bows with highly stressed thin limbs can be almost impossible to shoot with accuracy by other than a machine, whereas other bows with a rigid, stiff limb can put the arrow in about the same flight path even when the worst mistakes in shooting are made. It is well worthwhile either to have ample chances to try out the bow under your own conditions before purchase, or to buy with the understanding that it can be returned if it does not meet your expectations.)

"Ideal Gift" Brand New!
20 to 500 yds.
SPLIT-IMAGE
HUNTING RANGEFINDER



Instantly shows true range!



INSTANT MARKSMANSHIP! Just focus this precision optical instrument on any target. Dial instantly shows distance in yards. Lets you adjust sights for deadly accuracy every shot. Terrific for varmint hunters.

ARCHERY MODEL—just 8 inches long, 13 to 250 yd. range, only \$9.95. Deluxe Model, with telescope eyepiece and leather case, \$17.85.

HUNTING RANGEFINDER—12 inches long, 20 to 500 yd. range, with telescope eyepiece & leather case, \$29.95.

30-Day Money-back Guarantee. Send check or money order to

Dealers: FEDERAL INSTRUMENT CORP., Dept. BA-7
Write us. 114-06 ROCKAWAY BLVD., JAMAICA 20, N.Y.

Teela - Wocket Archery Camp

Vacation Camp Riding Camp
ROXBURY VERMONT
Aug. 29-Sept. 10

Ideal Vacationing For Adults and Families in the Heart of the Green Mountains



Instructors' Courses Workshops in Target, Field Archery, Riding

Reasonable rates, superb food, tennis, dancing, golf, etc.
For complete brochure, write:
Mr. and Mrs. E. B. Miller
67F Old Stone Church Road,
Upper Saddle River, N. J.

CHECKERING TOOL

The DEM-BART tool is completely new, engineered to satisfy the demands of craftsmen. Professional checkering done easily and much faster. Shallow or deep, straight or curved, parallel or cross-hatching. Every cut a clean one. Made of hardened steel for long service. Cutters come in 7 styles and 8 sizes. Complete tool \$2.75. Write for free literature. See your dealer.

DEM-BART CO.
3333 N. Gove St., Tacoma 7, Washington

Complete Line of Archery Tackle

MARTIN'S ARCHERY COMPANY

ROUTE 1, BOX 60 — WALLA WALLA, WASH. 99362

DEALERS - Write for New '64 Catalog

All-year Hunting In Hawaii



The opportunity of a lifetime to enjoy some of the finest trophy hunting under the direction of Slim Holt. Famous Mauna Kea Sheep, Mountain Goat and king-size Wild Boar can be taken year round. See your travel agent, or write to:

Slim Holt
PROFESSIONAL HUNTER
P.O. Box 1425, Hilo, Hawaii

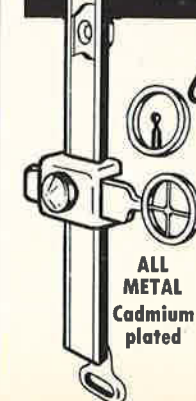
HOWARD HILL ARCHERY EQUIPMENT WORLD FAMOUS

Great Name — — Great Equipment
Longbow \$79.50 Made of Heat Tempered Bamboo
Recurve (New 1964 model) \$94.50 Made of Heat Tempered Bamboo & tapered Maple laminations. Comes in 66" or 68" lengths.
Are you a heavy bow man? We make them up to 120 pounds. Bows over 75# run \$1.00 per pound.

Send 25¢ for Howard Hill Catalogue. Retail only
ALSO The Grand Prix & International custom bows by Jim Darling.

SHAWNEE SPORTS CENTER
8644 Foothill Blvd. Sunland, Calif.
FL 3-3533

BEST BUY IN A BOW-SIGHT!



Josey Site SMOOTH OPERATION PROVEN DESIGN RUGGED!

Mounts close to bow, makes smooth bend to any bow contour. Slide block under constant spring tension travels 6". Positive thumbscrew lock. Complete with marking tape which hides top screw, \$3.75 and 2 reticules. Only Dealer, distributor and manufacturer inquiries invited.

SEATTLE ARCHERY, INC.
EDMONDS WASHINGTON

RARE BACK ISSUES WHILE THEY LAST!

We have had hundreds of requests for back issues to date, and we can now offer a limited number of the early editions. However, these will soon be depleted, so if you desire to complete your file, be certain to order today. Price for these copies is \$1 each, including handling and mailing charges. Order today to be certain of receiving the issue you want. Once these are gone, there will be no further opportunity!

\$1 PER COPY!

VOL. 1, NO. 1, MAY-JUNE 63 — You Can Be An Olympic Champ; Feather Fun With The Bow Bird; Custom Bow Fitting; Shark Shooting; Indoor Lanes Development; Bows Versus Black Powder; Army's Use Of Combat Bows; Banzai Bows Of Japan.

JULY-AUGUST 63 — How Fast Is An Arrow? Coming Olympics; Stringing Techniques; Build Your Own Bow; Hunting Spanish Goat, Russian Boar; Case For A Short Bow; Jim Pickering; Crossbows.

SEPTEMBER-OCTOBER 63 — African Bowhunting; Long Bow vs Recurve; Beginner Problems; Tiger Hunt; Spine & Accuracy; Carp Shooting; Turkish Bows; Antelope Hunting; Build Your Own Hunting Knife.

NOVEMBER-DECEMBER 63 — Styles Of Field Champs; Texas Fox Hunt; More Beginner Problems; Arrow Speed vs Bow Weight; Fletch Your Own Arrows; Profile: Louis Rangel; Boar Hunting; Indoor Archery — Its Future; Yabusame Cavalry Archery.

JANUARY-FEBRUARY 64 — Flight Shooting Secrets; African Trophies With A Crossbow; Checker Your Bow Handle; Clown Prince Of Archery; Arrow Speed; Howard Hill; Nebraska Rabbit Shooting; Coyote Calling.

Book Department
BOW & ARROW Magazine
550 South Citrus Ave.
Covina, California

Enclosed is \$_____ for the back issues checked below:

- Vol. 1, No. 1 Vol. 1, No. 3 Vol. 1, No. 5
 Vol. 1, No. 2 Vol. 1, No. 4

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

(California residents, please add 4% sales tax)

books for bowmen



ARCHERY CHAMPIONS by Robert Rhode, 212 pp; \$6; published by Rhode at 2630 Georgia Avenue, Minneapolis, Minnesota. This is the second edition of this volume, copyrighted in January, 1963. As such, it comprises an authoritative up to date record of the top scores in the International Tournaments, the National Target Tournaments and the National Field Archery Tournaments between 1930 and 1962.

In addition to the facts compiled by Robert J. Rhode, the editing was accomplished by Robert H. Sevey and there are informative and instructional articles by such archery leaders as Ann Weber, Rube Powell, Lon Stanton, James Caspers, Russ Hoogerhyde, Karl Palmatier, Norman Wilson and Vaaben Hansen.

There are biographical notes on a number of the winners, illustrating how some of them had to learn to overcome personal adversities before they could go on to win. The volume is liberally sprinkled with photographs that will arouse nostalgia in the hearts of some of the oldtimers in competitive archery. Records, with placings of competitors, have been arranged in chronological order so that one can settle plenty of personal arguments simply by checking these facts.

In the rear of the book, the champions mentioned above each contribute to a series on Technique, each offering his own ideas as to the important factors that go into developing championship form.

The only thing that seems to clutter up the book is the numerous advertisements. In the mind of a perfectionist, such commercialism only tends to clutter up the flow of the book, standing out like a sore thumb. While one may realize that paid advertisements have no place in a hard cover volume, it also must realize that the volume was privately printed and that this goes toward helping to pay the printing bill.—MH

COMPLETE BOOK OF HUNTING by Clyde Ormond, 467 pp; \$6.95; published by Outdoor Life/Harper & Row. This is another of the books which Outdoor Life has published on a cooperative basis, this time with illustrations by Douglas Allen. But the prime mover in this volume still is Clyde Ormond, who has been a leading outdoor writer for the past twenty-five years, operating from the old family homestead in Rigby, Idaho.

This book is divided into two parts, the first dedicated to an overall discussion of game animals, the latter to game birds.

It is a practical volume, inasmuch as Ormond begins with the basics, such as selecting a rifle, getting a hunting license, the type of food, clothing and equipment that should be taken into the field, not to mention information on packing and saddle horses and tips on selecting an outfitter or guide.

He also devotes a good deal of space to bowhunting, including tips on this facet in his information on tracking, judging range, dressing animals and discussion of trophies. In this section he covers everything from moose and bear down the ladder to varmint hunting, telling how to hunt each with rifle, bow or handgun.

On the matter of game birds, Ormond again has drawn upon his long experience as hunter and naturalist, going into such subjects as patterning a



shotgun, selecting and buying dogs, adding a wealth of information on the birds themselves, their habits and how and where to hunt them. A unique section is an illustrated field guide to water and land birds. Doug Allen has added some eighty-five wildlife drawings and there are more than a hundred photos from the author's own file. This is must reading for the beginning hunter, or the one who is seeking information on game he has not previously hunted, be he firearms or bowhunter.—JL.

Especially when choosing your next arrow shafts. Although all shafts in a set of arrows may look the same, only Easton 24SRT-X and XX75 Aluminum shafts have the uniformity that makes them different from all other type arrow shafts.

Since 1946 each Easton Aluminum shaft of every size has been weight and spine controlled within precise tolerance limits to the original master shafts. This consistent uniformity in both weight and spine means absolutely identical arrows every

time you buy a set of Easton Aluminum shafts.

It is this NO difference that has given Easton 24SRT-X and Easton XX75 Aluminum arrow shafts the reputation of the world's finest and has won the confidence of amateur and professional archers throughout the world.

The next time you buy a set of arrow shafts, don't buy just peas in the pod, specify Easton 24SRT-X or XX75 Aluminum arrow shafts—the difference could be perfect scores.

Look for either of these trademarks and the shaft size when you buy aluminum arrow shafts—they are your unconditional guarantee of Easton quality and uniformity—the World's Finest.

XX75 1816

EASTON ALUMINUM

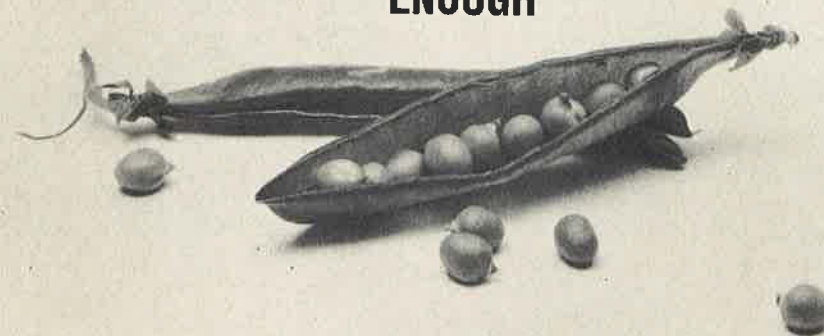
24SRT-X 1916

JAS. D. EASTON, INC.

15137 CALIFA STREET

VAN NUYS, CALIFORNIA

**LOOKING ALIKE
IS NOT
ENOUGH**



Archery's fun for Everyone!



Small wonder! Archery offers something for everybody. Target shooting and tournaments. Field archery and archery games. Bowhunting and bow-fishing. Shoot indoors or outdoors . . . by your lonesome or as a member of an archery league. You can be a 97-pound slip of a girl or a 250-pound hunk of man . . . a



grandmother or a teenager. Or a nine-year-old.

To enjoy archery at its best, use any Bear Bow, priced from \$19.95 to \$125.00. Designed for your shooting pleasure by the world's master bowhunter, Fred Bear. Awaiting you at your Bear dealer's. Or write Dept. BA-5 for your free 1964 full-color catalog.

BEAR® ARCHERY COMPANY

Rural Route One • Grayling, Michigan