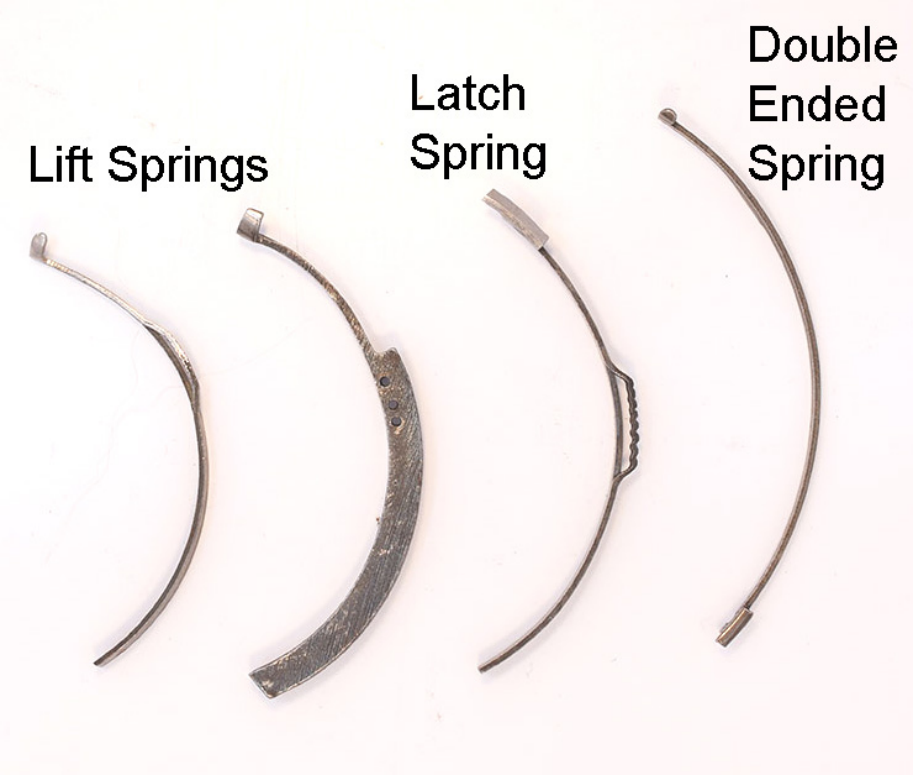
Replacing Hunting Case Springs

By Dave Coatsworth

Pocket watch hunting cases have a pair of springs that latch the cover and cause the cover to open when unlatched. These are called, respectively, the 'latch' spring and the 'lift' spring. Due to the additional stresses placed on it, the lift spring is usually the one that breaks and requires replacement. Breakage happens much less often with the latch spring as its movement is comparatively small.

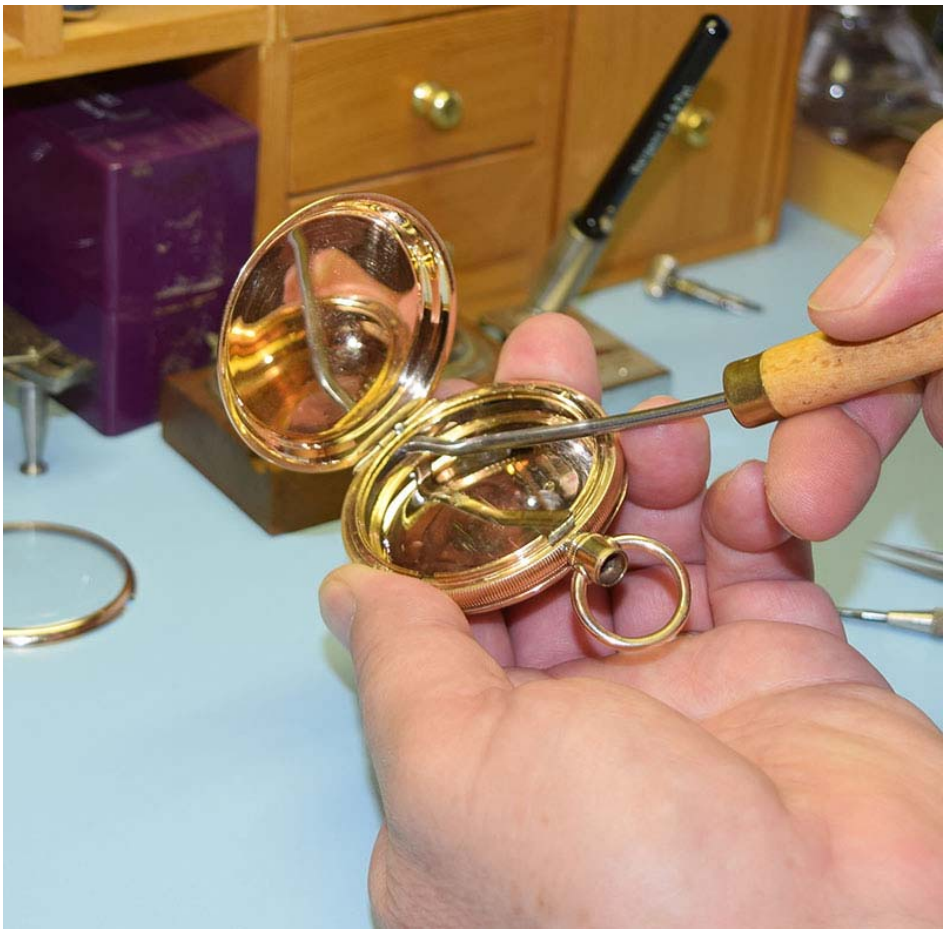
The photo below shows the different springs available. The first and third springs are what we call 'universal' springs as they accommodate a wide range of retaining hole placements and do not have any extra depth. With some modification, they will fit almost any hunting case. The second spring is a manufacturer specific spring, but notice that a couple of extra holes have been drilled in it. You will occasionally see the double-ended spring. These are easier to replace as they are usually just held in by the tension of the spring itself.



To replace a spring, we must first remove the bezel and the movement. Removing the bezel will expose two pins or screws that retain the springs. If you see screws, go ahead and remove the one on the broken spring. This can sometimes be a challenge as they are very small and tend to rust. If pins were used to retain the springs, the first thing we are going to try to do is to push the pins in further to make it easier to remove the spring. Find a punch that is about the same size as the pin, place the case on a soft surface like a towel and lightly tap the pin. If it goes in – great! If not, then it just makes the next step a bit more difficult.

With the screw removed or the pin pushed in, we must next remove the broken spring. I made the tool shown below after seeing a similar tool in an old watch tool catalog. It's simply a piece of round 1/8 inch steel stock on which I have flattened and hooked the end. There is also a slight offset to the hooked end to allow it to fit flat in the groove inside the case. You might want to make two or three of these tools of differing sizes to handle a range of case sizes. Place the tool behind the spring and pry out the back of the spring. Pay close attention to what parts of the case are in contact with the tool as you don't want to mar any visible part of the case. If you have made your tool the correct shape, this should not be an issue.

Case Spring Extractor.....each, $0 10

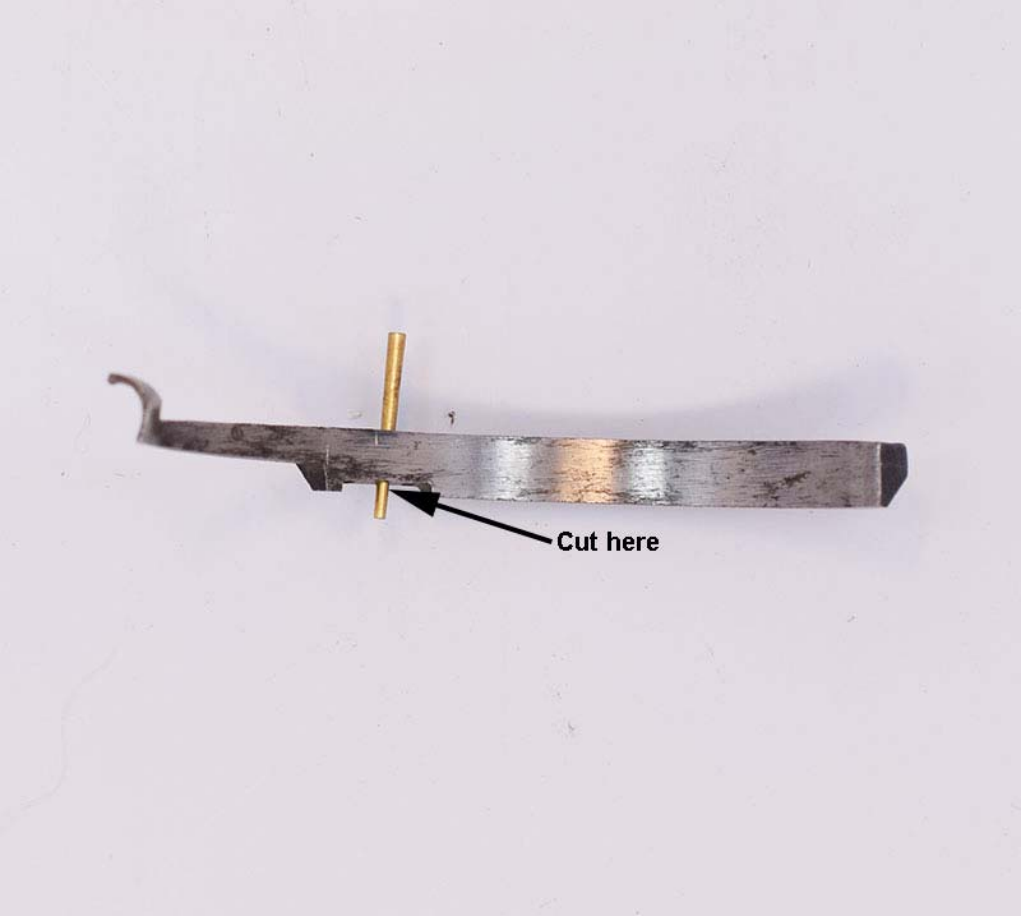


Once you have removed the spring, check your supply of spares to find a spring that has the same curvature, height, depth (for springs with weight added to the back of the spring), and hole placement. This is not always possible and you will then have to select the spring that is closest and modify it to match the old spring. Alternately, you can select one of these universal replacement springs. You will

still need to make sure the curvature and height are the same, but the hole placement and depth are no longer an issue. When modifying the height, find a clamp or vise that will hold the spring securely and file away the extra material.

Fit the spring into the case by hand to check the fit. Don't press it all the way in just yet. You just want to convince yourself that it is going to fit all the way in, that the retention hole will line up and that the lift tab is going to line up with the case lid correctly. If all looks good, go ahead and press it in as far as possible by hand, making sure that the holes are lining up. (It will be difficult to shift the spring later, so you want to make sure you get the hole alignment right initially.)

Unless your spring has a retaining screw, we need to prepare a pin to retain the spring. Select a brass taper pin that, somewhere along its length, is about the size of the hole in the case frame and that in the spring. Cut off the small end of the pin so that the lowest part of the pin now fits in the hole in the spring somewhat snugly. Cut it a little short of the bottom of the spring as we are going to push the pin in tighter for its final fitting. It's best to leave some excess to the top of the pin to make it easier to handle. We will cut that excess off later.



Next, you will need one of the specialized tools shown below. All of these are designed to press the spring into place while the retention pin or screw is put in place. The double ended plier is easier to find and is probably the tool that you will have. When you place this inside the case ring and squeeze, it

presses both springs into the case ring. It is for this very reason that I prefer the other tool. I have had the opposite spring snap when using this double ended tool. The other two tools work on only one spring at a time by fitting against the outer part of the case ring. Make sure you use a piece of felt or leather on this part of the tool to prevent scratching the outside of the case.

Whichever tool you use, go ahead and press the spring into place slowly until the holes line up. If you have a spring that is held in place with a screw, put the screw in. If you are using a pin, drop the pin in and press it down. Release the pressure on the pliers and your spring should stay in place. If you replaced the lift spring, check the action on the lid to make sure it feels right before trimming the pin. If you replaced the latch spring, make sure it travels the required distance to release the lid. Once you are convinced the action is correct, trim the pin flush with the case ring, using a wire cutter.

At this point, confirm that the lid opening action is correct. Do this with the bezel in place so you can see if there are any interference issues between the bezel and the spring(s). If the action is correct, remove the bezel again, replace the movement and then replace the bezel again.