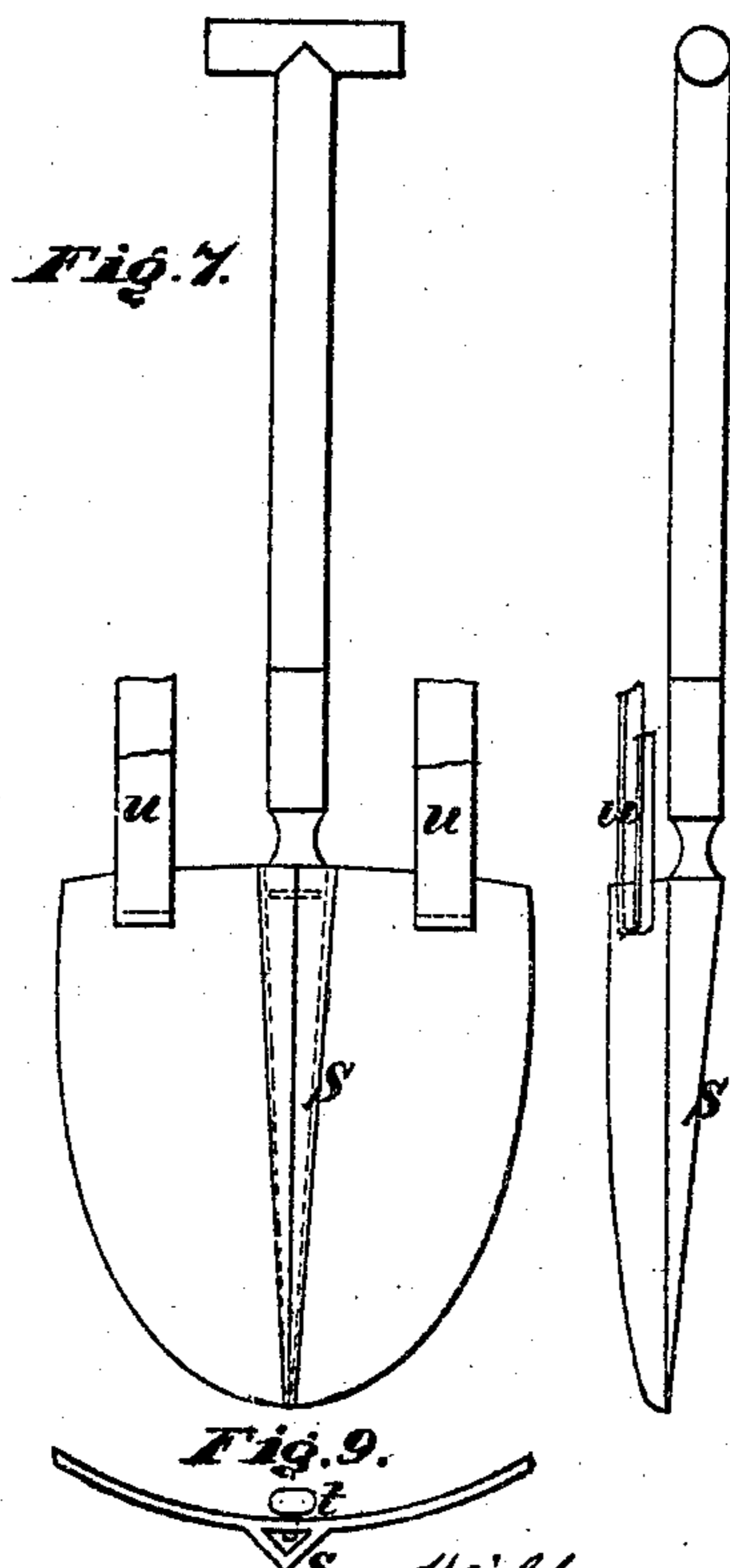
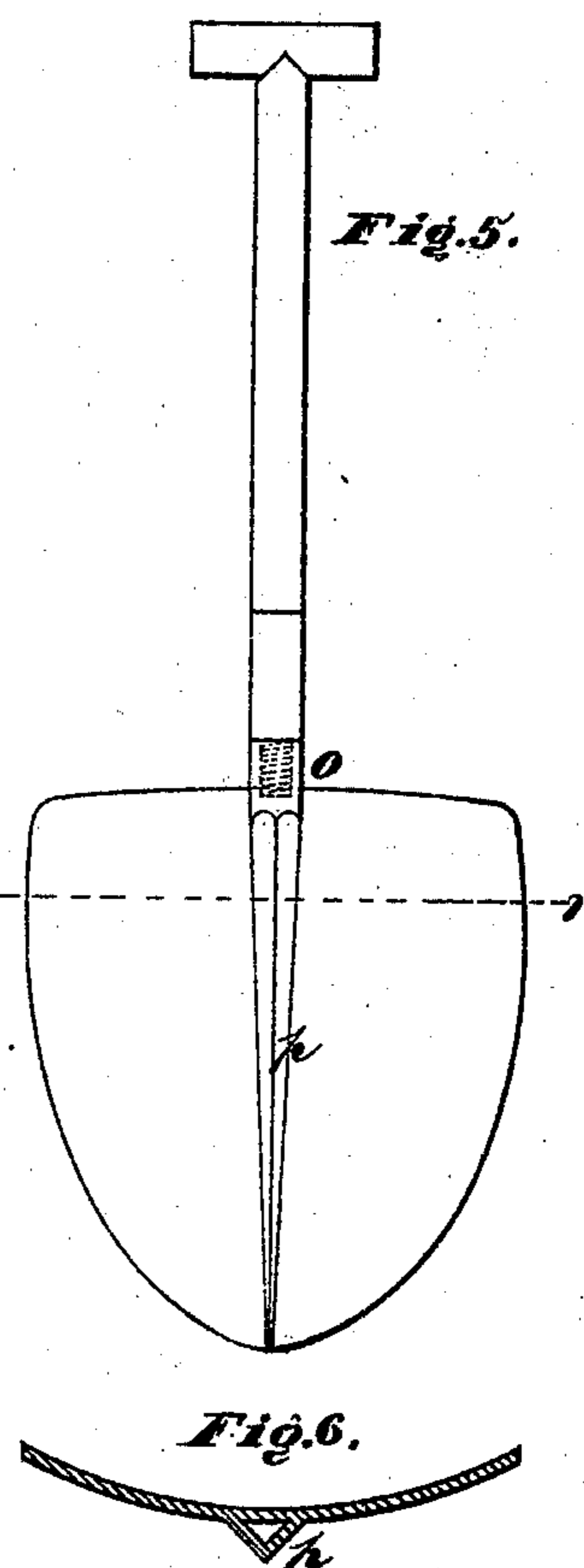
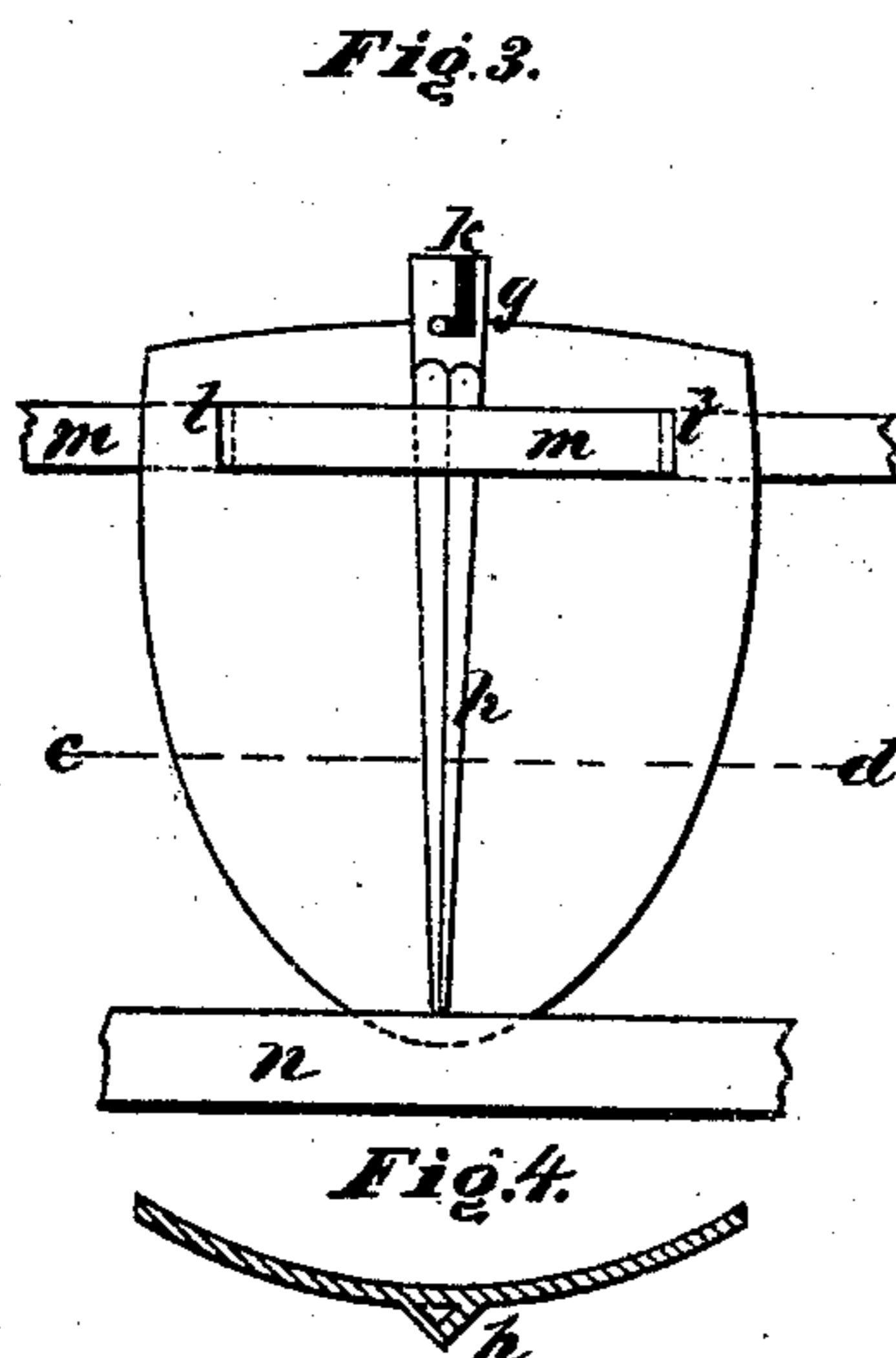
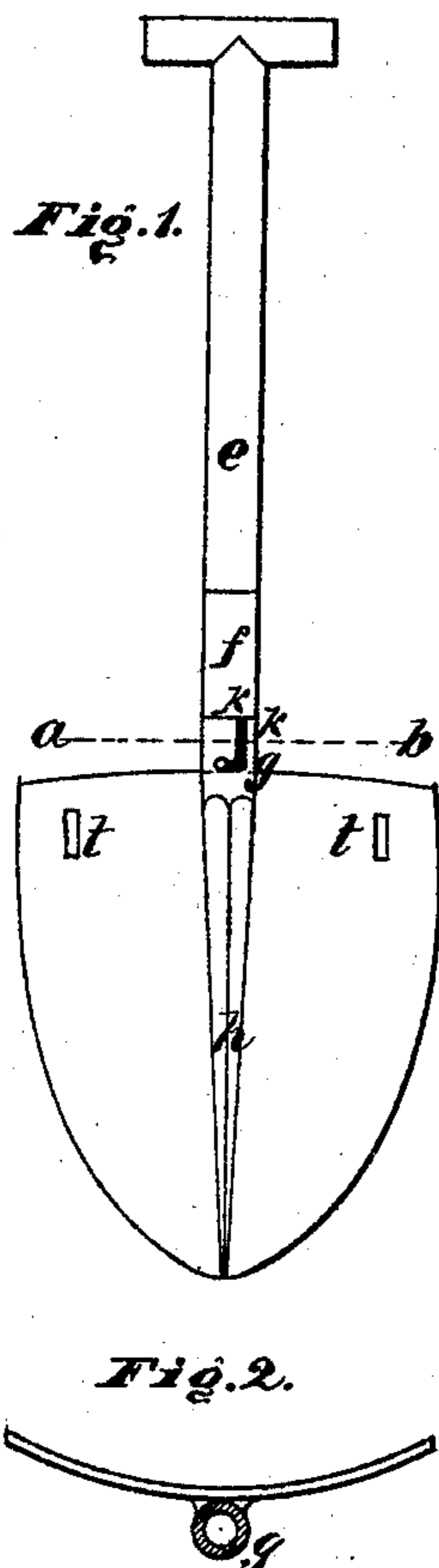


Improvement in Spade Bayonets.

No. 122,206.

Patented Dec. 26, 1871.



WITNESSES.

E. Hughes
H. L. Brooks.

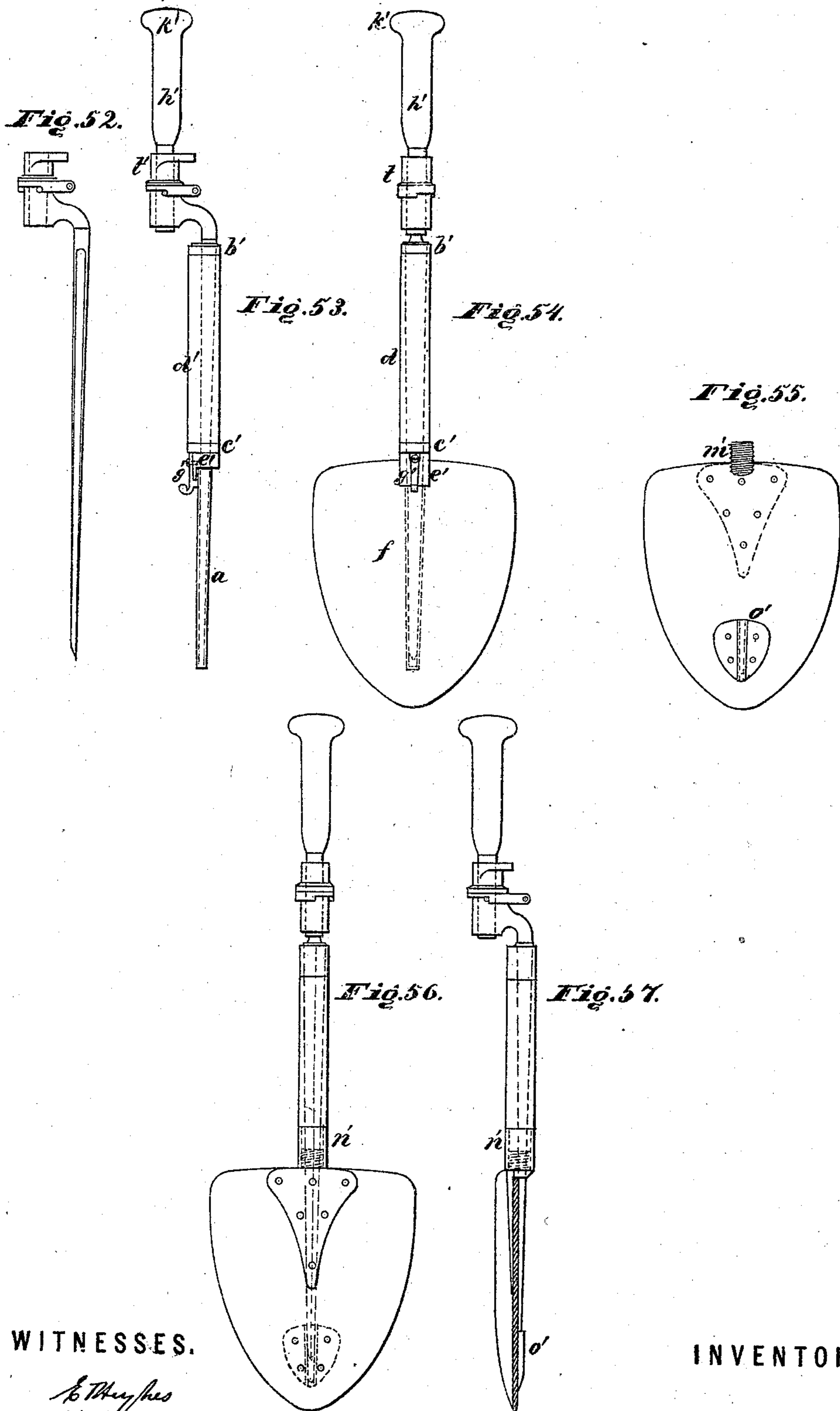
INVENTOR.

William Shepard Wetmore.

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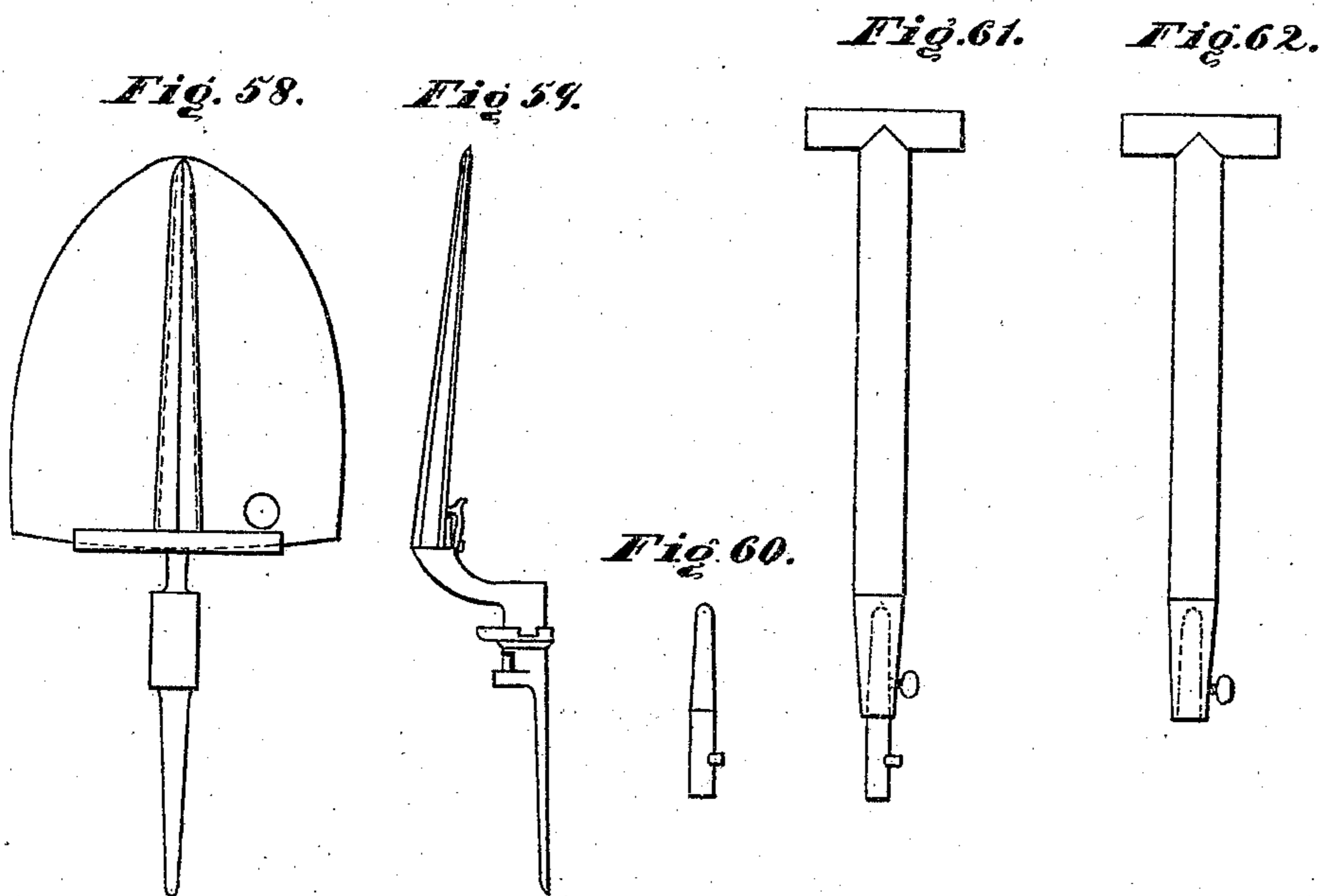
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WILLIAM S. WETMORE.

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William Shepard Wetmore

UNITED STATES PATENT OFFICE.

WILLIAM SHEPARD WETMORE, OF LONDON, ENGLAND.

IMPROVEMENT IN SPADE-BAYONETS.

Specification forming part of Letters Patent No. 122,206, dated December 26, 1871.

To all whom it may concern:

Be it known that I, WILLIAM SHEPARD WETMORE, of New York, United States of America, at present of London, England, have invented new and useful "Improvements in the Mode of Protecting Troops under Fire and in the tools or apparatus connected therewith, which improvements are also applicable to other purposes;" and I do hereby declare that the following is a full and correct description thereof, reference being had to the accompanying seven sheets of drawing and to the letters of reference marked thereon.

The object of my invention is to provide an improved attachment for bayonets which shall be adapted for use as a spade in intrenching, and also as a defensive armor or breast-plate for the soldier when in battle. The invention consists in the construction of the device, as hereinafter described and as specifically stated in the claims.

Figure 1 is an elevation of a spade designed for use both as a breast-plate and spade, a handle being shown attached to the blade by a bayonet-catch. Fig. 2 is a transverse section of Fig. 1 at the line *a b*; Fig. 3, an elevation of the blade detached; and Fig. 4, a transverse section of Fig. 3 at the line *c d*.

The bottom of the wooden part *e* of the handle is driven into the socket *f* and held by nails or screws in the usual manner; and below the socket there is a solid or tubular piece of round metal having on it a knob or button. The blade has at the top a circular socket, *g*, in connection with a triangular socket, *h*, at the back of the blade, forming a crest or rib extending from the top of the blade to the apex *i*; and in the socket *g* there is a slot, *k*, for forming, in connection with the button, the ordinary bayonet-catch; and with this form of blade the soldier's rifle with ordinary bayonet-knob may be used as a handle if desired; or I rivet or fasten on the upper part of the blade a metal piece with groove and socket, such as is made on the handle of the sword-bayonet; and by this arrangement the spade can be adapted to rifles made for this form of bayonet. At the upper part of the blade there are holes *l*, through which the holding-straps *m*, Fig. 3, are passed when the blade is used as a breast-plate or other protection, the apex *i* being supported in a pocket in the waist-belt *n*. The forms and dimensions of the blades are varied as desired; and Fig. 5 is an elevation of a spade in which the lines of the

blade are rounded off so as to give a broad bottom to the blade and more protecting surface when used as a breast-plate or armor; and in this spade, at the bottom of the handle, there is a male screw fitted into a female screw in the socket *o*, so that the handle can be firmly secured to the blade and removed from it; and in connection with the socket *o* there is a crest, *p*, also shown in Fig. 6, which is a transverse section of Fig. 5 at the line *q r*. I make the blades of any suitable metal, but prefer steel, which may be hammered out, pressed, rolled, or cut from sheets; and the sockets are also made of any desired metal, their positions and shapes being varied in any required manner. The socket may be worked upon the blade, forming together one piece; or it may be welded, brazed, or riveted to the blade, so that the socket may be at the outside, the inside, or both sides; and, instead of making the socket the entire depth of the blade, it may be shorter, and also be divided into parts or prolonged to extend above the top of the blade.

Fig. 7 is an elevation, and Fig. 8 is a side view of a spade, the blade of which has a triangular socket on the outside and the handle a piece of metal at the bottom of a similar shape; and the socket is marked *s* in Figs. 7 and 8, and also in the top view of the blade, which is shown detached in Fig. 9; and in the socket there is a thumb-screw, *t*, for holding the handle firmly to the blade; and the straps for fastening the blade to the shoulder-straps are marked *u*.

The ordinary bayonet, shown at Fig. 52, Sheet 2, is, when combined, entirely encased in a steel sheath, *a'*, Fig. 53, which is inclosed from *b'* to *c'* in an outer sheath, *d'*, made of wood or other material, and having at one end a lip, *e'*, for clasp ing the blade *f'*, and a spring, *g'*, for securing it. In this arrangement I employ a short wooden handle, *h'*, having at one end a knob, *k'*, and at the other end a metal collar, *l'*, provided with a pin or projection which can be locked in the groove in the socket of the bayonet. At the bottom of the blade *f'* there is a short socket for receiving the bottom of the steel sheath with the bayonet inclosed and the handle, collar, sheath, and blade combined are shown in Fig. 54. In another arrangement, shown in Figs. 55, 56, and 57, I rivet to the blade a collar, *m'*, having in the center a hole of the same shape as the bayonet, and at the outside a screw-thread; and on the bayo-

net I place a wooden sheath, *n'*, having an internal screwed thread to correspond with the thread on the collar *m'*; and on the blade there is a socket, *o'*, for the point of the bayonet to enter.

These improvements are used, in connection with the blades of the spades, either as defensive armor or for digging or intrenching, the blades, when used as armor, being carried as before described, or in any other convenient manner; and, although I have described various forms of the lower parts of the handles of the spades and modes of connecting them to the blades, it is evident that they can be varied to an indefinite extent.

For enabling the blade of the spade to be used as a shield or mantlet to the soldier lying behind it I prolong a section of the socket of a bayonet to a greater length than those before described in order that it can be forced into the earth, as

shown in Fig. 58, Sheet 3, and be used as a shield or mantlet, there being a hole for the soldier to insert his musket through it.

Having described various modes of constructing and attaching the shield or spade to a bayonet, what I claim as alone novel is—

1. In combination with the blade or shield and with a bayonet, the sheath or handle *d'*, substantially as shown and described, for the purpose specified.

2. The improved defensive-plate and intrenching-tool provided with a socket having a prolonged section, as shown and described, for the purpose specified.

WILLIAM SHEPARD WETMORE.

Witnesses:

E. T. HUGHES,
H. I. BROOK.

(55)