DERRINGER ASSEMBLY INSTRUCTIONS©

O/U .22/.45/.410 AND .45/.410 SINGLE SHOT KITS

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INTRODUCTION

These instructions assume that you have purchased the "Breech Face and Side Plate Kit" as well as the "Derringer Kit", neither of which are included with these instructions. These kits may also go by the names of FMJ or Cobray. While these instructions are specifically designed for the O/U Derringer 22/45/410, they will also work for the 45/410 Derringer with minimal changes. The kits can be sold separately and shipped without going through a Federal Firearms License (FFL) transfer agent because they are separate kits from separate vendors AND separately incomplete.

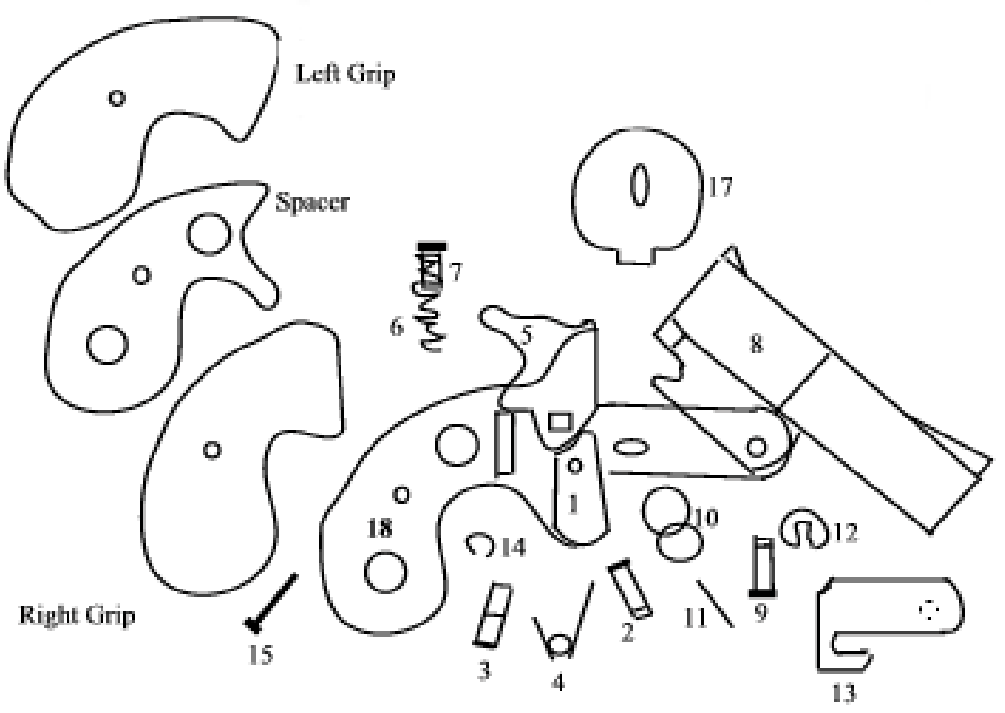
I do not know all the laws or regulations in every location where these derringers may be made or sold. I may not even know the country. It is YOUR responsibility to do the necessary research to determine the appropriate legal and regulatory guidelines. If you purchased these instructions before you obtained the kits, then do the research BEFORE you buy the kits so that you are not surprised by limitations, regulations or legal restrictions after you have spent more money; or risking prosecution and/or incarceration.

The actual process of building rather than purchasing the breech face and side plates is beyond the scope of these instructions. You may try www.gunbroker.com, www.ebay.com, or www.auctionarms.com where such construction diagrams are usually available for sale. Although I can possibly help you locate appropriate kits, **WE DO NOT CARRY OR SELL ANY PARTS OR KITS.** If you are not successful obtaining or constructing the parts yourself and you want a fully functional firearm, take the kits to your local FFL gunsmith who can help you if it is legal to do so in your location. The gunsmith may and probably will require you to complete the standard documentation and background checks required for purchasing a handgun. Be sure you understand the laws in your location and your abilities to obtain or construct these parts and to possess a functional finished product BEFORE you purchase and/or complete the kits.

Before starting, I recommend that you scan the document for yellow highlighted text that contains some of the tools that may be either required or optional. In some cases, alternatives might work (e.g., a standard hammer may suffice instead of a flat faced hammer, the painting is optional…).

The very last page is a duplicate of the diagram and parts list and the highlighted tool list that you can tear off for reference before and during the assembly process.

PARTS DIAGRAM



1. Open both kits and compare the parts with the inventory list below to be certain that you have everything you need. One kit contains only parts 17 and 18 while the other kit contains all the others. Another copy of this parts list and diagram is on the last page to be torn off for reference during the assembly process. See the drawing above to assist you in this process. The contents of the kits are as follows:

(1) Trigger
(2) Trigger Pin
(3) Safety Pin
(4) Trigger Spring
(5) Hammer
(6) Hammer Spring
(7) Hammer Plunger
(8) Barrel
(9) Barrel Pin
(10) Barrel Latch Knob – 2 ea.
(11) Barrel Latch Pin
(12) Barrel Pin E Clip
(13) Safety Shield
(14) Safety E Clip
(15) Grip Screw
(16) Left Grip, Right Grip & Spacer – 1 ea.
(17) Breech Face
(18) Side Plate – 2 ea.

NOTE: If you can not see this diagram or the diagram on the final page, please email your fax number to me at Derringer@farcroft.com and I will fax a copy to you at no cost.

2. Clear enough space on a non-combustible surface to work. **DO NOT LOAD THE DERRINGER OR HAVE ANY AMMUNITION IN THE SAME ROOM AT ANY TIME DURING THE CONSTRUCTION!** Consider that at some point you will need to braze the Breech Face to each of the Side Plates and take appropriate precautions. Remove all combustible materials, keep a bucket of water and a fire extinguisher handy, and be sure to wear safety goggles or a welding helmet as well as welding gloves. Brazing is strongly recommended over welding due to the lower but totally adequate temperatures and because it is easier and requires less sophisticated equipment. Do NOT solder, Superglue, or Epoxy the breech face to the side plates as the strength of these methods is insufficient given the pressures involved. The actual process of welding and brazing is beyond the scope of these instructions; however, detailed instructions were recently available at: http://www.handyharmancanada.com/TheBrazingBook/contents.htm or can be found by using your browser to search the web for "brazing."

3. Start with the two Side Plates (18). Be certain that both sides of the Breech Face and locations where the brazing will occur on the flat vertical edges of the Side Plates are completely flat. Use a flat file or a rotary tool to remove any burrs. Properly clean and degrease the areas that will be brazed in a separate well-ventilated area (preferably outside) because the degreasing fumes stink and remain present for quite some time. Insert the Spacer (16) between the Side Plates and the Left and Right Grips (16) on the respective outside of the Side Plates. Attach this with only moderate pressure (recognizing that you will be removing the Grips and Spacer later in the assembly process) using the Grip Screw (15). This will give you a sense of how far apart the Side Plates will need to be once they are brazed to the Breech Face.

4. Place the Barrel (8) between the Side Plates and insert the Barrel Pin (9) to hold it in place. Do NOT secure it with the Barrel Pin E Clip (12) at this point. The only reason for attaching it is to provide additional assistance in determining the separation of the Side Plates. (HINT: As you proceed, one of the most important factors will be to have the Side Plates absolutely parallel, perfectly aligned in every direction, and exactly spaced apart for the final assembly to work. This perfect alignment requirement is the MOST CRUCIAL aspect of the entire assembly.)

5. Insert the round part of Safety Pin (3) through the square hole on the left side of the assembly and push it through until the round end protrudes slightly through the right side.

> **The "left," "right," "back," "front" "above" "behind" or "beneath" side throughout the instructions is from the perspective of aiming the derringer.**

The square hole may not be large enough to allow the square part of the Safety Pin to be inserted even when properly aligned with the hole. If this occurs, remove the Safety Pin and use a small flat file to widen the hole on the Side Plate. Be sure to maintain a square hole by lightly filing EACH of the 4 sides ONCE and then retry inserting the Safety Pin. Continue until the square part of the Safety Pin fits snugly through the hole. Do NOT excessively file the hole on the Side Plate – the fit should be snug so the Safety Pin can be pushed back and forth through both side plates with only significant finger pressure but cannot be completely removed by finger pressure from either side. Now repeat this process by inserting the round

part of Safety Pin (3) through the square hole on the right side of the assembly and push it through until the round end protrudes slightly through the left side.

Once complete leave the Safety Pin in place with the square part approximately half way through the right Side Plate. Starting on the left side of the assembly, insert the small end of the Trigger Pin (2) with the recessed notch through the hole just beneath the Safety Pin until the small end with the recessed notch protrudes through the right Side Plate and the larger part of the Trigger Pin is flat against the left Side Plate. Attach the curved part of the Safety Shield (13) through the recessed notch of the protruding section of the Trigger Pin. Turn the Safety Shield counter-clockwise and ensure that the round hole aligns with the oval hole on the right Side Plate. The purpose here continues to be Side Plate alignment.

6. Close the Barrel (8) attached in step 4 by swinging it down upon the Side Plates. The edges should make complete contact with both Side Plates. Test this by inserting a piece of paper between the Barrel and each of the Side Plates. Pressing down on the Barrel, try to remove each piece of paper. Alignment is good if the paper either tears or requires considerable force to remove. If not, open the Barrel, adjust the vertical orientation of the Side Plates, and try again until you are successful. Once complete, open the Barrel to remove any remaining pieces of paper.

7. Insert the Breech Face (17) with the protruding notch down between the rear end of the Barrel and the flat front ends of the Side Plates. The protruding notch on the Breech Face should fit tightly between the Side Plates. Push down hard on the Breech Face to ensure that the non-protruding bottom edge is COMPLETELY seated on the top of BOTH Side Plates.

    a. Close the Barrel. The fit between the Breech Face and the Barrel should be very close, touching each other or even slightly snug. If it is too tight, push slightly forward on the Barrel and strongly back on the Breech Face to see if this resolves the problem. If this does not resolve the problem, remove the Breech Face and use a flat file on the flat surface to reduce its thickness. Recheck the fit frequently to ensure that you do not over-file the Breech Face. If it is too loose, push slightly back on the Barrel. A correct fit allows the Barrel to move up and down easily while still being close or lightly touching the Breech Face.

        Do not try the intuitively easier process of filing the flat front ends of the Side Plates rather than the Breech Face unless you have confirmed everything is properly assembled and the fit is so tight that you can't even close the Barrel. If the Barrel cannot close, the best solution would be to contact the vendor from whom you purchased the Side Plates to obtain replacements. If you MUST file the Side Plates (e.g., you made them yourself from a diagram), be extremely careful to retain Side Plate alignment and flatness. Using a perfectly flat file, file the entire vertical side of one Side Plate and then the entire vertical side of the other Side Plate ONCE and then recheck the alignment. Proceed until the Barrel can be closed and then revert to the procedure described in the beginning of this step.

    b. The fit between the Breech Face and the Side Plates should be VERY tight both horizontally and vertically. You will soon braze these parts together. Furthermore, the alignment of the Breech Face should be such that the hole in the Breech Face is

centered between the Side Plates, and with no part of the protruding notch on the Breech Face visible when observing from either side of the assembly.

8. Keeping the Breech Face immobile, open the Barrel. Now comes a tricky part. Hold an appropriately sized and heat resistant vise grip in a vertical position aligned with the Side Plates with the clamp end facing down in one hand. Hold the Breech Face TIGHTLY in place down and against the back of the Side Plates with the other hand. Adjust the clamp so that it will hold the three pieces tightly together, release it and then tighten it just a tad more. A proper clamping will result in the Breech Face completely flat and tight against the front of the Side Plates, the protruding notch on the Breech Face invisible from either side of the assembly, and the non-protruding bottom of the Breech Face completely flat and tight against the top of the Side Plates. Validate that the hole in the Breech Face remained centered and vertically even between the Side Plates. Make sure that the clamp does not block either of the edges that will need to be brazed. Now TIGHTLY clamp the Breech Face to the flat front edges of the Side Plates. You should be barely able to close the clamp with one hand and may even need the other hand for assistance; however, be careful not to dent or otherwise adversely affect the flatness of the Breech Face during this process.

   It may take several or many attempts to properly accomplish this. It took 6-10 attempts for me on my first construction. **THIS ALIGNMENT AND TIGHTNESS IS THE MOST CRUCIAL PART OF THE ENTIRE ASSEMBLY PROCESS!** Do not braze the parts together until this is achieved, because then the adjustment is difficult to impossible to repair. The remaining parts of the kit may not fit correctly, if they can be made to fit at all. Even if you were to somehow force the remaining parts to fit, the Derringer will almost certainly prove difficult to operate – either being too tight or too loose in an unpredictable and probably uncorrectable way. Remember that this is a FIREARM. If it is not assembled correctly, the result can be dangerous. Take the time to assure the proper fit and alignment!

9. Remove all parts from the clamped Breech Face and the Side Plates. Reconfirm the alignment. Reconfirm that a proper clamping still exists with the Breech Face completely flat and tight against the front of the Side Plates, the protruding notch on the Breech Face invisible from both sides of the assembly and the non-protruding bottom of the Breech Face completely flat and tight against the top of the Side Plates. Retest the alignment by inserting the Spacer (16) slightly on both the top and bottom of the Side Plate wherever it will fit, especially where it will eventually exist and where the Barrel would normally exist. It should fit snugly as with the original installation. The hole in the center of the Breech Face should still be aligned as closely as possible to the exact center between the Side Plates. Once again, if this alignment is incorrect, you will have little opportunity to correct the problem after the Breech Face and the Side Plates are brazed. Remove the Spacer before starting the brazing process. At this point, the only parts in the assembly should be the Breech Face, both Side Plates and the clamp.

10. While the actual brazing process is beyond the scope of these instructions, some hints may be helpful. Reference detailed help at the following link: http://www.handyharmancanada.com/TheBrazingBook/contents.htm or search for equivalent information unless you are already familiar with the process. Be certain the areas to be brazed were cleaned thoroughly (very light filing or sanding followed by degreasing as more fully described in step 3). If you did not do so in step 3, go back to step 3 and restart the assembly from there. Keep in mind that **PREPARATION is 90% of successfully**

brazing. The actual brazing procedure is only 10% of the overall process. Be sure to use proper welding safety precautions like having a fire extinguisher and a pail of water and NOTHING flammable nearby. At the very least, wear welding-rated eye protection and welding gloves (as well as any other welding protection you may have). I found Harris "Stay-Silv®" White Brazing Flux and 3/32 White Flux Coated Low Fuming Bronze rods to be excellent choices with an Oxy-Acetylene Torch.

11. Braze the Breech Face to both sides of the Side Plates. Braze only the back side of the Breech Face where it touches each of the Side Plates (not the lower part where the protrusion exists or where the Breech Face meets the horizontal section of the Side Plates).

    Be careful here. The materials will be VERY, VERY hot (literally red hot), during brazing and immediately after. Confirm that the alignment has remained exactly as originally established. Wait until the brazing components have returned to room temperature before continuing with the assembly process since some of the remaining parts can be damaged by excessive heat.

    Remove the clamp and ensure that the brazed parts are tight and cannot be separated even with considerable hand pressure. Do NOT push with too much pressure inward on the Side Plates or you may inadvertently bend the lower parts and cause misalignment (especially after so much effort getting it right in the first place).

    If problems exist, you will need to decide whether to re-braze or to purchase or make a replacement Breech Face and Side Plates. Remember, this is a firearm. Poor assembly can cause subsequent assembly problems and can quite possibly be dangerous. If the brazing process results in excess material, use a flat file or a rotary tool to remove the excess. Be careful not to remove any of the actual Breech Face or Side Plate. If this process results in breaking the brazing, then you will need to restart. Don't be too upset. Since simple filing exerts much less pressure and force than a fired shell, it should NOT break the brazing. It is much better to know now rather than when firing the first shot that the brazing was faulty. If re-brazing is necessary, be certain to clean the surfaces MORE thoroughly than before, especially since they will now also be crusty, dirty, and covered with burned flux and excess brazing material.

12. If you want to paint the plates, now is a good time as long as the parts have cooled to room temperature. Be certain to use paint that can withstand considerable heat (similar to that used for an oven or an outdoor grill). I found a pint of black (7778) Rust-Oleum Specialty High Heat far more than adequate – but that was the smallest quantity available. Use as thin a coat as possible. Do not double-coat the assembly, as one coat should be sufficient and you do not want to change the alignment or cause part movement difficulties with paint buildup. Be sure to remove all drips before the paint dries. Finally, allow the paint to dry at least 24 hours before continuing the process. The paint may interfere with the motion of other components (e.g., the Barrel Latch Knob, Safety Shield and especially the Safety Pin), so be prepared to sand some away if necessary. You might be required to repaint some minor areas after finalizing the assembly process. In any event, being a firearm, functionality should take precedence over beauty.

13. For me, brazing was the toughest part. The remaining assembly was comparably MUCH easier. Insert the Spacer (16) between the Side Plates and put the Left and Right Grips (16) on the outside of the Side plates. Do NOT screw the Grip assembly together yet but hold it tightly together.

14. Now place the Hammer Plunger (7) into the Hammer Spring (6). Insert it between the Side Plates just in front of the Spacer and under the front of the Side Grips with the Hammer Plunger on top. Notice two rectangular holes on the Side Plates. The Hammer Plunger should fit INSIDE and between the tops of these holes. This can be a bit tricky. It is NOT sufficient that the Side Grips only hold it in place – the top edge of the Hammer Plunger MUST be held between the holes in the Side Plates. As you proceed you will need to reduce the hand pressure on the Side Grips enough (but only enough) to allow the top of the Hammer Plunger to fit between them.

    Given the fact that the rectangular holes in the Side Plates are recessed below the tops of the Side Grips, try using a flat-faced punch or something similar to push it down into place. Do not press too hard since the spring eventually rests on the plastic part of the Spacer and it can be broken. You only need to press it until the top of the Hammer Plunger fits into the top of the rectangular holes of each of the Side Places. Once it is in place the Side Grips should close tightly together. (NOTE: Be careful here, both to avoid breaking the Spacer and for the following reason. As you push down on the Hammer Plunger, you will be compressing the Hammer Spring. If you lose grip or the punch slides off the Hammer Plunger, the Hammer Spring and Hammer Plunger can easily separately launch across the room and take some time to find. This happened to me twice.)

    Holding the Side Grips tightly with one hand, screw the assembly together using the Grip Screw (15) – but not TOO tightly since The Grips and Spacer are plastic, not steel. The parts should fit with no spaces between them. If there is a visible gap, then the most likely problems are a misalignment in the Breech Face and Side Plates, an improper Hammer Plunger and Hammer Spring insertion, or an inadequately tight Grip Screw. First, recheck the alignment of the Hammer Plunger and Hammer Spring and correct it if necessary. If this does not resolve the gap, then try loosening and then re-tightening the Grip Screw. If the Grip Screw is tight AND the Hammer Plunger and Hammer Spring are correctly inserted, then the brazing is misaligned. Go back to step 8 for instructions on how to correct this problem (if possible). If there is no gap or an almost invisible gap, then use the flat-faced punch or something similar to confirm that the Hammer Plunger and Hammer Spring are properly seated. If not, remove the Grip Screw and restart the procedure in this paragraph. If so, confirm that the hole in the Breech Face remains centered between the Side Plates. If validated, then the first test of a correctly aligned Breech Face and Side Plates has been successful. CONGRATULATIONS! If not, remember that proper preparation is 90% of successful brazing. Don't rush through the second brazing in annoyance if the first attempt(s) did not work. Take a deep breath and wait until you calm down.

15. Obtain a paper clip and fold it open to create a thin rod. Hold the Trigger Spring (4) by its long protruding tips, with the connecting piece to the front and insert it between and near the lower protruding section of the Side Plates. Align both sides of the circular hole in the Trigger Spring with the holes in the Side Plates where the Trigger will go. Now insert the Trigger (1). Hold it by the base with the protruding upper section of the Trigger to the front, between the protruding tips of the Trigger Spring but below and behind the connecting piece

with the hole in the Trigger aligned with the holes in the Trigger Spring and the Side Plates. This may take some time. Once you can see parts of all three holes (the two in the spring and the one in the Trigger) through the holes in the Side Plates, insert the point of the opened paper clip through all of the five holes and run it in a circle to help align them as closely as possible. Save the paper clip.

Insert the thin end of the Trigger Pin (2) through the hole in the left Side Plate and push it through until it protrudes through the right Side Plate and the thick end is flat and tight against the left Side Plate. It may take a few attempts to get this right. Once this is complete, secure the Trigger Pin in place by attaching the Safety Shield (13) with the indented section of the Safety Shield pointing down and to the back and then sliding the indented section COMPLETELY down and through the protruding and recessed notch at the tip of the Trigger Pin. If done correctly, you should be unable to remove the Trigger Pin from the left side of the assembly but able to swing the Safety Shield counter-clockwise towards the Side Plates where the Barrel will go and align the round hole in the Safety Shield with the oval Barrel Latch hole in the Side Plate. Furthermore, both of the long protruding tips of the Trigger Spring AND the connecting piece of the Trigger Spring should be to the front of the assembly and the Trigger. If the protruding tips of the Trigger Spring are behind the Trigger, then use the paper clip to confirm that they can be easily moved in front of the Trigger. This is most easily viewed from beneath. Put the assembly to the side for the moment. If the movement of the Safety Shield is difficult, it may also be due to the paint so sanding away some of the paint may satisfactorily improve movement.

16. Now you need to attach one of the Barrel Latch Knobs (10) to the Barrel Latch Pin (11). These parts fit VERY tightly and cannot be attached by hand. The flat part of the Barrel Latch Knob should face the Barrel Latch Pin. Hold one tip of the Barrel Latch Pin on a flat metal base (such as an anvil or the base next to a bench vise) while simultaneously holding the Barrel Latch Knob with the flat part down and the hole centered over the Barrel Latch Pin. Using a flat-faced hammer (to preserve the flat integrity of the part of the Barrel Latch Knob to be struck), lightly tap the Barrel Latch Knob until it is seated sufficiently on the Barrel Latch Pin to stay without being held. (NOTE: While the intuitive procedure would be to hammer the Barrel Latch Pin into the Barrel Latch Knob, this is not done here to preserve the flat and unblemished integrity of the other tip of the Barrel Latch Pin. The other side of the Barrel Latch Pin will need to be in perfect condition when the time comes to attach the other Barrel Latch Knob and this is more likely if it is not subjected to repeated hammer blows.)

    Adjust the Barrel Latch Knob until it is perpendicular to the Barrel Latch Pin. If the Barrel Latch Knob separates from the Barrel Latch Pin, lightly tap the Barrel Latch Knob back until it is secure. If you have trouble with this, try clamping the base of the pin with a pair of forceps. Then hold the forceps down with the edge of the hand that will not be holding the hammer while holding the Barrel Latch Knob steady on the edges with two fingers.

    When satisfied that the alignment is reasonably good, holding the Barrel Latch Pin upright and steady, strike the Barrel Latch Knob with a bit more force being certain to keep the Barrel Latch Pin perpendicular to the flat metal base. Check the alignment frequently. Continue until the tip of the Barrel Latch Pin is even with the outside and pyramid-like tip of the Barrel Latch Knob. When complete, the flat part of the Barrel Latch Knob should be perpendicular to the Barrel Latch Pin. If you used a clamp or forceps, remove it at this point.

17. Returning to the main assembly, use the tip of the opened paper clip and insert it into the top of the Side Plates over the oval holes through which the Barrel Latch Pin will be inserted. Using the paper clip tip, find BOTH of the long ends of the Trigger Spring and move them to the upper back of the oval holes in the Side Plates so that there is enough space for the Barrel Latch Pin to fit beneath them. The long ends of the Trigger Spring (4) are either hanging beneath the Side Plate and need to be pushed up into the barrel latch hole area, are already visible in the barrel latch hole, or are, lucky you, already slightly above the barrel latch hole. Holding the Barrel Latch Knob (with the Barrel Latch Pin already attached), insert the Barrel Latch Pin through the left oval hole in the Side Plate and continue until it passes through the oval hole on the right Side Plate. Once the Barrel Latch Pin has passed through both of the Side Plates, hold the attached Barrel Latch Knob (10) tightly against the Side Plate and far enough to the back so that the Trigger Spring (4) cannot slip beneath the Barrel Latch Pin. Confirm that both of the long ends of the Trigger Spring (4) remain above and to the back of the Barrel Latch Pin. If this is not true, pull out the Barrel Latch Pin and restart this step. While maintaining pressure on the attached Barrel Latch Knob, remove the paper clip.

18. Retract the Barrel Latch Knob just enough to allow the Barrel Latch Pin to be only slightly recessed but still touching the edge of the right Side Plate. Move the Safety Shield so that the round hole is aligned with the Barrel Latch Pin (you may need to move the Barrel Latch Knob and Barrel Latch Pin assembly to accomplish this) and push the Barrel Latch Pin through the hole in the Safety Shield. Maintain pressure on the Barrel Latch Knob to ensure that the Barrel Latch Pin remains visible and does not retract so far through the right Side Plate to cause the Trigger Spring to slip under the Barrel Latch Pin or to allow the Safety Shield to fall. Reconfirm that both of the long ends of the Trigger Spring remain above and to the left of the Barrel Latch Pin. If this is not true, pull out the Barrel Latch Pin and go back to step 17.

19. Holding the Barrel Latch Knob already inserted through the barrel latch holes secure against the Side Plate, place the tip of that Barrel Latch Knob on a secure metal surface (e.g., an anvil or the device used during the attachment of the first Barrel Latch Knob) and retain pressure to keep it in place. You may need to hold it at an angle or near the edge since the attached Barrel Latch Knob will not remain secure against the surface if the assembly is merely placed “as is” on it. I found that merely moving the Grips off the flat surface was sufficient. Reconfirm that both of the long ends of the Trigger Spring (4) remain above and to the left of the Barrel Latch Pin and that the Barrel Latch Pin protrudes through the hole in the Safety Shield. If this is not true, pull out the Barrel Latch Pin and restart step 17.

20. **(NOTE: Attaching the second Barrel Latch Knob while retaining the ability of the Safety Shield to move freely and easily is the next CRUCIAL part of the assembly. If you tap too hard and secure it too tightly, it will be difficult if not impossible to resolve the situation without damaging one or both of the Barrel Latch Knobs.)** While maintaining downward pressure on the part of the derringer containing the attached Barrel Latch Knob, place the flat part of the remaining Barrel Latch Knob onto the Barrel Latch Pin. First, place it on by hand trying to align it as close to perpendicular to the Barrel Latch Pin as possible. Using a flat hammer, lightly tap the second Barrel Latch Knob until it is more secure. Adjust the alignment between each tap until it is secure. Then continue to tap

but now both ensure that it remains perpendicular AND that the Safety Shield continues to move freely and easily.

Continue tapping until the Barrel Latch Knob is securely attached to the Barrel Latch Pin while the Safety Shield continues to move freely and easily. If you apply too much pressure, you will have difficulty moving the Barrel Latch Knobs all the way forward and back. If this is the case, first try moving them back and forth many times to see if this will solve the problem. If not, then try sanding away all of the paint on both sides of the Side Plates. Finally, try inserting a micro screwdriver head between the Barrel Latch Knob and the Side Plate on the side opposite the Safety Shield and VERY slightly loosen the connection. If you must do it more than once, retain alignment by adjusting in the following order: top, bottom, front and back. Recheck the movement between each adjustment, as you do not want to excessively loosen the connection or accidentally force the Barrel Latch Knob off the Barrel Latch Pin entirely.

If the Barrel Latch Knob will not stay in place (because it was forced off the Barrel Latch Pin or because the adjustment loosened it too much), try hammering it back in place as previously described. If this does not work, you may need to carefully braze the tip of the loose Barrel Latch Knob once it is properly aligned and the movement is correct. This is a very tricky procedure given the extent of the assembly and should be attempted only if you feel VERY comfortable with brazing. Given my difficulty with the original brazing, I would not attempt this much more complex and detailed brazing. Alternatively, you may need a replacement Barrel Latch Knob that will be difficult to obtain (unless the vendor from whom you obtained the kit is willing to sell you one), the assistance of a welding expert (who may be hesitant or unwilling to work on a firearm), or the assistance of a gunsmith (where you may encounter legal and regulatory complications). To avoid these problems, do it gently and correctly the first time! Once done, you should be able to move the Barrel Latch Knob assembly forward and backward in the barrel latch slot. The assembly is now almost complete. CONGRATULATIONS!

21. Attach the Barrel (8) with the hole at the bottom of the Barrel to the front of the assembly and aligned with and between the holes in the Side Plates. Insert the thin end of the Barrel Pin (9) through the right Side Plate hole and push until it is completely through both Side Plates and the hole in the Barrel. Lower the Barrel onto the Side Plates. The Barrel Latch Knobs should move back as the Barrel contacts the Barrel Latch Pin and locks in place. If this does not occur, then move the Barrel Latch Knobs as far back as possible and repeat the attempt. Once the Barrel contacts the Side Plates, hold the Barrel down and push forward on the Barrel Latch Knobs. This should lock the Barrel in place.

    If this doesn't work after several attempts, and only as a LAST RESORT, you may try using a rotary tool or round file to shave away some of the metal on the recessed, back part of the Barrel where the Barrel Latch Pin goes. Work slowly and test the alignment frequently to avoid shaving away too much of the Barrel. I needed to do this during one assembly and it solved the problem most effectively.

    Once the Barrel is properly aligned and appropriately locks, you may attach the Barrel Pin E Clip (12) around the protruding and thin end of the Barrel Pin. Place the open part of the Clip against the Barrel Pin and PUSH. This may take some effort and most likely cannot be done by hand. You may need to use a screwdriver or forceps to force the Barrel Pin E Clip

onto the Barrel Pin. If you break the pin, a replacement can be obtained at a hardware store (but take the Barrel Pin with you to get the correct size).

22. At some point during this step, you'll probably wish you had three hands! Place the Hammer (5) in front of the Grips and behind the Breech Face. The flat part at the base of the Hammer should rest on top of the Hammer Plunger and the firing pin part of the Hammer should face the Breech Face. To secure the Hammer, pull and hold the Trigger as far back as it will go (this is a critical step even if it doesn't seem to make sense unless you try to attach the Hammer without doing so) and press down on the Hammer until its hole is aligned with the one remaining hole through which the Safety Pin (3) will be inserted. This may take some time and effort since it will require some compression of the Hammer Spring. If necessary, move the Barrel Latch Knobs forward to allow the square end of the Safety Pin to fit into the square hole on the right Side Plate. Insert the round end of the Safety Pin into the square hole on the right Side Plate. Continue pushing until the round part of the Safety Pin protrudes through the left Side Plate and only a small part of the square part remains on the right Side Plate. You may need to move the Hammer back and forth and up and down vigorously to succeed.

23. Push in square end of the Safety Pin until the round part protrudes through the left Side Plate and continue pushing the square end of the Safety Pin until it is slightly recessed into the Side Plate. Jiggle the Hammer until this is accomplished. Make sure the Safety Shield can retract over the Safety Pin. This took me quite a few attempts. You may need to repeat the prior step several times since aligning the hidden flat part of the hole in the Barrel with the now hidden flat part of the Safety Pin can be difficult. Once done, pull back on the Barrel Latch Knobs and close the Barrel. This should lock the Barrel in Place. If not, push forward on the Barrel Latch Knobs and the Barrel will now lock in position. Holding the Grips, use your thumb to pull back on the Hammer. It should be locked in place and immobile (i.e., unable to cock). Test by pulling the Trigger. It should have no effect. The safety is in effect and functional.

24. Before proceeding with this step, **CONFIRM THAT THE DERRINGER IS UNLOADED!** (NOTE: No ammunition should be present or loaded into the derringer – I mention it again since this procedure would result in gunfire if it were loaded.) Move the Barrel Latch Knobs forward until the square part of the Safety Pin is free to move through the right Side Plate. Push on the round part of the Safety Pin until the Square section of the Safety Pin protrudes through the right Side Plate enough to prevent the Safety Shield from moving backward and perhaps even a bit more (but not so much that the round part of the Safety Pin retracts into the left Side Plate). You will once again need to jiggle the Hammer. Holding the Grips, use your thumb to pull back on the Hammer. It should retract and lock in the cocked position. Pull the Trigger. The Hammer will forcefully strike the Breech Face. If you cannot move the Safety Pin by hand with minimal effort, remove the Safety Pin and try re-filing each of the square holes in the Side Plates. Be sure to maintain a square hole by lightly filing EACH of the 4 sides ONCE and then retry inserting the Safety Pin. Continue until the square part of the Safety Pin fits a bit more loosely through the hole. Do NOT excessively file the hole on the Side Plate – the fit should be snug so each side of the Safety Pin can be pushed back and forth through its appropriate Side Plate with only finger pressure. Do not push so hard on the round part of the Safety Pin that it recesses into the left Side Plate since it has not yet been secured. If the Safety Pin recesses so far into the Side Plate that it cannot be pushed back out, return to step 22 to reset the Safety Pin.

Once you have confirmed that the derringer can be fired and rendered safe (test both several times), attach the Safety E Clip (14). (NOTE: With the O/U Derringer, test this several times with the firing pin in both positions as described in the first two sentences of step 25.) This will prevent the round part of the Safety Pin from retracting too far into the Side Plate while the Trigger itself prevents the same problem from the other direction. Place the open part of the Clip against the grooved notch at the end of the round part of the Safety Pin and PUSH. This may take some effort and most likely cannot be done by hand. You may need to use a screwdriver or forceps to force the Safety Pin E Clip onto the Safety Pin. If you break the pin, a replacement can be obtained at a hardware store (but take the Safety Pin with you to get the correct size).

25. With the O/U Derringer 22/45/410 kit, to fire the .22 LR round, pull back the Hammer and push UP the firing pin part on the front part of the Hammer. To fire the .410 shotgun shell or .45 Long Colt shell, pull back the Hammer and push DOWN the firing pin part on the front part of the Hammer. WITHOUT LOADING THE DERRINGER, test fire both upper and lower chambers several times. In both cases, open the Barrel after pulling the trigger and ensure that the firing pin part of the Hammer protrudes through the Breech Face at approximately the point where the selected shell would be located. With the 45/410 kit, there is nothing to adjust on the Hammer; however, you should still test fire it several times to ensure that the firing pin part of the Hammer protrudes through the Breech Face at approximately the point where the shell would be located.

26. THAT'S IT! You have now successfully built your own fully functional Over/Under 22/45/410 Derringer or your 45/410 Derringer!

CONGRATULATIONS!

On the next few pages, I would like to provide you with some cautions and recommendations:

a. The safety works differently than on most pistols. Become accustomed to it BEFORE you insert any ammunition into the derringer. In effect, BE CAREFUL!

b. If you are seeking a holster for this derringer, try the Derringer Holster by San Pedro Saddlery, shown below and usually available for auction at www.gunbroker.com or www.auctionarms.com.

This image was obtained from a listing by MrBisley at www.gunbroker.com.

c. Use only .45 Long Colt (NOT .45 ACP) or .410 Shotgun Shells in the lower chamber of an over/under combination or in the single chamber of a .45/.410 Derringer. Do not use any other type of ammunition even if it "appears" to fit since the chamber of the barrel is specifically designed for **only** these two types of ammunition. Any other type might cause problems due to such complications as differences in ballistic pressures, primer location, the need for a longer and/or rifled barrel, etc. Some problems may result in a simple hangfire, misfire or render the derringer unable to fire. Other problems may result in serious complications including but not limited to blowing apart or destroying the barrel, breaking the firing pin, fragmenting the bullet, or significantly altering the expected pattern, direction or diameter of the shot.

   i. If you make your own ammunition, be sure to use the exact STANDARD specifications for the above-referenced shells. Do NOT exceed the charge, use different primers, or include exotic shell contents. This derringer is NOT designed to accommodate such variances and its response to such experimentation cannot be predicted. This is a firearm. BE SAFE AND DON'T TAKE CHANCES!

   ii. Due to the style of the derringer and the slope of the handle, the recoil will be a bit more and somewhat different than you might otherwise expect from an equivalent shell fired with a more conventional pistol or shotgun. A word to the wise should be sufficient.

iii. While the .45/.410 chamber can accommodate 3" shells, my personal ammunition preferences (all available for reasonable prices from http://www.cheaperthandirt.com) are:

(1) Sellier & Bellot .410gauge 3shot 000 Buck Shot in a 2.5" shell.
(2) Remington .410 gauge 1/5 oz. Slug in a 2.5" shell.
(3) Winchester Super-X Centerfire Pistol/Revolver Cartridges, .45 Long Colt, 225 Grains, Silvertip Hollow Point.

d. Use only .22 Long Rifle shells in the upper barrel of an over/under combination. (Although a .22 Short would work, I wouldn't since better options are available.) Do not use any other types of ammunition for the same reasons noted in c. above.

iv. If you make your own ammunition, be sure to use the exact specifications for the above-referenced shells. Do NOT exceed the charge, use different primers, or use exotic shell contents. This derringer is NOT designed to accommodate such variances and its response to such experimentation cannot be predicted. This is a firearm. BE SAFE AND DON'T TAKE CHANCES!

v. Don't be confused by the size of this bullet or the concept that "it's only a .22." While it admittedly has limited value for defense, some have a range of 1.5 miles!

vi. My personal ammunition preferences for this chamber are:

(1) CCI/Speer .22 Long Rifle Hollow Point Mini Mag Ammunition.

(2) .22 Long Rifle Blue Tip Incendiary Ammo (usually available at www.gunbroker.com). These make a significant impression and can be great fun but they are admittedly expensive! Still, their unique nature may also be more effective in ending a tactical situation without needing the lower chamber. Nevertheless, remember that they are incendiary shells so do not fire them into anything flammable including dry leaves or wooden targets. As the saying goes, only YOU can prevent forest (or house) fires so as always, use good sense. Show respect for and consider the implications of the weapon and ammunition you use AT ALL TIMES!

e. While you were able to avoid the FFL requirements by obtaining partially completed kits from separate sources, once the derringer is completed everything changes. Once this derringer is completed, you CANNOT sell it unless you hold a Federal Class II FFL and it is legal to do so in your location. Some states have special rules at gun shows. Some states or counties do not permit the sale of this derringer under any circumstances – even by licensees who can otherwise sell even Class 3 weapons!

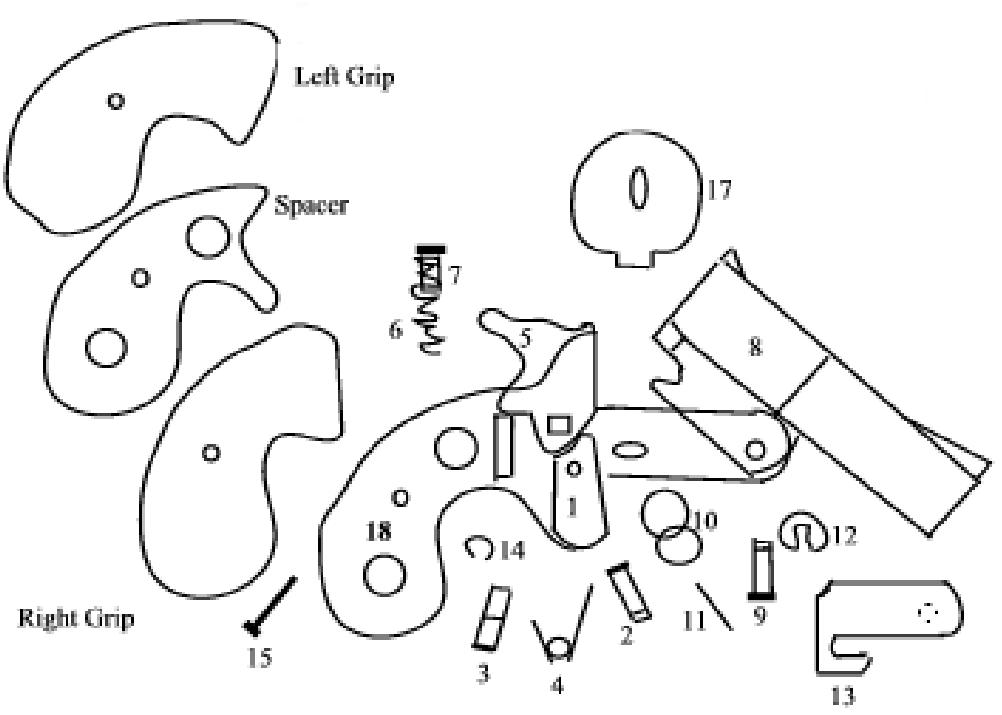
f. Once the derringer is completed, TREAT IT JUST LIKE ANY OTHER FIREARM YOU OWN! Use a trigger lock. Keep it in a locked safe. Keep it away from children. Do not carry it unless you have a permit to do so. Keep the ammunition dry. If you

are carrying it loaded, put on the safety and CONFIRM it by gently trying to pull back on the hammer. If the hammer cocks, then hold the hammer tightly, pull the Trigger, and release the Hammer SLOWLY. Proceed once again to set the safety. In effect, from a safety and legal perspective, treat it like you would an expensive automatic pistol or revolver. The fact that you made it makes no difference ONCE IT IS MADE! Even if you omit certain parts to make it non-functional and can prove it if necessary, it can still be considered a firearm under certain conditions by the authorities – especially since September 11.

g. If you ever have the misfortune to need the Derringer in a tactical situation, you don't want it to be the first time you've fired it! Go to a firing range and practice with your new Derringer. I hesitated including this step since at least one practice session with your new handgun is inevitable given all the work you put into making it. Still, as you've no doubt learned by this point, I have no problem with being too detailed. ☺ Test both chambers of the O/U model. Use EVERY type of ammunition that you intend to fire in the Derringer after obtaining approval from the range officer – especially if you purchased the incendiary .22 shells. If possible, confirm that the range will permit firing all of your ammunition before driving there. Most indoor ranges and some outdoor ranges only allow ammunition purchased at the range, so be sure they have the same ammunition you have purchased in stock before you make the trip. It may even be preferable to try various brands and types ammunition from their stock before making your own personal choices (being certain to consider the ammunition limitations of the derringer). Range ammunition is generally more expensive than similar ammunition obtained from other sources. If you identify a personal preference, write down the specifics and seek the ammunition from a less expensive vendor (e.g., www.cheaperthandirt.com, www.sportsmansguide.com or one of the gun-related auction sites). You may also want to join an organization that provides pistol and shotgun ranges. Consider the Izaak Walton League of America. The link to my particular chapter is http://www.iwla-rockville.com/.

GOOD LUCK AND BEST WISHES! If you have any questions not covered in these instructions, please feel free to send me an email at Derringer@farcroft.com. Since these instructions can be used with minor modifications to make several different derringers, be sure to include which version we will be discussing.

PARTS DIAGRAM



(1) Trigger
(2) Trigger Pin
(3) Safety Pin
(4) Trigger Spring
(5) Hammer
(6) Hammer Spring
(7) Hammer Plunger
(8) Barrel
(9) Barrel Pin
(10) Barrel Latch Knob – 2 ea.
(11) Barrel Latch Pin
(12) Barrel Pin E Clip
(13) Safety Shield
(14) Safety E Clip
(15) Grip Screw
(16) Left Grip, Right Grip & Spacer – 1 ea.
(17) Breech Face
(18) Side Plate – 2 ea.

TOOLS

Bucket of water
Fire extinguisher
Welding-rated safety goggles
Welding gloves
Large and small flat file
Rotary tool (optional but helpful)
Degreaser
Flat-faced screwdriver Paper clip
Large heat resistant vise grip
Flat metal base (anvil bench vise base)
Forceps
Sandpaper
Harris “Stay-Silv®” White Brazing Flux
3/32 White Flux Coated Low Fuming Bronze rods
Oxy-Acetylene Torch
Flat-faced hammer
Flat-faced punch or something similar
Black (7778) Rust-Oleum Specialty High Heat (optional)
Round file
Flat-faced screwdriver

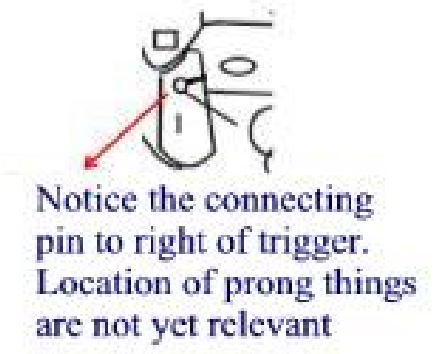
TRIGGER SPRING ADDENDUM

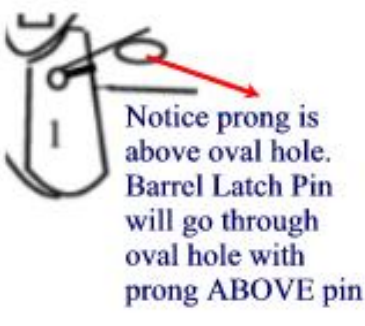
I found the trigger pin assembly part one of the most confusing steps (even if not a CRUCIAL step). I received a question on it and in response drafted this addendum. The trigger spring is one of only two springs in the kit. One is straight and is the Hammer Spring. The other is the trigger spring and looks V-shaped.

Look at the diagram. The trigger spring (4) goes around the Trigger (1) with BOTH the short connected part and the prong like things inserted to the front (towards the barrel) of the assembly. The prong like things may drop below or even behind the Trigger but this is not a real concern since they can easily be moved. The MOST crucial part is to be certain that the connected part of the spring is to the front (towards the barrel) of the trigger. You can see this best by looking at it from underneath. It might be easier to attach the spring to the Trigger before inserting it between the Side Plates. Once it is in place, you should be able to look from below and see the small connecting part to the front of the Trigger. The longer protruding ends could be almost anywhere at this point and it really doesn't matter since they can be easily moved once the Trigger and Trigger Spring have been connected to the Side Plates using the Trigger Pin (2).

Once this is complete, you will then move the prong like things towards the front (towards the barrel) and make sure that they are ABOVE the oval hole in the Side Plates through which the Barrel Latch Pin (11) will go. When you insert the Barrel Latch Pin, make sure it is BELOW (i.e., the prong like things remain ABOVE the Barrel Latch Pin. I found an opened paper clip to be invaluable. Since the spring is relatively loose and the prong like things are parallel, this should not be a problem; however, if so, do them one at a time as per the instructions.

From the side, you should see the hole in the trigger, the round trigger holes in the Side Plates, and the circular part of the Trigger Spring all aligned so that you can insert the Trigger Pin. This is somewhat difficult. Once they are close, use an open paper clip and run it in a circle through the hole to align everything and then put in the Trigger Pin. Recheck the Trigger Spring from beneath and confirm that it still can be seen on the barrel side of the Trigger. The large prongs don't really matter until you are ready to insert the Barrel Latch Pin as long as they are somewhat close to the JPG diagrams





BASIC SIDE PLATE & BREECH FACE INSTRUCTIONS

It would be best to purchase and speed read the Derringer Assembly Manual before tackling the side plate & breech face cutting. This would give you some perspective and would also give you an idea where there is leeway for variance and where perfection is needed.

BASIC RULE OF THUMB: If you must err, cut the EXTERIOR a bit WIDE and the HOLES a bit SMALL. You can always fine-tune to kit part variances this way. If you cut the exterior too short or the holes too large, there is no way to recover except to start from scratch. I will repeat this over and over because it is the key to getting it right the first time.

First, cut the entire exterior of one side plate. The flat part facing forward where the firing pin will be located and the top of the side plate where the barrel will go MUST BE ABSOLUTELY PERPENDICULAR. If you don't do this right, then the barrel won't align with the Breech Face. You can adjust it a bit with filing, but remember that this is where the brazing will occur, so a flat surface is mandatory. Then drill grip holes and make sure that the grips and spacer fit correctly. File as necessary. If it's a tad recessed, that won't be a real problem unless it's over where the Trigger Spring will go – then you need to decide if the difference is significant.

Next, drill the hole for the Barrel, insert the barrel pin and attach the barrel to the pin. Close the barrel, as it would look if it were complete. Place a piece of steel between the rear end of the Barrel and the front end of the side plates. The fit should be snug. If it is too tight, that can be corrected in a variety of ways. If it is really far away, then this is an uncorrectable problem.

Drill the circular holes next and check each with the appropriate pins.

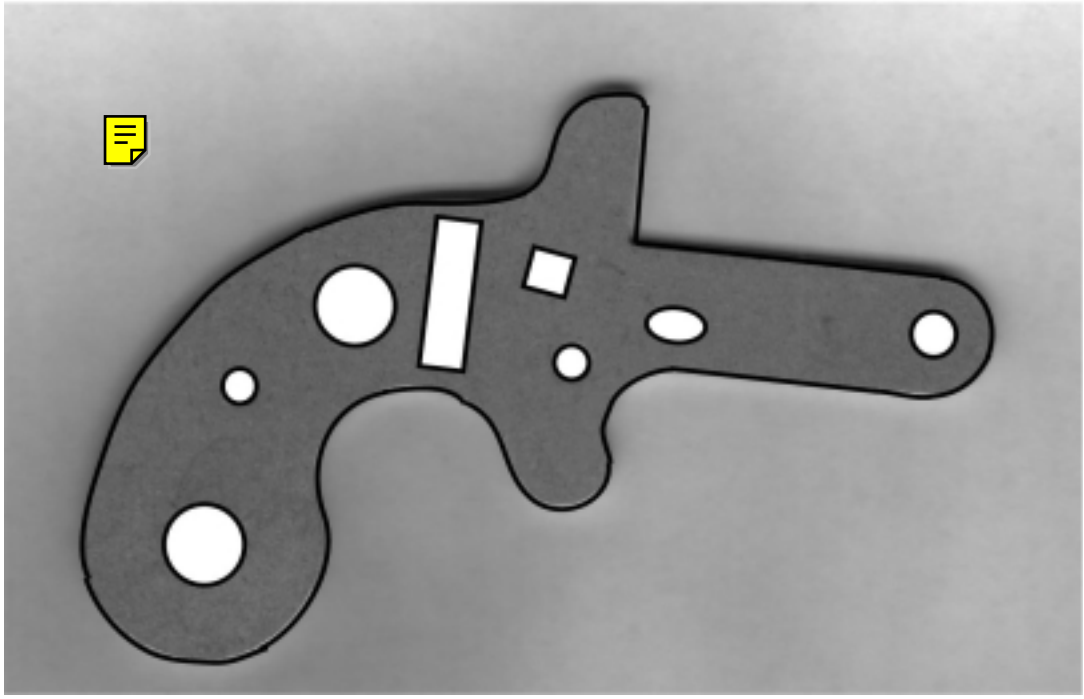
The rectangular hole holds the Hammer Spring and Plunger. The real key is the top part. It must not be too wide so that the Hammer Plunger can slip through it. The lower part is a bit less crucial since the spring really rests on the Spacer – but a nice flat cut won't hurt.

The square hole is critical. Make your initial cut intentionally TOO small. You can then widen it to fit the safety pin. If you initially cut it too big, you're hosed.

The oval cut for the latch pin is important in terms of its length and position. I would complete both plates except for this hole, insert everything I could to align the plates and then move the Safety Shield back and forth as far in both directions as possible with a pencil in the Safety Shield hole. This should be inside the hole in the template. If so cut it as closely as possible – but you'll probably need a file or rotary tool here.

BOTH SIDE PLATES SHOULD BE ABSOLUTELY IDENTICAL WHEN DONE! Actually, there is some leeway in some areas. If you read the assembly instructions first, you'll recognize where you can slide by and where you need perfection.

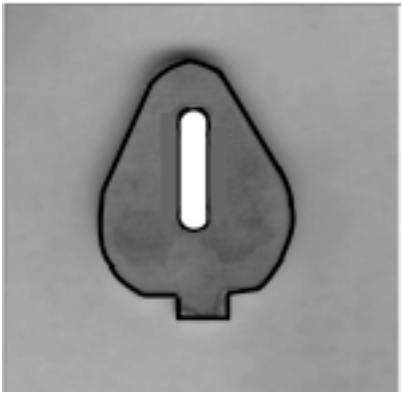
Once you have the side plates constructed, then attach the grips and spacer and barrel pin & barrel, safety pin, and safety shield (not securely but just to identify the width of the plates. Then take the cut Breech Face Template and insert it between the Side plates. The notch at the bottom of the Breech Face must fit tightly between the side plates. If you insert the Hammer Spring and Plunger with the grips & spacer, then you can also attach the trigger and make sure the hole aligns with the safety hole by removing the safety pin and inserting it into the trigger. Mark the template with the exact location of the firing pin and make any corrections to the template.



This Side Plate Template fits the O/U .22/.45/.410 Derringer, the .45/.410 single shot Derringer and the .22 Revolver Derringer. To obtain the proper dimensions, it must be PRINTED – not viewed on the screen. Once you cut out the template, compare it with the side grips. Some minor adjustments may be required due to variances in the kit parts. The metal should be constructed out of 11 gauge (.120") sheet metal scraps. Two are required for each assembly. It is highly recommended that the second Side Plate be constructed to perfectly match the first one as the alignment of the Side Plates is THE MOST CRUCIAL ASSEMBLY REQUIREMENT.

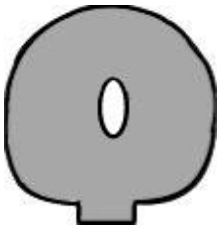
NOTE: Each Derringer required a different Breech Face. The appropriate templates are on the following page.

Remember the **BASIC RULE OF THUMB**: If you must err, cut the EXTERIOR a bit WIDE and the HOLES a bit SMALL. You can always fine-tune to kit part variances this way. If you cut the exterior too short or the holes too large, there is no way to recover except to start from scratch.



This Breech FaceTemplate fits the O/U .22/.45/.410 Derringer. Some minor adjustments may be required due to variances in the kit parts. The metal should be constructed out of 11 gauge (.120") sheet metal scraps.

Remember the **BASIC RULE OF THUMB**: If you must err, cut the EXTERIOR a bit WIDE and the HOLES a bit SMALL. You can always fine-tune to kit part variances this way. If you cut the exterior too short or the holes too large, there is no way to recover except to start from scratch.



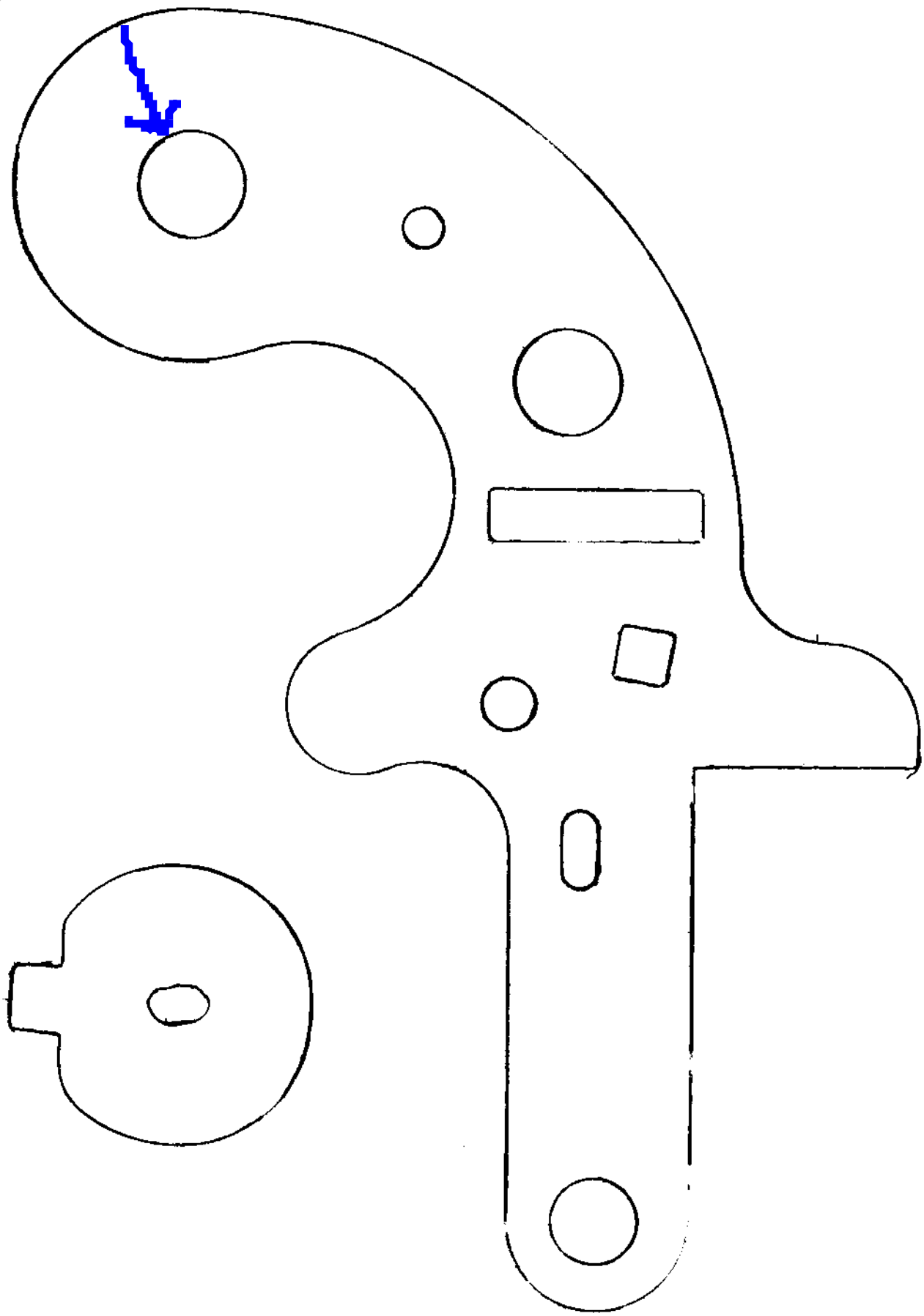
This Breech FaceTemplate fits the .45/.410 Single Shot Derringer. Some minor adjustments may be required due to variances in the kit parts. The metal should be constructed out of 11 gauge (.120") sheet

Remember the **BASIC RULE OF THUMB**: If you must err, cut the EXTERIOR a bit WIDE and the HOLES a bit SMALL. You can always fine-tune to kit part variances this way. If you cut the exterior too short or the holes too large, there is no way to recover except to start from scratch.

If you want a copy of 17 page **DETAILED** Assembly Instructions for the two kits that match the side plate and breech face templates, including how to assemble the finished side plates and breech face, please e-mail me at **Derringer@farcroft.com**. The price is $5.00 for email delivery in both Word 2000 DOC and PDF formats or $7.00 for email AND hard copy delivery.

DERRINGER ASSEMBLY INSTRUCTIONS©

O/U .22/.45/.410 AND .45/.410 SINGLE SHOT KITS



Preparing to Braze

I used a caliper to measure the spacer and barrel lug, then went to the old parts bin, and it took a while but I found two that were 6mm thick,
a bit more trial and error, and found two more that were 6.3mm. I use my
flex shaft to clean up the excess brazing material, before I file.

Before I did any brazing (Oxy-Acetylene) I had my son scribe two lines on
the inside of the breach plate (with a thin drawing pencil) when it was centered. Then I lined up the breach plate and he clamped it. Note, the side plates were bolted together before I started any of the breach plate
alignment.

While not in any of the above documents, I thought you might find some of my personal experiences instructive or at least amusing:

I spent hours trying to get the trigger spring to hold against the latch pin but to no avail. No matter how I inserted it, it still slipped. I eventually tried to bend a paper clip into a similar shape but gave up after another several hours and threw all the failures across the room. As it turned out, the trigger spring was defective - not only was one of the long prongs shorter than the other but when I received the correct one, even the longer one was still nearly 3/16" shorter than necessary. Little wonder I was having a problem.

Then there was the Hammer Spring. When trying to insert it, I lost it twice and it shot across the room. The first time took less than five minutes to find. The second took nearly 30 minutes! I also broke the Spacer end by pushing too hard on the Hammer Spring and had to wait another day while the epoxy set.

I don't even want to talk about the brazing process. It was the first time I had done anything more advanced using heat than soldering, and I learned that there was a reason why welders took courses and served as apprentices before becoming certified. Doing it "cold", so to speak, was more of a challenge than I expected. The hot ember in my eyelid that plagued me only took about three days to wash out. NOTE: Shooting glasses do NOT always work for welding because they do not form a perfect seal around the edges!

I also discovered that I could not fit the .22LR shells into the .22 chamber of the O/U model and had to file the chamber until they fit. The same customer who created the unique brazing set-up suggested the following: Rather than filing out the chamber, it would be better to use some emery paper rolled up, and slowly re-chamber until the .22 round fits. You could wrap some around a small nail. And chuck the nail in a drill. The .22 round should just drop out of the chamber if unfired.

Finally, I had the safety backwards for almost a week and it wasn't until I was confused when drafting the instruction manual that realized that the hole in the hammer had a flat and a round section - defining

the proper direction and explaining the purpose of the "extra" E clamp in the kit.

I've received at least 5 comments from customers who say that the firing pin does not properly center on the chamber. This is not from people who made the plates from the templates, but people who bought the "factory-made" versions available on the auction site.

By making the breech face and side plates yourself, you have an opportunity that they do not have to avoid the problem by adjusting them so that the hammer strikes where it should. First make the side plates. Do not make the breech face yet. Put the derringer together as if you were setting it up for brazing. This will give you a perfect shape for the breech face and the firing pin hole. This only increases my suggestion to cut the outside wide and the holes thin.

So you see, I've been there.

Lorien

P.S. I want to re-emphasize that you may email me ANYTIME if you have any questions, comments, concerns or confusion regarding the assembly. Given that these are instructions for a firearm, I want you to know that I will always be here to help out. There are no stupid questions. I would rather answer 100 questions from a single customer than have that customer make a mistake and cause an injury to himself or someone else. I've made the derringer and gone through every step dozens of times or I couldn't have written the manuals. Sometimes a one sentence explanation can clear up a question that would otherwise take hours to resolve. Please don't hesitate to email me