Spring Tube Receiver Detail

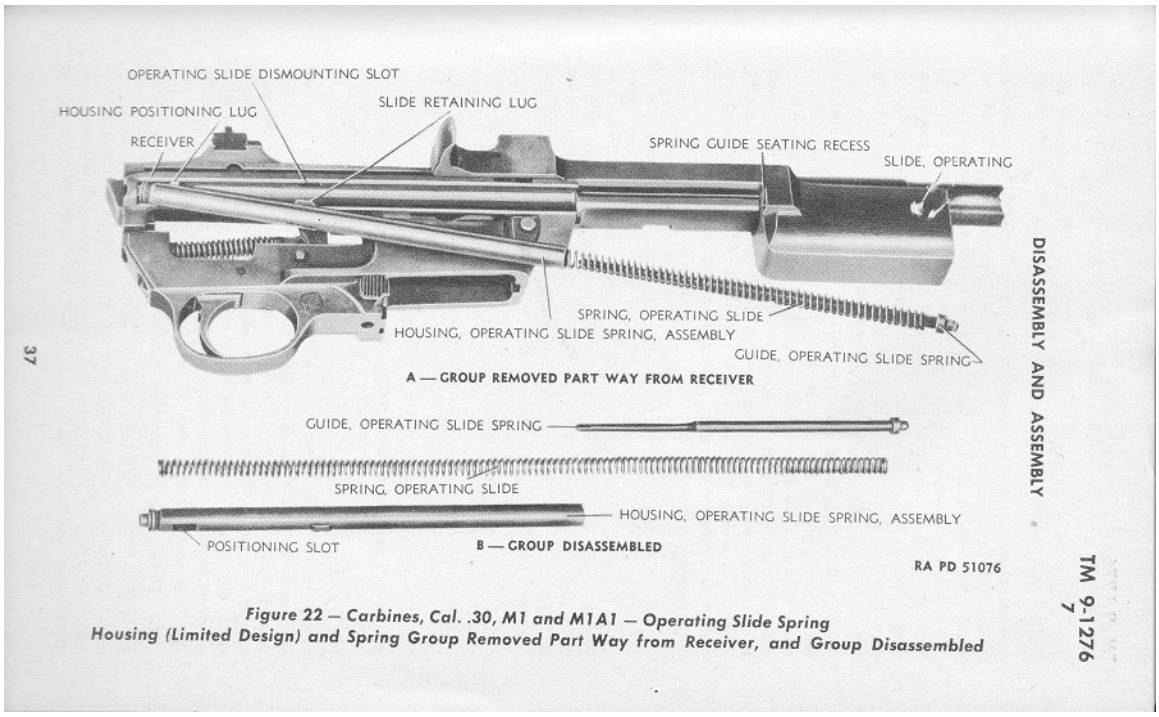


Figure 22 — Carbines, Cal. .30, M1 and M1A1 — Operating Slide Spring Housing (Limited Design) and Spring Group Removed Part Way from Receiver, and Group Disassembled

Early Winchester, early Rock-Ola, and all Quality Hardware manufactured receivers were of a two-piece design with the removable "*Housing, Operating Slide Spring, Assembly.*" The housing is commonly called a "Spring Tube." The two piece receiver is commonly called a "Spring Tube Receiver"

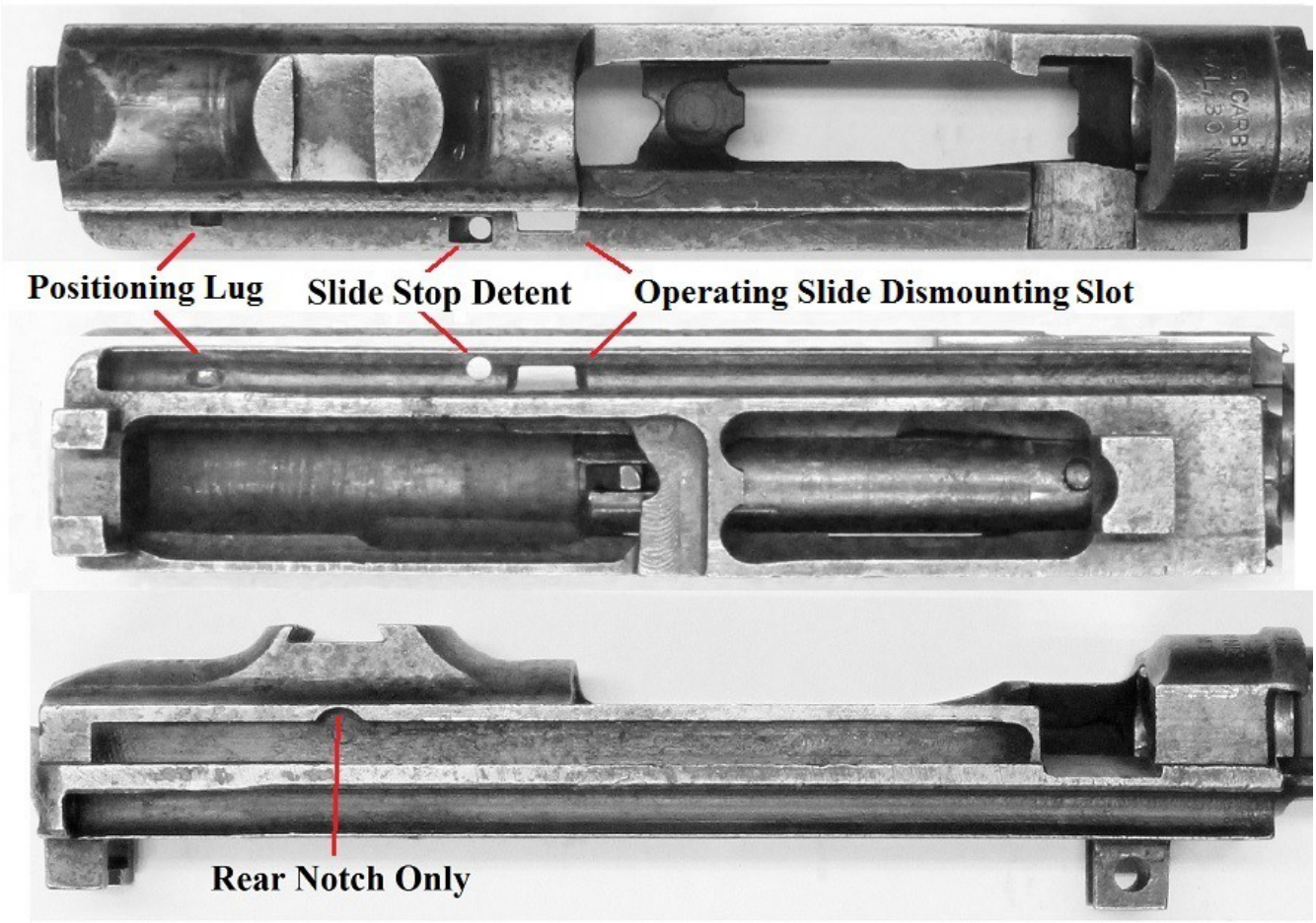
The manufacturers that utilized the integral spring housing (one piece receiver) experienced difficulty in drilling the "deep hole" that was required to house the operating spring, with slight misalignment or flexing of the drill could result in the drill cutting through the right side or bottom of the integral spring housing on the receiver. The manufacturer's options were to scrap the receiver or set it aside for later rework into a "spring tube" receiver by milling away the entire integral spring housing to accept a spring tube.

The one-piece receiver with integral spring housing is the most common receiver. These are commonly called Type 3 receivers. Please note that the "Type 1, 2, 3" receivers are definitions made by the club and not something the Ordnance Department used.

The Type 1 receiver is defined by having the operating slide dismounting slot, and the spring tube positioning lug. The dismounting slot allowed the rear of the operating

slide to disengage from the receiver. The spring tube has a slide retaining lug which served to keep the slide engaged in the slide guideway.

Type 1 Springtube Receiver Details



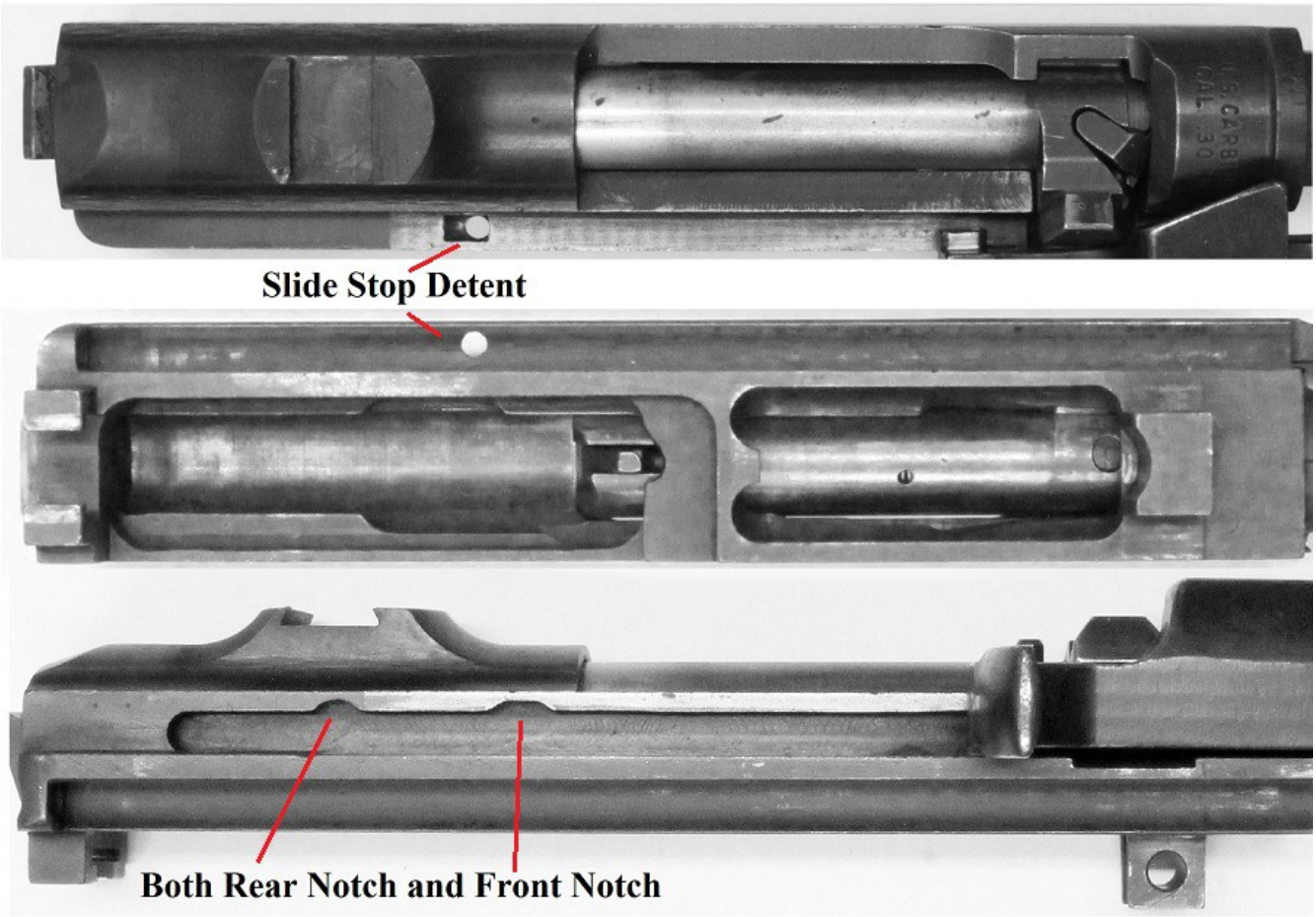
As you can see the slide stop detent has a hole that went all the way through the receiver. The rectangular hole for the operating slide dismount slot near the slide stop detent hole proved to be a weak point in the receiver and cracks could form between the two. As a result of the cracks, a change was made resulting in the Type 2 receiver.

The Type 2 receiver is defined as a spring tube receiver that eliminated the operating slide dismounting slot and the spring tube positioning lug. Due to not having the operating slide dismounting slot a front notch was added to the operating slide guideway in order to dismount the slide.

The rear notch on all receivers, if present, was only there for allowing the cutting tool access to cut the channel in the guideway needed for the operating slide. The slide

cannot be disconnected from the rear notch.

Type 2 Springtube Receiver Details



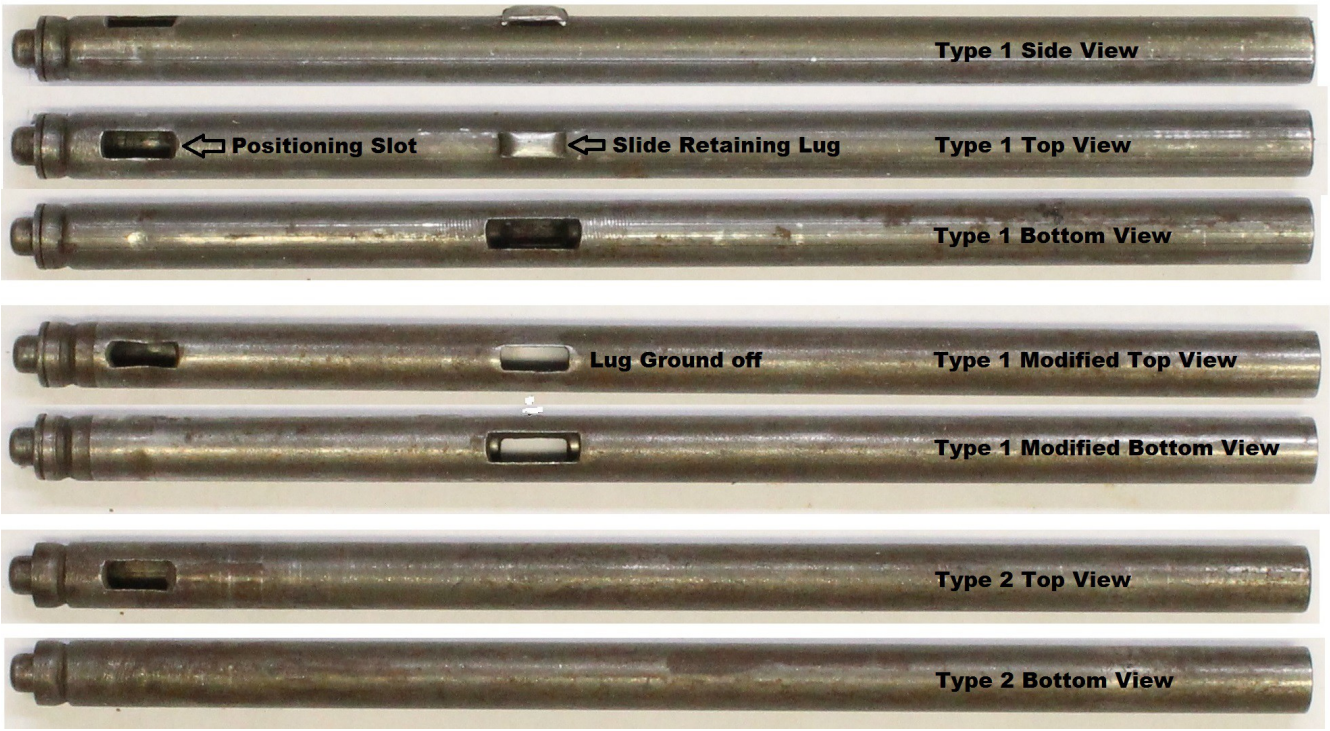
Winchester Type 2 receivers in the 1120000 range changed the machining so that the slide stop detent no longer had a hole going all the way through the receiver. Quality Hardware appears to have not changed that detail.

The top 3 views of the spring tube pictured below, labeled Type 1, show the slide retaining lug that would fit through the operating slide dismounting slot in the Type 1 receiver. The bottom view shows a larger rectangular hole; this was to get a forming tool in to form the lug.

The rectangular hole to the rear of the spring tube is the positioning slot. The positioning slot on the spring tube would engage the positioning lug on the receiver to orientate the spring tube, so the slide retaining lug would be positioned appropriately.

If the spring tube were rotated, it would not seat properly, and this would cause a safety issue of the slide possibly becoming disengaged during firing.

Housing, Operating Slide Spring, Assembly (Spring Tube)



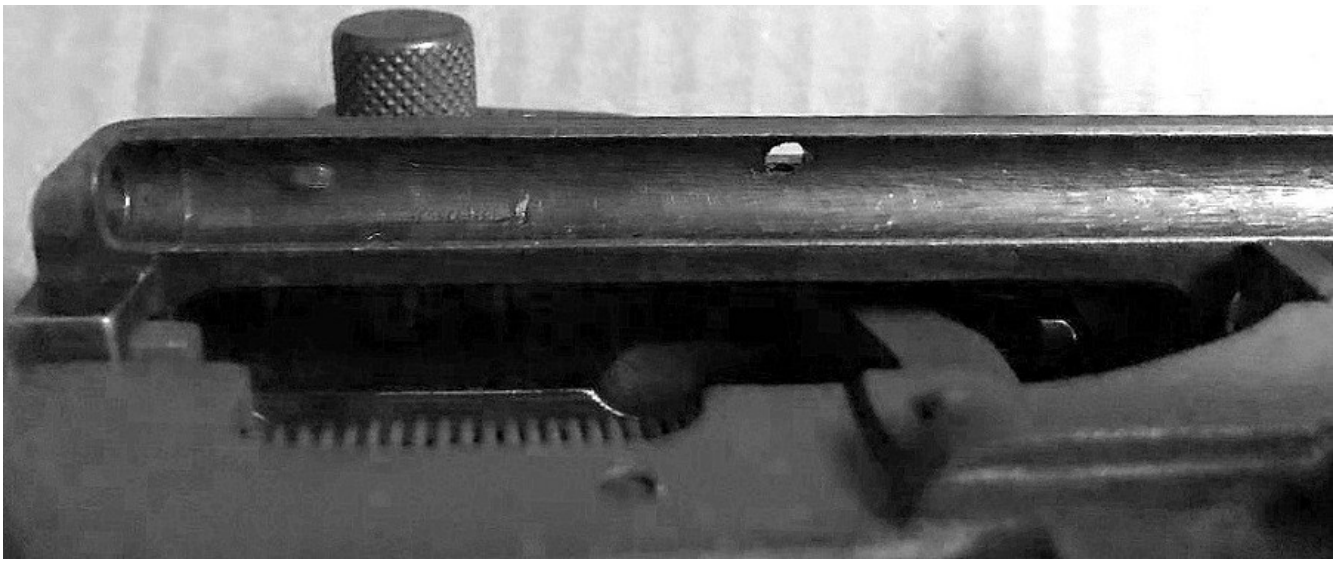
According to TM 9-1276 (1943), the spring tube with the lug could be used with the Type 2 receiver by turning the spring tube 45 degrees to clear the receiver. Doing so would cause the lug to dig into the stock as well as gouge the inner stock wall. The action would not fit properly in the stock. Perhaps Ordnance never actually tried this? Rock-ola remedied this by putting a cutout in stocks as pointed out in CCNL 328-2. However, the spring tube would have to be rotated 180 degrees.

The next set of spring tubes, labeled Type 1 Modified, were Type 1 spring tubes with the slide retaining lug cut or ground off. It would seem that there were ample amounts of Type 1 tubes that were modified. Why Rock-ola chose to mill a cutout in their stocks rather than simply grind off the retaining lug from their tubes remains a mystery.

The bottom spring tubes, labeled Type 2, do not have the lug nor the hole to form the lug. Why did they retain the positioning slot?

Type 2 receiver absent of the positioning lug would work with any spring tube type. But remember that if a Type 1 spring tube was used was used there would be the stock fit interference. As mentioned above, using a lug-less spring tube in a Type 1 receiver could be dangerous.

We expect that Type 2 receivers would not need the positioning lug. However, reporting by members indicates that at least some of the early Type 2 receivers retained the positioning lug. Changes to drawings probably followed, and machine operators were instructed to eliminate the indentation.



Although production of the Type 1 receiver ended in Spring 1943, and those receivers were to be declared "not acceptable during a rebuild, there was no attempt by the Ordnance Department to recall Type 1 receivers in use. Many did get rebuilt and were later purchased by collectors.

We are asking members with type 2 receivers to observe and report if the positioning lug is present. Please report the make and serial number so we can establish if this detail was across all manufacturers that made spring tube receivers. With this, we can define the serial ranges where this has occurred.

You can email the information to Datasheet@USCarbineCal30.com or post below as a follow-up.

As always we cannot do this without your help. Any submission of detail, large or small, that might not be known is always appreciated.

Dan Pinto