"Holler Bases"

Hollow Based Bullets

Hollow based bullets have been used over the years for a variety of purposes.

I expect the first major use of them here in the United States was in the War Between the States in the form of the minie ball.

In this application, slightly undersized conical bullets with a hollow base were used in muskets and rifles of the era to facilitate easy loading in battle in black powder weapons that were fouled with black powder residue. The hollow skirt, as we'll call it, expanded to fill the bore and acceptable accuracy was still obtained.

Later, hollow base projectiles were tried in black powder pistols in the form of hollow base, conical bullets.

This trend carried over to the .45 Colt and it has been loaded as a factory loading with a 250-grain hollow base bullet for years.

The old .38 Colt and .41 Colt cartridges used a heel based, hollow based bullet and many of these are still cast and loaded by cowboy shooters for authenticity purposes.

Many old .38 Special loads loaded early in this century were loaded with hollow base bullets in the 158 grain round nose configuration and these may still be encountered in ammunition on dealers shelves and in fact in some present day 158 grain round nose factory cartridges.

More recently, swaged, hollow base wad cutters became the standard for accuracy in .38 Special Match ammunition.

Overseas, there has been wide use of the hollow base bullet and the example I quote is the .455 round from Great Britain.

Why a hollow base bullet?

The minies used it to compensate for the smaller diameter required for quick loading in fouled BP rifles.

The hollow base expands during firing and somewhat compensates for any loose tolerances in the chamber and bore and provides better accuracy.

The hollow base tends to act as a stabilizer during flight to give better accuracy over longer distances.

The hollow base allows better "bump" during firing and allows the bullet to expand and fill the cavity when loading requires a smaller diameter base for heel loading.

This design makes more efficient use of a smaller charge of propellant.
It has been used to compensate for a shorter case in a longer chamber as in the case of the .38 Special case in a .357 Magnum chamber and a .44 Special case in a .44 Magnum chamber.

Is it Worth It?

Is all of the trouble of casting hollow base projectiles worth the effort? In black powder use, I believe that it is.

I'll attempt to shoot some of these bullets using smokeless loads and see what results I get and give you some ideas of

modern day applications.

Casting Hollow Base Bullets

Casting hollow base bullets is the same as casting any bullet with the exception of removing and reinserting the hollow base plug. This is easily mastered after a few repetitions. Most are single cavity moulds and all I have ever encountered were nose pour.

I start off and throw 10-15 bullets to warm up the mould and the mould usually starts dropping good bullets. It may take longer with a larger mould and I've even heard of people heating the base pin on shotgun sabot moulds, as they're pretty large.

You have to inspect the bullets pretty close and discard any with the normal casting defects. In addition, inspect the base cavities and discard any with any defect in the skirt, as this part is critical. It's holding all the pressure of the powder charge in the few microseconds as the bullet leaves the barrel. This is where I expect the problem lies with inaccuracies during firing.

The key is to have the mould hot and the base plug/pin hot and good bullets will result.

The Bullets

L-R: 35870, 358395, and 358431, 450229, 450229 modified, 45468, 429422 and 457196

35870… This little bullet drops from my mould at .358" and weighs 150.0 grains when sized and lubed. It was originally intended for the .38 Colt cartridge.

Cartridge	Bullet	Weight	Sized	Powder	Weight	Primer	Av Vel	SD	Comments
.38 Special	35870	150.0	.3575	AA #5	5.1	WSP	705	21.1	Very Acc
.38 Special	35870	150.0	.3585	Bullseye	2.7	WSP	592	8.1	3" at 25 Yards

358395…This is a wad cutter design by Ed McGivern and used back in the early days of bulls eye shooting. Somehow, three of these moulds have followed me home and all cast different weight bullets. This is an old Ideal mould and has the hollow base pin built into the mould similar to the 429422 pictured below. It drops from the mould at .361" and weighs 151.4 grains sized, lubed and ready to load. Of all the hollow base moulds I have, this bullet loaded in .38 Special cases is very accurate and great for small game.
Caution – Do not use loads labeled as .38/44 loads in a regular .38 Special. Use in a .357 Magnum only. They are hotter than ++P loads and likely damage will occur.

Cartridge	Bullet	Weight	Sized	Powder	Weight	Primer	Av Vel	SD	Comments	Pistol

.38/44	358395	165.5*	.3585	Unique	6.0	WSP	1218	8.6	Good Acc	Blackhawk
.38/44	358395	138.0*	.3585	Unique	6.0	WSP	1140	26.3	Good Acc	Blackhawk
.38/44	359395	128.8*	.3585	Bullseye	4.6	RSP	1103	4.4	Good Acc	Blackhawk
.38 Special	358395	154.4*	.3585	Bullseye	2.7	WSP	706	6.6	2” at 25 Yards	Model 15
.38 Special	358395	154.4	.3585	Bullseye	3.5	WSP	852	9.0	Acc at 50 and 100 yards	Model 15
.38 Special	358395	154.4	.3585	700-X	3.5	WSP	873	12.9	Acc at 50 yards	Model 15

* Bullets came from three different moulds. All loads loaded in .38 Special cases.

358431…This is Elmer’s old bullet for the .38/44 and .357 Magnum. I have a couple of these and this one drops from the mould at .361” and weighs 155.5 grains ready to load.

Caution – Do not use loads labeled as .38/44 loads in a regular .38 Special. Use in a .357 Magnum only. They are hotter than ++P loads and likely damage will occur.

Cartridge	**Bullet**	**Weight**	**Sized**	**Powder**	**Weight**	**Primer**	**Av Vel**	**SD**	**Comments**
.38 Special	358431	155.5	.358	Green Dot	4.0	WSP	801	25.5	Not Acc M15
.38 Special	358431	155.5	.358	Red Dot	3.7	WSP	796	36.4	Not Acc M15
.38 Special	358431	155.5	.3585	700-X	3.5	WSP	760	10.8	Acc at 50 yds M15
.38 Special	358431	155.5	.3585	Bullseye	3.5	WSP	735	8.3	Acc at 50 yds M15
.38 Special	358431	155.5	.3585	WW 231	4.0	WSP	745	19.6	Acc at 50 yds M15
.38/44	358431	155.5	.3585	WW 231	4.8	FSP	932	15.3	Not Acc .38 Spl case/Blackhawk
.38/44	358431	155.5	.3585	Herco	6.2	FSP	1099	26.3	Not Acc .38 Spl case/Blackhawk
.38/44	358431	155.5	.3585	Unique	6.0	FSP	1089	14.1	Not Acc .38 Spl case/Blackhawk
.38/44	358431	155.5	.3585	Blue Dot	7.5	FSP	955	16.1	Fr Acc .38 Spl case/Blackhawk
.38/44	358431	155.5	.3585	AA #5	6.5	FSP	940	10.7	Fr Acc .38 Spl case/Blackhawk
.38/44	358431	155.5	.3585	Bullseye	4.2	FSP	913	12.6	Not Acc .38 Spl case/Blackhawk
.38/44	358431	155.5	.3585	2400	11.0	WSP	1044	67.4	Good Acc .38 Spl case/Blackhawk
.357 Magnum	358431	155.5	.358	700-X	5.0	CCI Magnum SP	1029	18.1	Not Acc Blackhawk
.357	358431	155.5	.3585	AA #5	8.5	FSP	1191	47.6	Good Acc

Magnum									Blackhawk
.357 Magnum	358431	155.5	.3585	Herco	7.5	FSP	1181	24.0	Very Gd Acc Blackhawk

All cartridges crimped in crimp groove. Blackhawk is a 6 ½" barrel model. M15 is a 4" S &W.

429422…This is another one of Elmer's old designs for the .44 Special and .44 Magnum. Pictured below, this mould drops bullets at .431" and weighs 251.9 grains ready to load.

Cartridge	Bullet	Weight	Sized	Powder	Weight	Av Vel	SD	Seat Depth	Comments
.44 Special	429422	251.9	.431	Unique	8.0	976	29.3	Crimp Groove	Acc
.44 Special	429422	251.9	.431	2400	13.5	974	30.5	Crimp Groove	Not Acc
.44 Special	429422	251.9	.431	American Select	7.0	1023	8.0	Crimp Groove	Not Acc
.44 Special	429422	251.9	.431	700-X	4.9	824	9.4	Crimp Groove	Not Acc
.44 Special	429422	251.9	.431	Blue Dot	10.0	970	29.1	Crimp Groove	Not Acc
.44 Special	429422	251.9	.431	4759 Milsurp	13.0	911	13.9	Crimp Groove	Not Acc
44 Magnum	429422	251.9	.431	Blue Dot	15.0	1276	21.1	Crimp Groove	Ex Acc
.44 Magnum	429422	251.9	.431	700-X	9.0	1158	24.3	Crimp Groove	Acc
.44 Magnum	429422	251.9	.431	Herco	9.5	1073	7.6	Crimp Groove	Acc
.44 Magnum	429422	251.9	.431	Blue Dot	12.5	1134	39.9	Crimp Groove	Acc

The 429422 was tested in a pair of Ruger Super Blackhawks. It was also tested in a Marlin 336 .44 Magnum but accuracy was non-existent. It is apparent from the test results that the 429422 does not give good accuracy from a .44 Special case in a magnum cylinder.

45468…. This little bullet intended for use in light .45 Colt loads and has some potential use in the various .45s but is lighter in weight than I normally prefer. It drops from my mould at .454" and weighs 173.2 grains.

Cartridge	Bullet	Weight	Sized	Powder	Weight	Av Vel	SD	50 Yards	100 Yards
.45 ACP	45468	173.2	.451	Bullseye	4.5	866	6.8	Acc	Not Acc

Tested in a Ruger Blackhawk convertible with a 5 ½" barrel.

L-R: 450229, 450229 modified

450229…This is another bullet intended primarily for black powder use. Mine drops from the mould at .451 and

weighs 159.3 grains but it shoots all right in my Ruger sized to .451.

Cartridge	Bullet	Weight	Sized	Powder	Weight	Primer	Av Vel	Seat Depth	Comments
.45 ACP	450229(Mod)	206.0	.451	Bullseye	4.5	WLP	848	1.192 OAL	Acc
.45 Colt	450229(Mod)	239.7	.451	WW 231	8.0	RLP	933	1.605 OAL	Acc
.45 Colt	450229(Mod)	260.5	.451	WW 231	8.0	RLP	899	1.605 OAL	Acc

Loads tested in a Ruger Blackhawk convertible, 5 ½" barrel.

450229 (modified)… There always has to be someone in the crowd that is not satisfied with the way things are and wants to change them. I guess I'm the one in this crowd. I always read Keith's favorable writings on the factory Remington hollow base bullet and how affective it was as a factory loading in the .45 Colt. I made a longer standoff for the #450229 and this increased the length of the base band and the weight. Since I am able to vary the length of the stop screw, various weights can be obtained. If I was wanting a bullet to duplicate this design, I believe I'd pay NEI the money and get a custom made one rather than go this route again.

457196… This bullet was intended for the .455 British. I picked the mould up at an estate sale years ago and figured to try it in the .45/70. Mine casts at .457" and weighs 309.4 grains. Since this article is basically about handguns, I'll tell you now, even with the hollow base, it didn't shoot well in the Marlin .45/70 when I tried it.

Cartridge	*Bullet*	*Weight*	*Sized*	*Powder*	*Weight*	*Primer*	Av Vel	Seat Depth	*Comments*
45 Colt	457196	309.4	.452	Unique	8.0	HLP	854	14.6	Good Acc

Tested in Ruger Blackhawk, 5 ½" barrel.

These loads were fired in a Ruger Blackhawk 5 ½" barrel. I was amazed at the consistency of the HB #457196 in the .45 Colt. None were recovered as I expect they're penetrating pretty well at that velocity with that weight. I'll have to load some more of this load and play with it. Not worth going out and buying a mould for but if you have access to one, they make darn good .45 Colt loads.

Unusual Mould

The Ideal 429422 mould I have in an unusual but very nice specimen of the mould maker's art. Made back when companies and employees took pride in their work.

Ideal 429422 Hollow base mould and bullets

As you can see, it is a single cavity and someone over the years has attempted to add vent lines, which I haven't found to be necessary in these old un-vented moulds. This is the earlier Ideal method of making a hollow base pin. The later method used a separate pin for the hollow base. As with all hollow base moulds, this one is a nose pour. The handle attachment screws attach the handles from the top, making it necessary to remove the sprue plate and hardware. The hollow base pin is captive and held in place by a #4 screw that comes in from the back of the right mould half. It allows about .125" of play between the mould half and the pin when the halves are open. Closing the mould halves enables the pin to fit and index properly for the next bullet. When a bullet is cast, open the mould halves and tap the handle hinge pin and the bullet falls off of the pin and you are ready to close the handles and cast the next bullet. This makes for very fast casting…almost as fast as with a single cavity mould.

I have another 429422 which has had the pin modified in such a manner that it will make either hollow base or plain, solid base bullets. It's the best of both worlds.

Are Hollow Base bullets worth the effort?

I've been playing with these bullet designs now for several years. I have only achieved success several times and then not with a load that I'd normally carry and shoot other than with the 358395 in the .38 Special.

If you have to have a vintage design mould for an old handgun, be my guest and try them.

If you're shooting modern guns and just have a hankering as I did, be ready to search long and hard for old moulds, be ready to pay premium prices for the moulds and also be ready for disappointing results.

Instead, be assured that bullets like the #358495 WC, the #358429 SWC, the 429421 SWC and a host of .45 bullet designs will serve you better than a hollow base design that's hard to cast and difficult to locate because it's been obsolete for some years.

But, as the old saying goes: "There's those that can read about electric fences and there's those that can watch other people and electric fences and learn, and there's guys like me that have to pee on them themselves before they learn."

John Goins/akabeagle