BRITAINS HEAVY HOWITZER

Text: Brig. Gen. Raymond E. Bell Jr., U.S. Army (Ret.), Ph.D. **Photos:** Neil Rhodes

Bringing out the big guns, Raymond E. Bell Jr. takes aim at tracing the development of the old Britains 18-Inch Heavy Howitzer by inspecting examples collected by Neil Rhodes

W.Britain is well-known for the artillery pieces it manufactured in the past. The toy guns are noted for their ability to send a slug of metal, a wooden matchstick, or even a plastic pellet down range.

One of the most intriguing of these weapons is the old Britains 18-Inch Heavy Howitzer. This actually refers to two different guns: the howitzer mounted on tractor wheels for field service of set No. 1266; and the static version mounted for garrison use of set No. 1265.

At first glance, there is nothing unusual about the howitzers, except perhaps their size. The mobile version dwarfs the 54-mm horse teams which draw it. The static version looks impressive in an embrasure.

However, there are a number of subtleties about both versions that, over time, have demonstrated the development of production techniques and the influence of the suitability of materials in their manufacture as different metals were used.

POWERFUL PURSUIT

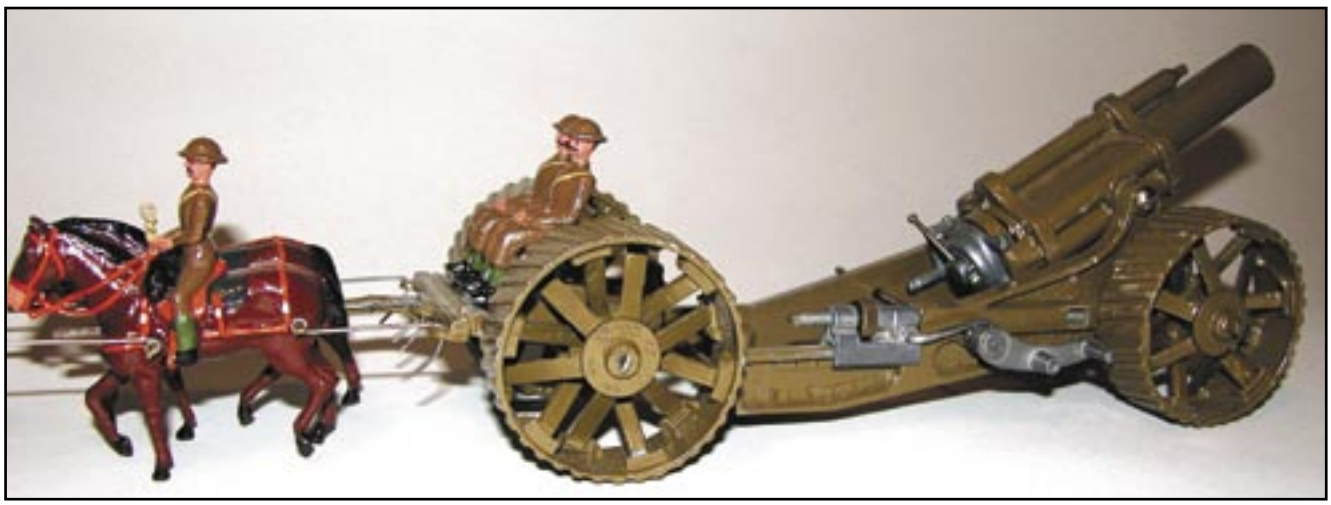
The study of this powerful howitzer has been the longtime pursuit of Neil Rhodes, proprietor of The Toy Soldier Shop of Washington, D.C. A visit to his U.S. shop reveals a broad array of the howitzers that are all part of his former collection.

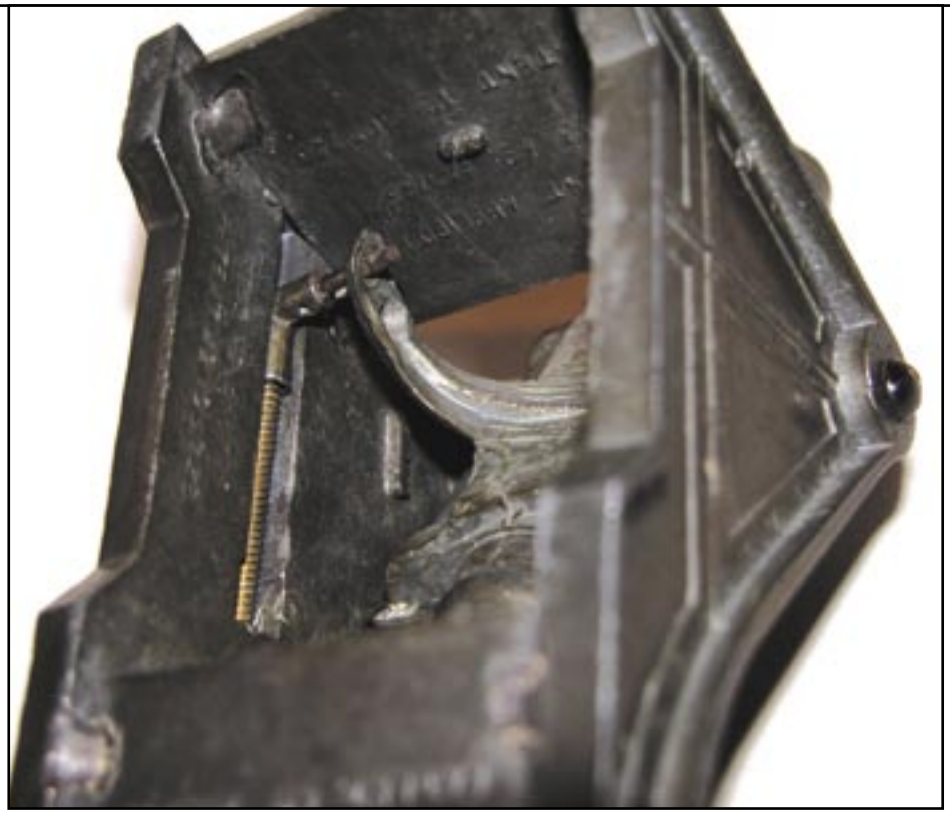
Above: A Britains 18-inch Heavy Howitzer being towed by a team of a dozen horses as produced by Neil Rhodes.

Taking each version in turn, the garrison gun was the first to be offered by Britains. Initially designated as Gun No. 1, it was patented on April 26, 1917 (although author James Opie, an authority on Britains, has determined the patent year to be 1916).

The actual mobile howitzer comprised part of the British Army's heavy artillery employed in France against German troops in World War I. The Britains model, known at first as Gun No. 2, is thought in reality to be an 8-inch model by author and toy soldier expert Joe Wallis.

Below: Close-up of the horse-drawn howitzer team made by Britains.





Above: A view of the underside of the "fumed" garrison gun.

Below: The "fumed" version of a garrison howitzer.

The garrison howitzer, which was modeled after the actual British 9.2-inch howitzer of WWI, had an elevating mechanism that set it apart from later models.

But the most distinctive characteristic is the protective coating over the gun's metal. Instead of paint, a process called "fuming" was employed. The result was a black finish.

Unfortunately, the "fuming" process of applying an acidic finish to the piece involved a toxicity that sickened the artisans doing the work. Britains abandoned the process after 1924, when it began to paint the howitzers.

ELEVATING EVOLUTION

Little noticed, unless one turns the model over, is the elevating mechanism. Through the years it is this mechanism that has seen the most changes.

To elevate and depress the barrel, the gunner turns a smooth-edged, lead rotating wheel with small protrusions on its sides. When rotated, the wheel moves a screw-ended, brass elevating rod attached to the barrel back and forth. This rod at the barrel end has a cast right angle lead knob from which a protrudes a small rod engaging the barrel extension.

As can be imagined, the lead knob forming the joint for the attachment of the two rods offered production complications. The unanswered question arises as to whether this was just an experiment.

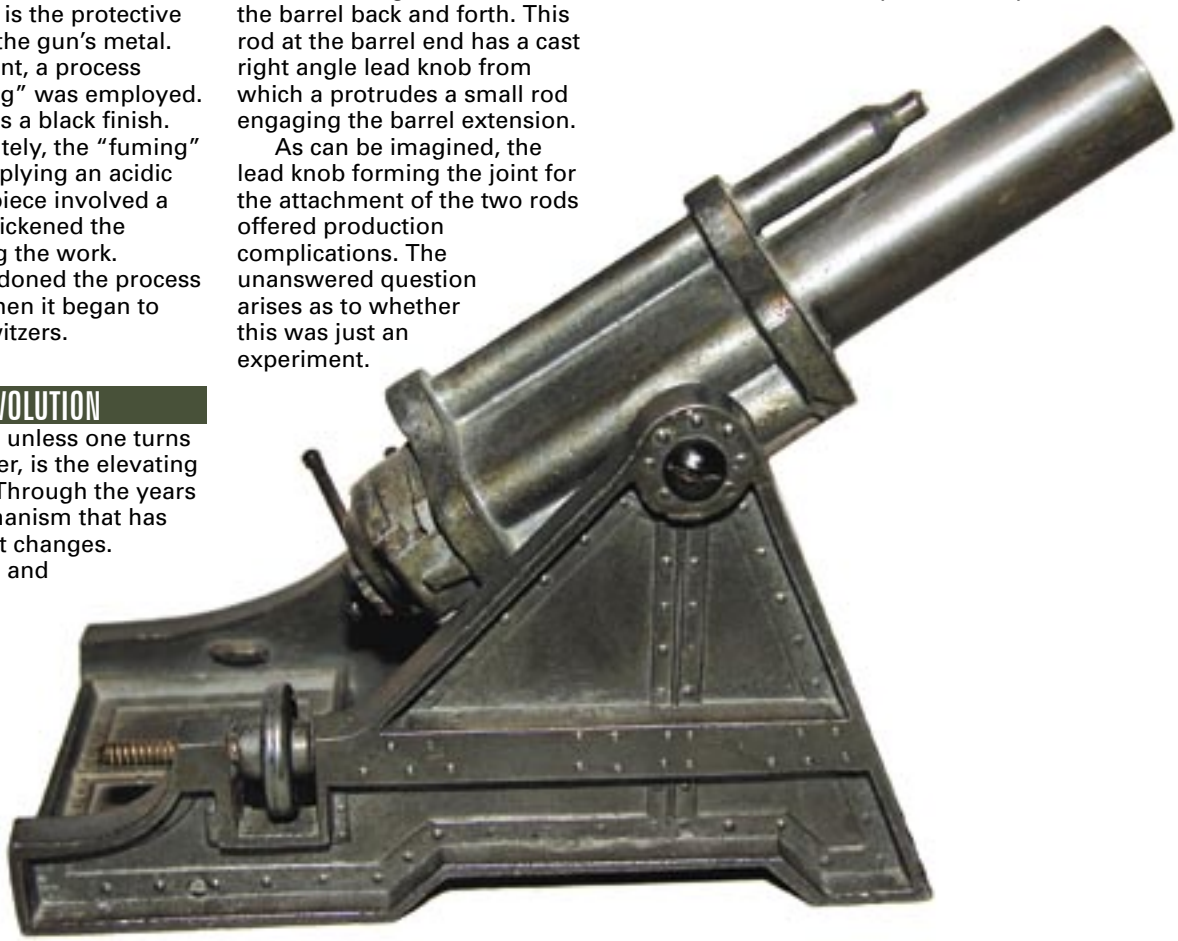
In any case, the complicated right angle knob was replaced by 1920 with a brass elevating rod with the end attached to the barrel formed by bending the rod at a right angle, leaving a tip about a half-inch long. All subsequent models had a bent rod connecting the barrel to the rotating wheel.

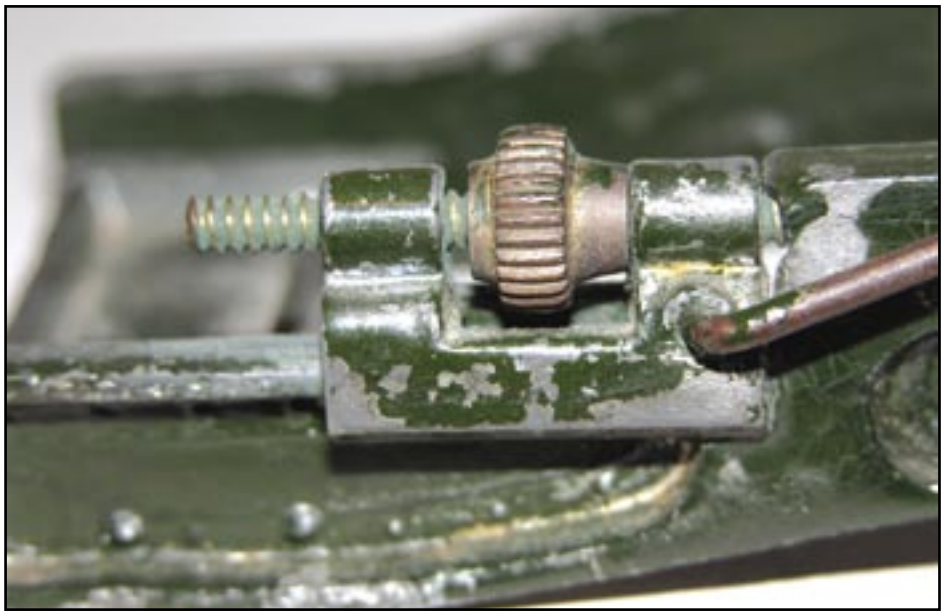
The next production change also involved the elevating mechanism. Instead of a lead rotating wheel, which tended to become stripped after continued use, a serrated brass wheel now elevated and lowered the barrel. The wheel, like its predecessor, sits in a shallow well and has slight protrusions on either side.

The change in the elevating wheel from lead to brass was followed, in another production alteration, by the elimination of the protrusions on either side of the wheel. This, in turn, led to a narrowing of the well in which the rotating wheel is situated.

Although brass appeared to be the preferred material for producing the rotating elevation wheel, lead again replaced the brass just before World War II.

During the war Britains manufactured small arms ammunition in which lead was an important component.





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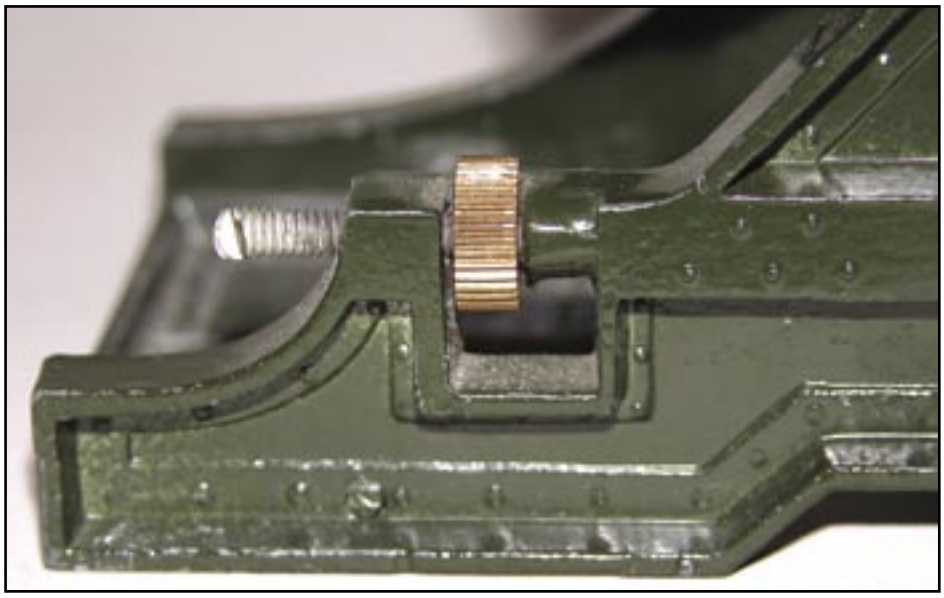


So the substitution of lead for brass as a suitable metal replacement in the production of the rotating elevation wheel does not seem to have made too much sense.

At the same time brass was also being used extensively in making shell casings for ammunition. With the conversion to wartime manufacture of ammunition, Britains production of the howitzer along with toy soldiers ceased “for the duration.” Thus the type metal used in the howitzer became a moot matter.

The howitzer was produced for 1954 as Britains set No. 1265. This postwar version of the model again had a solid brass rotating wheel, but it turned a steel instead of a brass elevating rod.

From 1955 to 1960, the set designation was changed to No. 2106 as the howitzer gained a new breech mechanism and aluminum instead of lead shells. It was also now made of die-cast parts. The model was discontinued in 1960, although the wheeled version was produced past 1966.

Top: The newer type of rotating elevating wheel.

Bottom: An example of the howitzer showing the narrowing of the well in which the rotating wheel is situated.

FIRING THE BIG GUNS

While the elevating mechanism of both models of the howitzer has undergone as many as seven changes, the firing mechanism has seen only two alterations.

The original mechanism, as noted previously, lasted until 1955. The mechanism involves rotating a small rod at the rear of the breech. This rotation trips a powerful spring in the shell casing holding the lead projectile, thus releasing it to proceed down range.

Before loading the round in the breech, the propellant spring in the shell casing is compressed and rotated until a little hook catches the edge of a small slot in the tip of the projectile. The hook holds the compressed spring in place.

When the hook is rotated by the rod on the breech, the spring releases. Its rapid expansion expels the projectile from its casing through the barrel’s tube toward its target.

In 1955, and in the last versions of the howitzer -- both garrison and mobile -- the firing mechanism was replaced by a trigger-activated device. This sends a firing pin into the base of the spring-loaded shell casing. The pin’s penetration of the shell casing releases the spring, which in turn expels the aluminum or plastic projectile through the barrel’s tube.

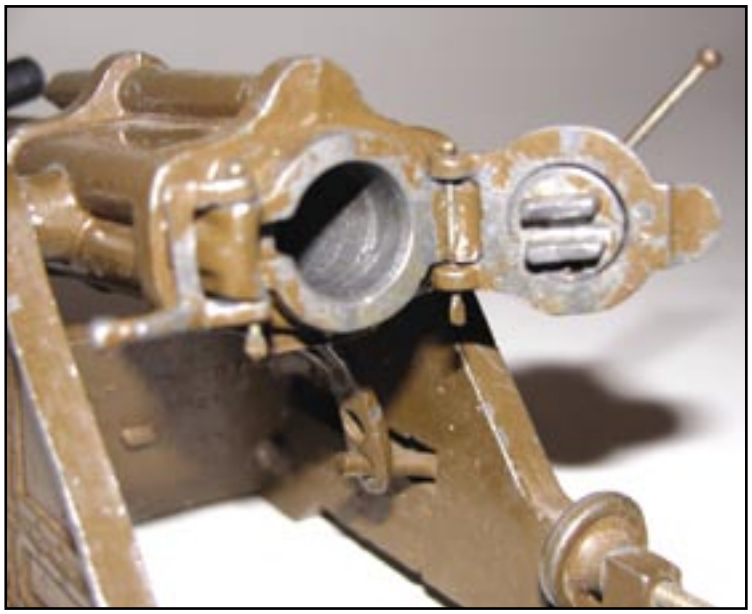
DETAILING DIFFERENCES

The mobile heavy howitzer, which was set No. 1266 until 1955 and set No. 2107 thereafter, differs little from its garrison brother except that it has outsized wheels and it lasted much longer in production. It was discontinued in 1980.

The mobile version also started out with a “fumed” coating. After 1924, it was painted. It ended up being made of pot metal and painted forest green.

Its elevating mechanism development followed the same pattern as the garrison version with three exceptions.

At first there was a problem connecting the elevating rod to the barrel in the garrison model which involved bending the rod



Left: The howitzer's breech opens for loading ammo.

Top right: Shell casing, springs and projectiles for toy soldier gunnery practice and floor wars.

after its insertion into the howitzer's undercarriage. This became cumbersome, so later versions of the garrison howitzer had a slot cut in the right side of mount, enabling a previously bent rod to be inserted after the other parts of the howitzer were assembled.

The mobile version did not suffer from this assembly difficulty because the construction of its undercarriage did not interfere with inserting the elevating rod.

The second difference was the introduction of yet another elevating rotating wheel after the garrison model's production ceased. In models made of pot metal, the wheel consists of two serrated brass discs separated by a small spacer. The reason for this new elevating wheel might have been the move away from lead as a material, and again, to possibly save brass.

The third difference was a mechanism along the right side of the mobile howitzer which allows for the rapid elevation of the barrel to a horizontal position to ease the loading of the shell casing and projectile. A knob attached to a hinge, when lifted, moves the barrel to the horizontal independent of the elevating mechanism to allow the barrel's position to be finely tuned.

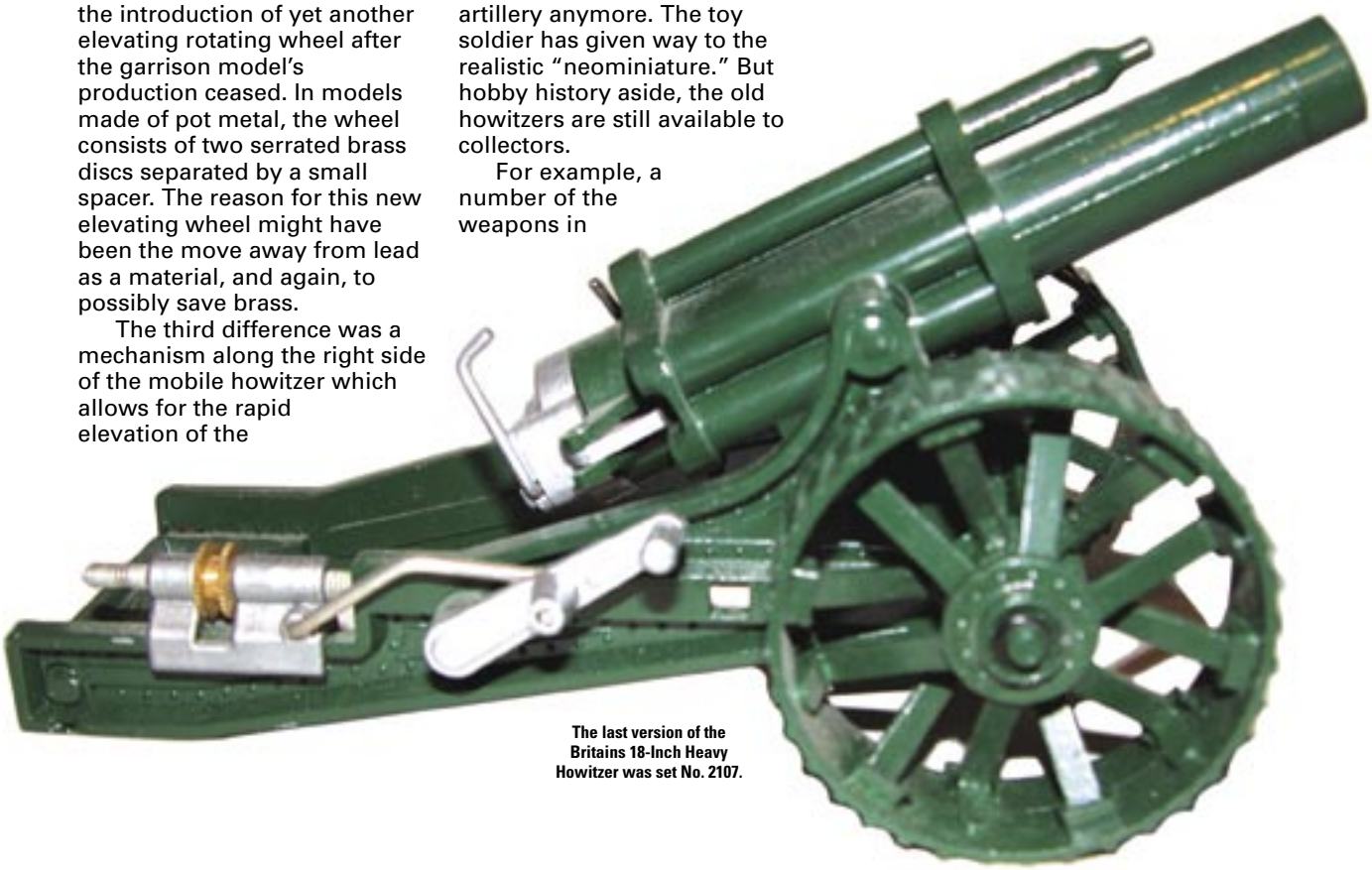
HOWITZER IS HISTORY

Today the Britains 18-Inch Heavy Howitzer, in both versions, is history.

Britains doesn't offer firing artillery anymore. The toy soldier has given way to the realistic "neominiature." But hobby history aside, the old howitzers are still available to collectors.

For example, a number of the weapons in several different modes are available at the Toy Soldier Shop of Washington, D.C. (Website: www.toysoldiershop.com). And from time to time the howitzers can be found at toy soldier shows.

To possess this unique model does not require an expert knowledge of firing or elevating mechanisms. But for the specialist collector of artillery pieces, the howitzer offers a unique experience in obtaining a range of toy big guns that went through many unique changes over the years. ■



The last version of the Britains 18-Inch Heavy Howitzer was set No. 2107.