Intro to the Parker Gun – 101

By Robin Lewis

Everyone that gets enthusiastic about Parker shotguns has gone to school of one kind or another, learning about Parker's, so I thought I would write up a syllabus for a class. The basis for this class is the Parker Gun Collectors FAQ web page. Several years ago I began helping John Dunkle with the web page and over that time I watched for interesting discussions on the forum that would be good candidates for the FAQ page. I know most visitors to the PGCA web page focus on the forum section and many never bother to read the other pages; also many of our PGCA members don't use computers and they have never seen any of this information. If you are a reader of the FAQ web page you will undoubtedly find this old news.

The general characteristics for a particular type and grade of Parker shotgun is just that, a general description. Not all Parkers will exactly meet a general description because Parker would alter a gun to meet a customer's requirements if possible. Parker shotguns are custom guns and descriptions found here are those of their most common features.

By the time you pick up your first Parker shotgun you will have heard that these guns are not, and never were, cheap. The most common question asked by a new Parker owner is "What is its value"? Originality, condition, grade, gauge and features such as single trigger, beavertail forend, ejectors, vent rib, special order/uniqueness and occasionally, provenance, are the accepted key factors that establish worth. Worthy also of consideration is the quality of any work done on repaired or refinished guns. All are important factors in placing value on a Parker but the three primary determining factors are **gauge**, with the smaller gauges commanding higher values, **condition** with near factory original commanding higher value and **grade** with higher graded guns valued higher.

There are so many variables in evaluating Parker Guns that it staggers the mind. The basic "Polar North" of course is "Condition, Condition, and Condition. Nowadays the smaller bores rule in terms of dollar value and desirability. Any small bore graded gun (e.g., G or above) brings a steadily escalating premium over any lesser-graded gun, regardless of gauge. That is, a 16 gauge BHE grade brings more money than a 12 gauge BHE ; a 20 springs ahead of a 16, a 28 takes a quantum leap over all three, and a .410 BHE makes you switch oxygen tanks. And any CHE is a very desirable gun, provided condition is OK!

The real proof of the pudding in evaluating any gun is to have the gun in hand and some "quiet time" for examining the gun and recording as much info as possible from it. Depending on the gun, this can take anywhere from 10 minutes on a "mint" Trojan Grade 12 ga. (no mysteries) to anywhere from 2 to 3 hours on an exceptional gun.

As guns ascend in desirability of grade and gauges, a myriad of questions pour out: how are the (case) colors? How is the condition of the wood? Is the stock original? Is the checkering pattern and inletting of the stock correct? Is the grade of the wood in the stock commensurate with the grade of the gun? Is the finish of the stock original? are the dimensions desirable for actual use?

How are the bores? What length are the chambers and do they correspond to the correct period length for that gauge (e.g., before c. 1927-29 you are liable to encounter a great variance in chamber length over gauge; after that, production consistencies in ammunition production more or less determined "standard" chamber lengths in most American SxSs.) Have the barrels been cut? Have the chokes been opened up? Have the chambers been lengthened?

There is so much to know and so few people available, relatively speaking, that can answer a majority of these questions, its recommend that your first move is to get a letter on your gun from the PGCA. If records exist, the letter will provide you with at least a modicum of information. At least that will provide you with a basis of data on which to research your gun further (e.g., compare barrel length, choke, weight and stock configuration as recorded when it left the factory with the current condition of the gun).

Next, take (or have someone take) some clear, close-up digital pictures of your gun and post them on the parkerguns.org web site so we can look at them. Pay close attention to receiver engraving; stock condition, wood to metal fit, butt treatment; muzzle close ups, and markings on the watertable, barrel, and frame. This can help tell a great deal about the gun. No one knows it all, but there are a lot of members on the PGCA internet forum that have looked at a LOT of Parker Guns!

Experience with auction houses can be mostly rewarding so far as the evaluation and sale of fine double guns has been concerned. The more discriminating firms most often have their operatives defer to the individuals possessing the most intimate knowledge of the desirability, rarity, historical significance, and technical importance of collectible firearms (not just Parkers!). These individuals, of course, are the seminal collectors of these guns. Most are not conducive to being approached for individual gun appraisals for obvious reasons (e.g. security; purchase; resale, etc.).

I would encourage you to use the PGCA site as a first step in determining the "value" of your gun. There are many there that can help you. The "dollars and sense" will come later very naturally.

Ultimately, ***it is worth what the owner and a willing buyer agree upon***; which can be an arbitrary figure and certainly subjective at the very least. Simple supply and demand at any given time is also a consideration.

Now, we go on to investigating the **Lock, Stock** and **Barrel**. These areas usually determine the overall condition when evaluating a Parker.

The Parker lock: The Parker shotgun has a boxlock action, meaning the type of action (receiver) for a break-open gun where the working parts are contained within a box-shaped metal housing. A boxlock is considered superior to other types because less wood is needed to be removed from the head of the stock to fit the action in the stock---and wood is generally more vulnerable to failure than metal. Parker actions come in various frame sizes which depend on the gauge of the gun.

When Parker began making shotgun they made both elaborate and plain guns but they didn't distinguish between them in their sales literature except by the sales price. Later they adopted a numeric system to identify the various "*grades*" they produced. The grade naming system began at zero and ascended as the grades became more elaborate and expensive. Later the numerical grades were combined with letters in an attempt to better differentiate the shotgun characteristics but that did not last long and the letter grades simplified and became *almost* interchangeable with the numerical system. The grade of the gun is almost always stamped on the water table of the frame above the serial number.

The frame size of a Parker is marked on the bottom of the barrel lug.

It represents the relative size and weight of a Parker's frame and controls the size of both the barrels and stock that was fitted to it. The fame size was, and still is, determined by measuring the distance between the firing pin centers; the frame size designation is the number of 1/16th of an inch above 1 inch. For example a zero frame would measure exactly one inch between the firing pin centers; a number two frame would measure 1 2/16 or 1 1/8 between centers. There is a correlation between the frame size and the gauge of gun it was used on, as seen in the chart below.

When examining the frame take particular note of the quality of the engraving, is it sharp or is it weak in appearance? Weak engraving can be an indication that the frame was buffed to remove rust at some point in its life. Another indication of buffing is rounded edges where sharp ones are expected.

All screws seen on Parker frames are oriented in line with the barrels or 90 degrees to them. Screws that are not oriented on these axis's are an indication that the screws are in the wrong

holes; which indicates that a previous gunsmith worked on the gun and he didn't "know" Parkers. All the screws should have clean slots that have not been damaged.

The frame should have a very close fit to the stock. Any gap between the frame and the stock indicates that the stock may be damaged or that the stock is a replacement. Even if there isn't visible splitting in the stock, it may have failed internally.

The Parker stock: The quality of wood used on a Parker was usually determined by the grade of the Parker. The more elaborate the gun the higher the quality of the wood used in the stock. Parker's highest grades were elaborately checkered and the lines per inch of the checkering was as high as 32. The walnut used on these high grade Parkers has to be the best quality for them to be able to hold 32 lines to the inch checkering without the wood crumbling. Not only was the wood quality more dense but the grain became more eye appealing as the grades increased. The low grades wood was plain with courser checkering. The quality of the wood should reflect the grade of the Parker; a lower graded Parker with high eye appeal wood has almost certainly been restocked.

Parker checkering patterns change in relation to the grade of the gun. Note the border edges on the checkering, original work will have a unique style not found on other guns. If the boarder is the same as the checkering, it has probably had the checkering re-cut incorrectly or the stock is a replacement.

Parker Barrels: Barrels can become what is called *off face*, a condition when the barrels breach end no longer fits tightly to the guns frame. Barrels go off face as the hinge pin wears or the action is overstrained, then the barrels can come away from the action face, i.e. *off face*. You should not be able to place a feeler gauge between the action face and the barrels and have the action close. You should not be able to see light between the barrels and the action or for that matter see any gap at all.

You can do a couple quick and simple tests to help detect if a gun is off face without using gauges:

1. Push the top-lever hard over with the thumb and hold it there, while supporting the barrels in the closed position. The tip of the index finger is then placed where the barrel and standing breech meet; then try to move the barrels moved from side to side. This should probably then be repeated with the forend removed, <u>taking care not to drop the barrels</u>! You should feel no movement.
2. With the gun upside-down and horizontal and with the forend removed, hold the gun firmly by the wrist and/or buttstock with both hands, while the top-lever is pushed hard-over give the gun a gentle shake from side to side. Again, you should feel no movement.

An off face condition can be repaired and it is not all that expensive to fix. The barrel lug hook can be "spray welded" and refit to the pin.

A poor solution which has been employed is to peen the pin or hook in an effort to deform the metal, forcing a tight fit. Another is to place a metal shim between the hook and the pin. Neither of which are long term solutions and should be avoided.

Next examine the ribs on the barrels. The top or bottom ribs on a double gun can become loose. The solder holding the ribs to the barrels can get hot from rapid shooting, especially using black powder, and the solder can fail. Or, a manufacturing process may not have solidly bonded and vibration could cause the solder joint to fail. In any case, the problem needs attended to.

A simple and well known test for loose ribs can be performed with the barrels separated from the action and forend. Let the barrels hang from your index finger by placing the hook (the part that pivots the barrels from the frame when they are opened) and then tapping the barrels with a flick of a finger nail or some other semi-hard implement. Care should be taken not to drop the barrels and avoid the use of an implement that could scratch or otherwise damage the barrels.

If the ribs are loose, the sound made by the barrels will be a dull "thud". If the ribs are tight and the barrels are in good condition, they will ring like a bell.

In "ringing" a set of barrels you are basically checking for loose ribs. If the barrels sound like a "chime" with a mostly clear tone to each tube, then chances are the ribs are well connected. If they sound "dead" or "buzzy" then there's a chance the ribs have come loose somewhere (or were never well laid to begin with). It all takes practice and experience.

To do this afield:

1) remove the barrels from the gun and the forend.
2) suspend the barrels vertically a short distance over a safe surface like a padded table.
3) use your left index finger in the "hook" of the barrel lump to suspend the barrels (if you're right handed).
4) with your opposite index finger's nail, "flick/tap/ting" one barrel along it's length. You can also use a non-marring object like a pencil.
5) if the barrel "rings" then all is good.
6) repeat for the second barrel.
7) if the sound is dead or buzzy in spots, you might have a loose rib somewhere.

But be aware that various barrels sound differently. Composite barrels are more prone to have a bit duller ring to them than fluid steel barrels. That is due to their construction being of an iron and steel combination. Some are perfectly fine, but don't chime well or much at all. Also... a slightly loose/buzzy sound doesn't mean the gun is bad, it means the rib might separate sometime in the future.

If you don't hear them ring, have a qualified gunsmith evaluate them to determine their true condition.

Generally, Parkers with factory installed vent ribs or flat ribs had a flat top standing breech.

There are at least two types of original rib ramps - one with a wedge cut into the ramp and one without but these both have flawless factory finishes where they are actually an integral part of the doll's head.

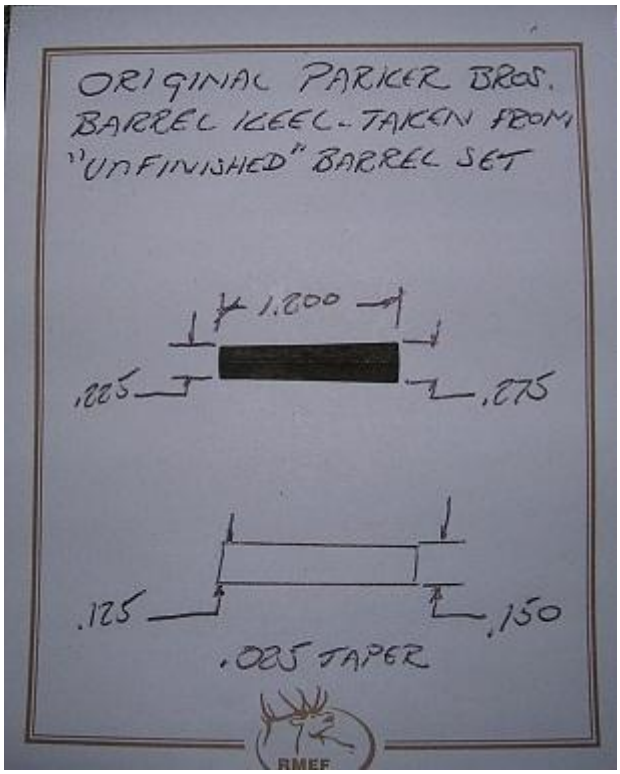
A factory installed vent rib will not have been installed on top of an original matted rib.

Most original factory fitted vent ribs had the last three digits of the gun's serial number stamped on the underside of the rib, generally between the second and third post from the breech end and only visible with the use of a mirror.

No roll stamping on top of rib because the pressure of the stamp would bend the rib between the posts, it will therefore be hand engraved. *The Parker Story* lists approximately 860 vent ribs guns in all grades and gauges.

Check that the barrels are original length and have never been cut shorter. This is done in several ways. First, look at the top rib markings, the wave markings "usually" end before the actual end of the barrel tubes. The short space after the front bead is "usually" void of rib markings. But there have been original barrels that did have them marked to the very end, so this is not a definitive indicator of cut barrels. More importantly Parker barrels have metal filler, called a keel, in the space between the barrels and the ribs at the muzzle end. The keel is a visible tapered triangular metal filler strips just over one inch in length.

Keels served several purposes. The keels soldered in place added surface area to the barrels when they were soldered together before the rib's were installed. The tapered keels are in the muzzle end because it could be inserted and tapped in, or pulled out, to help regulate point of aim. It would then be trimmed off when the muzzles were finished.



When the barrels are cut more than an inch, the keels are no longer visible and only solder will be seen between the barrels at the muzzle end. Normally, when the keels are in place and the barrels have not been cut, the two barrel tubes will touch at their inside barrel walls; another indicator to watch.

The question is often asked, "What is the minimum barrel thickness to safely shoot my gun?" and it's a difficult question to answer without risk. An answer, without a close inspection of the barrel condition, is impossible without risk of being wrong.

The use of black powder and corrosive primers is a primary cause of pitting in some old shotgun barrels, especially if they were not cared for properly shortly after their use. The results can be anything from slight to severe pitting and those pits effectively reduce the barrels thickness by the pits depth at that location. If the shotgun bore is not mirror bright, a competent gunsmith will determine the depth of the pitting and take that into consideration when measuring barrel wall thickness for safety.

With that said, here is a general 12 ga. guideline:

In the forward 2/3 of the barrels length, a thickness of .025" has been suggested as a minimum thickness for safety reasons. The rear 1/3 length of the barrels, where the maximum pressures are exerted, requires thicker wall thickness. The wall thickness at the juncture of the chambers and the forcing cone is the most critical and is where it has the highest pressure exerted.

With some uncertainty, it's assumed that a thickness of .090" at this juncture location would be about minimum.

UK Working Standards recommended minimum wall thickness measured 18" from the barrel breech from *Double Gun Classics* p. 56, Vol. 1, No. 4 Jan-Feb, 2006:

2 1/2" 12g- .028
2 3/4" 12g- .032
Re-proof recommended minimum- .024

And, ***The Hunter's Encyclopedia*** from the German proof house: minimal wall thickness at end of chamber, regardless of length, for 12, 16 & 20 gauge guns should be 2.3mm (.0906") for 'ordinary good steel' or 2.1mm (.0827") if a 'Special Steel' was used. For the 24 & 28 gauges, due to their higher pressures, 2.4mm (.0945") was recommended.
Minimal wall of .6mm (.0236") was recommended in the "forward third" of the barrel.

There is greater pressure as the gauges go from 12 to 16 to 20 etc. therefore the minimum values might increase.

Learning the measurement of known *original* Parker barrels of the same gauge would be a good example to use to understand what Parker thought were safe values in the days when they were making shotgun. The problem with this method is finding "original" Parker barrels and getting permission to take measurements.

The thickness of the barrel depends primarily on the frame size with respect to gauge, and secondarily on length. The barrels were finished by longitudinal hand filing to fit a general set of outside diameter checks. The filing was generally done to balance the gun at the hinge, but it could be muzzle heavy or light if the customer ordered. The longitudinal hand filing produced barrels that were not necessarily concentric with the bore, and wall thickness can vary side to side or top to bottom. There is no standard thickness.

Some guns appear to have thick barrels because full choke barrel muzzles are .040 or more thicker than the bore.

And, ***Some general observations made on the PGCA forum*** - Regarding accepted barrel wall thickness for shooting modern loads, it seems everybody has an opinion. Many of the gunsmiths that render opinions on wall thickness of 25 thou or above work more on modern guns than vintage doubles. If you ask a person who has spent his life working on fine VINTAGE double shotguns, they better understand how these guns were made and have much different opinions on the subject. Most all agree that even 18 thousands in the forward half of the barrels is not dangerous from a bursting or bulging stand point, but rather the risk of dents and damage that cannot be repaired as there is not enough metal to work.

If you ask me, the Brits have been the fussiest about barrels for almost 2centuries, and set the mark for proof testing. Forget opinions based upon everybody bloviating and regurgitating what they have heard or what their friend's opinion is. The British proof houses regularly try and blow up perfectly good guns! They see what barrels can handle by passing not one, but two definitive proof loads through each barrel. I believe the loads are 18,500psi. We all shoot loads that are

below 12,500psi (magnum loads), and most of us shoot more reasonable loads that run under 10,000psi. And the guys that have patterned their guns with loads like RST Shells recognize it is not speed that kills, but the nice even patterns premium ammunition provide. RST Shells don't exceed 8000psi. Go to www.rstshells.com for very affordable, safe loads for your beloved doubles.

If barrels with 20 thousands wall thickness were regularly failing the proof they would not mention that as the recommended minimum. The facts are that barrels under 20 thousands regularly pass proof and are deemed safe. Barrels with 20 thousands and all other characteristics in good shape pass proof in overwhelmingly high numbers. It is extremely rare for failure in the rigid proof testing for barrels in excellent condition because of wall thickness of 18 thousands or above. Barrels fail for other reasons, but not often from bursting or changing bore diameters as in bulges. AND REMEMBER, THIS IS WITH 18,500 PSI LOADS!

Doesn't repeated, large sample, empirical testing that occurs in very controlled circumstances trump untried opinions? Especially with DEFINITIVE PROOF LOADS?

The British Gun Trade Association clearly states that 20 thousands is the generally accepted minimum for judging healthy guns. This is stated in the Jan/Feb 2012 issue of *Shooting Sportsman*, and in another *Shooting Sportsman* article from Sept/Oct 2009 issue. Unless you are shooting guns with obstructions in the barrels, there is no measurable risk shooting reasonable loads in guns with 20 thou wall thickness at least 15" from the muzzle, provided all other issues are sound, like tight ribs, no serious dents, etc. This is not opinion, but data collected for decades under controlled testing.

Now, from my experience, I think many Parker collectors and shooters may be surprised that I have measured at least 20 guns that were 20ga. or 16ga. guns on "O" frames that were definitively factory original in the way of blue and bore diameter. They were never backbored or polished inside, and never filed or machined on the outside since leaving the factory, and they had areas 6-12" back from the muzzle that were 18 thou, FROM THE FACTORY. This is almost always in a 3-4" area very close to the top rib or bottom rib, and only on one side of the tube. As one person on this thread mentioned, virtually all vintage American doubles have a very noticeable lack of concentricity, ie thicker on one side than the other. There is also the matter of soldering on the ribs, with the required filing of overflow solder tight in to the rib, creating these thin spots.

All of these guns were very lightweight Parkers. Where most 20ga. Parkers weigh in the neighborhood of 6 1/4lbs., often a few ounces more, how do you think the factory came up with the guns that weigh less than 6lbs. or even 5 3/4lbs.? It is damn hard to hawg a butt and remove 3 oz. of wood. It is usually more like 2 ounces with a lot of hawging. And once hawged out, how do you think they keep the gun from being barrel heavy? They filed metal from the barrels, that is how.

The guns I refer to have been shot for generations, and 10 years ago hunters would regularly use high base shells for everything. After 70-100 years of use they are still unchanged and have perfect barrels.

How many of the opinion makers actually own high quality barrel wall thickness gauges? Not many I can assure you. I travel the country and am surprised how few buyers of fine shotguns own one, let alone know how they are used. If you are going to buy more than a few shotguns in your life, I recommend looking at the Hosford and Co. barrel wall thickness gauge. One mistake in buying a bad set of barrels on an expensive gun will pay for the gauge 5 times over. The Hosford gauge is very convenient and portable. Either that or rely on someone that has one before finalizing any deal in which the wall thickness is not guaranteed by the seller. Just my opinion on that. No dog in the race.

Just examing 100 Parkers I have sold over the last 3 years, 24 of them had at least one of the two barrels with wall thickness under 23 thousands. Without a lot of researching each individual gun, I can generally say I don't buy or sell any guns you all would consider unworthy at least as a sound shooter, and in general I have above average shotguns. THAT IS 25% OF THIS SAMPLING THAT PROSPECTIVE PARKER OWNERS WOULD DISMISS IF THEY WERE FOLLOWING THE 25 THOU RULE.

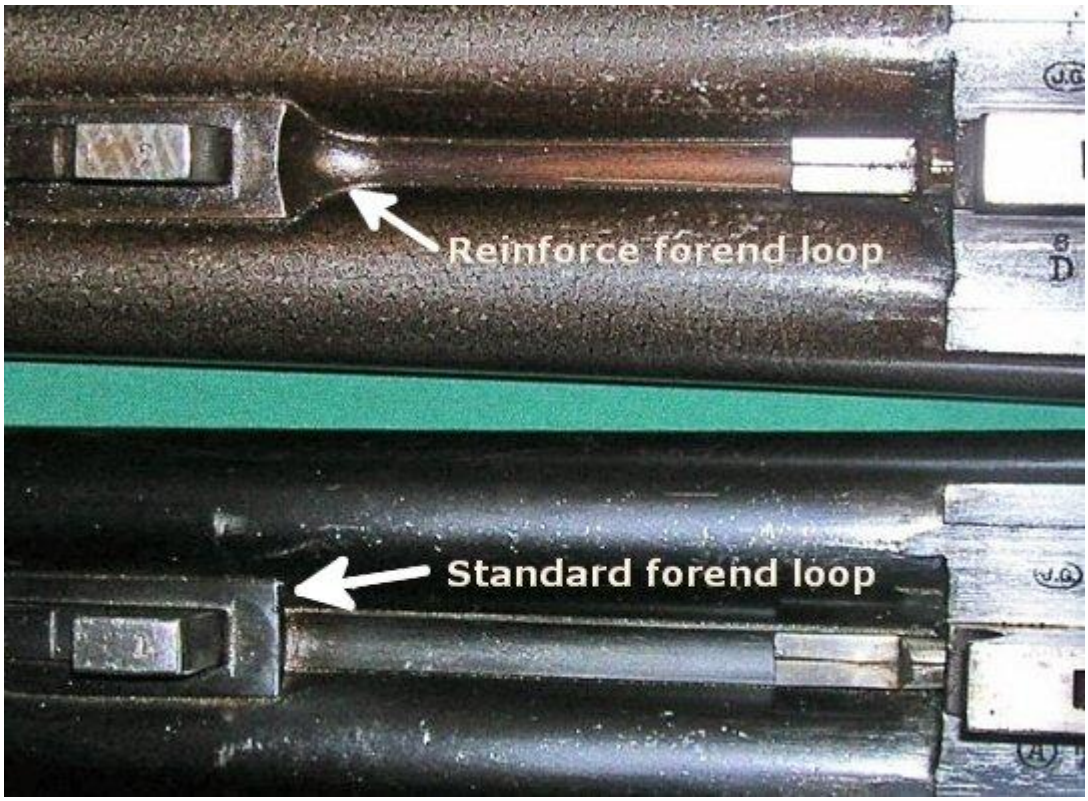
I guess my point is this: It seems there are quite a few folks that come to this forum as being inexperienced with buying and shooting Parkers, and are looking for sound info from members to utilize in getting started shooting and collecting Parkers. Rather than use guesstimates and opinions, why not recognize the results of strict empirical data gathered over the decades of testing provided to us by the Brits? It is certainly better than having fellows looking for a light weight Parker for the uplands simply give up because they can't find one with both tubes over 25 or even 30 thou, as some have stated in this thread. Many of those following that advice would pass over some very fine Parkers for no reason at all. And then they would have to buy Fox guns, as most of them are much lighter than like Parkers! We don't want that do we?

And again, most of the members of our association have no clue what their Parker's barrel wall thickness is. MANY of them are shooting guns that are under 25 thou, and have for decades.

Again, ***a word of caution*** **-** without a hands on inspection, these numbers mean little; don't risk life and limb shooting bad barrels. Have them inspected by a competent and knowledgeable gunsmith before shooting an older gun of unknown history or condition.

If your Parker has a beavertail forend it may not be a factory original. There are a couple of telltale signs that indicate if a gunsmith and not the Parker factory installed your forend.

Parker found that adding a beavertail forend required a design change to the forend loop used to hold the forend to the barrels. The larger beavertail forend put enough added pressure on the hooking loop found under the barrel that the solder would fail. To resolve this problem they increased the solder area, reinforcing the loop. See the picture below and note the larger loop connection.



Also, without the reinforced loop, the finger latch on the forend will be recessed lower into the beavertail wood because of its added thickness. If it is a factory installed beavertail forend, the reinforced loop will allow the latch to be flush with the thicker beavertail forend wood. A Parker factory installed beavertail forend finger latch will fit much like it is on standard Parker splinter forends.

Extractors and ejectors are two parts that perform the same function in shotguns. They both aid the removal of shotgun shells from the barrels shell chamber.

In the case of the extractor, both the shells are pulled slightly up from the breach of the barrels as the gun is opened. This allows ones fingers to get under the shell and "extract" it from the gun.

A gun with ejectors looks and operates in exactly the same way when the shotgun shells have not been fired. But for a shotgun shell that has been fired, the ejectors "eject" the fired shell(s) from the gun with sufficient force to throw the spent case(s) over the shooters shoulder.

To identify one from the other, while looking at the opened breach end of a Parker barrels, the extractor is on the bottom edge of the barrel and spans both barrels. Ejectors appear to look the same but upon close inspection the ejectors are split in the middle to allow only one shell to be thrown from the gun when one shell is fired and not the other.

It is common to find extractors on lower grade Parkers and ejectors on the high grade guns. Ejectors were an option when Parkers were ordered and may be found on low grade guns. Ejectors added as an option usually add value to a Parker's sale price.

Repairs to Parkers, if done by the factory or by a skilled craftsman can be impossible to identify through the closest of inspections.

Parker guns sent back to Parker Bros. for repair can in some cases be verified. The company repair records were kept in *order books*. Some repair records are intertwined in the order books that recorded both repair orders and sales of guns. Some repair records were kept in "order books" that were posted only with repairs. Regardless, the order books are consecutive by date and book number. The use of order books was discontinued in 1919; except for one book (order book #101 which covered the period from 1919 to 1934). Order book #101 is a book that included very few gun sales or repairs but mostly covers financial transactions and returns from dealers in anticipation of the Remington takeover. All the order books entries are in the PGCA database of serial numbers and their entries are reflected in PGCA research letters.

Unfortunately, a few of the Parker order books have been lost and therefore some repairs cannot be verified.

If a Parker was returned for repair after the company was taken over by Remington, there will be a Remington repair code stamped on the water table of the receiver. These codes are a sequence of alpha characters which will decode to the month and year in which the repair was made. Unfortunately, these codes make no reference to the type repair that was made to the gun.

This only scratches the surface, there is still areas to consider: barrel material used, engraving and checkering styles, type of grip, type of release lever, barrel pitting, case color,…. on and on it goes.