



Special thanks to:

Lee W. (plans for decapper and 7.5 Swiss reloading data)
[LEE Precision](#) (donation of 7.5 Swiss expanding pin)
Dangerous Dave [Old Western Scrounger](#) (Berdan primers)

CAUTION!: The following article pertains to rifle cartridge reloading. We make no statements, warranties or claims to the safety of the reloaded cartridges, reloading method or load data. Reloading cartridges is to be taken seriously and you should only proceed if you feel totally comfortable and willing to accept any and all risks for your actions.

I was looking through a big tub of shot brass that I keep all my “non reloadable” brass in and was lamenting on the fact that some of it was just too nice to toss out (CHEAP, cheap cheap cheap.....). Then someone pointed out to me that one CAN get Berdan primers here in the US. One thing led to another and what follows is my experience in reloading Berdan primed brass.

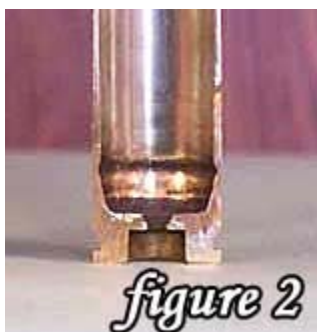
First off, let me say that I still stick by our current statement that reloading Berdan primed brass is more labor intensive than Boxer primed brass. No getting around that fact.

Second, this article is an attempt to show you the technique how you can reload with Berdan primers, it is not intended to offer up the exact perfect accurate load for your Swiss rifle. That is for you to work up. In essence, I am going to show you that the rounds that I loaded using the technique described did indeed go BANG (in the right direction).

What's the difference? Berdan vs. Boxer Primed Brass



In a nutshell, Berdan uses an anvil “teat” that is built into the base of the cartridge. There are two flash holes on either side of the anvil.



The Boxer has the anvil built into the primer cup itself. Boxer brass has one large hole to pass the flash to the powder.



Primers on right are PMC Berdan Large rifle. They are firing side up. A thin foil like material covers the primer compound itself. The Boxer large rifle primers on right show the anvil inside the primer cup.

A Little History:

In general, Berdan primed ammo tends to be the stuff that is imported from overseas

(Europe) and is the “mass produced” mil surp ammo that may be brand spanking new or decades old.

Boxer primed ammo seems to be a “US only” product, but in fact it is being made overseas as well.

I found it interesting to learn that both Berdan and Boxer refer to the surnames of Army officers who developed their respectively named priming systems. Oddly enough, Colonel Hiram Berdan was an American and Colonel E.M. Boxer was a British officer. Colonel Boxer actually designed an entire cartridge that used a coiled brass case with an iron base. Whereas the Boxer cartridge was made obsolete, the Boxer primer was so well designed that it has pretty much remained unchanged over the years. American Colonel Berdan developed both his priming system and a cheap method of drawing brass to form cartridges. I find it ironic that the American invention became the standard in Europe and the British invention became the standard in America.

Source: The Book of Rifles, Smith et. al., 1948

Reloading Issues:

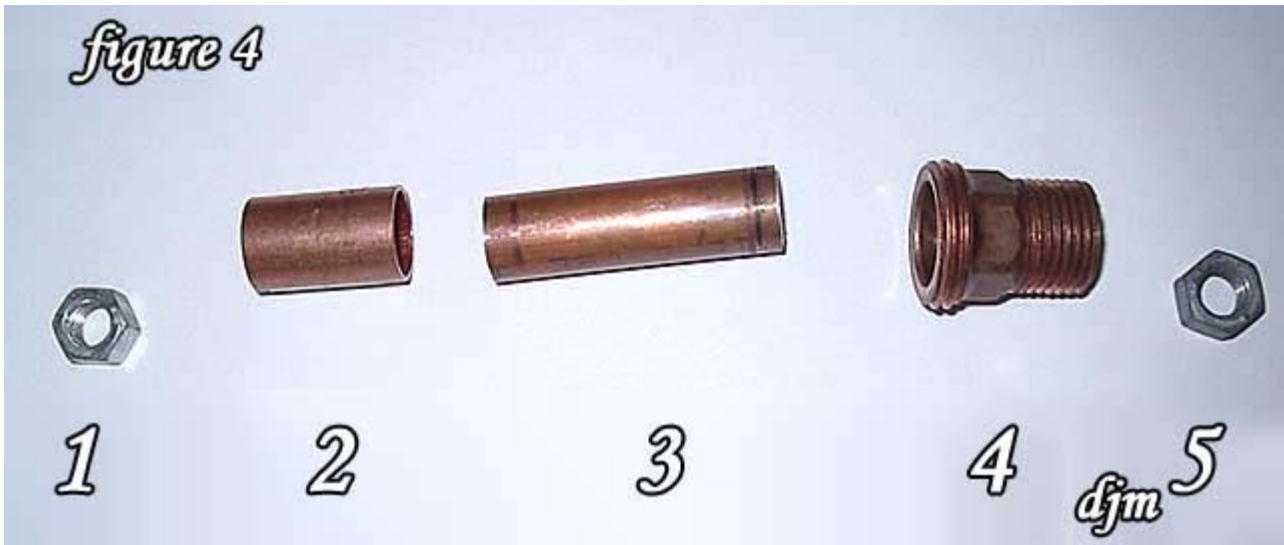
If you have done any reloading at all, you know that one of the very first steps is to deprime or decap the brass, that is to remove the spent primer. In Boxer brass, with its single hole, a pin (usually part of the sizing die) is pushed down and through the flash hole and pushes the spent primer out. This does not work for Berdan brass, indeed, if you accidentally try to decap Berdan brass using a regular die, you may end up with a bent or broken decapping pin. Reloaders take heed. Check your brass. You cannot tell from the outside whether the brass is Boxer or Berdan. You have to take a light and look down into the cartridge and see how many flash holes there are.

BEFORE you start to reload your Swiss brass, you should inspect each piece to make sure that it is still intact, with no corrosion marks, no major dents or dings. Discard any brass that does not look normal.

So, how do you decap Berdan brass? That is the \$64,000 question.

The Cheap Guy’s Decapper:

There are several methods floating around that work, some easier than other, and with a great variation in cost. In researching this topic (and in the spirit of keeping things CHEAP), I ran across information on the web provided by Lee W. Basically, Lee came up with a way to make a Berdan decapper that uses the hydraulics of water pressure to pop the spent primer.



The cheap basic components of Lee W. decapper.

1. 3/8" nut
2. 1/2" copper coupling
3. 3 1/2" copper tubing (1/2" diameter)
4. 1/2" to 3/4" coupling
5. 3/8" nut
6. 5/16" clevis pin (not shown)

1. To assemble the device, place the 3 1/2" copper tubing (3) into the 1/2" coupling (2) and solder using the same technique as soldering a water pipe.
2. Place 3/8" nut (1) into 1/2" coupler (2) and tap nut until it is flush with top of coupler.
3. Place 3/8" nut (5) into the 1/2" to 3/4" coupler (4) and tap nut until flush with top of coupler.



Complete assembled unit. Clevis pin is located at bottom left of photo the slender

end of the pin has a slight bevel put on it to help the insertion.

To Use the Water Decapper:



Fill the case with water. I found filling from a bucket to be easier and faster than trying to pour water into the mouth of the case.



Place the water filled case onto the base of the decapper.



Place the top portion of the decaper unit over the case and press it into the base. It forms a nice tight seal with the base.





Place the clevis pin into the top of the device through the 3/8" nut, which helps center the pin. The pin will stick up, seen in the right photo, and is ready to be smacked.



Using a plastic mallet, smack the pin smartly. The decapper unit keeps the water spray contained.



Disassemble the unit. There may still be water in the case which you need to dump out. Note the primer sitting on the towel.

Once you have decapped the brass, it's a good idea to wash it completely in soapy water to remove primer particle as such. In the case of the GP-11 Swiss brass, it was not corrosively primed, however other Berdan primers are corrosive in nature and therefore you will need to wash the brass to remove the corrosive salts.

My Way of Washing (and Polishing) Brass:

You have seen other articles on Surplusrifle's web site about [liquid cleaning brass](#). I have a vibrating type cleaner as well. I like using the liquid cleaning method for fired brass. There is less mess, no dust, and it is much quieter. Health wise, it is a better method as well, with no lead dust from the polishing compounds and you do not need to pick pieces of tumbler media out of the brass either. The downfall is that it takes longer to clean via the liquid method as you have to allow time to dry the brass. With the two drum tumbler, I can do about the same number of pieces of brass as the vibrator type, an added bonus being that I can clean two different sizes of brass without having to sort the brass after cleaning.



figure 13

The Chicago two drum tumbler. I purchased a rock tumbler (two drums) from Harbor Freight tools (about \$35).



figure 14

I learned of using Jungle Jake's from the guys at the range. It's an all in one degreaser/cleaner. A couple of capfuls in each of the drums and away you go. Cost for a gallon (available at Fleet Farm) is about \$4.



With a two drum tumbler, you can clean two different sizes of brass at the same time. On the left, a few rounds of 7.5 Swiss, you could put about 25 pieces or so in a drum. On the right are 50 pieces of 5.56mm.

After you place the brass in each drum, fill the drum with hot water, add 2 or more capfuls of Jungle Jakes (or similar cleaner/degreaser), seal up and tumble for at least an hour. The longer you tumble the cleaner your brass seems to be. As a side note, if you just place your brass in a bucket, fill it with hot water and add about $\frac{1}{4}$ to $\frac{1}{2}$ cup of Jungle Jake's to it, swirl and let it sit over night, this will also yield very shiny clean brass, assuming you do not start out with really crappy stuff.



Once the brass has tumbled for at least an hour (longer if really dirty), I dump the contents of the drum down the sink. I pour the brass into some netting (from a bag of oragnes) and then repeatedly dunk/drain them in hot water. Finally, I roll them around inside the netting to get all the water out.



The final step is to place the brass on some sort of cloth and place them somewhere to dry. During the winter, near an air duct works well. In the summer, I put them near a dehumidifier. If you wanted to dry quicker, you **COULD** put them in the oven...but I would not recommend it. Into the hot summer sun may be a better option.

Loading the Berdan Primed Brass:

So now your brass has been cleaned and is ready to be sized. If you were to use your Boxer primer sizing die, you would probably ruin it at this stage. Obviously, the decapping pin would break, bend or (in the case of the LEE dies) pop out. To alleviate this issue, I got a second expander for my LEE 7.5 Swiss sizing die and then cut the decapping pin off with a Dremel tool. The 7.5 Swiss has a very sharp shoulder on it. Check to make sure that the sizing die is forming the shoulder properly.

Once the cases have been fired in your rifle, you could probably back off the die to only size the neck enough to accept a new bullet. The LEE expander rods (as you can see in the photo) is fairly long before the actual sizer comes into play. Keep that in mind as you back the die out if you try to only neck size.



Unmodified Expander on the Top.

Now you should lube the case and size it as you would with Boxer primed brass. After that you should check your brass length and trim as you would normally as well.

Before I got to repriming the Berdan brass, I noticed that the flash holes were not quite up to the white glove test. The liquid cleaning had removed a lot of the crap, but there was still some flakes left in the primer pocket. You cannot use a standard primer pocket cleaner/reamer in a Berdan pocket with the anvil in the center. So I came up with a CHEAP idea.

I went to a local hobby store and bought a packet of floral stem wire, used to hold flower stems nice and straight. It is fairly stiff wire, but is soft in nature. A pack of 40 18" wires cost like \$2. I took approximate 12 or so of the wires, cut them down to about 6" and then wrapped them together with electrical tape to form a "brush" of sorts. Being that the wires are not tightly packed together like a store bought Boxer brush, the wires will bend around the anvil to clean the primer pocket out.



Wrapping about a dozen of the floral stem wires together will give you a wire brush to clean the primer pocket out. Chuck it into your cordless drill to make a power cleaner.

At this point you will want to check to make sure that the two flash holes are clear of debris. This is best accomplished by holding the case up to a strong light and look through it to make sure the two holes are clear.

Now, where to get Berdan primers. Berdan primers come in various sizes. The ones you will need for the 7.5 Swiss are the .217" or "Large Rifle Berdan". I was lucky. I was able to pick up a box of them from a local reloading store. Cost wise they were exactly the same as your standard Federal, CCI or Winchester types, which surprised me. Other sources of the primers are Old Western Scrounger, Grafs, and Midway. Be aware that if you order them via mail, you will be paying a haz-mat shipping tariff. As far as I can tell, no one MAKES the Berdan primers here in the US, rather they import them. The PMC ones that I have came from Russia.

To reprime the brass, I used a LEE manual primer seater. Use the large primer seater. I do not think that the self loading primer seater should be used, the Berdan primers are similar in size to large rifle Boxer primers, but are different enough that they may not behave the same in a feed mechanism.



The correct LEE Primer shell holder for the 7.5 Swiss is #3. PMC is one company of a couple that imports Berdan primers.

When you reprime the brass you will notice that the primer seats deeper than a boxer primer. Apparently, the primer itself is slightly shorter than the primer pocket on the case. I tried seating the primers at various levels, from flush to all the way down and then dry fired them. All of them went off. Seems that primer depth did not make all that much of a difference. In a bolt action rifle it is probably not that critical, however in a semi auto, it could be drastic to have a primer seated to shallow leading to risks of slam fires.

Once you have the brass primed, you can load the cartridge as you would a Boxer primed cartridge. From what I have read on the web, powder loads and bullet selections are the same as Boxer primed ammo.

The GP-11 7.5 Swiss

Loaded with a 174gr spitzer bullet, it reaches 2640 fps velocity. It generates about 45,000 psi of pressure. The round saw service in converted 1911 series rifles, K31 series rifles and the Stgw 57 assault rifle into the mid 1980's. It is not safe to fire this round in the Model 1889 Schmidt-Rubins because of pressure levels.

I loaded some 173 gr. GI FMJBT bullets over IMR 4064 powder and also some 168 gr. Nosler Competition bullets over IMR 4895 powder. I selected these based on the fact that was what I had on hand! I am sure there are dozens of pet loads out there. Hence, this article is not to address pet loads, but rather test and report the reloading Berdan cases.

Some Range Results:

Having done the major parts, which I think was finding the primer source and making a decapper, I figured that I should put the technique to good use and load up some ammo for a caliber that just BEGS to have it's Berdan primed brass reloaded. I chose the 8x56R caliber because mil surp ammo for this caliber does not grow on trees anymore (probably never did or will) and, by reloading the ammo, we could tailor make it so it does not beat the daylights out of you with its nasty recoil.

The technique of removing the Berdan primer is the same as what we discussed in Part 1, however, we are not as fortunate to be able to go to the hardware store and just pick up ready made parts to do the job. The base that is used in Part 1 will still work for this caliber, however you will need to make a new hydraulic "ram", as the clevis pin is too small for this caliber. I used two different materials to make a new ram, a section of fiberglass rod and a section of mild steel rod.



Figure 1. Both rods are 3/8" diameter. The one on the bottom is mild steel. The one on top is solid fiberglass. The fiberglass was easy to file down but did not last long. The mild steel was harder to file down, but lasts pretty much forever.

I found 3/8" diameter pieces of solid fiberglass rod at a local surplus store (those of you in the Twin Cities may know about the Axman on University Ave.) The fiberglass was easily cut down to size by chucking it into a hand drill and using a file on the spinning rod.

I have gobs of Nazi marked 1938 8x56R ammo, and luckily I had been saving the brass as I shot the M95 rifle every now and again. This brass is old, so make sure that each case is inspected for any sort of case issue and discard any that you suspect for any reason. Other reloaders recommended that the brass should be annealed. I did not do that. Mostly for the fact that I do not know a good technique that yields consistent results, secondly because I figure (rightly or wrongly) that I was going to be reducing the load in power to a level that would be safer on the old brass. Using the same technique as I did with the 7.5 Swiss reloading, I filled the cases with water, placed the case on top of the base. At first, I tried to place the copper sleeve over the case, but a couple of things changed my mind. First, I had to replace the 3/8" nuts with 5/8" nuts to allow the wider ram to pass through. Second, I also had to change 1/2" coupling to a 1/2" to 3/4" coupler to hold the new 5/8" nuts. In the end, unlike the 7.5 Swiss decapper, this arrangement did not contain the water spray nearly as effectively and I stopped using it. I only used the

base, placed the case with water onto the base, inserted the fiberglass rod, wrapped a towel around it and smacked it smartly with the mallet. The fiberglass rod worked great...for a time. The problem was that as I used the rod, the sharp edges of the mouth of the case sometimes cut into the rod. Once the rod became "whittled" down in diameter, it stopped sealing the mouth of the case completely and I started to become more and more wet with escaping spray (and not popping primers either).

The next step in the development was to go with a 3/8" mild steel rod. Chucking this puppy up in the hand drill and using a file was, well, let's say tedious to a very large extent. Eventually I did managed to file the diameter down to something that worked, but it took quite some time. Essentially the mild steel rod worked just the same as the fiberglass one, but it does not wear out.

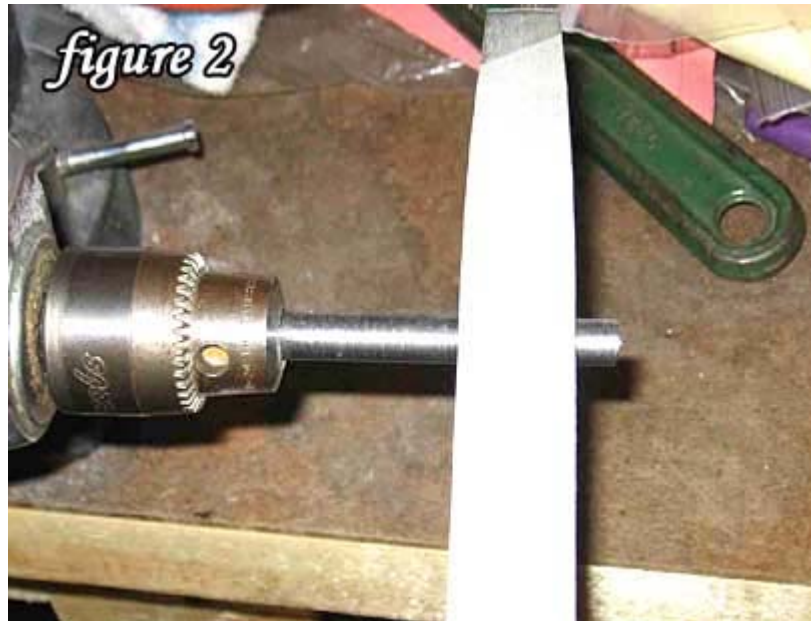


Figure 2. You can cut a section of 3/8" rod off and file it down by putting it in your hand drill. The mild steel rod takes a long time to take off enough material. Check it often against the mouth of a case. A perfect fit will "pop" when it is pulled out of the case.

Now, having said all that, one problem I ran into was the odd case that the mouth was just a hair larger than normal. I could tell easily which these were as the rod would just slide down into the case and the water would squirt straight out. These cases just could not be decapped and had to be removed from the batch. Between the two rods, I managed to get all the cases I had (save the ones with too large a mouth) decapped. After decapping all the cases, I went through the washing stage like I did with the 7.5 Swiss brass.



Figure 3. You can use the same base that we used in the 7.5 Swiss article consisting of a 3/8" nut in the coupler.



Figure 4. Pretty much all you need for de capping your Berdan brass. A rubber/plastic mallet works better than a metal hammer.



Figure 5. Fill the case with water. Place the case on the base. Insert the rod.



Figure 6. Wrap an old towel around the rod/case mouth to keep the spray from going all over our face. And then smack it with your mallet. You will find that previously reloaded brass will decap quite a bit easier than the original primers.

Once again, in order to size with the 8x56R dies you will need to remove the decapping pin from the sizer die. Lee provided me with a replacement expander pin for my dies and I used a Dremel cut off wheel to remove the pin itself, just like the 7.5 Swiss rod. Sizing the brass is just like any other brass, lubing it first. You should also check the max length of each cartridge as you go through the sizing step. The max length listed for this cartridge is 2.195".

Priming was accomplished like the 7.5 Swiss, using a Lee hand priming tool and a #16 shellholder. The Berdan primer used was the same also, the PMC .217 Large Rifle Berdan Primer. Seating the primer, once again, they went down a lot further than I would seat a Boxer primer, but I did not have any misfires at all on any of the reloads.

If you are not familiar with the Steyr M95 rifle (which I was using as my test rifle for the 8x56R caliber), you have to understand that 8mm in this rifle is NOT the same thing as 8mm Mauser (which is actually 7.92mm, 0.323"). The Steyr shoots a "true" 8mm bullet (.329"). To prove this, you can review a previous article by Mark and I (<http://www.surplusrifle.com/reloading/slug/index.asp>) where I slug this particular rifle barrel and measure the bore size at .329". Accuracy using a .323" bullet would be dismal at best, I would suspect.

A .329" bullet is not a simple one to go and pick up at your local reloading supply store. Except for Hornady which recently started to make both the .329" bullet and 8x56R (boxer primed) brass along with loaded ammo in the same caliber, I do not think I have ever seen a jacketed bullet in this correct caliber, except what is on mil surp ammo. That led to me to look into the possibilities of cast bullets. Cast bullets are available in all sorts of shapes and calibers and you can always size them down from a larger cast caliber if worse came to worse. As it turns out, I ended up using two different sources of cast bullets.

Our good friends at Lee Precision make all the items you need to cast and reload the 8x56R caliber. They offer a .329" RN mould (p/n C329-205-1R) to make your own bullets. Lee was kind enough to donate one of these moulds and I had a good friend of mine cast up a bunch of bullets in 10:1 lead:tin alloy to try out. Lee also makes the resizing die set up to size these bullets to exactly .329", gas check and lube them. And, of course, Lee also offers the 8x56R reloading dies.



Figure 7. Copper gas checks in the 32 cal/ 8mm size are needed. Hornady sells/makes them in packs of 1000.

I took the raw cast bullet from the Lee mould and sized them through the .329" Lee sizing die. I used a soft lube taken out of Paul Mathews's book "The Paper Jacket" that called for a mixture of 45 percent (by weight) beeswax and 55 percent clear petroleum jelly. I used this lube because I did not want to mess with melting down and "dipping" the bullets in a harder lube. Instead, this lube is soft enough that I could dab a bit on the bullet just prior to sizing it. It worked well enough for what I wanted to do, but if you wanted to get into a hotter, full powered load, you may want to go with a harder lube. At the same time as lubing and sizing the bullet, I placed an 8mm gas check on the back end as well.



Figure 8. I spread a small amount of lube along the grooves with my fingers prior to sizing the bullet. Do not try to size unlubed bullets. Alternatively, Lee's liquid Alox could be used to lube the bullets, before and after sizing.



Figure 9. After putting on the lube, I placed a gas check on the base of the bullet, most will not stay on and you may have to hold it in place when moving it to the sizing operation.



Figure 10. Lee's sizer comes with the sizer die and a base that attaches to your reloading press. You place the lubed/gas checked bullet on the base then run it up into the sizing die. The base of the case serves as a collection bin.



Figure 11. A view down into the holding cup. As the bullets are sized, they are pushed up and out into the cup.

I found a second source of bullets from a commercial operation run by Wayne Doudna in Richland Center, WI. Wayne has literally 100's of moulds and calibers to choose from, including the .329" bullet. His mould is a David Moss mould and he offers 175gr SP and FN bullets from the moulds, these being gas checked as well. Wayne will work with you on your caliber, bullet and alloy needs. His pricing is very reasonable, figuring that cast bullets cost way less than jacketed bullets. You can reach him at wdoudna@hotmail.com or at 608-647-8070 as well as at <http://www.customcastbullets.com/>. With over 20 years of casting and shooting experience, I found him to be a wealth of information and very willing to work with you on your casting needs.

So the next step was to find load data. With the Lee 8x56R dies came a short table of powder/bullet combinations that could be used. I, however, did not have any of the recommend combinations so I scoured the web in search of answers. I was in contact with several reloaders over on other sites (as well as the Surplusrifle.com forum) and came up with a couple of trial loads that everyone thought would work and that I had the components for. By the way, Cartridges of the World has two loads listed, both of them use IMR 3031 powder. This powder did come up again and again in conversations with other reloaders (I did not have any on hand and so did not actually test this powder).

I do have IMR 4895 on hand, and lots of it. It is a standard favorite of mine. So that was the test powder of choice. The load that was decided on was using 43 gr of IMR 4895 under the Lee cast and Doudna cast bullets. By the way, as I was loading the cast bullets, I first used the Lee Universal case flaring die to open the mouth up a bit first to accept the cast bullets without shaving the base. And off to the range I went.

First off, I fired several mil surp Nazi 1938 marked full power rounds through the Chrony to get an idea of velocity. Average turned out to be 2433 fps. Next I fired both of the cast loads through the Chrony (to see if I was approaching any maximum load issues). The Doudna rounds came out to be 1961 fps and the Lee rounds came out at 1934 fps. Well below the mil surp ammo. That issue was successful, but everything else came apart with these rounds. First off, the recoil issue was not tamed in any sort of way. After about 50 rounds, my shoulder, wrist and hand were not feeling all that well. Secondly, and more importantly, the accuracy of the round did not even approach what I could do with the mil surp ammo at 50 yards (that was my standard, the loads had to do AT LEAST as good as the mil surp ammo). I mean the accuracy sucked big time. Matter of fact, I think there were rounds that I fired that I do not know where they went on the target HOLDER. Back to the drawing board.

Enter Mark. Once again, I bow to the senior reloader of our group who has much more experience in working things like this through. He brought up a point. Why not our PSB load? The 8x565R is a "mid size" case like the 7.62 NATO. Back to the reloading bench I went, after first decapping the cases of course (decapping the reloaded Berdan primer requires much less force than the mil surp primer). This time, the powder of choice was IMR 4198, 22 grains in fact, followed by a 22.4 grain chaser of PSB buffer to fill the rest of the case to the bottom of the bullet. (See our article <http://www.surplusrifle.com/shooting/castfiller/index.asp> about the entire process).



Figure 12. These three types of ammo were used. Center two are mil surp Nazi marked 1938 original ammo. The clip on the left holds Doudna 175gr semi flat nose bullets, the clip on the right holds the Lee # C329-205-1R bullets, cast at about 210gr.

Again, the Lee and Doudna bullets were used. At the range, I started out again checking mil surp ammo through the Chrony and clocked it as 2418 fps, just to make sure I was seeing correct Chrony results. Next up were the Lee cast rounds which came out at 1540 fps. Very slow indeed. (I did not have enough Doudna bullets to run through the Chrony, but I would have to assume the Chrony results would be similar). But, here is the kicker, or perhaps I should say it NOT the kicker. The recoil was tamed way way down, down so

much that you could actually shoot and really concentrate on the sights and keep the sights on target in follow through. Accuracy also was much improved, very much so, a lot to do with the recoil. You have to flip up the battle sights to get more elevation (an artifact of the slow velocity I am sure) but at 50 yards, we could easily print groups $\frac{1}{2}$ the size or smaller than the mil surp ammo. With this final shooting test, I used up all the cast bullets that I had on hand.



Figure 13. A final 3 shot, Lee cast, 50 yard group proved that we have something to work with. Recoil was mild to say the least.

One thing that I would try next would be to test a slightly hotter load with the IMR 4198 + PSB load to bump up the velocity a bit, not much though, maybe up to around 1800 or so. Who knows what that would do. Most likely it would also pump up the recoil a bit, which would not be that big a deal. I cannot get over how much the recoil was reduced using this load. It was actually very pleasant to shoot the carbine. Lot better than being kicked by the Steyr mule.

So, you can reload the 8x56R with the mil surp brass. Keeping the loads well below max power not only saves the wear and tear on the old brass, but also really tames the recoil beast of the rifle. It was a fun project. Would I do the same for the 7.62x54R? Not likely as there is so much cheap mil surp and commercial ammo for sale, the time spent popping out the Berdan primers would not be worth it. This technique could be adapted to pretty much any Berdan primed brass in good shape that you could procure reloading dies for.

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A special thanks to:

RCBS

CAUTION!

The following article pertains to rifle cartridge reloading. We make no statements, warranties or claims to the safety of the reloaded cartridges, reloading method or load data. Reloading cartridges is to be taken seriously and you should only proceed if you feel totally comfortable and willing to accept any and all risks for your actions.

In this third installment on Berdan reloading, I take a look at the RCBS Berdan Decapping tool. Now, you may say, but why? Well, I also asked that before I used the device for the first time, but I would have to say, this little piece of equipment may become a Berdan reloader's standard tool.



Simple enough. Two main parts. Nothing else.

The device comes in the standard RCBS green plastic box and includes a case holder and the decapper proper. Both are made of extremely high grade hard steel.

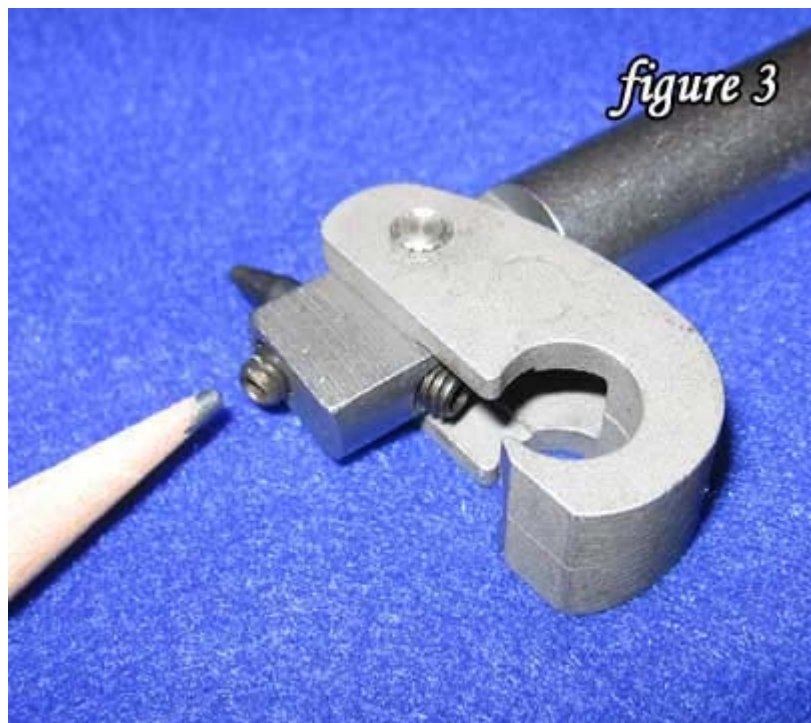
Just WHO is **RCBS**?

Founded by Fred Huntington in essentially a garage. RCBS is the largest supplier of reloading dies in the US and offer a lifetime warranties on their non electronic/non commercial reloading equipment. RCBS is owned by Alliant Techsystems (ATK) along with such companies as CCI, Federal, Speer, Outers, Alliant Powders, Ram-Line, Weaver, Gunslick, Estate Cartridge and Shooters Ridge. Okay, RCBS supposedly stands for Rock Chuck Bullet Swager, originally a swager that Huntington used to use .22 shells as bullet jackets.

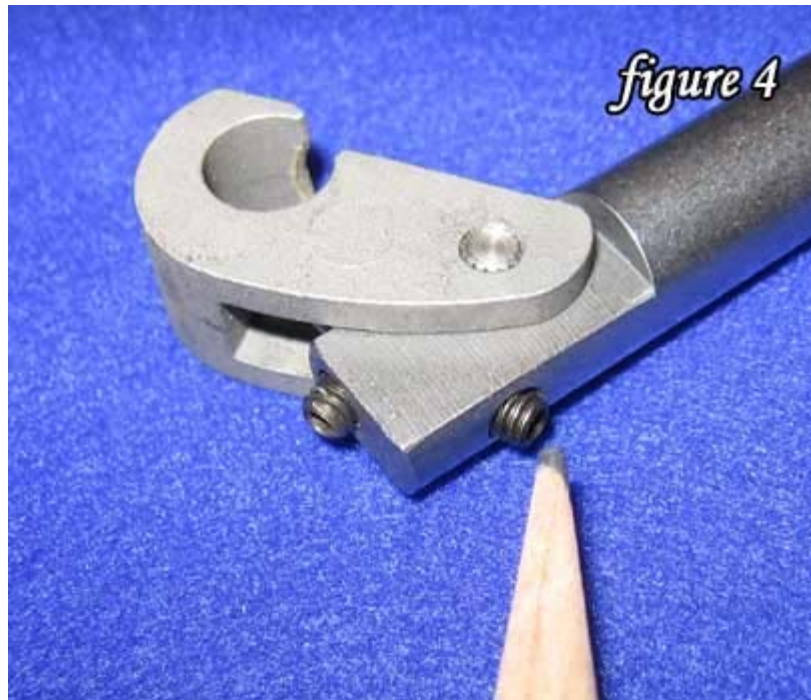


The guts of the system, the decapping pin

The whole thing works on the principle of leverage really. There is a decapping pin that is forced into the spent primer and then the claw of the device causes a leverage point that lifts the primer out of the pocket. Note, a word of caution, this device is NOT to be used to remove LIVE primers!!!



Locking screw



Depth adjustment screw

The decapping pin has one adjustment screw and one lock screw. Both are allen head screws. RCBS includes the required allen wrench. When you first start out, you will need to adjust the depth to which the decapping pin will enter the primer. Too deep and you could damage the Berdan "nipple" in the case. Too shallow, and you will not lift the primer out of the pocket. Start out gradually with the pin adjusted **SHORT** for starters and then gradually lengthen the pin until the primer comes out. It depends on your specific cartridge that you are working with. What you need to do is loosen the lock screw, and then screw the adjustment screw in or out to adjust the pin depth. The adjustment screw is **NOT** attached to the pin, therefore, if you tip the decapper upside down, the pin could drop out of the device completely. On that note, a closer look at the pin reveals that it has an angled point to it. The correct direction of the pin should be such that the "point" is to the front (toward the claw) of the device. RCBS does sell replacement tips if you lose or break on.

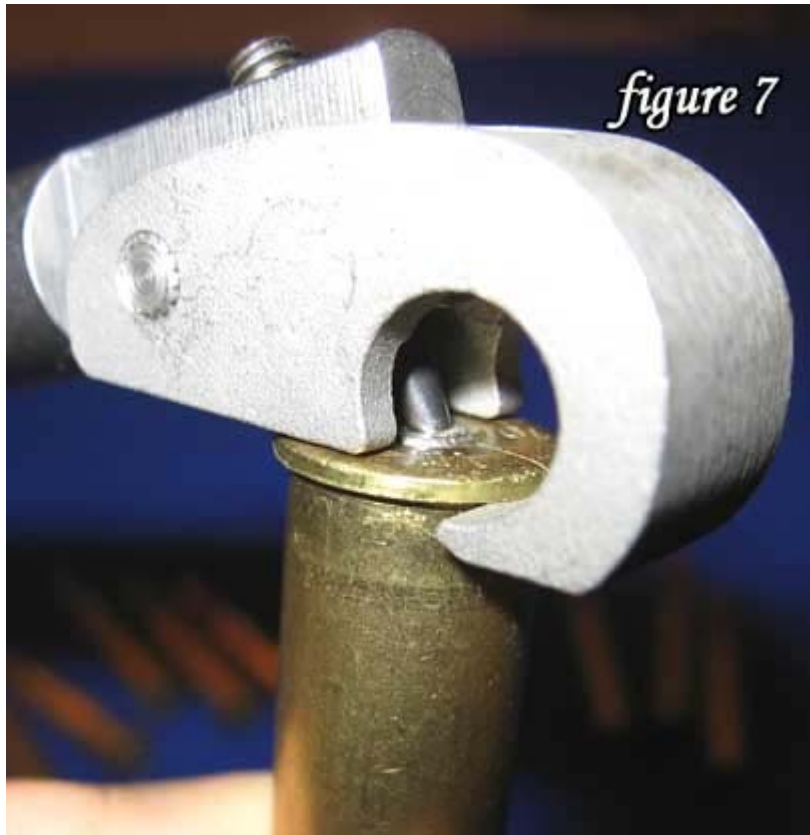


This is how you hold the case

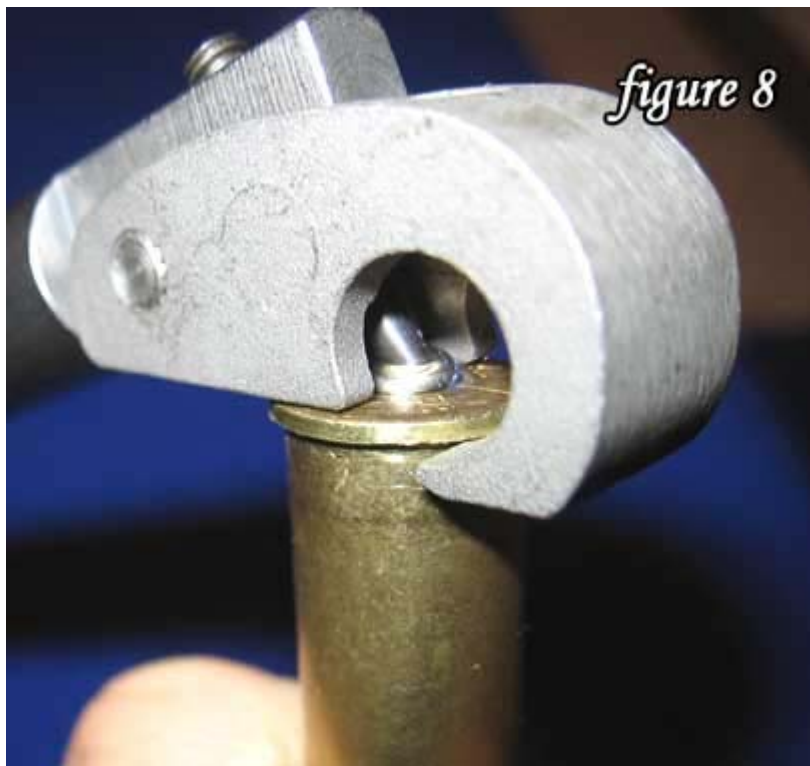
To decap a case, place the case on to the case holder, which is simply a way of easily holding the case as you lever out the primer.



Latch the hook around the rim of the case, at the same time you will have to align the decapping pin with the firing pin impression in the primer. Here, the pin starts into the firing pin impression



Gradually, force the handle downward, which causes the decapping pin to enter into the primer at an angle.



As you bring the lever down flush to the base of the case, you will start to lift the primer out of the pocket. I found that a slow gradual movement was more

productive then quickly snapping the lever down.



Here is the final result. You can see no shiny marks on the “nipple”, so I am pretty confident that it is not damaged. Of course, this pocket needs a good cleaning.



The RCBS Berdan decapper is not really for use in removing the original military (mostly crimped). You will still need to hydro push them out. I found the military primers were harder metal, harder for the pin to enter. The softer reloaded spent primer (on the right), is very easy to lift out.



Here are a couple of 7.5 Swiss decapped shells. The one on the left shows a slight dent into the Berdan "nipple" because the decapping pin was set too long. This could lead to misfire "dud" primers.



The decapper does work for rimless cases as well. Here, a 7.5 Swiss is being decapped, the decapping pin is just entering into the firing pin depression and I am just starting to push the lever downward.

When I started the entire Berdan reloading project I was really gung ho about decapping using the easy and cheap hydraulic method to pop out the primers. It works, but, if you

have tried it, you have quickly found that it can be messy and slow. I figured I would not do a heck of a lot of reloading that way, but at least it was an option. With the RCBS Berdan decapping tool, I will be much more inclined to do more reloading with Berdan primers. You can get the RCBS Berdan decapping tool from a number of sources, including MidwayUSA. Cost is list at about \$55. I have seen them available for about \$38 or so online.

CAUTION!

The following article pertains to rifle cartridge reloading. We make no statements, warranties or claims to the safety of the reloaded cartridges, reloading method or load data. Reloading cartridges is to be taken seriously and you should only proceed if you feel totally comfortable and willing to accept any and all risks for your actions.

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