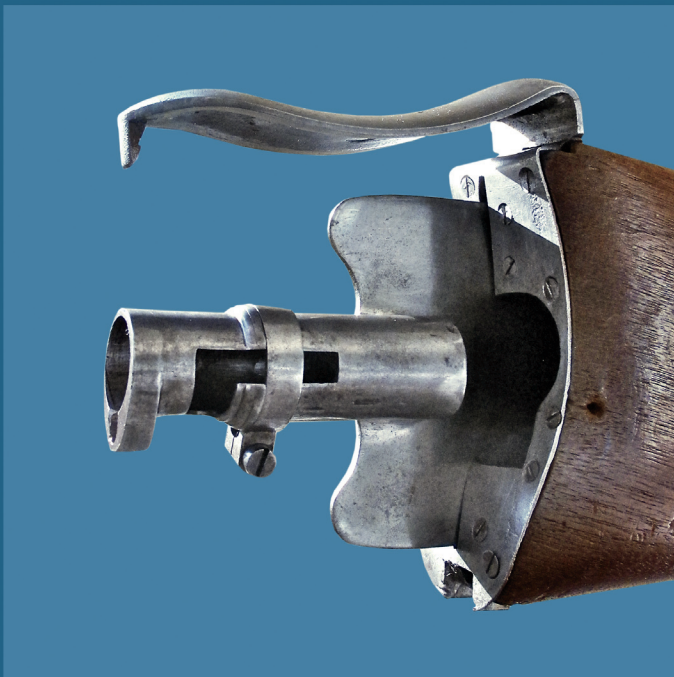


This trowel bayonet, invented by DeWitt C. Poole, may well be one of the earliest in a series of trowel bayonets presented to the US Army for trial. This is the only specimen of his device known to exist.



Courtesy of Walt Goulet

Preface

While entrenching tools may not have the “star power” of a Colt Walker revolver or a brass framed Henry rifle, they should not be considered the “ugly duckling” by the collecting fraternity, nor should they be relegated to last place on the arms collecting hierarchy. Indeed there are many reasons why such tools deserve more study and, yes, respect.

First, these tools display the great creativity and innovation of their inventors. All entrenching tools have but one purpose: enabling the soldier to move enough earth to quickly provide cover; yet these tools manifest an almost limitless diversity. As we shall see, there is a remarkable variety in design, materials, weight, size, and portability.

Secondly, these tools are a part of a long history of experimentation within the US Army to find the optimal tool for the individual soldier. From the Civil War on the army struggled with this issue, attempting to decide if each soldier should be issued an entrenching tool in addition to a bayonet, and, if so, what kind of implement should be distributed. The right balance between a tool’s functionality and its weight was a critical concern, as an effective, efficient implement would add considerable weight to a soldier’s burden, while a relatively light tool would be of little use. This complex conundrum appears several times in official US Army reports and documents, and the army’s repeated experiments and attempts to resolve the issue make for interesting reading.

Furthermore, an entrenching tool could sometimes be as valuable to the soldier as his rifle, and certainly has saved countless lives on battlefields around the world and here at home. Any soldier who has been exposed to enemy fire of virtually any intensity knows the value of even a small depression in the surrounding earth, and perhaps no one has expressed the importance of a hole in the ground when under fire so eloquently as Erich Maria Remarque in *All Quiet on the Western Front*:

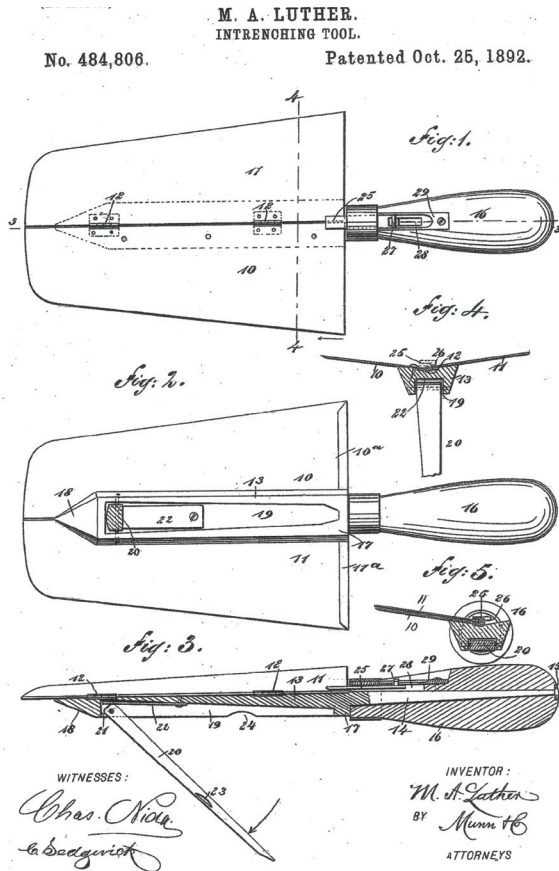
From the earth, from the air, sustaining forces pour into us — mostly from the earth. To no man does the earth mean so much as to the soldier. When he presses himself down upon her long and powerfully, when he buries his face and his limbs deep in her from the fear of death by shell-fire, then she is his only friend, his brother, his mother; he stifles his terror and his cries in her silence and her security; she shelters him and releases him for ten seconds to live, to run, ten seconds of life; receives him again and often for ever.

Earth! — Earth! — Earth!

Earth with thy folds, and hollows, and holes, into which a man may fling himself and crouch down. In the spasm of terror, under the hailing of annihilation, in the bellowing death of the explosion, O Earth, thou grantest us the great resisting surge of new-won life. Our being, almost utterly carried away by the fury of the storm, streams back through our hands from thee, and we, thy redeemed ones, bury ourselves in thee, and through the long minutes in a mute agony of hope bite into thee with our lips.¹

Another reason to collect entrenching tools is their relative affordability. Firearms of good quality are commanding higher and higher prices, and are beyond the purchasing power of many collectors. While rare and pristine entrenching tools are also able to command high prices, certainly many of these implements may be bought relatively inexpensively.

Perhaps most important to a collector of US weapons/accoutrements, many of these entrenching tools are visually intriguing and even aesthetically pleasing. Certainly the Bell tool, which fits around the canteen, is an interesting design, as are tools invented by Edmund Zalinsky and DeWitt C. Poole, designed to be carried in the butt of a rifle. And while digging tools are not usually thought to be artful or artistically beautiful, it is difficult to deny the aesthetically pleasing appearance of such tools as the Rice intrenching knife/bayonet, Model



Annual Report of the Commissioner of Patents.

a folding blade and a small pick which folds into the back.
The tool was considered too weak for service.¹⁰⁰

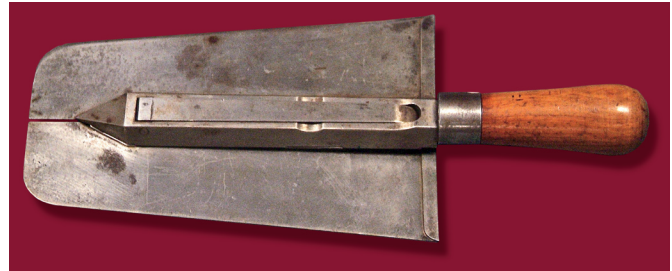
The Luther tool was also tested, along with eight other entrenching tools, at Fort Snelling, Minnesota, in October, 1894 (See Ch. 1). The tool was clearly not a success.

The Luther tool broke in the first test at the end of 12 minutes, with the trench one-third completed. The folding blade broke off at the hinge which is a weak point.

The pick does not stay open in use and the blade is dull, making it difficult to force through sod. It also hurts the hands to dig with it.¹⁰¹

Specifications

Handle length	4 inches
Blade length	8 inches
Blade width (near handle)	5 inches
Blade width (near point)	3 1/2 inches
Pick length	5 1/2 inches
Overall weight	1 pound, 6.5 ounces

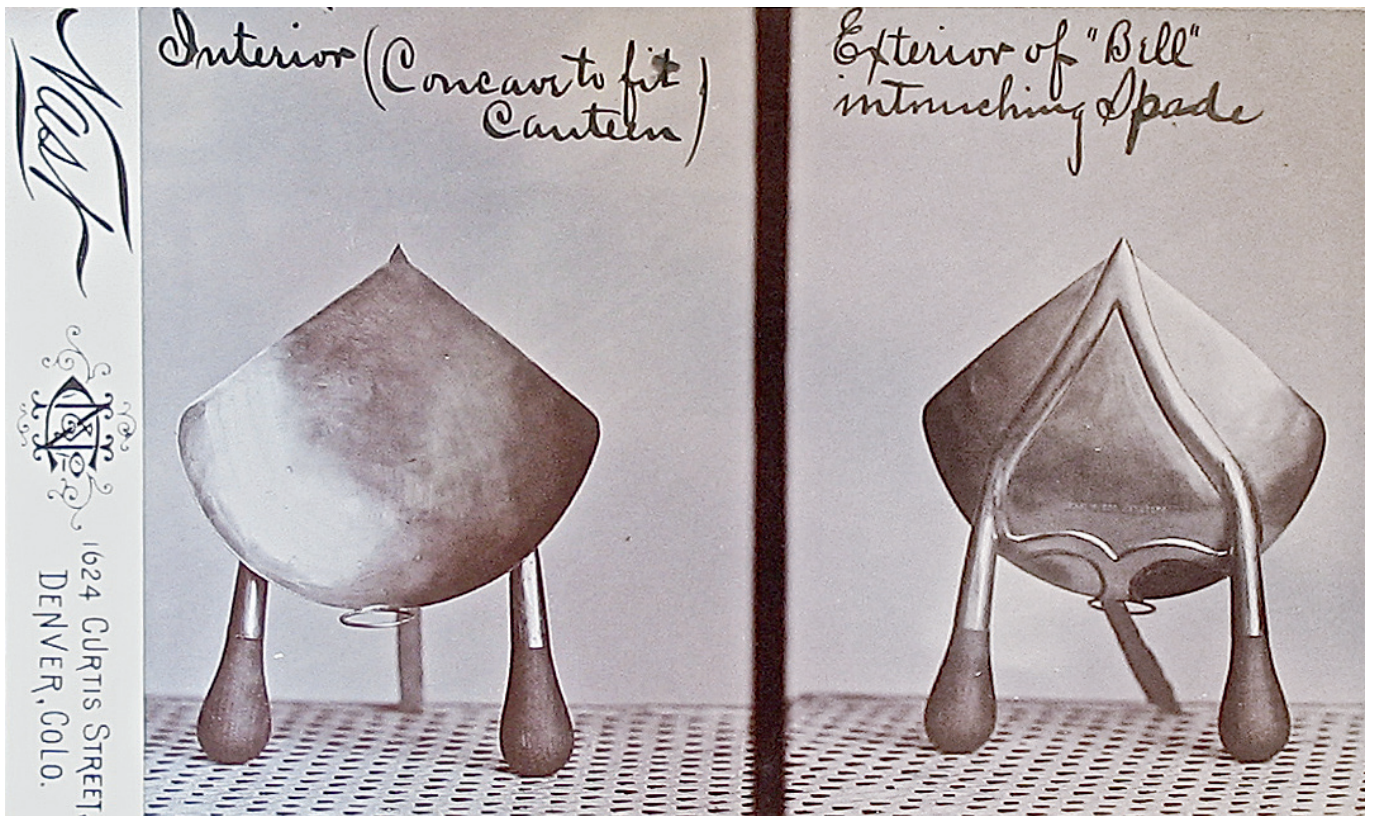
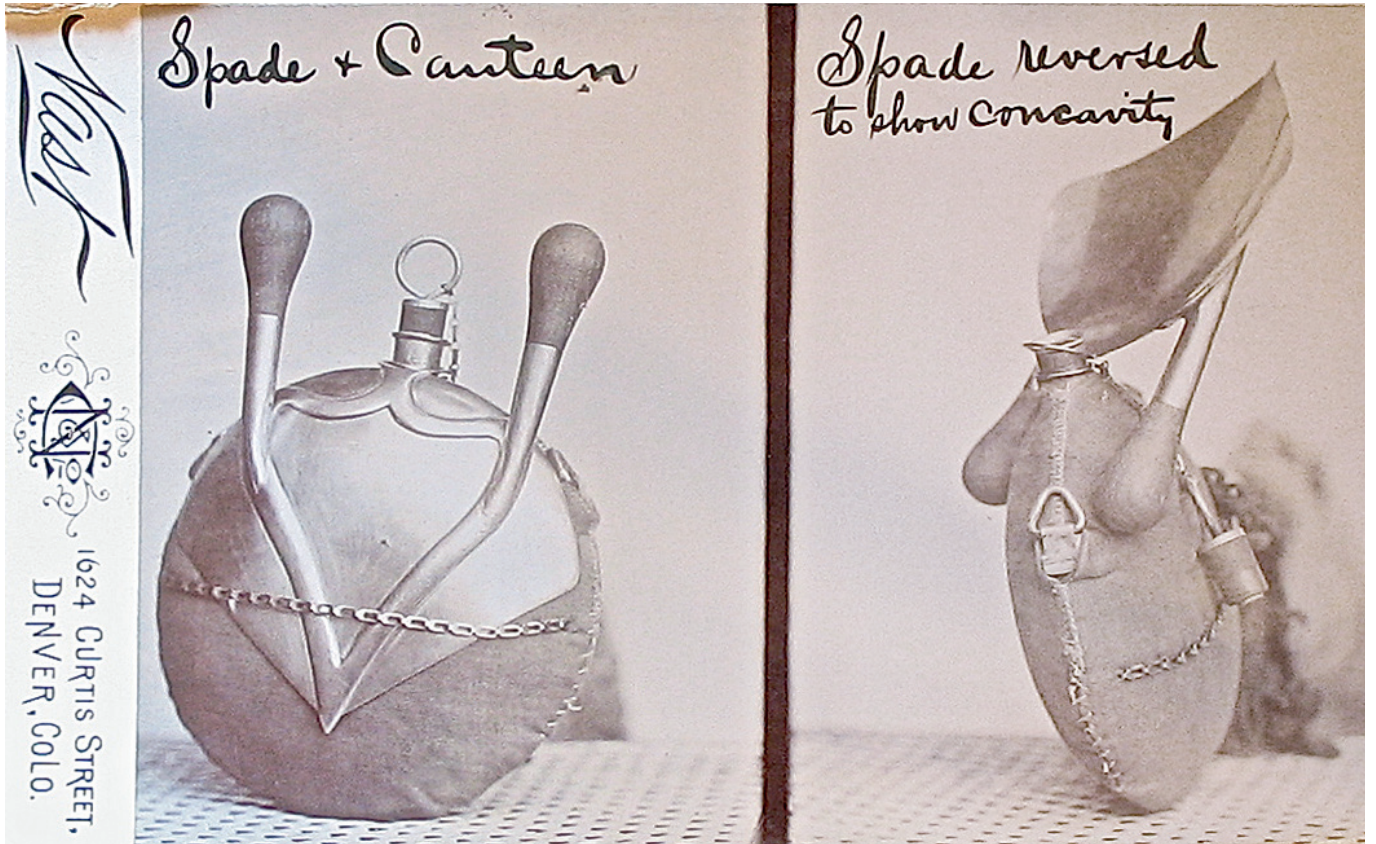


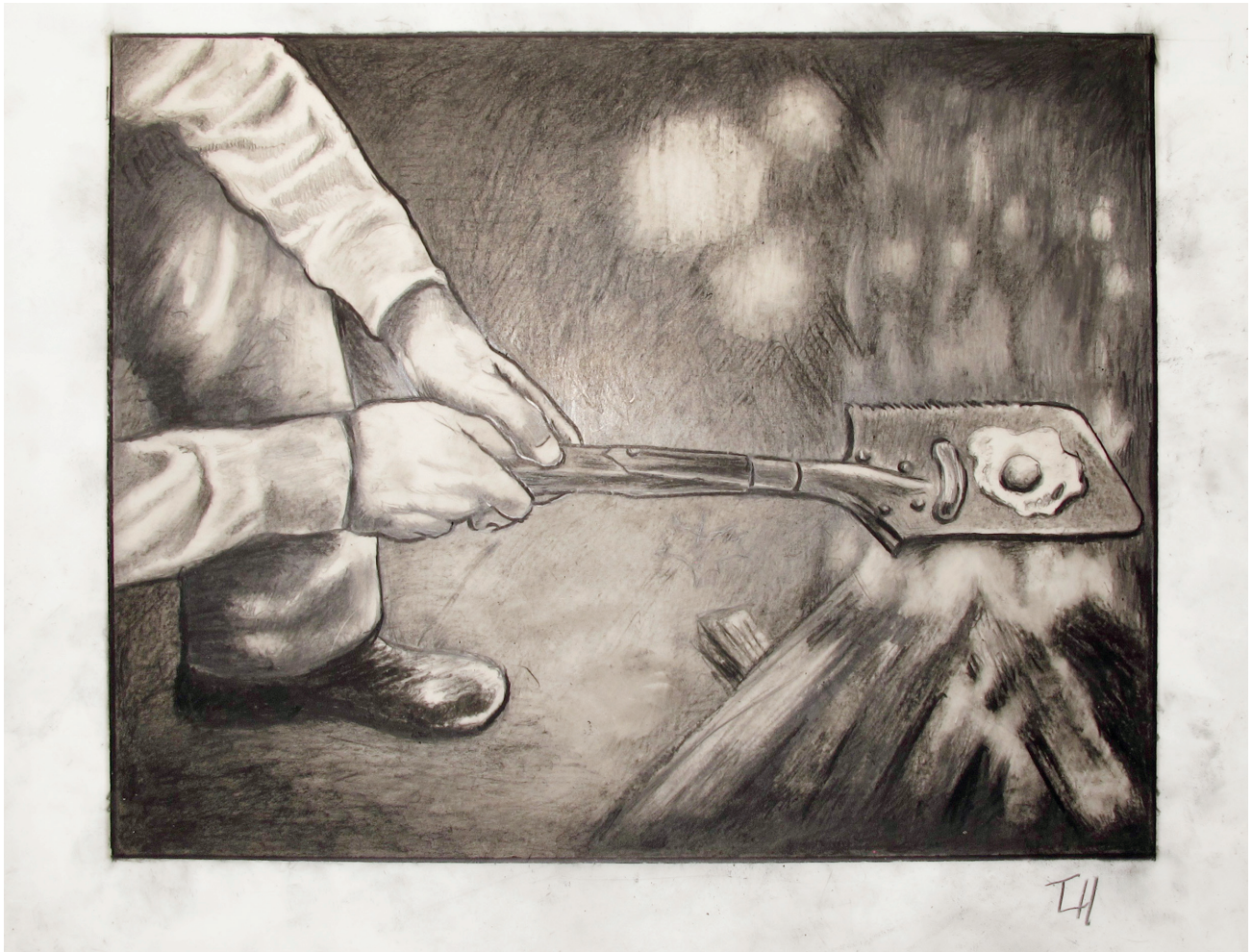
Photographs printed by permission of the US Army Rock Island Arsenal Museum, Rock Island, IL.

As an interesting final note, Luther wrote a letter to the Chief of Ordnance on September 12, 1906, asking to have his tool and “any information regarding its merits” returned to him. The only response seen on the military document is “Where is the tool?”¹⁰²



Luther tool broken during Fort Snelling trials.





Drawing of Linnemann Spade Used as Frying Pan.

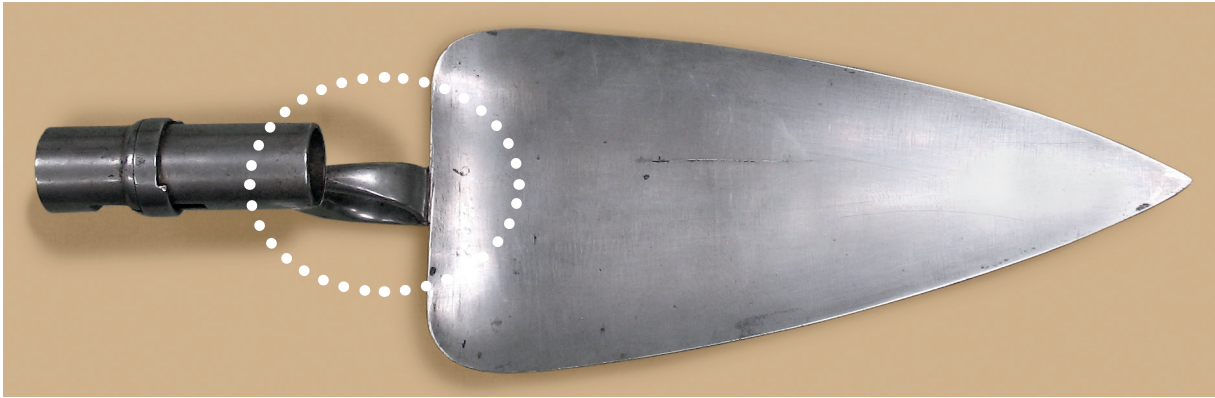
Artist: Tracy L. Hartman

ommended, including the Linnemann spade, the Rice trowel bayonet, the Wallace tool, the Benham picket shovel, the Babcock tool, the Albee tool, the Hamner tool, the Bell tool, and the Patterson tool. Although the majority of these tools were recommended by only a few officers, the Linnemann spade was advocated by at least seventeen officers, receiving a higher favorable response than any of the other aforementioned implements. Lieutenant John M. Sigworth, 10th Infantry, noted: "Eight or more of the leading nations of Europe having adopted the Linnemann spade in preference to the innumerable types that have been offered clearly indicates that it is a good tool." Similarly, Colonel J. S. Poland, 17th Infantry, stated: "I think continental countries have reached the ultimate solution of the question, by adopting a light spade (the Linnemann model) and corresponding pick." Colonel H. M. Lazelle, 18th Infantry, was even more direct: "The Linnemann spade is now in use by eight European nations; it weighs but $1\frac{3}{4}$ pounds and is the best intrenching tool known." Lieutenant W. H. H. Chapman, 20th Infantry, noted an objection to the tool, but still clearly

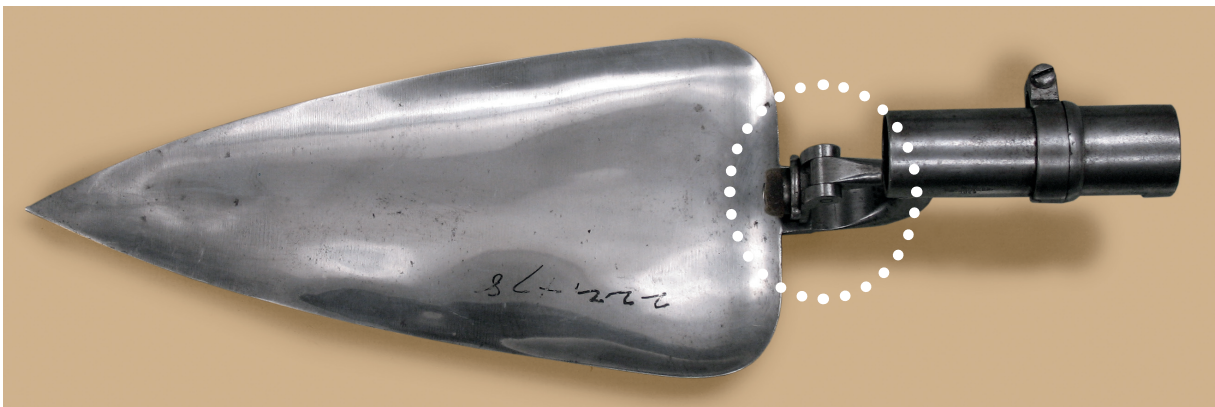
avored it over other entrenching devices: "The Linnemann spade is the most satisfactory entrenching tool with which I have had any experience, the objections to it being its weight and shape which makes it rather awkward to carry."¹⁵

Lieutenant W. C. Wren, 17th Infantry, actually wrote a rather scholarly article on the entrenching tools of the day for the July, 1894, issue of the *Journal of the Military Service Institution*. In his article, "Portable Intrenching Tools for Infantry," Lt. Wren evaluated and drew sketches of "as many tools as I could procure": the 1880 Ordnance hunting knife and entrenching tool; Rice's trowel bayonet (Model 1868); the Ordnance (Hagner) entrenching tool; the Patterson spade; the Harrison spade; the Underwood spade; the Wallace spade; and the Linnemann spade. See next page.

Noting that "Argument as to the necessity of intrenching tools seems almost out of place now, as almost all nations have acknowledged their necessity as fighting implements second only to the rifle," Wren then specified:



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Smithsonian National Museum of American History



M1869
Smithsonian National Museum of American History





Rice Steel Scabbard

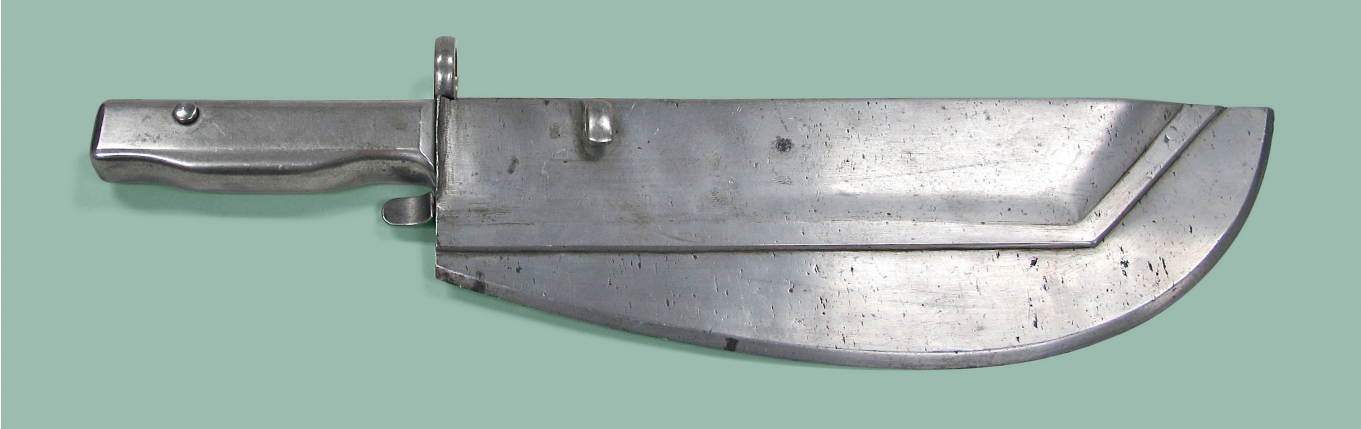
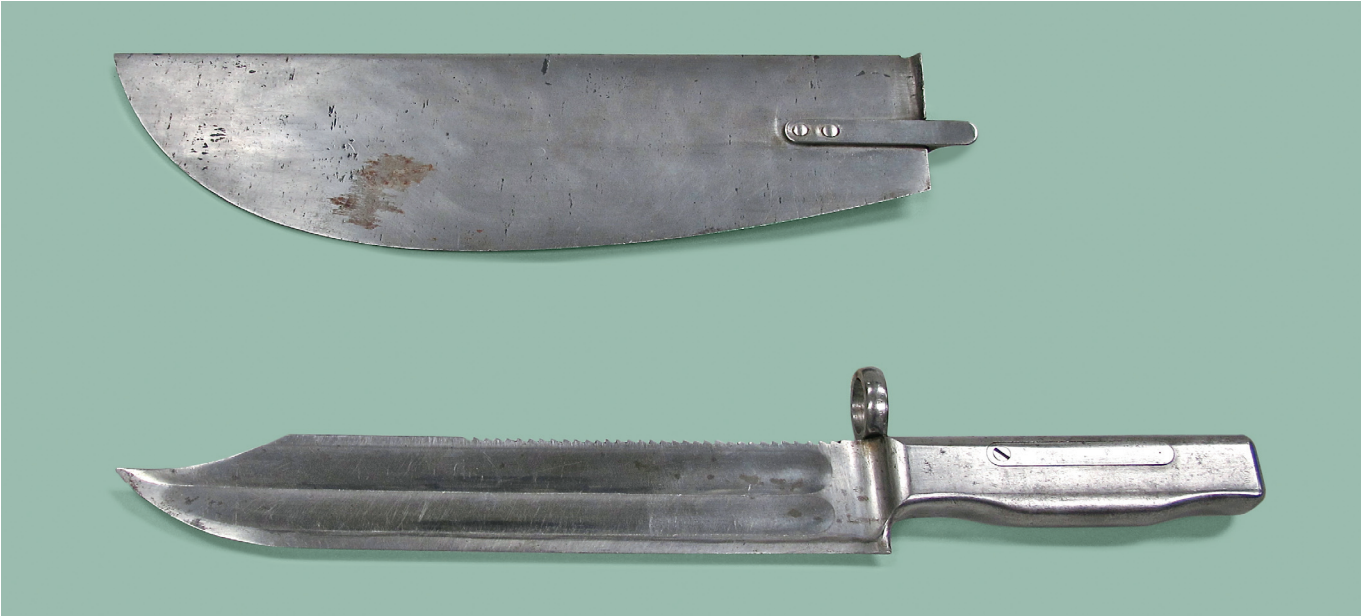
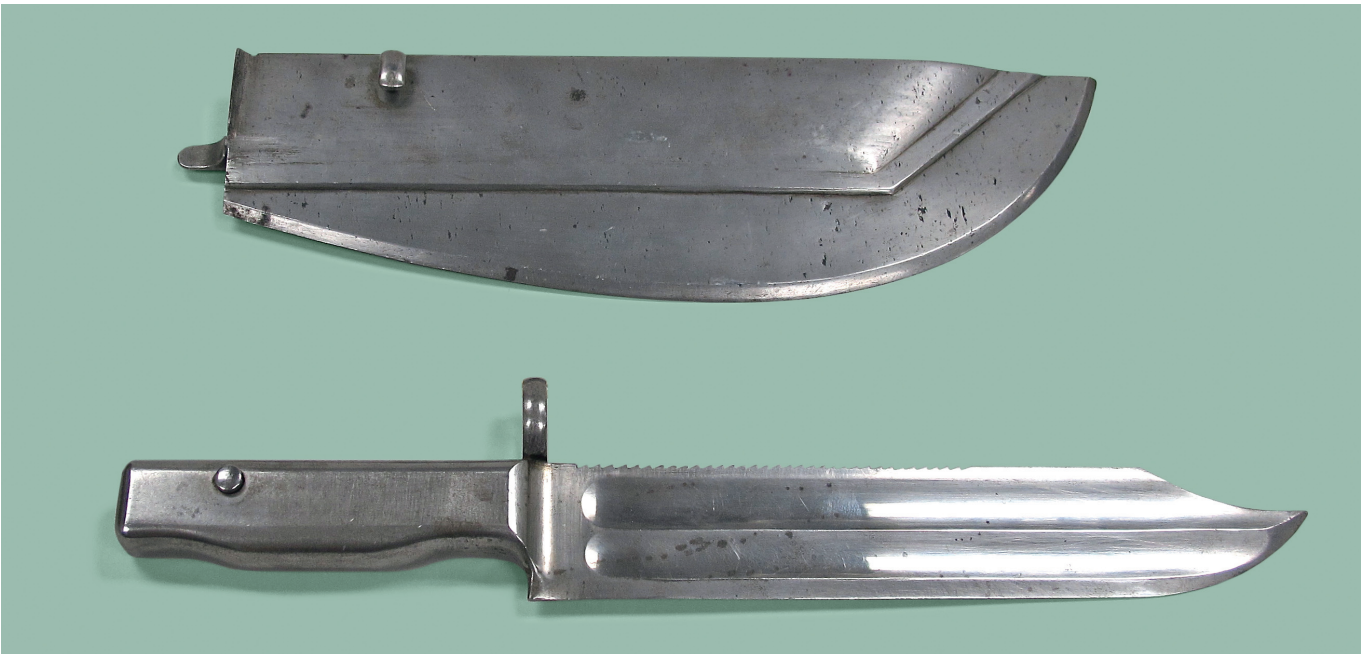
Courtesy James S. Hutchins and Patrick J. Hutchins

mended to the Secretary of War “that the trowel bayonet scabbard submitted by Mr. Chillingworth be approved for the 10,000 bayonets now being made for the military service ...” The Secretary of War (Belknap) approved the recommendation the very same day.

May 5: Less than two weeks after Belknap’s approval, Major Benton informed the Chief of Ordnance that, in his opin-

ion, “none of the trowel bayonet scabbards submitted by me could be made in the workshops of the Government free from claims of royalty on account of alleged patents.”⁹⁶

May 8: Chief of Ordnance sent Chillingworth pattern leather scabbard to Col. Hagner, Watervliet Arsenal, with instructions to prepare a cost estimate of producing a





Cavalry Model 1912 Entrenching Shovel