The Rifle Magazine

Nov.-Dec., 1969
Number 6

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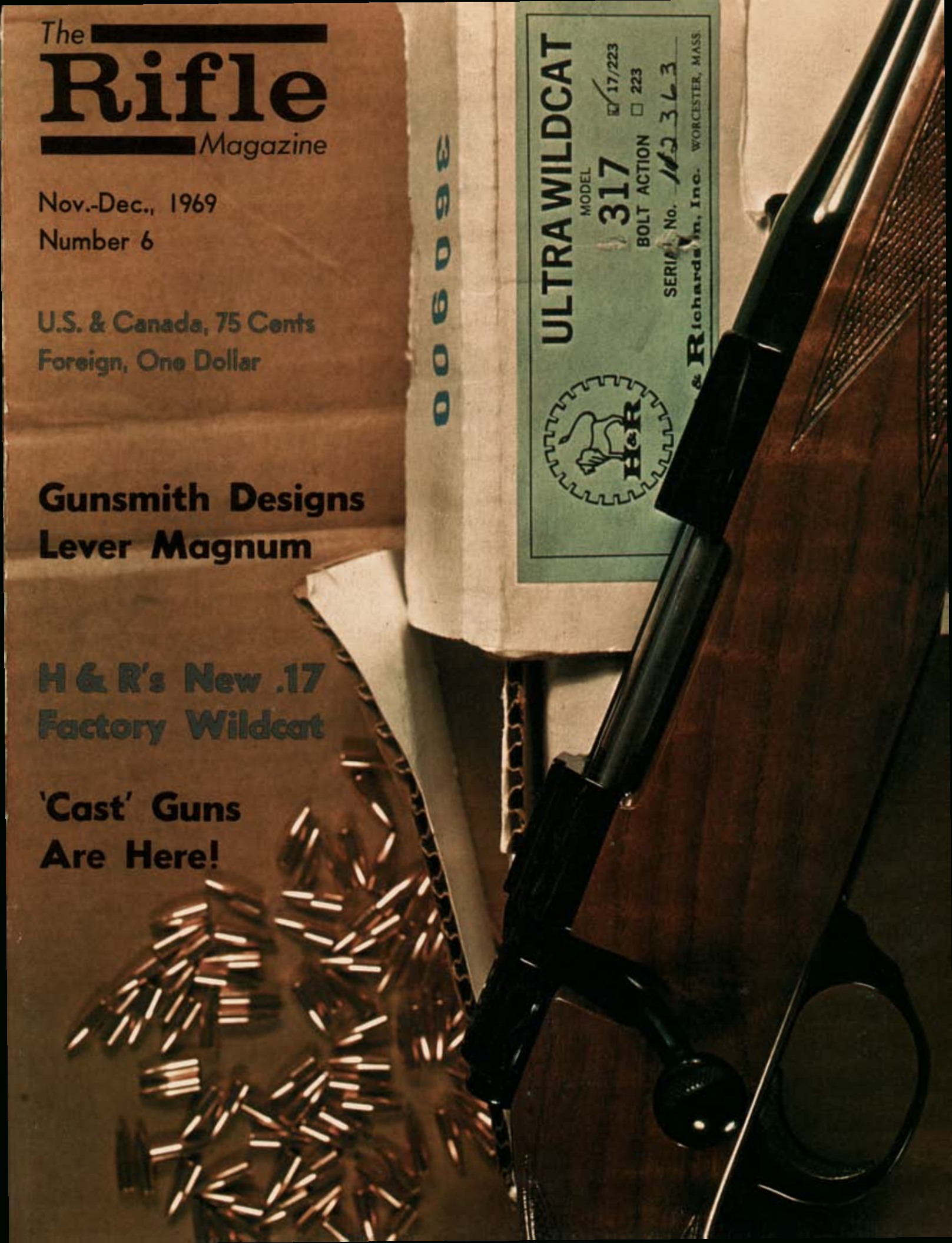
Gunsmith Designs Lever Magnum

H & R's New .17 Factory Wildcat

'Cast' Guns Are Here!



The Rifle Magazine

'Only Accurate Rifles Are Interesting'
– Col. Townsend Whelen

Volume 1, Number 6
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In This Issue

Departments

Cover

Interest in .17 caliber rifles has peaked and waned in the past, but the mini-bore now seems to be here to stay -- evidence is the H&R Ultra Wildcat .17-223 on the cover of this issue, the first factory offering with a .17 bore. See John Wootter's report in this issue.

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The Staff

Editorial

Sen. Kennedy Almost Denied Gun Ownership

AT ONE TIME an H&R-produced M14 rifle reportedly hung in the office of Sen. Edward Kennedy as an example of Massachusetts manufacturing. We do not know where that rifle is today, or whether he owns or uses any other guns, but had it not been for a minor change in one of the two gun laws he helped pass in 1968, the junior senator from Massachusetts could not legally have owned that rifle, or used any other firearm, for the rest of his life.

The first gun law passed last year, the "Omnibus Crime Control and Safe Streets Act of 1968," provides, among other things, that no person ever convicted of a felony crime or committed to a mental institution may possess a firearm. As originally enacted, "felony" was defined in the law as "any offense punishable by imprisonment for a term exceeding one year." Sen. Kennedy's recent conviction would have made him ineligible to own guns, for although he received only the minimum sentence -- two months probated -- on the charge of leaving the scene of a fatal accident, classified as a misdemeanor by Massachusetts law, the offense is *punishable* by a maximum of two years.

Most states classify crimes punishable by more than one year imprisonment as felonies, but since a few states -- including Massachusetts -- don't, Congress changed the definition of felony on its second gun law last year, "The Gun Control Act of 1968," to exclude non-firearms crimes "classified as a misdemeanor under the laws of the state and punishable by a term of imprisonment of two years or less." To the best of our knowledge, Sen. Kennedy did not support the change, and we doubt that he did, for his philosophy has been to limit gun ownership to as few people as possible. But . . .

If Congress had not made that slight change in the law, Sen. Kennedy could not have bought any firearm for the rest of his life.

If the Massachusetts law had called for a maximum term for his offense only one day longer, Sen. Kennedy could not have borrowed a shotgun for some trapshooting off the fantail of his yacht.

If the accident had occurred in one of the states where any offense punishable by more than a year's imprisonment is classified as a felony, Sen. Kennedy could not have accepted any firearm as a gift -- which is the way he got the M14.

If any of these "ifs" had caused Sen. Kennedy to be denied gun ownership, would anyone in the nation have felt safer, more

protected from crime?

We would feel no safer than we do because of some of the other unjust side-effects of this excessively broad law. For instance, we feel no safer knowing that a fellow in New Jersey cannot ever own a gun after being convicted of failing to pay child support payments -- a misdemeanor *punishable* by up to three years imprisonment (though few are ever jailed). And we feel no safer because a friend in Texas, one of the most respected citizens of his community, cannot legally keep his extremely valuable collection of premium quality guns because he spent a few months in a mental hospital more than 40 years ago.

Laws such as Title VII, which ruin a basically good idea by being written too broadly, need to be called in for another look by Congress. But they won't be, not any time soon. But if Sen. Kennedy had been denied gun ownership because of a car accident, things might have been different. -- Neal Knox.

Jacketed 1/2-Jackets For A

By STAN ENSTROM

SINCE BEING INITIATED into handloading some 20 years ago, there have been no great problems in working out high-performance loads with .22 varmint cartridges through heavy magnum rifles – except one, a rifle chambered for the .357 Magnum. Making a popular pistol cartridge perform well in a rifle proved to be the challenge of my shooting life, for conventional methods simply didn't work.

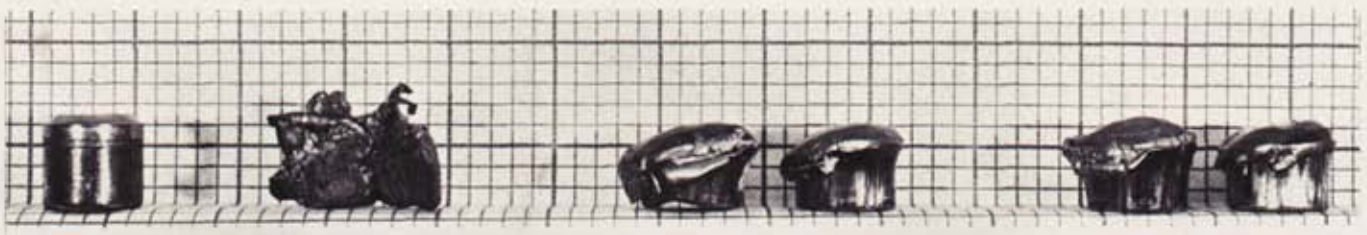
This particular rifle was custom built for me eight years ago, after a "bargain" .357 rifle convinced me that performance had to be paid for. But only its good looks and handling qualities caused me to spend several years trying to solve the problems of my aggravating "pet." It is a BSA Martini Cadet action, fitted to a heavy Douglas premium barrel, 20 inches in length with a groove diameter of .3555" and a twist of one turn in 18 inches. Two-piece stocks were obtained from Winfield Arms Company, and the Weaver K-2.5 scope had its objective lens replaced with an 8X Litchert booster attachment. Chambered for the .357 Magnum pistol cartridge, anticipations ran high until I got to the shooting.

Cast gas check and plain base pistol bullets of such wide variety that they cannot all be mentioned here were tried, with mediocre to poor results for over two years. In final desperation, I ordered 100 No. 358315 cast rifle bullets from Lyman. These were cast hard, sized .356 and weighed 205 grains. This bullet seated in a .357 Magnum case is a picture of the unconventional, but it turned the tide. My first loading with these bullets was 10 rounds in front of 14.0 grains of DuPont IMR No. 4227 and primed with Remington 6½ Small Rifle primers. All 10 went within 1¾ inches at 100 yards and further load modifications brought this to 1 5/8-inches with 15.0 grains of this powder with good consistency. I sent for the mould.

I shot paper, ground squirrels, crows and woodchucks with that bullet and load for three years, and can recommend it as a dandy for such a rifle combination as this one, but I still wasn't satisfied.

Then, half-jacketed bullets were promoted to the pistol boys. The cold swaging idea seemed to offer better expansion and more uniformity, so I decided to enter the new field of bullet making. A C-H Swag-O-Matic press, a set of .357 diameter semi-wadcutter dies, .38 caliber half-jackets, core cutter and lead wire were purchased and I enjoyed the simplicity of turning out good-looking bullets with relative ease.

They did look good, but I tried every conceivable load combination and bullet weight variation with nothing but poor results. A new gremlin had been added--uncontrollable lead fouling. Regardless of how I lightened the swaged bullets to reduce the amount of pure lead exposed, the leading was excessive and I knew what effect this



In an expansion and penetration test of the 90-grain .357 jacketed wadcutter with gas check swaged onto the nose, the bullet showed surprising uniformity. At 50 feet the bullet almost totally disintegrated upon impact with stacked one inch pine boards, but at 50 yards only two grains of weight were lost from the two bullets in the center, while penetrating seven inches of boards. At 100 yards, right group, the bullets lost less than one grain weight, while penetrating six inches of stacked pine boards.

The author says he never had any problems handloading until he tried getting good accuracy from a pistol cartridge in this custom rifle -- a .357 Magnum Douglas barrel and BSA Martini Cadet action with Weaver K-2.5 scope with 8X Litchert booster attachment.

.357 Magnum Rifle

had on accuracy. Thus I had no alternative but to abandon half-jacketed bullets in the rifle unless something could be done to cover up that raw lead.

I was unable to obtain longer jackets so I ordered a full wadcutter nose punch from C-H as the only nose design which would permit the fabrication of an entirely jacketed bullet. By trial and error, cores were cut and adjustments made to the nose-forming punch so that a copper gas-check could be swaged into the nose portion of the bullet (cup facing the core) to a point where the two jacket materials almost made contact. This completely covered the lead and the new bullet looked beautiful--if a bit ridiculous. Light in weight--only 90 grains--it measured .357-inch wide and .340-inch long.

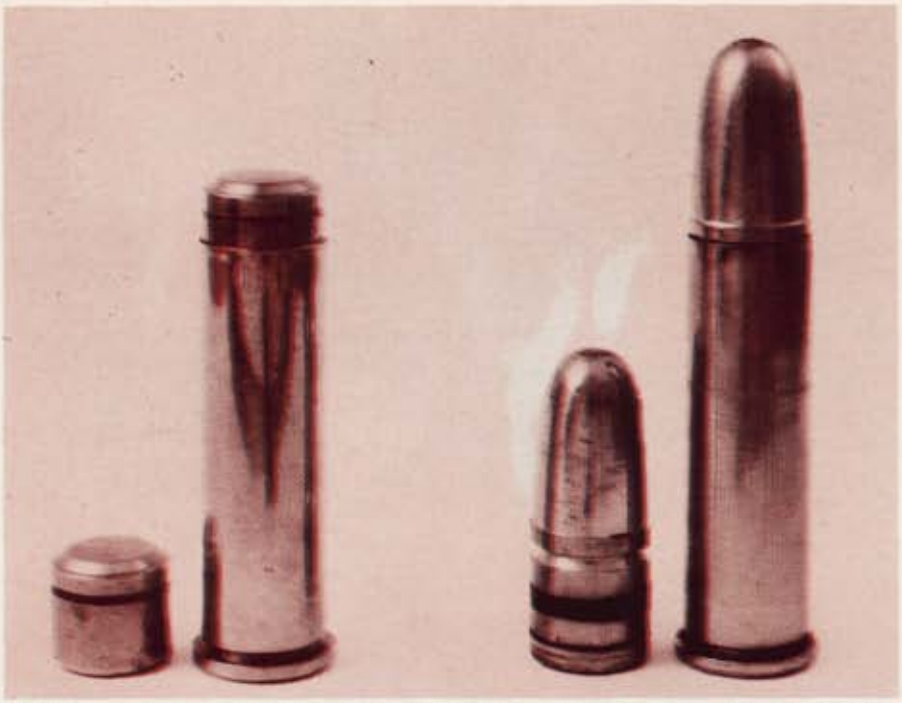
With a certain amount of skepticism regarding its unconventional width to length ratio, I decided to make the initial performance tests at 50 yards. Some well-used .357 Magnum cases were primed with Remington No. 7½ primers and each of six cases were loaded with 17.0, 18.0, 19.0, and 20.0 grains of Hercules 2400. Bullets were seated a whisker shy of the rifling, an overall length of 1.475-inch. Results of this experiment were as follows:

Load		50 Yard Group
17.0 grs.	2400	1-1/2
18.0 grs.	2400	1-3/16
19.0 grs.	2400	7/8
20.0 grs.	2400	5/8

I was astonished at the results. Projecting the 20.0 grain load's performance at 50 yards would give me a theoretical 100-yard group of 1¼ inches, a significant breakthrough. The bullet was, of course, the complete solution to the lead fouling problems, but its terrible sectional density and even worse aerodynamic shape would cause it to shed velocity rapidly--and might make it unstable at 100 yards. But the clean-cut holes made by the jacketed wadcutter resembled those from an outsized ticket puncher, without the slightest hint of keyholing at 50 yards. Further firing at 50 yards showed that the groups never opened beyond 5/8-inch at that range and that the shots were "settled" with even dispersion.

This bullet and load combination then was turned loose from bench rest at 100 yards and the feared problems failed to appear. Hundreds of rounds have since been fired for absolute confirmation of its abilities and under

The 90-grain jacketed wadcutter, which is wider than it is long, gives surprising accuracy -- as this eight-shot 1 3/16-inch group fired at 100 yards shows. A light breeze blowing from 90 degrees apparently gave some horizontal dispersion.



The only two home-made bullets to show fine accuracy in the author's .357 rifle were, at left, the 90-grain jacketed wadcutter and at right, the 205-grain Lyman No. 358315.

reasonable conditions it will average 1 3/8 to 1½-inch groups with a consistency never previously achieved with any other bullet of the home-made variety. Not having a chronograph at my disposal, I estimated velocity of the 20.0 grain load of 2400 powder at somewhere between 2,000 and 2,300 feet per second out of the 20-inch barrel.

(Editor's Note–Out of curiosity, I chronographed the one sample jacketed wadcutter that Enstrom had sent me in a .357 S&W with 8 3/8-inch barrel. Rather than take the time to swage wadcutters with gas checks on the nose, I lopped some lead off some .357 HJ's, reducing the weight to an even 90 grains, and used them to work up to Enstrom's 20.0/2400 load.

(The 17.0-grain load was clocked on our Oehler Model 20 with Oehler electronic screens at 1,315 fps; 18.0 at 1,443; 19.0 at 1,530; and 20.0 at 1,657. Each round was fired in the same cylinder and cases inspected before going to the next load. Both the 19.0 and 20.0 loads flattened the CCI 500 primers, but neither showed any tendency toward case stickiness.

(I then fired Enstrom's bullet, which clocked 1,598, which I suspect is on the low side of the load's average velocity, judging from the speeds of my "work-up" loads. Even though this load is fast, it isn't very pleasant in a revolver–the blast and flash are terrific, since much of the powder is burning in the air. Confining this unburned powder in a rifle barrel would probably result in a 400 to 500 fps gain in velocity, well within Enstrom's estimate.–N.K.)

The author reports unusual satisfaction in being able to obtain fine accuracy from ammunition assembled with his home-made bullets and these components.

Extending the range to 135 yards, I've experienced no difficulty in making "killing" shots on printed crow and woodchuck targets with equal consistency, which proved that the little 90-grain jacketed wadcutter can be shot with the dependability that every rifleman demands.

Further examination of this bullet was made regarding load reduction to the point where keyholing would take place. Backing down from the 20.0 grain load a grain at a time, some keyholing was detected at 100 yards with the 17.0 grain load, and at 16.0 grains there was definite keyholing.

It appears that best overall results are obtained with the full 20.0 grain load of 2400, for good reasons. This loading was found to be slightly compressed when the bullet is seated to an overall cartridge/bullet length of 1.475". This eliminates air space and the probability of powder "slopping" around within the case. It further insures uniformity, shot to shot by this virtue, and a happy phenomenon, as the .357 Magnum case has reached its probable optimum capacity. Recoil of this load can be classified as enjoyable and pressures appear to be mild.

The flat nose design of this bullet invites violent expansion. Tried on a variety of materials such as soaked catalogs, wood, sand, and clay, it exhibits unbelievable expansion immediately upon contact, proving beyond all doubt that the gas check at the nose portion of the bullet does in no way restrict these capabilities. Many tests were conducted in a comparison of leaving the gas check off the nose prior to firing, and leaving it on. As far as expansion was concerned, it made no visual difference. As far as accuracy was concerned, there appeared to be some advantage in leaving the gas check on. Being a relatively cheap component, I leave it on during all firing sessions and it seems to insure the fullest potential of the bullet.

The cost of making these jacketed wadcutters was found to be very

acceptable comparing their cost to commercially made jacketed bullets. Much, of course, depends upon the source of supply of the components which make up this bullet. Half jacket copper cups cost about a half-cent each. Lead wire costs about $7.00 per 25 pounds, or, 36c per pound; and about 95 cores of 74 grains each can be cut per pound at a cost of about a third of a cent each. Gas checks from Lyman cost $4.00 per 1,000. This breaks down the total cost of materials to about 1 1/3 cents per bullet. This can be trimmed a bit further if one were to cast his own cores from lead of known purity, purchased as scrap.

In making these jacketed wadcutters, it should be noted that the installation of the gas check to the nose portion of the bullet will cover up existing excess lead bleed holes in the swaging dies. This makes it essential for the lead cores to be precisely cut, as this is the only means of obtaining bullet weight uniformity. A high quality core cutter is a fine investment in the making of this swaged jacketed wadcutter bullet. I have found that a core weight of about 73.5 grains is correct so that when the half-jacket, core, and gas-check (cup facing core) are swaged together, the bottom edge of the gas check does not quite contact the top edge of the half-jacket. Care should be taken that the two jacket materials do not contact each other as buckling of either one or both will take place. If they contact, then add to the core weight and adjust the nose punch correspondingly. Enough pressure should be applied to the three components so that they fill out the complete dimensions of the die. The Swag-O-Matic press makes this a very simple operation.

I keep a good supply of these components at the side of the swaging press and during a few moments of free time I'm often surprised at the number of bullets that can be produced.

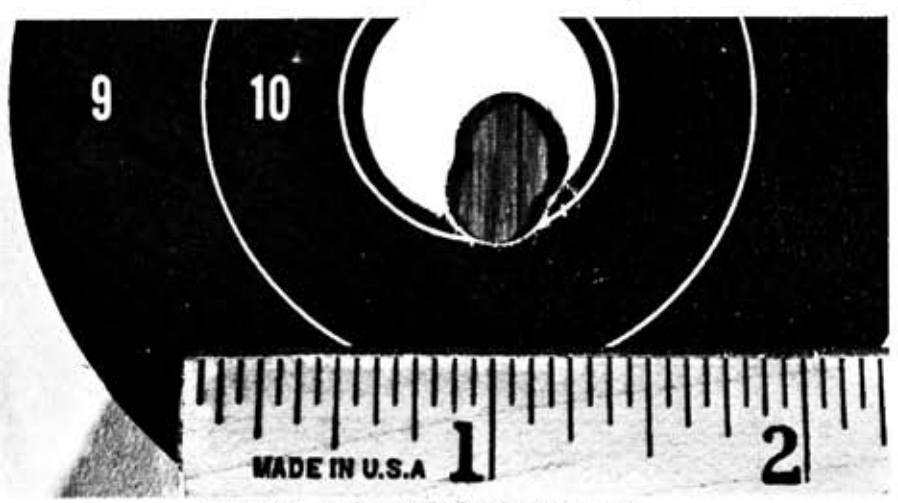
During the course of experimenting with this bullet, I found a few vitally important items that govern its accuracy potential. The most important is bullet diameter. The groove diameter of my rifle is .3555-inch and the diameter of the bullets is .357. An attempt was made at shooting .3555 diameter bullets (groove diameter) but the results were poor accuracy and a useless set of .3555 swaging dies. No experiments were made with bullets more than .0015" over the groove diameter. To determine the exact groove diameter of my rifle, I slugged the bore at least six times and measured the results with a good micrometer.

The destructive effect of the 90-grain jacketed wadcutter in the .357 Magnum rifle is evident in its effect upon a water-soaked Chicago phone directory. The entrance hole appears more like an exit hole, showing that the bullet blew up immediately upon contact with the book when traveling at about 2000 fps. Bullet fragments were found throughout the interior of the hole.

The second item that contributes greatly to tight groups is cases of uniform length. A test using varying length cases showed a definite opening up of groups. I keep a Forster case trimmer adjusted to the near maximum case length dimension of the .357 Magnum case, and following the full length resizing operation, the cases are run through the trimmer to maintain uniformity. If some material is removed, I then chamfer the inside edge of the case mouth slightly with the Wilson chamfering tool, which makes bullet seating easier. In the seating operation, no attempt should be made to crimp the bullet to the mouth of the case; friction tight is sufficient, just as in the seating of rifle bullets. I find it very satisfying to have the independence of producing these bullets at home. With the performance obtained, and the economical cost involved, it represents a great factor for one who does a considerable amount of shooting throughout the year. Here is a bullet that can be used for serious target shooting, varminting, small game hunting, or casual plinking for pleasure within the proper limits of its range.

It cannot, of course, be used for bench rest competition, or big game hunting, but there is an exciting area between these two categories that this combination does fill, and it does it exceedingly well.

Stan Trenholm



Five-shot group fired at 50 feet from crude rest.