

# The Los Angeles Silhouette Club

## The .44 SWC

By Glen E. Fryxell

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Human society has always valued marksmanship, and bestowed honors upon those who have proven their skills in competition. This is a time-honored tradition that goes back to Biblical times (e.g. the story of David and Goliath), and comes up through the Middle Ages with colorful characters like Henry VIII, to the modern day. In the second half of the 19th century, handgun design had progressed to the point that handguns were beginning to be thought of as something more than last ditch defensive tools, or weapons of the duel. The ability to accurately place a handgun projectile on a distant target began to be a realistic goal, and shooters' skills began to grow to achieve this goal. Not surprisingly, this led first to informal, and later to formal competitions. In 1870, S&W began production of their large-frame Model Number 3 revolver, which was quickly recognized for its fine accuracy. The Russian Army ended up ordering over 100,000 of these guns, chambered for the new "inside lubricated" .44 Russian cartridge. Bullseye shooters of the day flocked to this gun like flies to honey. This market demand led to the first mass-produced revolver made specifically for target competition, the S&W New Model Number 3 Target, introduced in 1886. This combination of revolver and cartridge became the standard for accuracy in handgun marksmanship for many years.

The bullet used in these competitions was the standard lead round-nose bullet. While superbly accurate, these bullets did anything but cut clean holes in the targets, and sometimes accurate scoring was difficult, making the outcome of closely competed matches somewhat contentious. In 1900, A. L. A. Himmelwright designed the so-called Himmelwright wadcutter (Ideal #429220), an oddly shaped bullet, designed to cut clean, full-diameter holes in target paper. The extended proboscis found on Himmelwright's bullet was presumably to help maintain aerodynamic stability in flight. It became known simply as "The Wadcutter".



The Himmelwright  
wadcutter  
(Ideal 429220)

The concept of designing bullets specifically for target shooting took hold and a flurry of activity followed over the next several years. The first of these bullets that a modern-day shooter would recognize as a semi-wadcutter, would be the Ideal 358271 designed by B. F. Wilder in the 1903-1904 timeframe. This 150 grain .38 caliber target bullet had 2 lube grooves, a wadcutting shoulder, a radiused ogive, leading to a flat meplat; a familiar combination to shooters today, but a novel development for the day. The .44 Russian was the leading target cartridge of the period, so it's no surprise that the success of the Wilder wadcutter led to the design of a similar bullet for the .44 round. C. E. Heath of the Boston Revolver Club designed the Ideal 429336 as a target bullet for the .44 Russian cartridge (remember, the .44 Special was not introduced until 1907). This bullet was similar to the Wilder wadcutter in that it had 2

narrow lube grooves, a wadcutting shoulder, a radiused ogive, coupled with a flat meplat. It was a popular target bullet, and would inspire one of the greatest bullets ever made.

In 1928, Elmer Keith drew up his design for the now famous 429421, what is now known universally as the Keith semi-wadcutter (SWC). The SWC terminology wasn't initially used for this type of bullet design, but came into fashion later in the 1950s. Originally this design was simply known as the Keith bullet. In essence, what Elmer did was to take the 429336 basic design and convert the forward grease groove to a beveled crimp groove, and then fatten up the rear grease groove to hold more lube. He cited the 358311 .38 round-nose as his inspiration for these features -- he liked how that bullet behaved during casting, loading and shooting (but not how the round-nosed bullet killed game), and wanted to capture those desirable features in the bullet he was designing for the .44 Special. The weight, ogive and meplat of the 429336 were left unchanged. The result was the Ideal 429421, and it was everything that Elmer had aimed for. It delivered target grade accuracy, cut clean holes in paper and meat, killed game quickly and humanely, and was accurate over long ranges. How we think of revolver bullets was forever changed. A HP version of the 429421 soon followed, providing an expanding version of the Keith SWC for enhanced game-killing capability.



The Heath target bullet (Ideal 429336).



The Keith SWC and HP (Lyman/Ideal 429421).

In pre-WWII America, Hensley & Gibbs were also making moulds for the .44 SWC, such as their designs #35 and #45. These are both 240 grain, plain-based bullets, that differ in the design of their lube grooves and nose length. I have a GC version of H&G #45 (basically a 240 grain version of their #140), and it is an exceptionally accurate bullet. Later, in the early 1960s, Elmer Keith was frustrated with the changes that Lyman had made to his SWC designs, so he turned to H&G and commissioned them to reproduce his original SWC designs. The results were the H&G #503 (.44 SWC), the #501 (.45 SWC) and the newly designed #258 (.41 SWC) for the brand new .41 Magnum.

Modern-Bond was also producing moulds for .44 SWC's during the 1930's and '40s. Their catalog included the D-429 (D-429770, the 230 grain "Ness" bullet) and E-429 (E-429690, the 240 grain "Resser" bullet), both of which captured the design features we think of as SWC today. The Ness bullet had a thick base band, a square-cut grease groove (a true 90 degree cut), a beveled crimp groove, and a skinny little forward driving band, leading into a long straight ogive and a moderate sized meplat. The Resser bullet had a radiused ogive, similar to the Keith SWC, but had a narrow forward driving band and two different sized square-cut grease grooves. These moulds are not commonly encountered today.

During this timeframe, Cramer was also making SWC moulds for the .44 Special. The Cramer #7 was listed at 250 grains (unspecified alloy) and was very similar to the

original Keith SWC, Ideal 429421, with 3 sizable driving bands, a beveled crimp groove, a wide flat-bottomed grease groove, a double radius ogive and large flat meplat. When cast with WW alloy, the Cramer #7 drops from the blocks at 260 grains, and is a dandy bullet. I know one very knowledgeable bullet caster who has chosen this bullet as his one and only .44 Magnum bullet. It does everything well; given its heritage and its weight, there's little wonder why. Cramer was bought out by SAECO in the early 1950s.



The Cramer #7 (photo by Robert L. Applegate).

Gordon Boser also designed a SWC for the .44 Special. The Ideal 429360 was first cataloged in Ideal Handbook #37, published in 1950. By cherry number, it would seem that #360 might have come out sometime in the pre-WWI period, but Boser didn't come on the scene until much later and this bullet wasn't included in the Ideal Handbooks until 1950, so I suspect that this is a recycled cherry number (I haven't found any reference to the original #360, perhaps this number was skipped in the original series?). Boser's bullet featured a

straight ogive, and a sharp corner where the ogive met the meplat (similar to the Modern-Bond "Ness" bullet, described above). It had a thick base band, and a small, round grease groove. It also had a somewhat undersized forward driving band (bullets from my mould measured about .424" across the forward driving band, perhaps this was intended to be some sort of bore-riding band? or perhaps it was designed for Colt SAA revolvers with tight bores?). As a result of its short bearing surface (i.e. only the last two driving bands) and undersized front driving band, this bullet tends to have alignment problems in modern revolvers, and accuracy is generally poor.

In the post-war growth of the early 1950s, S&W was selling a lot of .357 Magnum revolvers. Now keep in mind that reloading components were not as prevalent in those days as they are today, and to be a pistol shooter in those days pretty much meant that you were a bullet caster. Well, the blistering velocities of the First Magnum got some of

429360



The Boser Bullet (Lyman/Ideal 360)

the shooters of the day thinking about adding gas-checks to their revolver bullets. Ray Thompson designed such a bullet (the Ideal 358156) for the .357 Magnum. This excellent bullet not only provided superb accuracy, it also basically eliminated the leading problems that many of the early Magnum shooters were complaining about.

The 358156 was, and remains today, immensely popular for the .357 Magnum. When the .44 Magnum was unveiled in the mid-1950s, Mr. Thompson followed suit with gas-checked .44 SWC's of 215 and 255 grains (the Ideal 429215 and 429244, respectively). All of the Thompson SWC's are superbly accurate. The Thompson SWC's were also available in HP form, which make excellent hunting bullets (the 429215 HP for vermin



D-429  
44 S. & W. Special  
Bullet Metal  
1 Part Tin to 20 Parts Lead  
—D-429770

STOCK MOULD  
No. D-429770 two bullets 230 gr.  
"Ness" Bullet



E-429  
44 S. & W. Special  
Bullet Metal  
1 Part Tin to 20 Parts Lead  
—E-429690

STOCK MOULD  
No. E-429690 two bullets 240 gr.  
"Besser" Bullet

Catalog entries for the Modern-Bond .44 SWC's (this figure was taken from the scans online at <http://www.castpics.net/research.htm> -- an excellent online resource for cast bullet data)

and the 429244 HP for larger game).

Lachmiller was a significant player in the field of reloading tools throughout the 1950s. In the 1960s they added bullet moulds to their product line. One of which was a .44 SWC very similar to the now modified Lyman 429421, with its rounded grease groove, and somewhat smaller forward driving band. Like the Lyman and Cramer designs that preceded it, this bullet shoots, and kills, very well. Lachmiller made a wide variety of fine 2 and 3 cavity bullet moulds, for both rifles and pistols. They were bought out by RCBS in the late 1970s



The Thompson SWC's; the Lyman/Ideal 429244 SWC and HP, and the 429215 SWC and HP.



The Lachmiller .44 SWC mould.

Ohaus jumped into the bullet mould business in a big way in the early 1970s with an extensive selection of mould designs. Included in these 60+ moulds designs was a .44 SWC similar to the Keith design. RCBS bought out the Ohaus line in the late 1970s. The RCBS line now includes several .44 SWC's, ranging from 225 to 300 grains, one of which is marketed as a .44 Keith. While this design captures virtually all of the design features that Elmer drew into his landmark 429421 back in 1928, it is also graced with an unusually wide v-shaped crimp groove that was not a part of the original Keith design (at least not according to the original drawings of the Keith bullet on page 90 of the Ideal Handbook #29, published in 1929). The other RCBS .44 SWC's have a more traditional beveled crimp groove. I have worked with most of the RCBS line of .44 SWC's, and they have all shot very well for me.

NEI has a whole host of 44 SWC's ranging from 225 grains to 300 grains, largely paralleling the classic designs of RCBS and Lyman. Most notable to my eye is the beautifully balanced design #256, which is listed as a 255 grain plain based SWC. This must be a linotype weight as these bullet drop from my mould at 270 grains with WW alloy. This is a very useful weight for the .44 Magnum, and this well-proportioned SWC captures all of the features that Elmer wanted, and tops it off with a .340" meplat.



The RCBS .44 250 grain SWC.



The NEI #256 (.44 SWC, 270 grains WW alloy).

For the most part the .44 SWC has stayed true to the original Heath design weight of about 250 grains. Ray Thompson designed a lightweight 215 grain GC-SWC for high velocity .44 Magnum loads in the 1950s, and Ohaus/RCBS followed suit with their 225 grain SWC, as did NEI. In more recent years, following the introduction of the SSK 320 grain sledgehammer in the early 1980s, the pendulum has swung the other direction, towards heavyweight bullets for the .44 Magnum. The two most notable contributions here are the GC heavyweight SWC's from Lyman and RCBS. Both of these

bullets are exceptionally accurate, hit hard and penetrate deeply, whether from a sixgun at 1300+ fps or a lever-gun at 1600+ fps. NEI and H&G also offer 300 grain .44 SWC's (the NEI #268C is a GC design, while the H&G #328 is PB). H&G moulds are now available from Ballisti-Cast.

#### **.44 Special:**

When loading the .44 Special for general use (i.e. 800-1000 fps), it almost seems wrong to load the case with anything other than a SWC that captures the elements of Elmer Keith's basic design, whether from Lyman/Ideal, Cramer, RCBS, H&G, or NEI. Gas-checked bullets are not needed, or even appropriate, for this level of ballistics, and heavyweight bullets raise pressures faster than velocities in this cartridge, making the PB 250 grain SWCs the logical choice for optimum performance from these guns. If the shooter wants more expansion than these bullets offer, then the Keith SWC (429421) was also made in HP form. Cast soft (i.e. BHN of 7-8) these cast HP's expand just fine at 1000 fps



The RCBS 44 300 GC-SWC, and the Lyman 429650 GC-SWC (310 grains WW alloy).

#### **.44 Special +P+:**

I don't load "Elmer Keith loads" for general purpose use in the .44 Special anymore. The only reason I load the .44 Special to 1200 fps these days is to re-live history, to feel with my own two hands what Elmer Keith felt as he experimented in those long-gone days, to understand where the .44 Magnum came from, and to hunt with the loads that Keith hunted with back in pre-WWII Idaho. Since the motivation behind these loads is heavily steeped in nostalgia and historical accuracy, the only bullets used to construct these loads are the Lyman/Ideal 429421 (the original version with the full-width forward driving band and flat-bottomed grease groove), in both SWC and HP form (the HP's are generally cast 20-1). It can be very satisfying to re-visit history periodically.

#### **.44 Magnum:**

The .44 Magnum is an amazingly versatile cartridge! And this versatility plays itself out in the wide selection of .44 SWC's that are of value to the .44 Magnum shooter. While GC bullets are not required for the .44 Magnum, the higher pressures and higher velocities experienced with this round mean that the presence of a GC can help to make up for modest deficiencies in the alloy or lube, and therefore make the sixgunners life a little simpler. While the Himmelwright wadcutter might look a little odd loaded in the .44 Magnum case, and the Boser SWC probably wouldn't deliver all the accuracy that the cartridge is capable of, any of the other SWC's from Keith or Thompson, or those inspired by them, is of value to the .44 Magnum shooter. The 215-225 grain GC-SWC's provide higher velocity and lower recoil for hunting animals ranging from rodents up to deer in size. The 240-250 grain SWC's are excellent general purpose .44 Magnum bullets, for silhouette competition to hunting deer, black bear and even elk. If the hunter wants an expanding version of these bullets, the Keith and Thompson SWC's were also made in HP form. Cast to a BHN of about 12 (e.g. WW alloy sweetened with about 2% tin), these bullets expand fine on game. For the larger stuff like elk and

moose, the 300 grain SWC's couple deep penetration with excellent accuracy. There are many useful SWC's for the .44 Magnum, but perhaps the most versatile overall is the 265 grain Thompson SWC (the Lyman 429244 GC-SWC). I know one very successful handgun hunter who uses only the 429244 in his .44 revolvers. To date, he has taken a couple dozen elk and a bunch of deer with this bullet. He really likes it.

The story of the .44 SWC started back in the 1860s with the introduction of the S&W Model No. 3 revolver. Thus, was created the need for the Himmelwright wadcutter, which begat the Heath bullet, and the Heath bullet begat the Keith SWC, and the Keith SWC begat the Thompson SWC. As a result of these pioneers and their experimentation, the .44 caliber revolver established a firm place in American history, because without these bullets, the .44 revolver would have never delivered the level of performance (and hence acceptance) that we associate with it today. What started out as a bullet designed solely for competitive paper punching, morphed into a general purpose bullet, and ultimately resulted in an outstanding series of handgun hunting bullets. The story of .44 SWC continues, under a full head of steam, head-long into the 21st century.

- Glen E. Fryxell

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