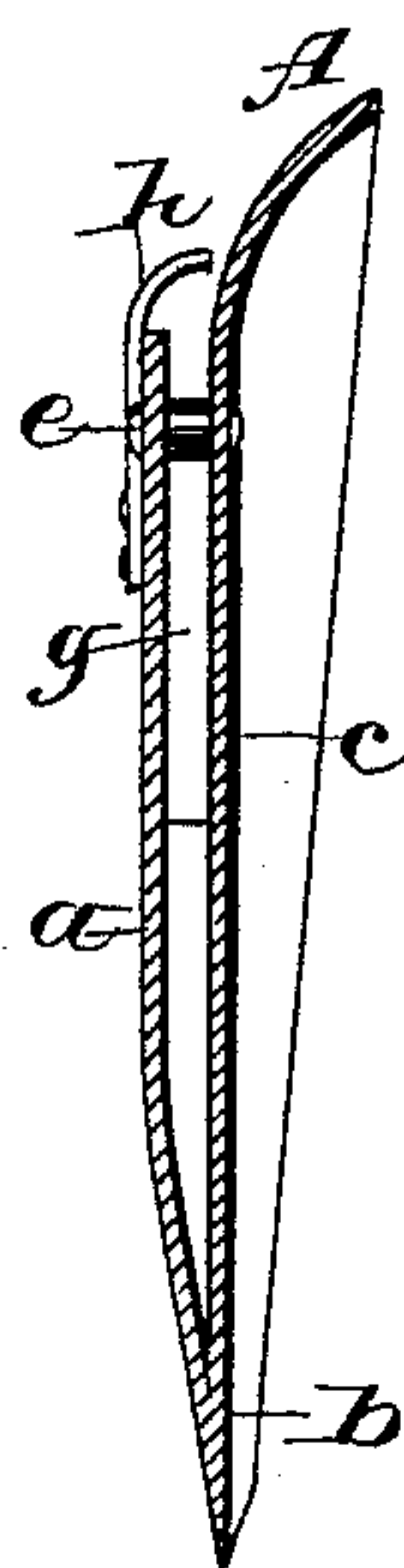
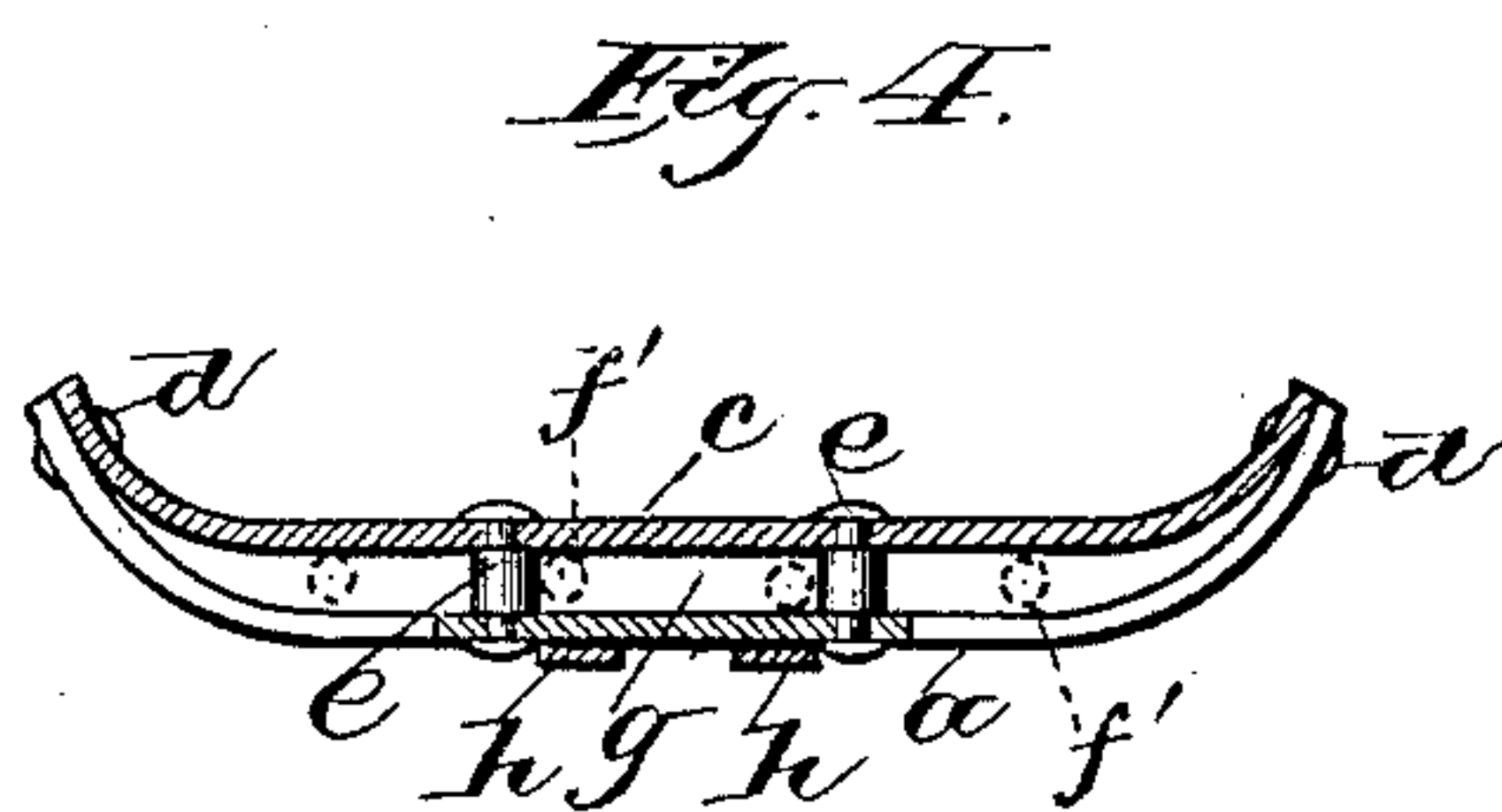
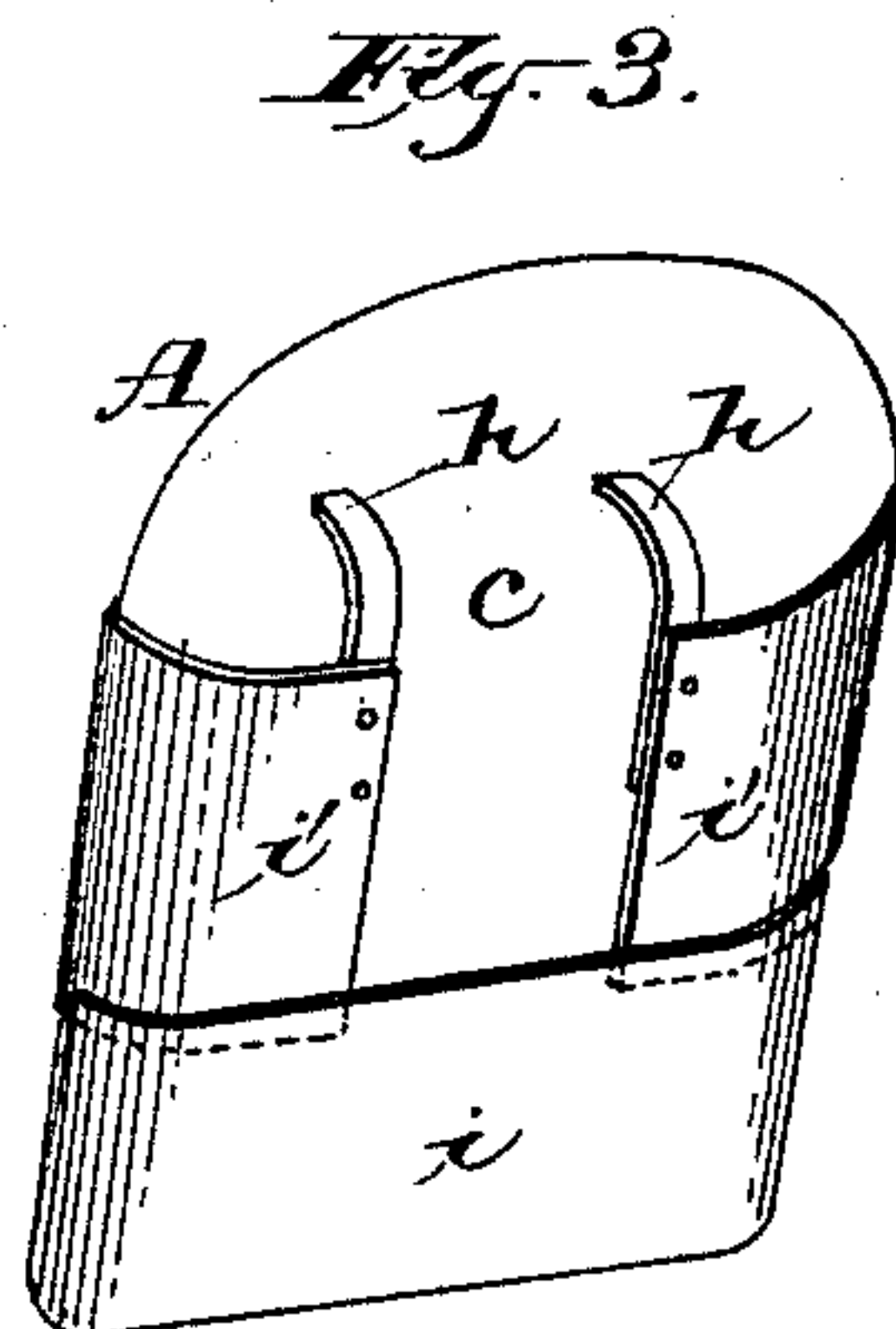
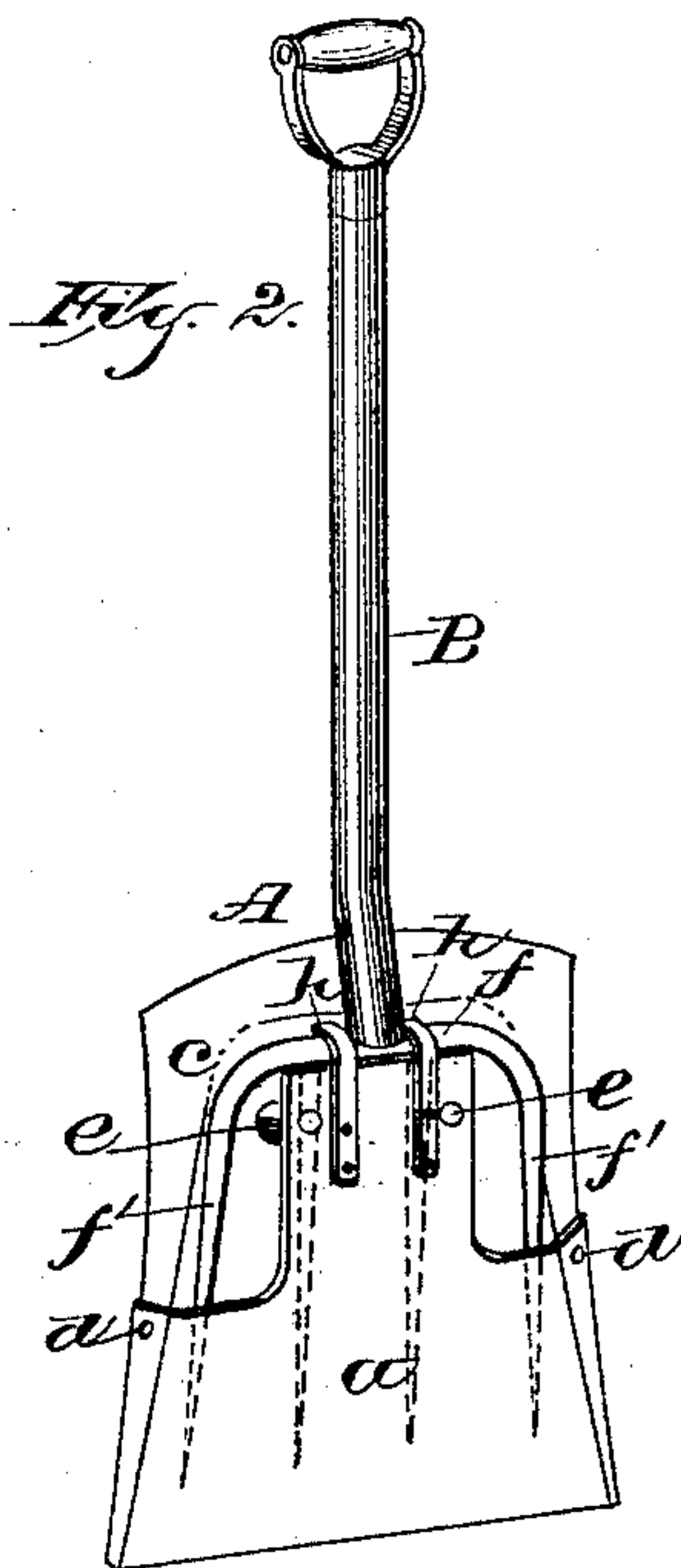
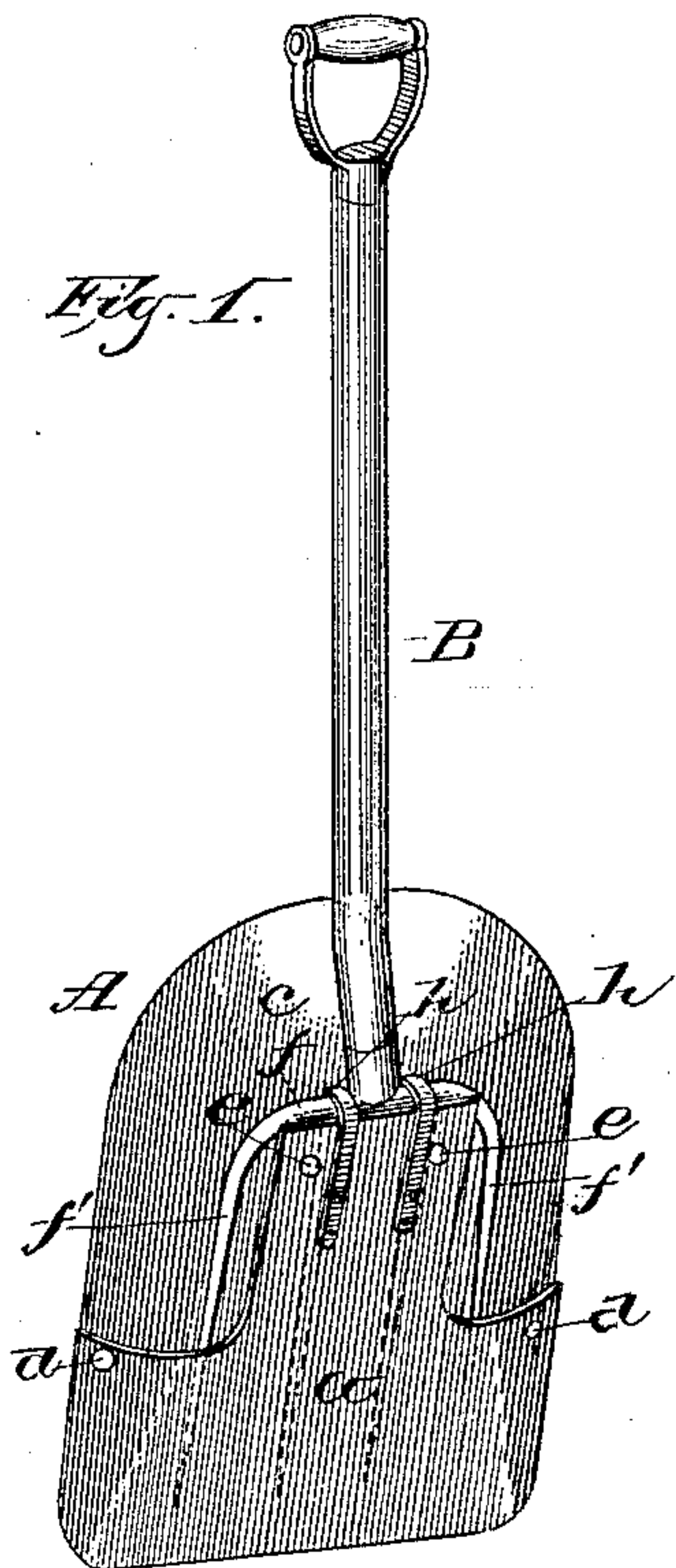


(No Model.)

Z. H. SMITH.  
DETACHABLE SHOVEL BLADE.

No. 348,794.

Patented Sept. 7, 1886.



Witnesses:  
E. G. Simon  
N. E. Oliphant

Inventor:  
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Attorneys.

# UNITED STATES PATENT OFFICE.

ZWINGLE H. SMITH, OF FRANKSVILLE, WISCONSIN.

## DETACHABLE SHOVEL-BLADE.

SPECIFICATION forming part of Letters Patent No. 348,794, dated September 7, 1886.

Application filed February 6, 1886. Serial No. 190,984. (No model.)

*To all whom it may concern:*

Be it known that I, ZWINGLE H. SMITH, of Franksville, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Detachable Shovel-Blades; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to forks and shovels, and has for its object to provide a shield or shovel-blade capable of being detachably secured to an ordinary stable-fork; and my invention consists in certain peculiarities of construction, whereby the above object is attained, as will be hereinafter described, with reference to the accompanying drawings, in which—

Figure 1 is a perspective view representing my detachable blade in the form of a scoop and operatively connected to a fork; Fig. 2, a similar view showing the blade in the form of an ordinary shovel. Fig. 3 is a perspective view of another form of my blade; Fig. 4, a transverse section of my blade, and Fig. 5 a vertical section of the same.

Referring by letter to the drawings, A represents my detachable blade, which is preferably made from a single piece of sheet metal in either shovel or scoop form. That portion *a* of the metal designed to form the back of the blade is preferably L-shaped, and being bent around to position is welded at *b* to the main or front portion, *c*, of said blade, thus forming a solid point to receive the usual wear and prevent the parts from separating by such wear, as would be otherwise the case were this welding omitted.

At *d*, I usually rivet the parts *a* and *c*; but, if desirable, the opposing outer edges of said parts may be welded together. The vertical arm of the L-shaped back portion of the blade is united to the front portion, *c*, by riveted braces *e*, the latter also serving as bearings for the horizontal arm *f* of a fork having the usual handle, B, the tines *f'* of said fork extending down into the space *g* between the parts *a* *c*. The inner tines of the fork fit between the riveted braces *ee*, and the outer tines are respectively located on the outside of said braces.

To the vertical arm of the L-shaped back *a*

are secured springs *h h*, that come over the arm *f* of the fork to retain the latter in operative position with relation to the blade A. The free ends of the springs *h h* are so shaped as to be forced back by the insertion of the fork into the space *g*, thereby rendering the coupling of the parts a simple and easy operation.

In Fig. 3 I show the blade A as having its back portion composed of a horizontal strip, *i*, and vertical side strips, *i'*, the latter having the springs *h h* riveted thereto.

This form of my invention is more particularly applicable for attachment to ordinary shovels as well as forks, and hence I prefer to make the same in the shape of a scoop, so as to provide such an implement without any great additional cost.

The fork shown in connection with my device is similar to those generally termed "manure-forks," and to this class of forks my invention is especially applicable.

By the construction above described I provide a simple, easily manufactured, and cheap blade, capable of being detachably connected to an ordinary fork to serve the purpose of a shovel, and this blade can be made of various patterns and placed upon the market for sale as an independent article.

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

1. A shield or shovel-blade formed from a single piece of sheet metal, having part thereof bent around to form a back, and welded to the front portion at the point, and suitable springs secured to said back portion, as set forth.

2. The combination, with a fork having a handle, B, of the shield or shovel-blade A, constructed to engage the fork and provided with springs *h h*, adapted to retain said parts in operative position, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at the city of Racine, in the county of Racine and State of Wisconsin, in the presence of two witnesses.

ZWINGLE H. SMITH.

Witnesses:

J. E. DODGE,  
JOHN DONALD.