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***TESTFIRE***

**report . . . . . by GIL HEBARD**

**HANDLOADING**

The **SMITH & WESSON**

**MODEL 52 . . . . . by KENT BELLAH**



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The factory claims 10-ring accuracy at 50 yards — pistol expert Gil Hebard put 4000 wadcutters through a double brace of these new target pistols, and here's his comprehensive, fact-finding account.

**H**OW GOOD is Smith & Wesson's new Model 52 38 Special autoloader? This is a logical question on nearly every competitive shooter's lips at this early stage of the 52's career. Time and the heat of stiff competition will dictate the final answer, but I'll venture the following prediction: *If the four production guns I tested are typical of total production, and if S&W continues to hold quality control at its present level, this gun will be a winner!*

Three requisites of any target gun worth its salt in hot competition are functional reliability, fine accuracy and good trigger action. Of lesser importance are precision adjustable sights and good balance or handling quality. The 52 seems to possess all of these desirable features, even when viewed through the most critical target shooter's eye.

#### Accuracy

S&W claims "ten ring accuracy" when properly machine rest tested — that is, the gun will hold ten consecu-

tive shots within a 3.39-inch circle at 50 yards with good ammunition. To determine if this claim is fact or fiction, I machine-tested four production guns at 50 yards, 300 shots each, with three different brands of factory wad-cutter ammunition. The results are shown in the accompanying chart and to me they were impressively good. The average 10-shot dispersion (group), all guns, all ammo, was 2.60 inches. Average dispersion for Remington ammo was a startling 2.31 inches — more than an inch better than S&W's allowable maximum! Any further doubts about these four particular guns were dispelled when I telephoned the S&W factory and obtained the original test target data (each gun is machine tested before leaving the factory) and found their results had practically coincided with mine.

S&W asserts that *all* of their 52's are averaging 2 to 2¾ inches at 50 yards. To a rifleman who can hold in one inch at 100 yards *without* the aid of a machine rest this sounds like

## The Smith and Wesson 38 *how good is this new*



In addition to firing thousands of rounds through the Potter machine rest (right foreground), Gil Hebard shot the M52 offhand to check hand fit, sight use, etc.

child's play, but to the pistolman it approaches the fantastic. He knows that an ill-designed blunt nosed bullet, moving out of a 5-inch barrel that must be locked into position for each shot, is going to be headed toward the moon unless every preparatory condition approaches perfection.

Remington tells me that the best 38 Special wadcutters have inherent accuracy of from 1 to 1½ inches at 50 yards. In developing an autoloader that will shoot as close as 2 inches, S&W has arrived at a pinnacle of achievement heretofore reached only by custom gunsmith James Clark, with his 38 Conversion and Model 61 38 Special; by Fort Benning and their AMU 38 Special, and possibly a couple other custom gunsmiths at most.

#### Factory Ammunition

The four guns tested shot best with Remington, next best with Western and Federal, in that order. The fact that one brand of ammo will shoot better than another in a given gun is pretty well established. The *reasons*

in this gun and worry naught. But handloads? — this could be a different story!

#### Handloading the Model 52

2000 various handloads (that's right, 2000) machine-rested through the 52 left me with the impression that the handloader is going to have to use all of the wiles and tricks of his trade to whomp up a match winning load. The 52 seems to be more temperamental than most 38's as to which handloads it will shoot *well*. One contributing factor, doubtless, is that the bullets have to be seated *flush* because of the short magazine. This presents a new problem to the handloading fraternity which, over the years, has developed and perfected wadcutter loads with the bullet seated *beyond* the case mouth.

I was never able to equal factory ammo accuracy-wise but did come close with three loads: 1) Lyman's No. 35863, a 148-grain wadcutter, seated flush, taper crimped to .370" with 2.8 grains Bullseye; 2) North-

charge in the 2- or 3-grain area, for the large powder-dispensing hole that is required if the measure is going to throw, say, the 50-grain rifle loads they were originally designed for. Variation of a few tenths of a grain in the powder charge in a 3-grain load can spell the difference between accuracy and inaccuracy with a particular group of components and a given barrel. I cannot emphasize too strongly that a pistol powder measure (one with a small drum that throws from 1 to 20 grains) should *always* be used by a pistol reloader. Owners of Star, Phelps, or Potter tools have no worry as these have very well-designed measures integral with the tool.

H&G's resurrected No. 244 bullet did not do as well as touted. Speer's swaged bullet was a disappointment. Hand swaged bullets were absolutely hopeless (as is usually the case at midrange velocities). H&G's No. 50 loaded backwards is not the answer either. Had I not been plagued by a publisher's deadline, perhaps I would have found a "final" load. But even

## Master— *pistol?*

for a gun's partiality to a certain load are theoretical and open to argument even among pre-eminent authorities. The fact remains, though, that of the 900 or so Model 52's produced as of this writing, most have demonstrated a definite preference for Remington. This is not a testimonial for Remington. Perhaps Western's next lot of wadcutters will be the favored fodder for the 52 — dies wear, tolerances widen, primer mixtures vary, powder is difficult to stabilize from lot to lot, manufacturers are continually striving for improvement — *things change* and shooters should realize this. A good example here is Federal, whose ammunition did not fare as well as the others in our tests, but they're to be commended on a tremendous improvement in their load from the first lots marketed in mid-1961. It appears that they now have an excellent load and are in the running.

Shoot *any* of the factory wadcutters

ridge's hollow base pressure-swaged 148-grain bullet, flush seated, .370" taper crimp, 3.8 grains Du Pont 5066; 3) Hensley and Gibbs No. 50, 148-grain wadcutter seated *below* the case mouth with a substantial crimp and 3.7 grains of 5066. All three of these loads averaged slightly over 3 inches.

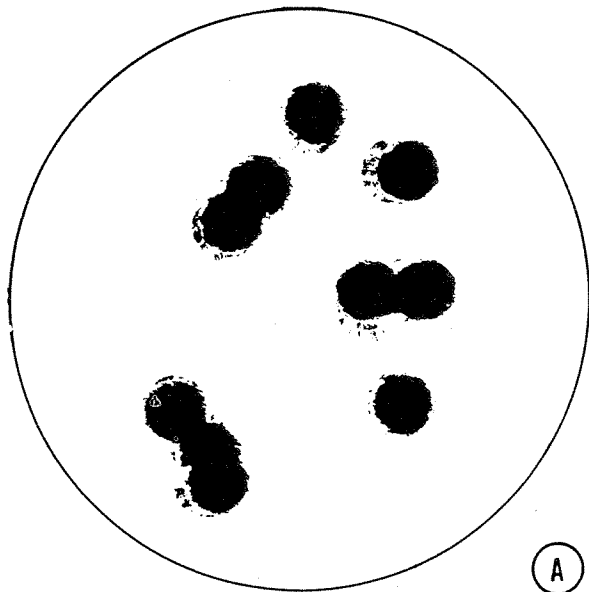
Trends that became evident in the tests indicated that .3555" was best bullet size; 5066 powder held a slight edge over Bullseye (and is certainly much cleaner); heavier charges such as 2.7 or 2.8 grains Bullseye or 3.7, 3.8, or 3.9 grains of 5066 printed better targets than the lighter loads; light taper crimping (.370"-.372") is superior to roll or heavy (.367") taper-crimp.

Uniform bullet weight and powder charges seemed more critical than usual. It was extremely difficult to get uniform groups when using a standard powder measure. These just won't throw a consistently uniform

so, it would have been for *my* gun (or guns) and not *yours*. The variables are just too many and complex to flatly declare that a given load is it, and expect *it* to be the ultimate for all guns. I am well aware that handloads *can* be as accurate as factory and feel confident that it is only a matter of time before excellent loads will be developed for these guns.

#### Bullet Tipping

There has been considerable criticism of the 52 in that it tips bullets excessively. Of the 3200 shots we fired at 50 yards about 40% showed a tipping print or "scuff" mark on the target. S&W has tried barrel twists of 12, 14, 16, and 18¼ inches, various barrel lengths, riflings, chambers and reaming to overcome this but without success. This tipping, however, is not confined to the Model 52. Close examination of most any 50-yard target fired from most any gun or barrel



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A — 38 Special full wadcutter loads tip slightly, sometimes, from most any handgun, when going through the target at 50 yards. Note "scuff" marks.

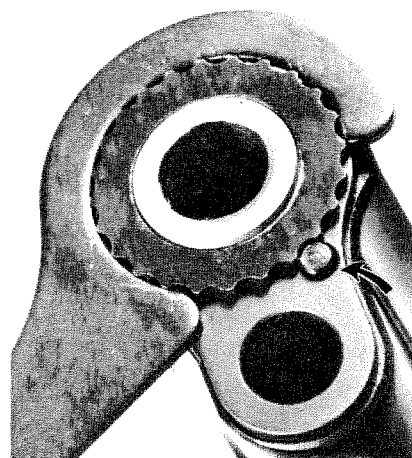
B — M52 barrel breech, showing loading ramp and rim stop.

C — Swelled section of M52 barrel muzzle has near-point contact in bushing for uniform positioning.

D — Notched ring on M52 bushing adjusts by means of spanner shown; spring-loaded pin (arrow) locks bushing.

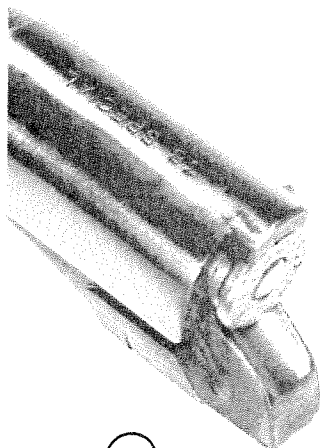
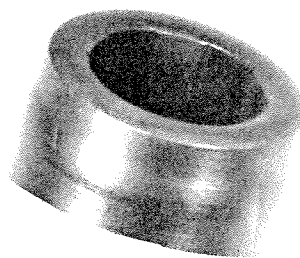
(including Mann test barrels) will show some degree of tipping with 38 Special *full wadcutter*, midrange (600 to 900 fps muzzle velocity) ammunition, either factory or handloads. Remington tells me that tipping is synonymous with the midrange load. This action, perhaps, could be better defined as "yaw," as the base of the bullet is gyrating around its own point (watch a 30-caliber bullet through a scope as it goes down range and you will know what I mean). Trajectory range tests, where the bullet is fired through a series of screens at 5-yard intervals, further proves the point; the "scuff" mark rotates on the successive targets in direct relationship to the barrel twist. Even when fired from a 10" Mann Barrel (closed chamber testing barrel) tipping of wadcutter bullets is still evident regardless of brand of ammunition.

Tipping is something shooters will have to put up with for the time being at least but, if their gun is



D

C



B

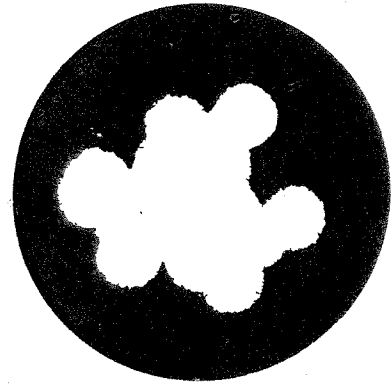
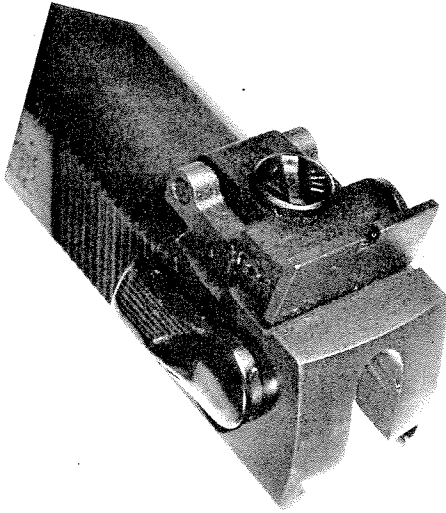
grouping as tight as 2 or 3 inches, who cares? One unfortunate aspect of this tipping, though, is this: when a shooter throws or jerks a "flier" out in the six-ring and the target hole shows a tipper, he invariably blames his gun rather than himself. In the extensive testing we've just completed, there was no evidence whatsoever that "tippers" were spreading the group.

Tipping should not be confused with lobbing or keyholing, which can be caused by an inaccurate or damaged barrel and/or by poor handloads. Many reloaders do such a poor job

that their bullets are actually lobbed out of the barrel, thus may print broadside-on at either 25 or 50 yards! If your bullets are doing this, you can bet your bottom dollar that your loads won't group better than perhaps 15" at 50 yards, even out of the finest gun. In just about every instance, this is the fault of the load, not the gun.

#### Leading No Problem

The 52 does not seem to suffer from leading — we did not clean the test guns at any time and, although leading developed in the front end of



Left — Micrometer click rear sight of M52. Sturdy, rugged, sight is quickly, accurately adjustable by means of coin-slotted screws.

Right — Regarding this 1.03" group, Hebard wrote, "... the tightest 10-shot group I have ever gotten at 50 yards with any gun or ammunition." Fired with S&W 52 No. 50817, Remington Targetmaster wadcutters, from the Potter machine rest in April, 1962.

the chamber, accuracy was as good at the end of the test as it had been at the beginning. The chamber leading was easily removed and apparently presents no problem unless, of course, one allows it to build up to the point where malfunctions occur.

#### Functional Reliability

The four guns function very well with factory loads and a wide variety of handloads, including those made using 38 Colt cases and trimmed 38 Special cases, which allowed the bullet to be seated projecting from the case in the usual manner.

(Here is, possibly, a good avenue of development. More extensive shooting with 38 Long Colt or shortened 38 Special cases, handloaded, might be rewarding work. Jim Horton, not unknown to these pages, may report

on such short-case loads later.)

The gun is *closely* fitted and there was a noticeable slowing down of the normal fast action at the end of the test. A thorough cleaning and oiling again restored the snappy action, a fine tribute to S&W's close fitting and tolerances. To coin a phrase that would be applicable to this or any other finely fitted target arm, "He who shooteth a dirty gun deserveth his alibi."

#### Life Expectancy

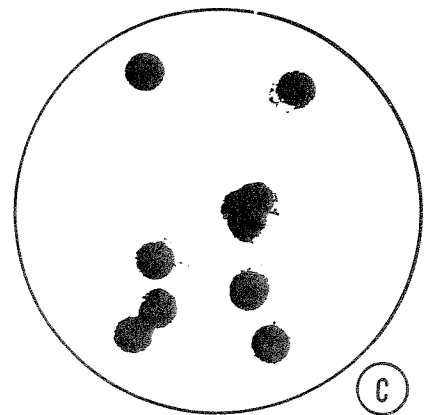
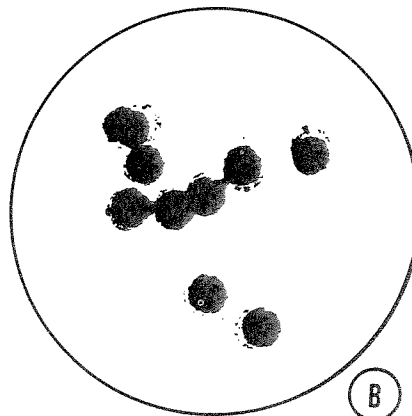
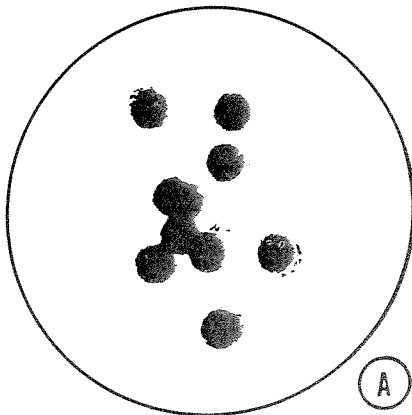
S&W subjected one Model 52 through a "wear and break down" test in which the gun was put through a cyclic operation 100,000 times. 50-yard group accuracy of this particular gun was 2.14" at the start of the test. After 10,000 cycles the gun tested 2.1"; at 25,000, 1.93"; at 50,000, 1.83"

and at 100,000 it was back up to 2.14". Considering that a barrel will normally go hundreds of thousands of rounds without showing any appreciable wear (using lead bullets only), it would appear that the 52 would satisfy accuracy requirements for many years, even for an active shooter, barring accidental damage or abuse.

#### Trigger Action

Some shooters may not like the 52 trigger action; it is a two-stage affair with about 1/4" take up before actual sear engagement commences. Of the 15 or so Model 52's that have gone through my hands to date, all seem to have the same general characteristic — a "soft" type of pull. That is, not a clean, crisp break but rather a slight perceptible amount of smooth movement immediately before the

These targets represent, approximately, the 100-shot average made with three brands of 38 wadcutter ammo. A — 1.93" for Remington. B — 2.20" for W.W. C — 2.53" for Federal as against 1.830", 2.149" and 2.741" respectively. The M52 will shoot!



Groups illustrated are shown in 62% scale.

trigger breaks away from the sear. This movement is so small that most shooters may not notice it. Nor is it something to be criticized, for it's an excellent example of the soft pull, long recognized by gunsmiths and top target shooters as a very desirable type — *if the shooter happens to like it*. So, this may be an advantage or a disadvantage, depending on your point of view. I personally don't like a soft trigger, but I must admit that this is one of the finest of its type I've ever seen.

### Sights

The rear adjustable sight, new and of excellent design, generally follows the dictates of what our top shooters desire, i.e.: a  $\frac{1}{8}$ " deep notch with large flat sighting surface, uniformity of adjustment with minimum backlash or error and fineness of setting (see specification chart). The sight adjusting screws can be operated with a coin and are marked for direction of movement. The front sight is a  $\frac{1}{8}$ " post and it is fortunate that this size and type is of proven popularity, as it would require the services of a professional gunsmith to change it.

### Design and Balance

The Model 52 is basically a target version of the Model 39, the 9mm automatic which S&W introduced in 1954 and which has proven to be more than an excellent weapon. To me the balance seems a little muzzle light, but it does have a feeling of consolidation, which is in line with the present trend toward shorter, more compact guns, among our better shooters.

The angle of the grip to the bore, just slightly more than that of the 45 Colt auto, allows the trigger finger to operate in a line parallel to the arm extension. Contrary to some so-called "authoritative" opinion, I feel that this abrupt stock-to-barrel angle is conducive to better shooting.

I believe the arched mainspring housing, which constitutes the backstrap of the grip, will come up for

some criticism, especially from shooters with small hands, as it tends to slip off of the hand and away from the palm when properly gripped. Good custom grips, perhaps, will correct some of this for those shooters who experience this problem; however, there is really not much a custom grip maker can do when the frame is too large (for a given hand) to start with.

### Conclusion

*The S&W Model 52 appears to me to be the first factory produced 38 Special target autoloader worthy of the name.* Its early acceptance by some of our best shooters would indicate that its star will be rising in the target shooting world. Whether this star will be one of first magnitude or not only time will tell. I'll wager a dollar to a doughnut that its future will be brilliant.



The Smith & Wesson M52, disassembled for cleaning and oiling. Take-down is simple, easy, and so is reassembly.

#### S&W MODEL 52 38 MASTER

CALIBER: 38 S&W Special midrange wad-cutter with flush seated bullet  
MAGAZINE CAPACITY: 5 rounds  
MECHANISM TYPE: Semi-automatic, locked breech, recoiling barrel, detachable magazine  
WEIGHT: 41 ounces, empty  
OVER-ALL LENGTH: 8 $\frac{5}{8}$ "  
OVER-ALL HEIGHT: 5 $\frac{3}{4}$ "  
SIGHTS: Front,  $\frac{1}{8}$ " Patridge. Rear, new S&W micrometer-click. Coin slot adjustment screws. Each click  $\frac{3}{4}$ " elevation,  $\frac{1}{2}$ " windage at 50 yards  
SIGHT RADIUS: 6-15/16"  
BARREL: 5 $\frac{1}{8}$ ", 5 groove, right twist, one turn in 18.75"  
CONSTRUCTION: All steel  
TRIGGER REACH: Trigger to backstrap 2 $\frac{3}{8}$ "  
STOCKS: Checkered walnut with S&W monogram  
TRIGGER:  $\frac{3}{8}$ " wide, serrated surface  
ACCESSORIES: Bushing, spanner wrench, Allen wrenches, cleaning rod with brush and bob  
PRICE: \$150 with two magazines

For an exploded view and disassembly instruction see our 32-page portfolio of exploded drawings in this issue.

### 50-yard Machine Rest Test of Four S&W Model 52's

Ammunition	Gun No. 50292			Gun No. 50575			Gun No. 50817			Gun No. 50851		
	Rem.	West.	Fed.	Rem.	West.	Fed.	Rem.	West.	Fed.	Rem.	West.	Fed.
50-yard 10-Shot Machine Rest Groups, Measured in Inches.	2.47	2.42	3.89	2.12	2.31	2.53	2.82	2.85	2.20	2.16	2.50	2.80
	3.30	3.18	3.57	2.00	2.20	3.08	2.00	2.50	3.25	1.91	2.36	3.92
	2.37	2.59	2.95	1.95	2.95	2.32	2.65	2.33	4.02	2.70	2.74	3.65
	3.17	2.64	3.06	2.35	1.40	3.10	2.10	3.22	2.70	2.16	2.38	2.00
	3.72	3.49	4.45	1.30	1.62	4.00	1.03	2.25	2.89	2.14	2.28	3.25
	3.50	2.92	2.93	1.45	2.50	3.34	1.70	2.35	2.40	2.01	2.25	2.70
	3.21	4.02	2.90	1.55	2.56	1.70	1.42	3.11	3.11	2.95	2.65	4.01
10-Group Av.	2.48	2.64	3.77	1.55	1.95	2.42	3.00	2.27	2.73	2.00	2.60	2.47
	2.47	1.89	2.41	2.10	2.25	2.40	2.50	2.43	3.04	1.67	2.55	2.86
	2.87	3.32	3.18	1.93	1.75	2.52	2.81	2.67	2.47	2.90	2.19	2.98
	2.950	2.921	3.301	1.830	2.149	2.741	2.203	2.598	2.881	2.260	2.450	3.064

All gun average, 3 brands ammunition, 300 shots each gun, total 1200 shots ..... 2.612  
All gun average, Remington ammunition, 100 shots each gun, total 400 shots ..... 2.310  
All gun average, Western ammunition, 100 shots each gun, total 400 shots ..... 2.529  
All gun average, Federal ammunition, 100 shots each gun, total 400 shots ..... 2.997

# HANDLOADING THE SMITH & WESSON 38 MASTER AUTO PISTOL

by KENT BELLAH

**S**MITH & Wesson's Model 52, introduced in December, 1961, is a superb 38 Special Mid-Range target pistol. Many revolver fans will switch to it for better scores. A chambered barrel has a more uniform velocity spread, and an accuracy advantage over the revolver. The advantage in timed and rapid fire is obvious. You concentrate on sighting, with no change in hold. The new 38 Masters are factory tuned for 10-ring or better accuracy at 50 yards with factory ammo.

Factory midrange ammo is held to such a high degree of accuracy that reloads can't compete unless they're assembled correctly and very carefully. Average reloads open groups 50% or more. If one or two shots print out of a group the cause is often non-uniform bullets. Common faults are air pockets or internal defects, and a non-uniform alloy. A considerable hardness variation may still exist in bullets that pass a visual and weight inspection.

Sorting to plus or minus 0.2-grain is best. The heaviest weights are best, if the alloy is kept well fluxed, stirred and homogenous, and uniform pressure kept on the mould handles. Lighter sortings may vary in alloy content or have internal defects. A thermostat-controlled furnace maintains uniform temperature best. Cast bullets are best if they come from the mould at exact sizing diameter to no more than .0005" larger. A good mould is a treasure, and deserves good care.

A good commercial mix is best, and Illinois Bullet Alloy No. 7 is excellent. It's difficult to mix a ternary alloy, and harder to duplicate it. A good one, however, is 7-88-5 (antimony, lead and tin), mixed in that order. I don't recommend scrap metals.

SAECO has a fine Lubri-Sizer, in perfect alignment. Dies give the bearing surface a chrome-plated look. Loose jointed sizers and rough dies do not "true up" oversize castings. Keep bullet bases free of lube.

There are no better moulds than the Hensley & Gibbs. Their No. 50 wadcutter is the most popular. I believe it has a slight accuracy advantage over their No. 50 BB (Bevel Base) in auto pistols, if correctly cast and loaded. Specify your exact sizing diameter and the alloy you'll be using

when you order one. .356" is about right for the Master 38 with IBA No. 7. Some Masters may shoot better with slightly larger or smaller pills, if you make 'em with some other alloys.

Bullets sizing .358" are oversize; if they must be used, the bore is a better sizing die than reducing them too much in any lubri-sizer. Lyman's 358432-S mould is good in the correct size, but be sure you order the size you need.

Case length isn't critical if it's uniform. My Forster trimmer is set for 1.142". After trimming, inspect and discard any that are not uniform. Chamfer mouths rather heavily inside. Use one make and lot of cases, those without a cannellure above the seating depth of the bullet.

Cases should be sized enough to hold bullets friction tight, with no bulge in the case at the bullet base. Dies for .358" loads may be sloppy for .356" Masters. Bell case mouths to prevent lead shaving. Start pills in a straight line, then back off, turn cases half a turn and seat fully, flush with the case mouth. Adjust the seater to barely remove the mouth bell without crimping. Still better is the Taper Crimper, sold by Gil Hebard Guns in standard or Star-Phelps thread.

Cheap loading dies are often faulty or out of alignment. \$13.50 is not too much to pay for good dies.

The best charge with the above bullets for 25 and 50 yards is 2.7 grains Bullseye, or 2.5 for 25 yards. With

the 2.7 load I get 10-ring groups at 50 yards, and so can you if you'll really load carefully. An Electric Dripper will "drip" the entire charge on a scale pan. Tilt it for a faster flow. A 5% variation in powder will open groups. Careful, uniform operation of the SAECO measure with the old style drum (still available) will hold charges within 0.1 grain in our test. You'll have to spend a little time to master a uniform technique in throwing sticky Bullseye from this fine measure, but it's time well spent.

George Murphy, maker of Accuracy "Perfecast" bullets, gets machine-rest groups of 1½ to 2 inches at 50 yards with his No. W-146 pill, which is the H&G No. 50. These excellent bullets are sold by many dealers, including Gil Hebard. Specify .356".

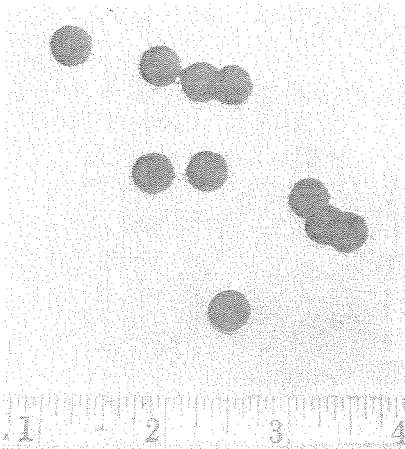
The factories prime cases better than do most reloaders. Seat Remington primers .002" below the case head, and W-W caps .008" low. CCI No. 500 are designed for reloads. The compound doesn't crumble easily, and excessive compression isn't necessary to increase sensitivity. This makes them desirable for "seating by feel," as well as for use in presses with an adjustable primer stop such as the C-H Magnum. About .003" low is right, but ignition is uniform from flush to .008" low. We have found all lots run uniform in dimensions. All primers, however, vary in cup length and over-all length, some over .012". Primer pockets vary, too, even in the same lot. I prefer to seat by feel, even in presses with a primer stop, on the theory that compression is more uniform. The variation in primers and pockets, though, may cancel out any advantage.

Some makes and lots of factory ammo shoot better than others. My Master 38 has a .3546" groove diameter. Western Super-Match lot 29SD02 had .3553" bullets, and Remington Targetmaster lot W18E went .3551". They shot equally well, the R-P having a very slight edge at 50 yards. SAAMI lists .358" as maximum. The diameter isn't nearly so important with conical base pills as with flat base. For example, Norma's .358" "Hollow Tail" shoots well indeed, but it's swaged, not cast.

Federal now has Monark Mid-Range 38's. One lot shot well, but we'll test various lots before it gets a blanket A-OK.

The Master will lose matches that better ammo could have won. If you won't load precision fodder, shoot factory ammo. Stock up if you find a make and lot that gains points. It keeps for years.

My Master has fired much factory stuff, and various reloads with various powders, without a single malfunction. The H&G No. 50 and 3.0 grains Bullseye is accurate to over 75 yards. It's a dandy load for running jack rabbits.



My test rest groups with reloads stay well within the 10-ring at 50 yards, permit a margin of error in aiming.





*Backed by over 100 years of Craftsmanship*