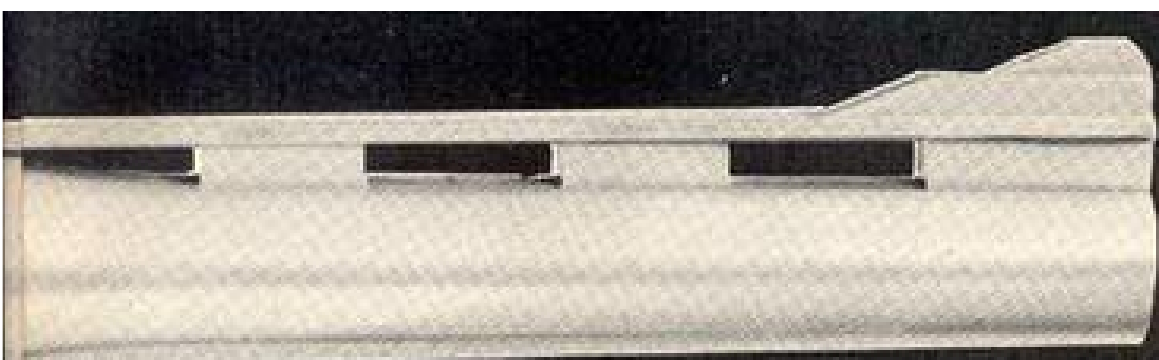


MADE IN U.S.A.

**RELOADING
THE**

.44

AUTO MAG



When Working With This Newest And Hairiest Of The Hand-Howitzer Clan, Rolling Your Own Ammo's Half The Fun!

By Dean A. Grennell

THERE IS SOMETHING about a brawny new handgun which seems to grab the imagination of the shooting public by the throat. Back around 1956, when Remington teamed up with Smith & Wesson to produce, respectively, the ammunition and revolver known as the .44 Remington magnum, they set off a clamor which has not subsided appreciably to the present day.

Shooters, it would appear, enjoy being able to tell their friends that some given handgun in their rack enjoys the title of most potent on the planet. Perhaps that helps to explain the disappointingly lukewarm reception accorded the .41 Remington magnum when the cartridge and revolver were introduced some eight years later. The .41 mag probably is capable of better accuracy than any revolver cartridge larger than the .38 Special and can give the older .44 mag one helluva fight in the area of foot-pounds of energy and feet per second of velocity, with a bit of an edge on flatness of trajectory and penetrating capability. But it's hard to concoct a convincing boast that it's the biggest and most fearsome of all handguns, so the gorgeous .41 remains unloved and lonely, except for a small band of connoisseurs.



Auto Mag easily field strips into three sub-assemblies. Note that barrel, sights and barrel extension are one integral unit. Stud on magazine follower is to actuate slide hold-open, not an aid in loading.

Most of the more ambitious handgun cartridges have been intended for use in revolvers. A major exception was the ill-fated efforts by British designer Hugh W. Gabbett-Fairfax to perfect the design of his Mars autoloading pistol in the interlude spanning from about 1895 to 1907. During this period, the firm known as The Mars Automatic Pistol Syndicate Ltd., of Birmingham, England, turned out a succession of pistols — most of them experimental prototypes — in an assortment of calibers which ranged in diameter from 8.5mm, 9mm, .360 and .450, varying likewise as to length.

Geoffrey Boothroyd, in his elegant and comprehensive book, "The Handgun," pictures one of the Mars pistols in 8.5mm and notes that it could deliver a muzzle velocity of 1500 fps — bullet weight not given — which was a most impressive handgun velocity for that era. There were a number of bugs in the Gabbett-Fairfax design which were not exterminated before the Mars firm succumbed. For example, the ejected empty cases tended to strike the shooter in the face with considerable force and the immensely complex and ungainly looking design never succeeded in achieving reliable feeding performance.

But the Mars managed, for half a century, to hold the title of most powerful handgun against all comers. The advent of the .44 magnum earned the latter the title of world's most powerful, successful, commercially produced handgun, even though it was a revolver.

Some few years ago, there was a bit of hoo-hah over an auto pistol to be

called the Kimball, chambered for the caliber .30 M-1 carbine round, but it seems to have withered on the vine. Apart from that, the field of really high-performance autoloading pistols has been singularly barren and unproductive since the Mars firm went under, back in the early years of this century.

It was inevitable that someone would step in to fill such an obvious, aching, gaping void and, sure enough, along came Harry Sanford and his .44 Auto Mag. The relevant details on the inception and production of this most singular hawg-laig were set forth in GUN WORLD for June, 1971. As with many a new firearm design, there has been an extended lapse between drawing board and appearance upon dealer's shelves. It will be quite a ways into the future before you start encountering the .44 Auto Mag frequently in displays of used guns but, as of just before press time for this issue, I've had the opportunity to brew up some handloads and crank them through the chronograph and onto targets out of the gun pictured on the cover of this issue.

The vital statistics on the big stainless steel auto run like this: The barrel is 6½ inches long, measured from muzzle to face of locked breech bolt. It is rifled with eight lands and grooves, at a left-hand twist of one turn in eighteen inches. Land width is .0499-inch, groove width is .119-inch, groove depth is .004-inch. Bore and groove diameters, respectively, are .422 and .430-inch. The design is short-recoil, firing from a locked breech, featuring a rotary bolt having

six locking lugs. The magazine holds seven rounds of the special .44 Auto Mag Pistol (AMP) ammunition — which, as we'll see, is not merely a rimless .44 Rem mag cartridge — and, if you wish, an eighth round can be carried in the chamber to give it a capacity one-third greater than that of any comparable revolver and equal to the Government Model .45 auto.

Design features include an exposed hammer, an adjustable trigger, satin stainless steel finish and sharply checkered stocks of tough black polyurethane plastic. The pistol weighs fifty-six ounces, empty, measuring 11½ inches in overall length. The retail price tag reads \$247.50, but may be adjusted upward in the near future.

The overwhelming first impression is that this is a man's handgun, primarily suited for hunting and, if the man has large hands, that's all to the good.

Fifty-six ounces works out to 3½ pounds and the grip has to be wide enough and long enough to accept the box-type magazine holding seven of those well-fed cartridges. A big hand, with long fingers, is a decided asset when taking aim and even more so when the hammer drops.

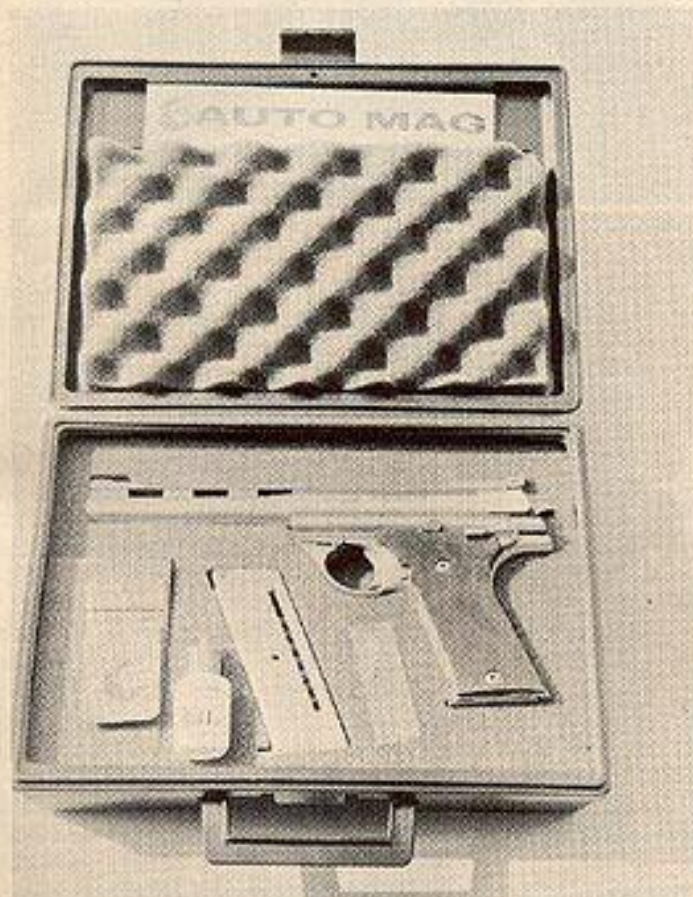
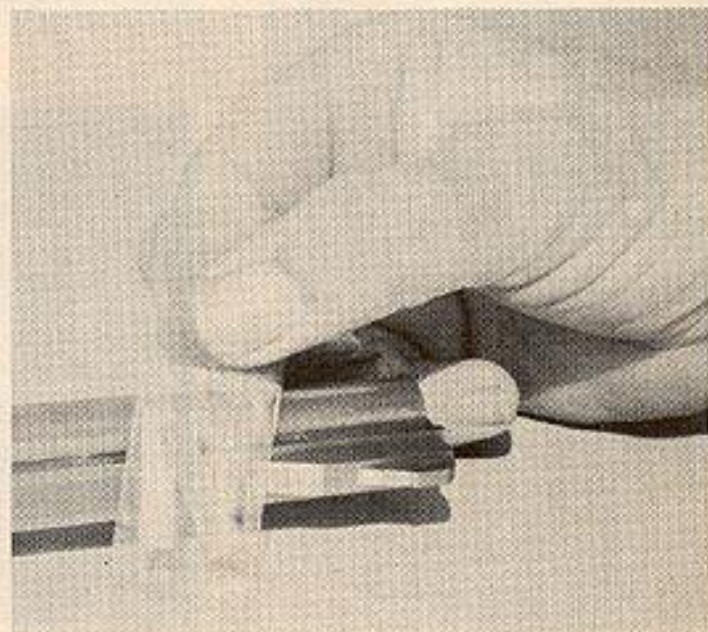
I must admit that the recoil is nowhere nearly as fierce as I'd anticipated. In fact, if you don't go into the experience with your imagination cringing, it's not half bad. I've fired any number of handguns which were more punishing to the hand than the Auto Mag. Unlike the Mars, it is gratifying to report that the empties sail well clear of the shoulder of a right-handed shooter, dropping in a tidy cluster slightly to the rear and right. I tried a few shots from the left hand and can assure the southpaw fraternity that they have no cause for alarm, either. Doubtless, the report is quite severe. I used shooting glasses and ear protectors throughout the tests and, through the muffling layers, the comparable noise was not as bad as that of a short-barreled .357 magnum firing hot loads.

Loading the magazine takes strong fingers and it's most helpful to have a solid bench on which to rest the base during this operation. There's a small, sharp-edged magazine follower stud on the left side, but it's not much help in loading. I found it worked best to use the same technique as with the .45 auto: forcing the base of the previous round down with the left thumb and cramming it on down the rest of the way with the base of the next round.

The quoted purchase price, by the way, includes a spare magazine and a sturdy carrying case which is shaped like an attache case, with a compartmented foam-plastic liner, a small



Above: Rear sight adjusts by one of the two hex-wrenches supplied with pistol. Right: Two strips of self-adhesive reflective material, red and yellow, are furnished for use on rear surface of front sight. Below: Foam-lined case affords maximum protection and convenience. It comes with spare magazine, instructions, lube oil, sight insert strips, hex-wrenches and lift-out insert to provide space for plastic ammunition container.



plastic bottle of an especially formulated lubricant — required for the stainless alloys — and the best-prepared operator's manual I've seen supplied with any firearm. No effort has been spared to keep this a first-cabin production, all the way.

As noted previously, the .44 AMP round is larger in diameter than the familiar .44 Rem mag, so that .44 AMP loads cannot be inserted in a .44 mag chamber. As of press time, I've been told that Thompson/Center Arms will offer their Contender barrel in .44 AMP caliber on a special order basis. Presumably, these will feature the same muzzle brake presently furnished on Contender barrels for the .44 magnum. There seems to be no obvious reason why such barrels cannot be fitted with the muzzle choke device for pattern control with the T/C HotShot

shot capsules which are offered for reloading. And it should be possible to load the HotShot capsules into .44 AMP brass for use in the Contender barrel — possibly, by reaming out the mouths to a slightly greater depth.

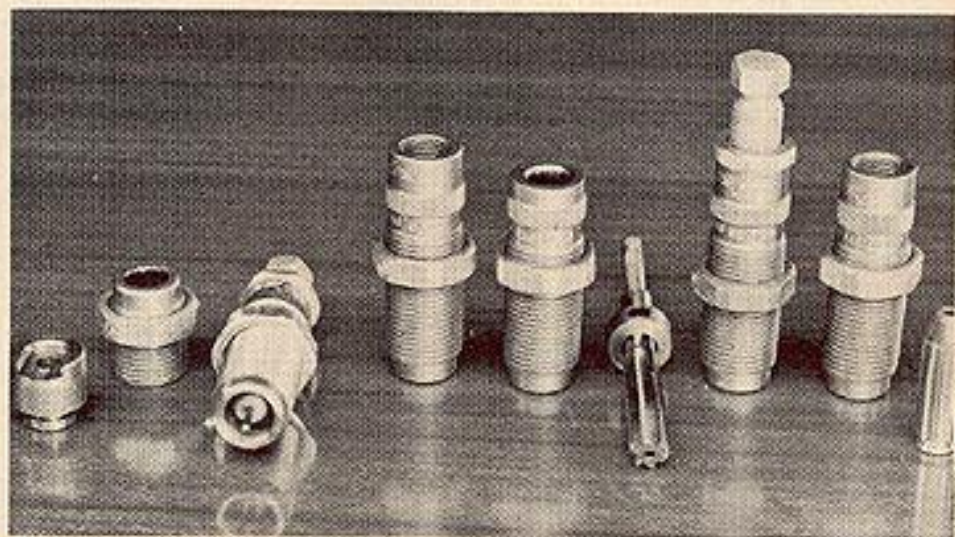
If the HotShot capsules are loaded in the .44 AMP cases — 7.0 grain of Bullseye is the suggested charge — they can be hand-fed singly into the empty chamber. Patterns won't be as tight as with the Contender barrel and its choke device, but it's a good snake load. Usually, it will be possible to eject the unfired round, if desired. Comes a pinch, it can be removed by dismounting the barrel, which is a quick and easy operation.

LOAD-READY CASES — will be offered by Auto Mag Corporation through their distributors and dealers

in cartons of fifty at \$4.95, unprimed. These are made up from military brass in calibers such as 7.62mm NATO (same as .308 Winchester) and .30/06. The stamped crimp has been removed from around the primer pocket so that the reloader need not concern himself with this operation. In working with some of these cases, I found it helpful to give a few turns of a neck-chamfering tool inside the case necks to prevent shaving metal from the sides of the bullets during seating. Apart from that, reloading with the factory brass proceeded easily and smoothly. Reloaders will appreciate the fact that the cases are furnished in sturdy, compartmented plastic boxes with covers for long-term durability.



Above: Attache-type case has attractive outer appearance. Upper right: Shot capsule by TIC can be loaded in .44 AMP case and chambered singly through ejection port. Lower right: The .44 AMP loading, case-forming and reaming dies, by Eagle Products, with extended shell holder, reamer and a sample round of .44 AMP.



HOME-MADE CASES — At least two firms — Eagle Products and RCBS — presently offer reloading dies and case form/ream sets for making .44 AMP cases out of .30/06 or .308 brass. These may be obtained through the usual dealer channels or from Auto Mag dealers via the factory.

The .44 AMP requires the same shell holder as the .30/06 or .45 auto and, depending upon the make of loading press employed, it may be necessary to have an extended shell holder. The first step — not mandatory, but helpful — is to lubricate and full-length resize the military brass in a regular die for the given caliber: .308, .30/06, etc. This is followed by removal of the stamped crimp from around the primer pocket — not required if match brass is used — which can be done by scraping, cutting or

reaming, though I prefer to swage the pocket mouth by means of any of the several accessories available for this operation.

The next operation is to install the file/trim .44 AMP die, turning it into the top of the press till it bottoms snugly against the shell holder. If this locates the top of the die below the surface of the die mounting portion of the press, you'll need the extended shell holder, priced at about \$3.

With the lubricated case run up into the file/trim die, shell holder in contact with the lower surface of the die, the protruding excess of the case is cut off by means of a hacksaw. Use the fine-tooth blade, 32-tooth, if available. Cut close to the top of the die, as it's hardened to the point where the hacksaw won't bother it in the slightest. Use a flat mill file to remove any re-

maining excess brass or, if you prefer, a regular case trimmer can be used later in the process; specified trim-length is 1.296-1.298 inches. Remove brass filings and primer residue from the cases.

Install the expand/decap die of the regular reloading set and adjust it to produce a slight flare at the mouth. This wipes out the normal taper of the case, leaving it with sides almost parallel.

Install the standard sizing die and run the cases fully into it. Relubricate as required and take care to remove any brass filings prior to sizing. This puts a bit over .016-inch of taper over the length of the case.

At this stage of the process, the case walls are too thick in the neck. Were you to seat a bullet, the neck would bulge beyond chamber diame-

ter. It is necessary to provide clearance by removing brass at the neck and the recommended method is by inside neck reaming. Required equipment includes one ream die to hold the case during reaming, an extended shell holder (not necessarily required with all presses) and a reamer. The last is straight-fluted, as supplied by Eagle Products — the kit used in the tests — having a one-quarter-inch shank and an adjustable stop collar to control reaming depth. Auto Mag specs call for inside reaming to a depth of .490-inch, as measured from the mouth of a case trimmed to the specified length of 1.296-1.298 inches.

The case, lubricated as required, is run up into the ream die until the shell holder bottoms on the base of the die. The reamer is chucked into a good, heavy-duty, electric hand-drill and the reamer is inserted into the opening on top of the reamer die. Bring the reamer into contact with the case mouth before turning on the switch. Do not attempt to insert the reamer in the die while it is turning, since this is apt to damage the reamer. With the reamer turning, feed it down until the stop collar touches the top of the die; cut the power and pull the reamer out on the residual revolutions.

Again, remove all brass filings and shavings from the inside and outside of the prepared case — an air hose is most helpful, if available, taking precautions against blowing chips in an eye. The case will be load-ready after reaming, although a light pass to chamfer the inside of the neck will make it easier to seat the bullets.

LOADING PROCEDURES — are fairly routine and straight-forward. Auto Mag recommends the use of large-pistol primers. You may find that these will bottom out well below the surface of the case head, as they are slightly less thick than large-rifle types. This does not seem to pose any significant problem, ignition being totally reliable in the tests. Possibly, large rifle primers could be used, but there would not seem to be any obvious advantage in so doing.

LENGTH OVER ALL — must be adjusted to assure positive feeding from the box-type magazine. This will vary, according to the nose profile of the bullet being used. In general, the various types of jacketed soft point and hollow point bullets have cannelures for crimping when used with revolvers. If the case neck is brought to the center of this cannelure, the LOA should be correct. Note that the .44 AMP is given a gentle taper-crimp by the dies supplied in the sets. It should not be roll-crimped in the same manner as the .44 Rem mag because,

PRELIMINARY LOADING DATA

BULLET	POWDER	VELOCITY (F.P.S.)	
180 Gr. Super Vel	24 Gr. Olin 630-P	1653	
	25 Gr.	1687	
	26 Gr.	1751	
	19 Gr. Norma 1020	1295	
	20 Gr.	1482	
	21 Gr.	1605	
	25 Gr. Hercules 2400	1596	
	26 Gr.	1659	
	200 Gr. Speer	18 Gr. Norma 1020	1402
		19 Gr.	1525
20 Gr.		1585	
22 Gr. Olin 630-P		1570	
23 Gr.		1624	
24 Gr.		1680	
22 Gr. duPont 4227		1255	
23 Gr.		1303	
24 Gr.		1375	
22 Gr. Hercules 2400		1485	
23 Gr.		1561	
24 Gr.		1574	
240 Gr. Speer	8 Gr. Hercules Unique	980	
	10 Gr.	1230	
	12 Gr.	1346	
	17 Gr. Olin 630-P	1259	
	18 Gr.	1319	
	19 Gr.	1384	
	20 Gr.	1428	
	18 Gr. Hercules 2400	1252	
	20 Gr.	1378	
	21 Gr.	1435	
	22 Gr.	1479	
	15 Gr. Norma 1020	1245	
	16 Gr.	1329	

as with the .45 ACP, the loaded round headspaces by contact between the case mouth and a ledge at the front of the chamber.

In the tests, I used a flat bullet seating punch and seated all loads to a LOA of 1.610 inches, finding that this worked well with all bullets used.

FACTORY DATA — supplied by Auto Mag, specifies use of the CCI-350, magnum-type, large-pistol primer. I used this same primer throughout all of the supplementary tests to be discussed later.

SUPPLEMENTARY DATA — was worked up by use of the load-ready, unprimed brass supplied by Auto Mag, after conducting tests which showed that cases made from military brass by means of the Eagle dies functioned fully as well. Cases were primed with CCI-350s, chamfered inside the mouths and taken to the test range with a press, scales, powder measure and supply of assorted bullets and powders. This permitted the desirable process of starting low and working up cautiously, as conditions seemed to

warrant. A T333 Avtron chronograph was hooked to a photo-screen box by Chronograph Specialists — offering the two-fold advantage of being able to save considerable time by recycling at the push of a button, besides being able to chronograph and fire groups on target simultaneously. Firing was by use of the adjustable iron sights (well, stainless steel sights, to be precise), off of a sandbag rest on the bench.

There seems little profit in devoting extensive discussion to group sizes obtained, beyond noting that several were quite gratifying. As is common with bolt action rifles, groups expanded or shrank as the charge weight of powder was varied behind any given bullet. It is highly probable that another individual Auto Mag might "go to sleep" and group its tightest with a load up or down a grain or three of powder from those which gave best groups in the test gun.

For what it's worth, 20.0 grains of Hercules 2400, behind the 240-grain Sierra JHC bullet, grouped astounding-

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AUTO MAG RELOADING

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When fired offhand, recoil of Auto Mag is not particularly punishing. Large hand, long fingers are a decided asset.

ly well. The first three shots, at twenty-five yards, all went into one hole — center to center spread, as well as it could be measured, was less than .025-inch — with the fourth and fifth shots about .322-inch between centers, but ending with a maximum spread of 1.100 inches for all five. Considering that this was early in the tests, with open sights, on a gun to which I was not accustomed, I was most favorably impressed. This is thoroughly adequate handgun accuracy, in my book, and I'm confident the Auto Mag is capable of doing better — perhaps even with bleary-eyed me behind the trigger.

Gathering some white chips of clay-bird and placing them on the dusty bank of the range backstop showed that it was immensely capable from a two-handed, standing hold at one hundred yards. It was common to either hit the chip or land the big slugs so closely that it went flying in the ensuing ruckus. It was rare for the radius to exceed an area equal to the vitals of a deer at that distance. Make no mistake: This is a hunting gun, primarily and it is destined to fill an awful lot of space in freezers. Give it any reasonable chance and it comes roaring through like a true thoroughbred.

For my own satisfaction, I spot-checked several of the combinations listed in the factory-supplied load data given here previously, finding that the chronograph agreed within the natural minor variations. In fact, it came out considerably closer than most such data when I've attempted to verify it.

So, with that established, I branched off to explore some of the bullets and powders not covered in the dope from Auto Mag. I had brought along the remnants of a box of the 265-grain JSPs made by Hornady for use in the .444 Marlin, wanting to see how these might perform in the big silver pistol. Seated to the same 1.610-inch LOA, they fed and fired flawlessly. I obtained my peak velocity with this bullet on a rousing 18.0 grains of Alcan AL-8 powder: 1315 fps, about 1015 ft-lbs of energy.

Which is hardly a moment too soon to ring in the familiar refrain: Approach all maximum listed loads with caution in any individual handgun. Reduce charge weights if the loads are to be fired in extremely high temperatures; ambient temperature for the tests, by the way, was 97 degrees F. Since the writer and the publisher of GUN WORLD have no control over techniques and materials used in reloading, they cannot and do not accept any liability, expressed or implied, for events arising from the use of data listed here.

Running the 18.0 grain of AL-8 down the weight scale of bullets, a 240-grain Sierra went 1367 fps; a 200-grain Speer went 1297 and a 180-grain Sierra went 1367 fps.

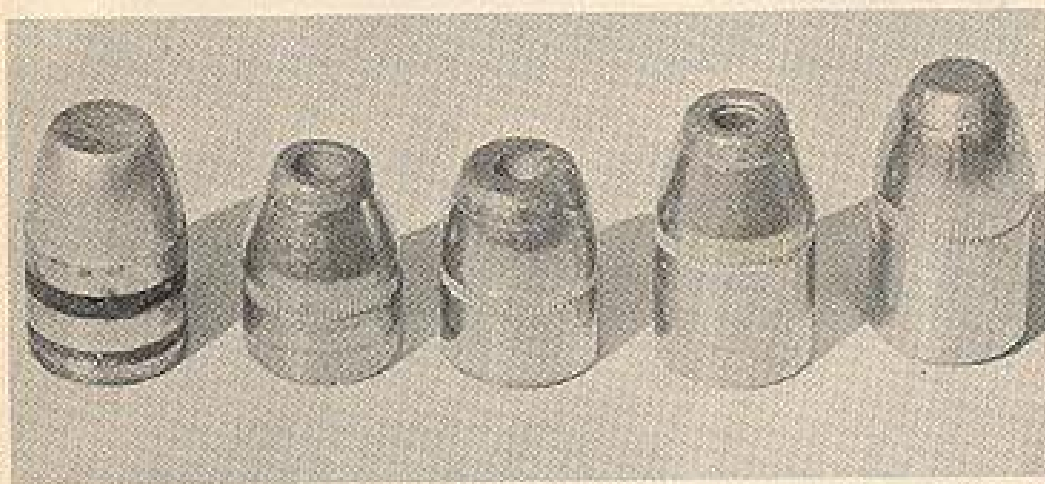
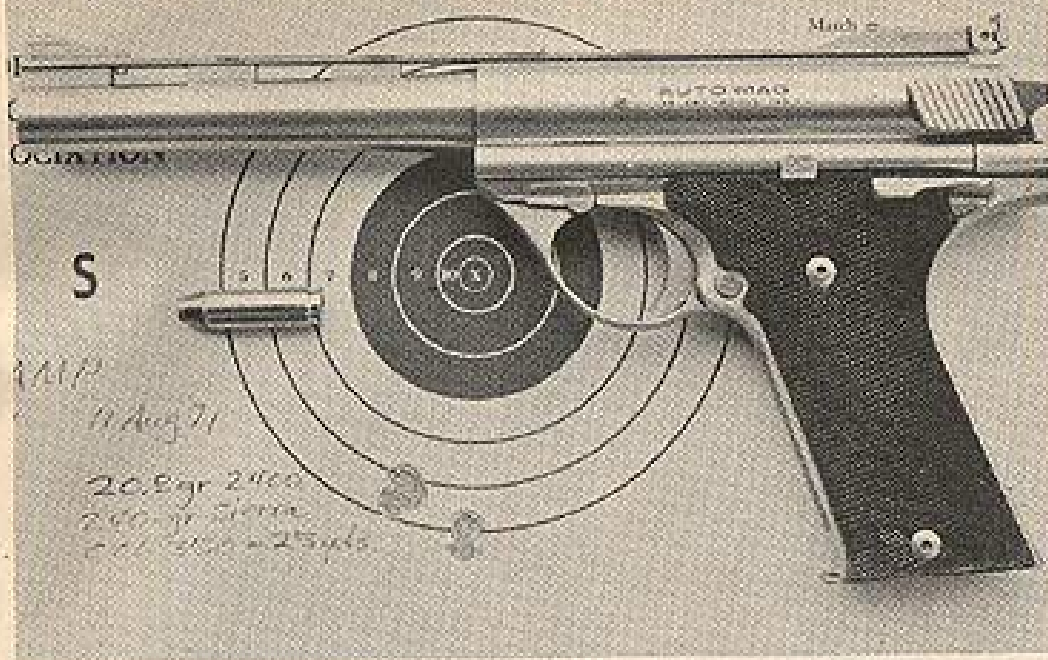
Hodgdon's H4198 — virtually identical to D4198 — proved a bit too slow-burning to be efficient in the 6.5-inch barrel with this cartridge. A charge of 23.0 grains was as much as could be compressed behind the bullet at the requisite LOA and a 240-grain Speer bullet went to 1064 while a 200-grain Speer barely hit 1015 fps.

Norma's N-200, being denser, permitted a charge weight of 26.5 grains and gave 1152 fps with a 180-grain Sierra, 1173 fps with a 200-grain Speer and 1210 fps with the 240-grain Speer.

The load which grouped well — 20.0 grains of 2400 with Sierra's 240-grain JHC — clocked 1261-1270-1261-1267-1239 fps; remarkably consistent uniformity. Raising the charge weight to 21.0 grains of 2400, same bullet, gave 1390-1367-1375-1386-1381 fps; still excellent uniformity, but the group expanded to 2.572 inches, from the previous 1.100 with the lighter charge — although four of the hits were within 1.250 inches.

The foregoing example points up an important difference between the .44 AMP and the .44 Rem mag when fired in revolvers: Absence of a gap between barrel and cylinder means no pressure loss at this point. As a result, you tend to match the revolver velocity with substantially less powder.

50 YARD SMALL BORE RIFLE TARGET



Upper: One of the better groups, described in text, put three into a tight clump, other two touching and close for 1.1-inch group at 25 yards. Center: From left, Lyman 429434 cast, 180-grain Super Vel, 200-grain Speer, 240-grain Sierra and 265-grain Hornady. Lower: Five of the powders tested, in approximate order of value.

Switching back to the 265-grain Hornady, 16.0 grains of 2400 gave 993 fps and worked the action, as did 17.0 grains of 2400 at 1091 fps and 18.5 grains of 2400 at 1213 fps. There were no obvious pressure signs at this point, but the base of the bullet was com-

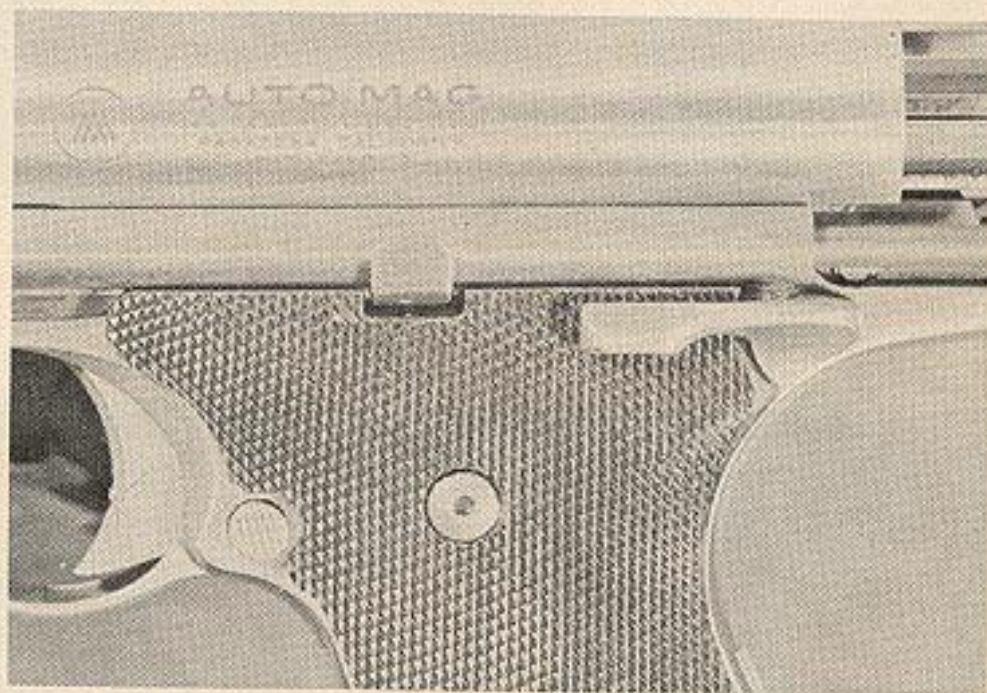
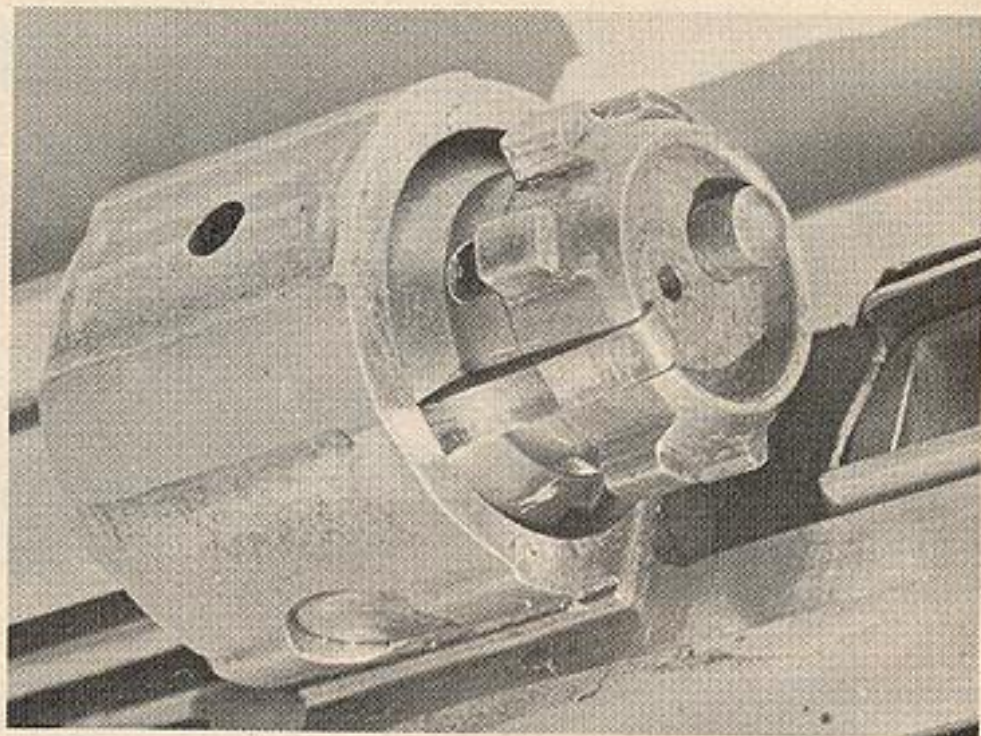
mencing to compress the powder and experience has shown that 2400 tends to lose velocity as you begin to compress the charge.

Wanting to try some cast bullets, I selected Lyman's number 429434 gas-

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AUTO MAG RELOADING

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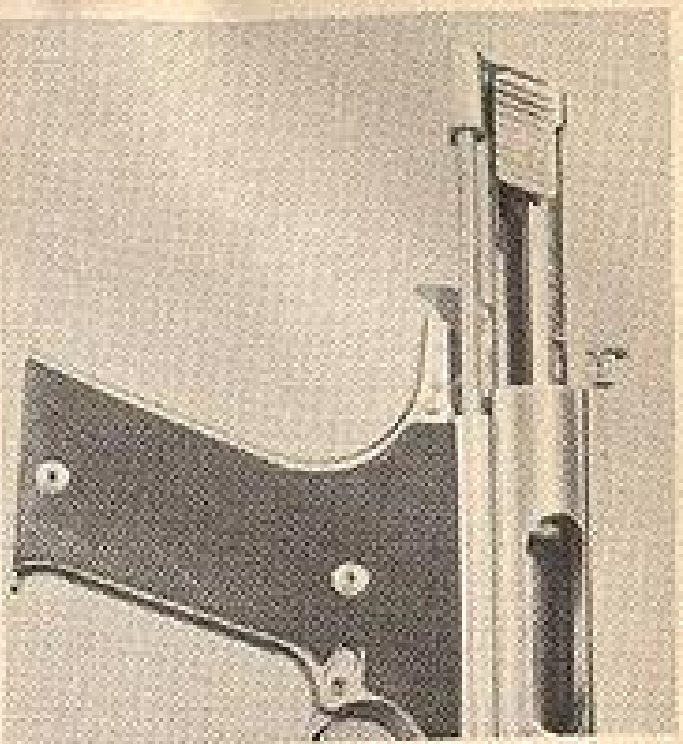


Upper: Details of the extractor, ejector and locking lugs can be seen in this close view of the rotary bolt face. Lower: Controls are on left, convenient for right-handers; hold-open is in center.

check design as one which duplicated the nose profile of the jacketed bullets closely. Cast in straight linotype alloy, this bullet weighed 215 grains and 18.5 grains of 2400 gave it a comfortable and effective 1226 fps of velocity, with flawless functioning through the action. Groups averaged around the two-inch mark at twenty-five yards — acceptable and probably capable of improvement through trail and error

research. This cast bullet design — listed under the caliber .44-40 in the Lyman charts — has given highly satisfactory results in several revolvers and rifles chambered for the .44 Special and .44 Rem mag.

One powder not listed in the Auto Mag load data was Hodgdon's H110, a number which has given good results in .41 and .44 Rem mag loadings. With



When bolt is in full recock, or locked in open position, the extent of its rearward projection is as shown here.

21.0 grains of H110 behind it, the 240-grain Sierra JHC slid out at a sizzly 1414 fps, with good uniformity and accuracy.

Staying with H110 and switching to the 180-grain Sierra JHC, 24.0 grains of H110 gave 1447 fps; 27.5 grains of H110 went 1569 fps; 27.3 grains delivered 1618 fps and one final boost to 28.8 grains of H110 screamed through the screens at a howling 1748 fps.

To add perspective, Speer's Number 8 manual checks the .44 Rem mag — in a Model 29 S&W with 6.5-inch bar-

rel — at 1628 fps with 29.0 grains of H110 behind the 180-grain JSP bullet. So the gapless Auto Mag barrel of the same length generates an added 120 fps on 0.2 grains less of the same powder.

All in all, the .44 AMP checks out as a reloader's dream-cartridge: beefy and tough in the head, since the parent brass is built to withstand the hairiest of rifle pressures; locked into the chamber with full support at the time of firing by a rotary bolt design featuring six locking lugs.

One of the steels used for critical components of the Auto Mag is called 455 Carpenter: a spin-off of the space program, it's a double vacuum-melt alloy with a goodly dollop of titanium in its make-up and it sells at the wholesale level for around \$1.89 per pound. It's superb for any heavy-stress application — provided you can develop a technique for machining the fantastically tough stuff into the desired shape and dimensions. Auto Mag has brought it off through a highly sophisticated process of annealings and re-heat-treatings but words such as easy and simple have no place in that particular saga.

So the substantial price-tag is justified on several counts. Here is a big, massive handgun that combines a devastating punch with long-range accuracy and up to eight shots as fast as you can drag the muzzle back down. It's built painstakingly, unstintingly to do its Thing for about as long as you want to lug it about and stuff loads into its hopper — and for some years after that. So, after sixty-five years, we have a new heavyweight champ in the autoloading pistol division: high time, no? ●