



by Marshall R. Williams

The members of the Order had finished their routine Saturday morning, two rounds of Skeet, a round of 16-yard Singles and a round of 5-Stand. Most had used several guns, and some were quite different from each other. Sonny had a 20-gauge O/U for Skeet, a 16-gauge Model 12 for 5-Stand, and his 12-gauge Model 12 for trap. The Major had a .410 double for Skeet, an over/under for 5-Stand, and his sometimes magical 1100 Trap gun. Topper had a 28-gauge double for Skeet, a 20-gauge O/U for 5-Stand and a fancy Italian auto looking somewhat like a sports car for Trap. The Judge had as always .410 pumps for Skeet and his "Old Friend," the 870 with the straight comb Trap stock. As usual, Grundoon had his entire battery of shotgun, an 11-87 with a Skeet tube and a modified tube. These covered all games.

As the old men gathered their guns to leave, Ajax, a shooter with a reputation as a know-it-all kibitzer, stood next to the gun rack waiting for the range. Ajax was accompanied by his acolyte, Grover, who acted as Greek chorus and parroted all of Ajax's limited learning. Both were easily recognizable by the amount of advertising on their clothes.

Ajax observed the old men of ALOOF used too many different guns with too many different stock dimensions. (He obviously had paid no attention to Grundoon's equipage.)

Ajax was especially emphatic about gun fit. "If any of you really wanted to shoot 5-Stand well, you should pick just one gun with the precise measurements for the game. That way, you have the same length of pull, drop at comb, and down pitch for the targets." Grover dutifully chimed in, "Right, same pull, the drop, and same down pitch."

The Judge acknowledged their input with a smile and a nod. Of course, the old men of ALOOF held Ajax's learned opinions in low regard, but the Judge stopped to look at Ajax's and Grover's guns, he even "store-pointed" them. The guns were identical standard model sporting clays guns from one of the better manufacturers.

The Judge inquired, "Ajax, what are the dimensions of your gun's stock?"

Delighted to be acknowledged by ALOOF's guru, Ajax replied, "1 3/8 by 2 1/4, with a 14 1/4" length of pull. Perfectly ideal for 5-Stand."

Grover, who was about four inches shorter and 50 pounds heavier than Ajax, dutifully agreed, "1 3/8 by 2 1/4, with a 14 1/4" length of pull." Then to show his erudition, he added,

"With 2" of down pitch and no cast. Perfect dimensions for me and Ajax."

The Judge inquired who had fitted the guns to their individual requirements and how they had checked the dimensions. Ajax replied, "Oh, we don't do that. These are high-quality guns from a reputable maker, and the store clerk told us what the dimensions were."

The Judge smiled politely and said, "It's a lovely day. You fellows enjoy the ranges." And with that, the ALOOF members ambled off.

The Judge did not dispute Ajax's statements. This did not surprise the members of the Order. Even Grundoon knew debating Ajax was casting pearls before swine.

With shooting over for the day, the old men gathered at the clubhouse for good strong ALOOF coffee, high-calorie salty or sweet restoratives, and gun gossip.

Here's an ad for a tool to do all of that. It's called a Shotgun Combo Gauge.

As the newest member of the group, only 20 years, Grundoon asked the table at large what Ajax and Grover were so proud of, and what did the numbers mean. The Major replied that, "The two small fractional numbers that Ajax and Grover had used were related to the position of the comb in relation to the line of sight. The nose or front of the comb is 1 3/8" below the line of sight, and the heel or rear of the comb is 2 1/4" below the line of sight. Those dimensions establish where your eye is relative to the line of sight, or the rib, since nowadays nearly every gun has one. Basically the higher the comb, the higher the gun will shoot."

"Or the more aggressive the shooter's stance must be to hit the target," added the Judge. "The 14 1/4" dimension is the distance between the center of the trigger's bow and the center of the gun's butt. Many current makers use those dimensions as standard for Sporting Clays guns and some use them for modern Skeet guns, but the standard for American hunting guns is 1 1/2 by 2 1/2 by 14 inches."

Topper added, "Down pitch is an old-fashioned way of measuring the angle of the butt to the line of sight."

"The length of pull usually depends on how long the shooter's arms are. The comb dimensions are dictated primarily by the game you shoot. Trapshooters use higher combs than skeet shooters, and down pitch has some effect on how high the gun shoots, but it mostly keeps the gun from jumping off your shoulder when you shoot it."

"How do you measure all that?" asked Grundoon.

The members looked to the Judge. Among all the members, he was the only one who measured stocks. The old man said, "To do it right, you ought to use a special tool or gauge, but it can be done with a wall, a foot ruler and a steel tape. I hold the gun's rib against a corner of the wall so the sights are out of the way and use the ruler to measure the distance between the wall and the nose and heel of the stock's comb. I measure length of pull with a little steel tape stretched between the trigger's bow and the center of the butt pad. To measure down pitch, I set the gun's butt on the floor, ease it back to the wall, and measure the distance between the muzzle and the wall. The measurements are close enough, but the setup is wobbly and not very precise."

While the Judge was saying this, the Major skimmed a *Shotgun Sports Magazine*. Suddenly he said, "Hey, here's an ad for a tool to do all of that. It's called a Shotgun Combo Gauge. It ought to be way better than what the Judge describes."

(Editor's Note: See page 13 for the *Shotgun Combo Gauge* ad.)

The old man said, "Lemme see that." He studied the ad for a few minutes and showed it to the others. "We could buy one on shares," he said. "Would anybody want to chip in?" Everyone raised his hand.

The Judge said, "Grundoon, you only got one gun. Are you sure you want to be part owner?" Grundoon nodded in the affirmative, so the Judge pulled out his smartphone, typed in some information, looked again, and said, "It will be at my house Wednesday night. Everybody come and bring a gun. We'll see how good this Combo Gauge is."

Wednesday evening the Judge was in his sanctum sanctorum *cum* basement with two small frame 20-gauge Remington 1100s on his workbench when the whole crowd arrived bearing guns.

The Major had brought his "Magic Gun," the old 1100 with the straight comb stock, and was the first to push his gun forward. "Let's see how the Combo Gauge works." He picked up the Combo Gauge, unlocked its jaws, and stretched it out to measure his gun's length of pull. When he saw where the movable jaw had come to rest, he looked surprised and said, "That's only 14". I thought it was supposed to be 14 1/2 inches."

The Judge, who had some technical background in his youth, said, "It does measure 14 1/2", but that's a Vernier caliper and you are reading where the jaw stopped on the main scale, not where the Vernier scale shows the length." Pointing to the markings, the Judge said, "Here's the major measurement, 14.5". Now look at these little numbers, and whichever number is closest to any hash mark gives you any additional distance. The scale on the gauge is laid out in increments of 1/16 of an inch. The Vernier index divides each

1/16" into eight increments, so it allows you to measure to the nearest 1/128 of an inch. You don't need that level of precision, but it is there."

Handing the gauge back to the Judge, he said, "Okay, show us how to measure the drop at nose and heel."

The old man placed the "Magic Gun" in his cleaning rest, checked to make sure the gun was firmly seated, pushed the gauge's movable jaw out of the way and laid it on the rib of the Magic Gun. He said, "The gauge has a really strong magnet that holds it to the rib of the gun. You simply adjust it so the little drop meter" — here he pointed to a short steel ruler attached at right angles to the gauge so it could slide up and down — "the drop meter can be adjusted down to the comb. The drop meter is laid off in 1/64s of an inch, and you read the depth where it crosses the main gauge." Doing exactly that, the old man said, "One and one-half inches." Then moving the drop meter to the heel of the stock, he repeated the action and said, "Two inches on the button. That's exactly what Remington advertised it to be."

The Major seemed happy with the results, but Topper said, "Okay, show us how to measure the down pitch."

"This gauge departs from tradition, but in a more accurate way." Sliding the Combo Gauge farther to the rear, he pulled the drop meter all the way down and angled it against the buttplate. "You use a protractor to measure the actual angle of the butt. That's a departure from tradition but a good one. The

traditional method sets the gun on its butt, slides it against the wall and then measures the distance between the muzzle and the wall, but that distance depends on the shape of the rear end of the gun's receiver. This Remington 1100 can have exactly the same angle as the old Browning A-5, but the Browning's square rear end sticks out farther than the Remington's streamlined receiver, so the measurement is different."

"How about 'cast'?" asked Topper. "I have a number of English guns that have a fair amount of cast."

"That's easy," said the Judge. "When you have the drop gauge down on the center of the butt, just measure the distance that the butt deviates from center. You also can measure 'toe-in' or 'toe-out' the same way."

At that point, the old man stepped aside and let the others play with their new Combo Gauge. Grundoon said, "My 11-87 is 1 1/2 by 2 1/2 by 14. Wow! Perfect American hunting dimensions."

Topper measured an English double and said, "Ah, it's 1 1/2 by 2 by 14 with half an inch of cast off. Perfect English-driven game dimensions." Sonny said, "My old 16-gauge Model 12 is shorter and lower than my newer 12 gauge, but both of them are perfect for what I do with them."

"There are some things we can't easily measure," said the Judge. "Normally we talk only about the height of comb, but the thickness and shape of the comb play a part in eye placement. The thicker the comb, the higher the eye

will be and vice-versa. Therefore, comb thickness is nearly as important as comb height in determining how high a gun shoots. Combs are sometimes described as thick, thin, round or knife-edged, but I am unaware of any traditional way of measuring comb thickness.

"Additionally, there are some things almost too subtle to measure. Take those two 20-gauge 1100s. One is Minerva's gun, an early 1100 Lightweight with Mahogany stock with standard dimensions in every way. The other is my Light 1100 bought five years later and as standard as Minerva's gun. I can't tell two cents' worth of difference between the guns, but Minerva hates my gun and loves hers. I measured both and the only obvious difference is less than 1/32" in drop at the nose of the comb and a quarter inch in down pitch. Sometimes I think stock fit is as much black magic as it is science." **SS**

A retired bureaucrat, Marshall Williams is what he calls "an old fart." He first fired a shotgun in 1947, a 12-gauge Browning Auto, when he was 7 years old. Even at that tender age, he exercised the discreet judgment which would guide many of his later ballistic decisions: Given a choice between red and green shells, he chose green because they "looked less dangerous." He hit the paper target and saved the empty as a souvenir, and guns and shooting have been his passion ever since. Marshall believes every shot should be a learning experience. ALOOF is an imaginary club made up of dear friends who exhibit all the Judge's own foibles, which he tries to purge and correct by writing it all down as if someone else is making the mistakes. The Judge is a bit crotchety, but the other members are all splendid people, men of good will, who make Saturday mornings a pleasure when they raise a cup of good, strong ALOOF coffee to toast shotgunners everywhere. The first ALOOF appeared in *Shotgun Sports* in May of 2000. The Judge and the other members of ALOOF can be contacted at alooofnc@hotmail.com.

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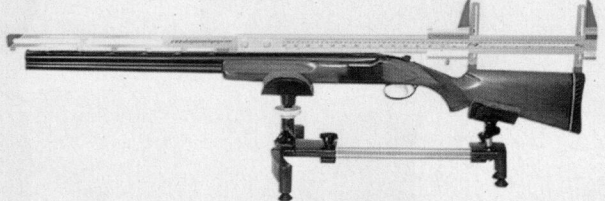
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