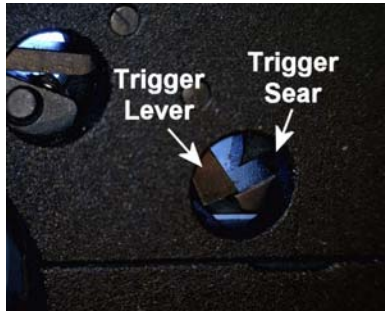


IZH-46M Stuck Trigger Sear Repair

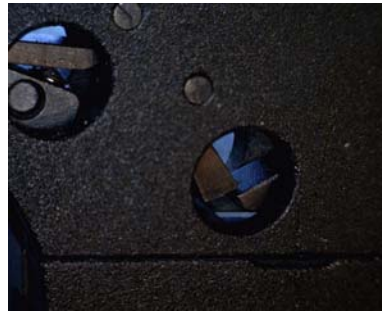
M.I.T. Sport Pistol Club

Doug White, 11/24/13

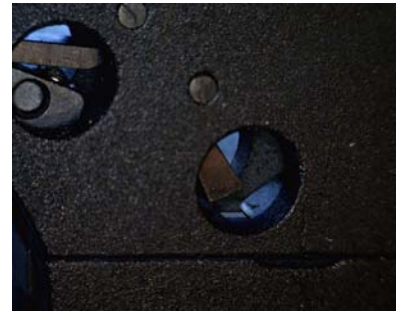
We have had several different IZH's that have failed with the same symptom. Pulling on the trigger meets with no resistance, and the pistol won't fire. The problem is that the "Trigger Sear" (#15) gets jammed too far down, and isn't engaging the Trigger Lever (#18). If you remove the grips, you can look into the large hole in the left side that shows the trigger sear engagement and see the problem. The Trigger Sear will be stuck down, well away from the bottom of the Trigger Lever (see Figure 1).



Normal cocked engagement
(a)



Position during normal cocking
(b)



Sear jammed down too far
(c)

Figure 1: Trigger Lever & Trigger Sear Relationships (Viewed from left side)

I studied one pistol carefully, and learned both how to un-stick the sear, and what is probably causing the problem. I believe it is the result of overly enthusiastic cocking for dry firing, and a little extra instruction to the students will be required to prevent it from happening in the future. Figure 2 shows the normal position of the trigger & valve sear (#14) when the pistol is cocked.

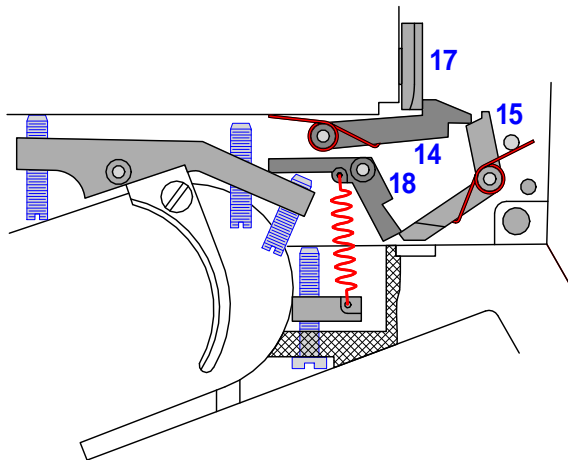


Figure 2: Normal cocked condition

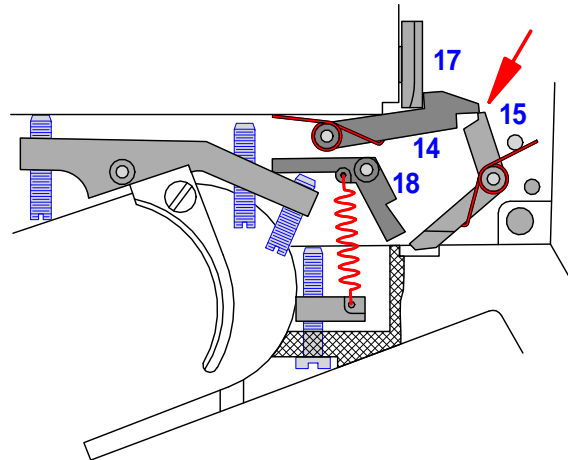


Figure 3: Trigger sear jammed under valve sear

Figure 3 shows how the Trigger Sear (#15) is rotated too far counter clockwise, and it has cammed the Valve Sear (#14) up far enough that the top of the Trigger Sear is jammed under the back of the Valve Sear. This can only occur if the shooter pulls back too hard on the Breech Block Lever (#57, not shown) during the cocking process for dry fire. The normal cocking process is prevented from going anywhere near far enough to do this by the pump arm linkage.

The bottom of the Trigger Sear is ordinarily rotated downward by forward pressure on the upper section of the Sear by the back end of the slot in the Breech Block Lever. Once the Trigger Sear has cleared the end of the Trigger Lever (#18), it doesn't need to go any further to cock the mechanism. There is actually quite a bit of extra travel required to jam the Trigger Sear.

If you remove the grip, you can often un-stick the Trigger Sear with a toothpick inserted in the back of the mechanism (Figures 4). You want to put the toothpick to the left of the spring on the rear-most pin, and push it in at about a 45 degree downward angle. At most, you should be able to free the sear with a slight upward prying pressure. If that doesn't work, you may have to remove the Breech Block assembly to get enough access to the Valve Sear to pry it up. If it's really stuck, the toothpick can break, and then you have to fish out the broken bit. Some stiff but unbreakable plastic tool would be ideal, but the space is pretty tight. The pointed end of a small nylon "tie wrap" might be worth a try.

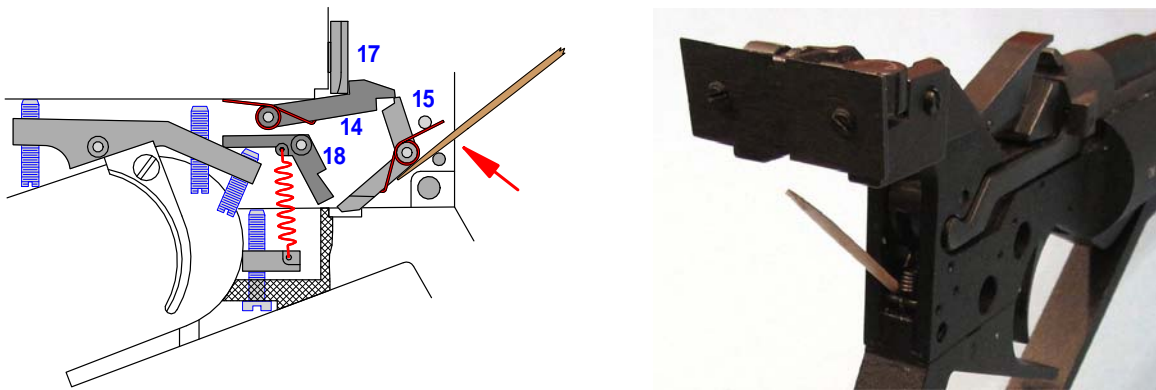


Figure 4: Un-jamming the trigger sear with a toothpick

It may be that this jamming problem can't occur if all of the parts are new & properly fitted. I've attempted to re-create the problem with another pistol, and pressing as hard as I dared, it wouldn't lock up this way. I can see a lot of places where just a small change in geometry could prevent this failure from happening. If something has worn enough to allow this, it will probably require a significant re-build to fix because of the difficulty of replacing many of the trigger & valve sear components.