(No Model.)

2 Sheets—Sheet 1.

W. H. HAMNER.

INTRENCHING TOOL.

No. 470,122. Patented Mar. 1, 1892.

Fig. 1.

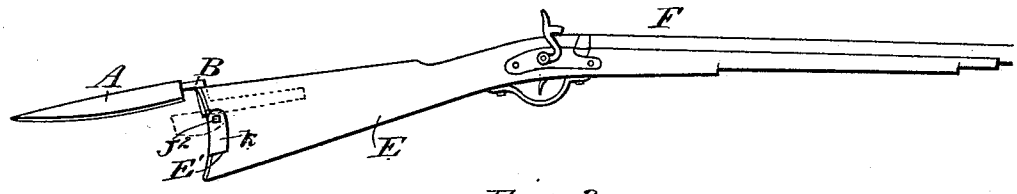


Fig. 2.

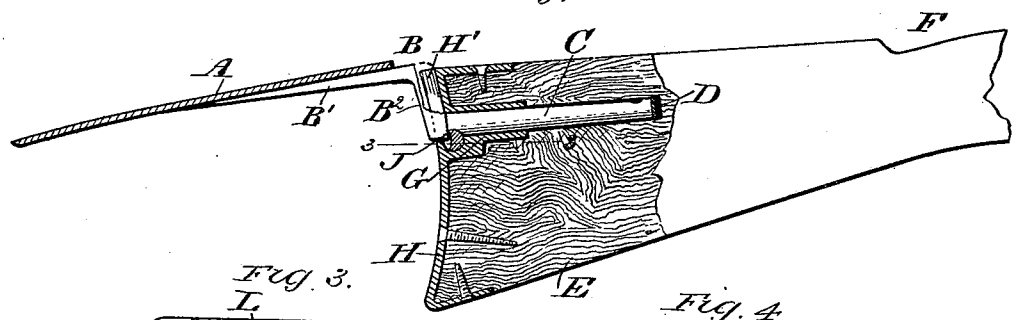


Fig. 3.

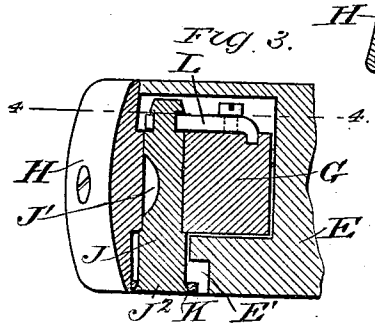


Fig. 4.

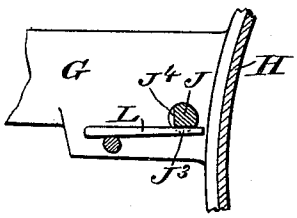
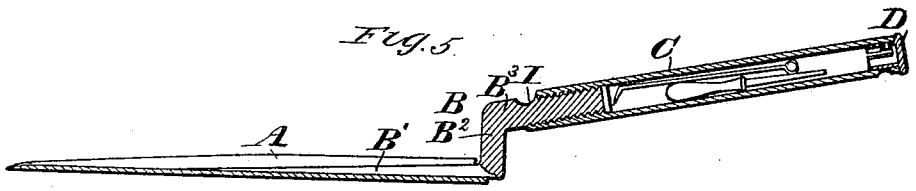


Fig. 5.



WITNESSES:

W. R. Davis.

C. Sedgwick

INVENTOR:

W. H. Hamner

BY

Munn & Co

ATTORNEYS

(No Model.)

2 Sheets—Sheet 2.

W. H. HAMNER.

INTRENCHING TOOL.

No. 470,122. Patented Mar. 1, 1892.

Fig. 6.

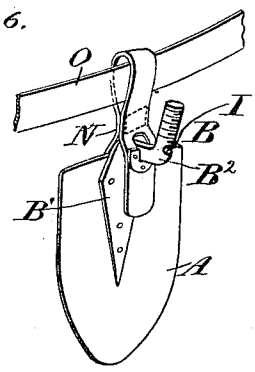


Fig. 7.

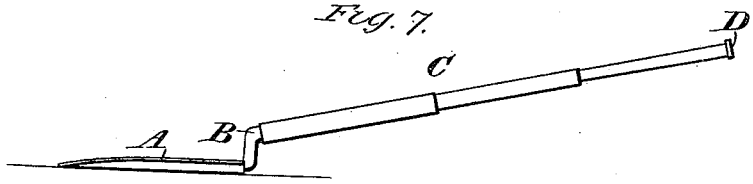


Fig. 8.

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UNITED STATES PATENT OFFICE.

WILLIAM H. HAMNER, OF FORT ASSINABOINE, MONTANA.

INTRENCHING-TOOL.

SPECIFICATION forming part of Letters Patent No. 470,122, dated March 1, 1892.

Application filed April 11, 1891. Serial No. 388,503. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HAMNER, of Fort Assinaboine, in the county of Choteau and State of Montana, have invented a new and Improved Intrenching-Tool, of which the following is a full, clear, and exact description.

The invention relates to improvements in implements for use by military men to build trenches, breastworks, and the like.

The object of the invention is to provide a new and improved intrenching-tool adapted to be used on the butt of a rifle or carbine for constructing earthworks, rifle-pits, and the like as a protection from the enemy's fire or used singly for the same or other purposes.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement as applied to the butt of a rifle. Fig. 2 is an enlarged sectional side elevation of the same. Fig. 3 is a sectional plan view of the same on the line 3 3 of Fig. 2. Fig. 4 is a rear sectional elevation of the same on the line 4 4 of Fig. 3. Fig. 5 is an enlarged sectional side elevation of the improvement as attached to a handle. Fig. 6 is a perspective view of the improvement attached to a belt. Fig. 7 is a side elevation of the improvement having a telescoping handle, and Fig. 8 is an enlarged sectional side elevation of the telescoping handle.

The improved intrenching-tool is provided with a shovel-blade A, to which is attached a shank B, formed with a tongue B′, riveted or otherwise secured to the top surface of the blade A, as is plainly illustrated in the drawings. From the tongue B′ extends nearly at right angles an arm B^2, from which extends at an obtuse angle a threaded part B^3, adapted to be screwed into a hollow handle C. By thus constructing the shank B the handle C stands at an acute angle to the blade A, as plainly indicated in Fig. 5. The handle C is preferably made hollow, so as to insert or store therein a screw-driver, shell-extractors, or other similar tools for the convenient use of the riflemen. The outer end of the handle C is adapted to be closed by a cap D of any approved construction. The intrenching-tool thus described is adapted to be secured to the butt E of a rifle or carbine F of any approved construction.

In order to conveniently attach the tool to the rifle, the handle C is passed through a sleeve G, projecting inwardly into the wooden portion of the butt from the heel or base plate H, as plainly illustrated in Fig. 2. In the heel-plate H of the butt and near its upper end is formed a vertically-extending slot H′, adapted to be engaged by the back of the arm B^2 of the shank B, previously described, so that the tool is prevented from turning when attached to the butt.

In order to prevent the handle C or the threaded portion B^3 of the shank B from turning in the sleeve G, the said handle or the threaded portion B^3 is formed with a transversely-extending recess I, adapted to be engaged by a bolt J, extending transversely and mounted to turn in suitable bearings in the sleeve directly below the handle C, as is plainly shown in Fig. 2. The bolt J is formed in its periphery with a recess J′, which when moved opposite the recess I permits of conveniently withdrawing the handle C from the sleeve G. When, however, the bolt J is turned into the position illustrated in Fig. 2, it passes into the recess I and consequently locks the handle C firmly in place in the sleeve G. On the outer square end J^2 of the bolt J is secured a handle K, adapted to pass into a recess E′, formed in the butt E, as is plainly shown in Figs. 1 and 3. When the handle K is in the position shown in Fig. 1, the bolt J locks the handle C in place; but when the operator turns the handle K outward into the position shown in dotted lines in Fig. 1 the bolt J is turned so that the recess J′ is opposite the recess I and the handle C can be withdrawn from the sleeve G.

In order to lock the bolt J in either of the two positions mentioned, a spring L is provided, secured on one side of the sleeve G and adapted to engage with its free end two shoulders J^3 and J^4, formed at the inner end of the bolt J, the shoulders J^3 and J^4 extending about at right angles to each other, as plainly illustrated in Fig. 4.

When the intrenching-tool is fastened to

the butt of a rifle or carbine, as shown in Figs. 1 and 2, the back of the shovel-blade A extends about in line with the top of the butt, so that the barrel of the rifle or carbine is at an angle to the said blade similar to the angle of the handle of an ordinary shovel to its blade. When the device is in this position, the tool can be readily used for digging trenches, forming breastworks, rifle-pits, and the like, the soldier not being hindered from using the rifle or carbine in case of an emergency. In firing, the top of the blade A can rest on the shoulder of the soldier, thus assisting the soldier to firmly hold the rifle.

Instead of the handle C described, a telescopic handle may be used, as illustrated in Figs. 7 and 8, the said handle when extended forming, with the shank B and blade A, a regular shovel, which can be used without the carbine or rifle.

When the intrenching-tool is not to be used in connection with the rifle or carbine, then it may be carried in a loop N, held on the belt O of the soldier. The shovel-blade A then extends with its back inward toward the belt, while the handle C is carried in sleeve G with cap D outward, the locking-bolt engaging in notch on end of handle at D. The intrenching-tool can be used as an ordinary shovel when attached to the rifle or carbine, the foot being applied at the top edge of the blade A, so as to push the blade into the earth. It can also be used when the operator is in a kneeling position for throwing up breastworks without exposing himself to the deadly fire of the enemy.

With the handle C, as described, the tool can be detached from the rifle, and can then be used as a hand-tool in a lying position.

Should a hand-tool not be desired, that part of shank with screw-thread can be made plain and recessed longitudinally, into which a spring will be fitted, having a projection upon it to engage with a notch in sleeve G, whereby it can be readily adjusted, the recess in butt-plate preventing the tool from turning.

In case a soldier or a column of soldiers are advancing upon an enemy to gain a position and to intrench then the rifle is used, as the occasion may require, either for firing or for throwing up earthworks, as previously described.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In an intrenching-tool, the combination, with a hollow handle having an interior screw-thread, of a shovel-blade provided with a shank having a tongue secured to the blade, an arm extending at right angles from the said tongue, and a threaded part extending at an obtuse angle from the said arm and adapted to screw in the said hollow handle, substantially as shown and described.

2. An intrenching-tool provided with a shovel-blade comprising the blade proper, a tongue secured to the top surface of the said blade, an arm extending at right angles from the said tongue, and a threaded shank part extending at an obtuse angle from the said arm, substantially as shown and described.

3. In an intrenching-tool, the combination, with a heel-plate having a groove and a sleeve projecting from the said heel-plate, of a shovel-blade comprising a blade, a tongue secured to the said blade, an arm extending at right angles from the said tongue and adapted to engage the groove in the said heel-blade, and a threaded shank part extending at an obtuse angle from the said arm, and a handle in which screws the said shank part and which fits into the said heel-plate sleeve, substantially as shown and described.

4. In an intrenching-tool, the combination, with a heel-plate having a groove and a sleeve projecting from the said heel-plate, of a shovel-blade comprising a blade, a tongue secured to the said blade, an arm extending at right angles from the said tongue and adapted to engage the groove in the said heel-blade, and a threaded shank part extending at an obtuse angle from the said arm, a handle in which screws the said shank part and which fits into the said heel-plate sleeve, and a bolt for locking the said sleeve and handle in place, substantially as shown and described.

5. In an intrenching-tool, the combination, with a heel-plate having a groove and a sleeve projecting from the said heel-plate, of a shovel-blade comprising a blade, a tongue secured to the said blade, an arm extending at right angles from the said tongue and adapted to engage the groove in the said heel-blade, and a threaded shank part extending at an obtuse angle from the said arm, and a handle in which screws the said shank part and which fits into the said heel-plate sleeve, a bolt for locking the said sleeve and handle in place, and a flat spring adapted to engage flat surfaces on the end of the said bolt to hold the latter in position, substantially as shown and described.

6. In an intrenching-tool, the combination, with a heel-plate having a groove and a sleeve projecting from the said heel-plate, of a shovel-blade comprising a blade, a tongue secured to the said blade, an arm extending at right angles from the said tongue and adapted to engage the groove in the said heel-blade, and a threaded shank part extending at an obtuse angle from the said arm, and a handle in which screws the said shank part and which fits into the said heel-plate sleeve, and a bolt mounted to turn and passing through a recess in the said handle, the said bolt being formed in its periphery with a recess adapted to regulate with the said handle-recess to permit of removing the handle from the sleeve, substantially as shown and described.

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Witnesses:
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W. C. BROADWATER.