

E. SMITH.
Shovel-Handle.

No. 214,464.

Patented April 15, 1879.

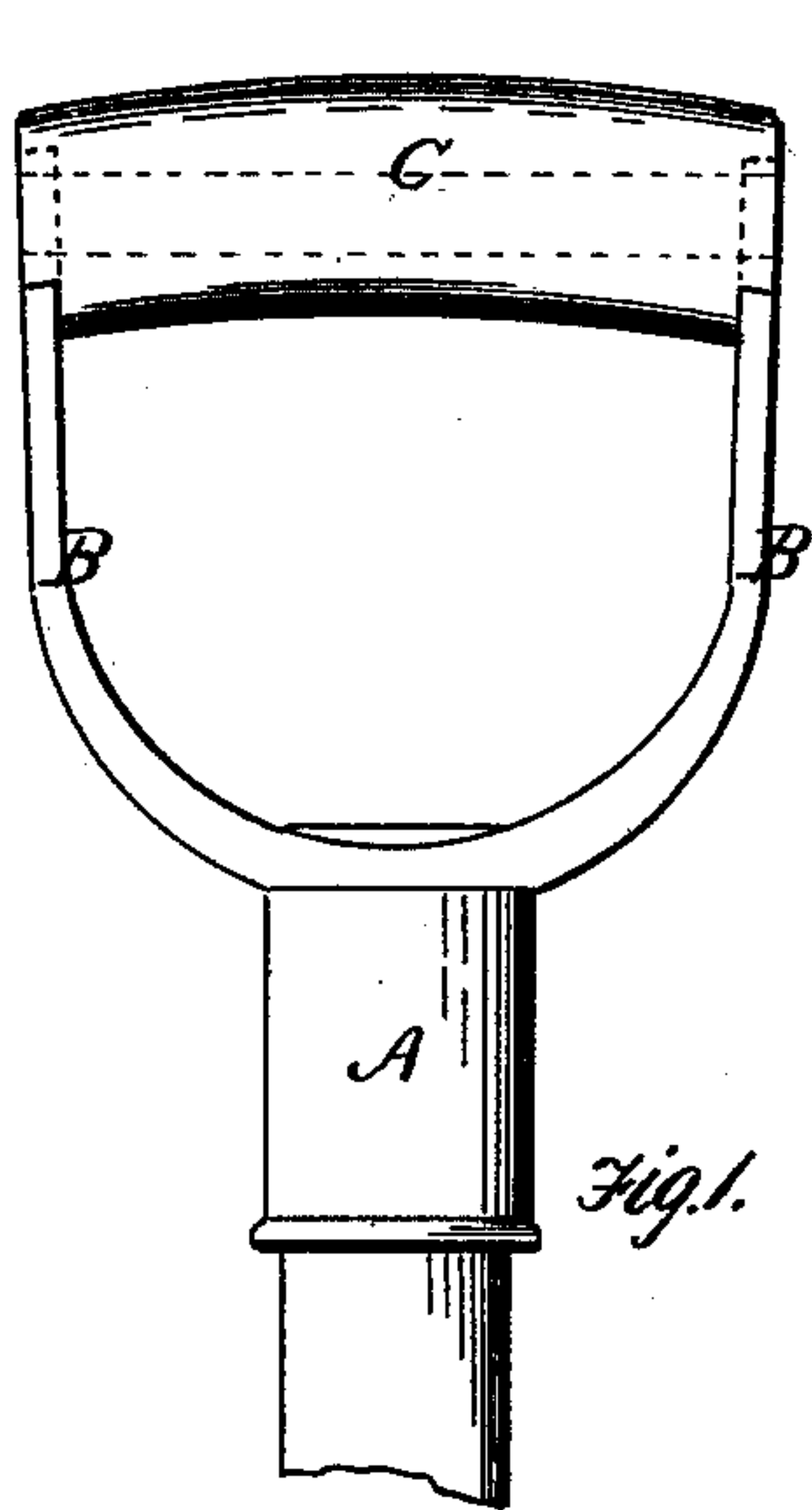


Fig. 1.

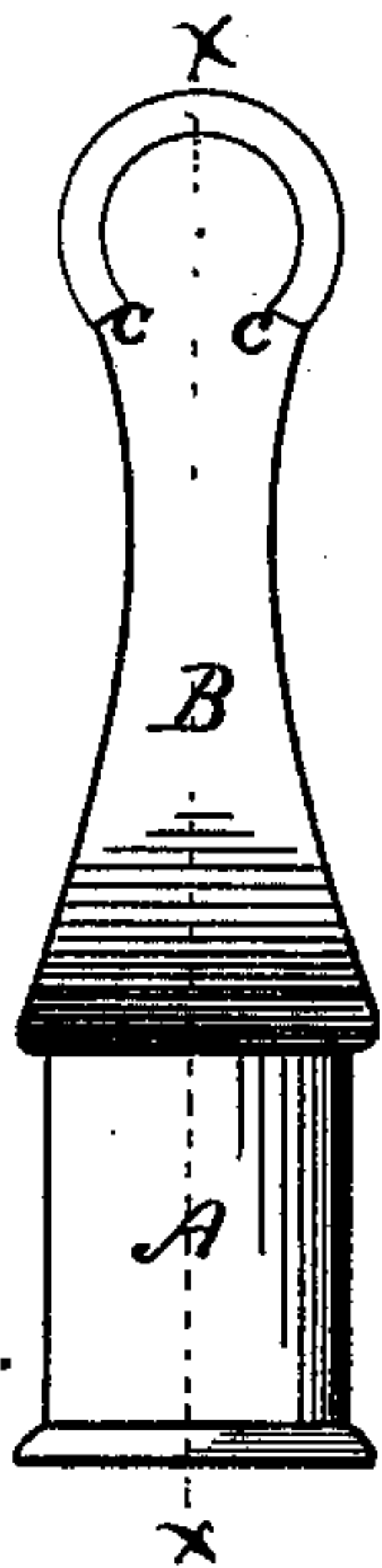


Fig. 2.

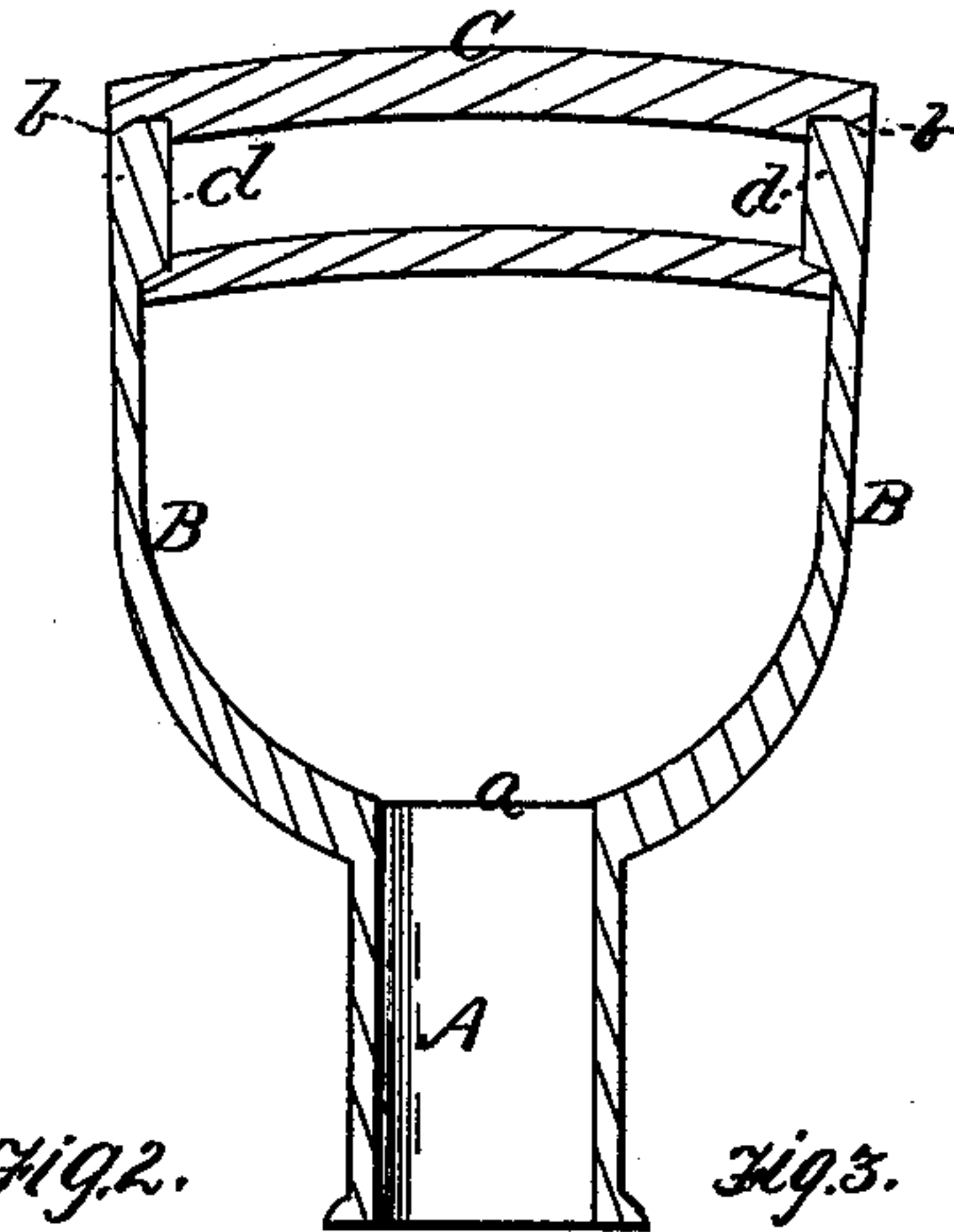


Fig. 3.

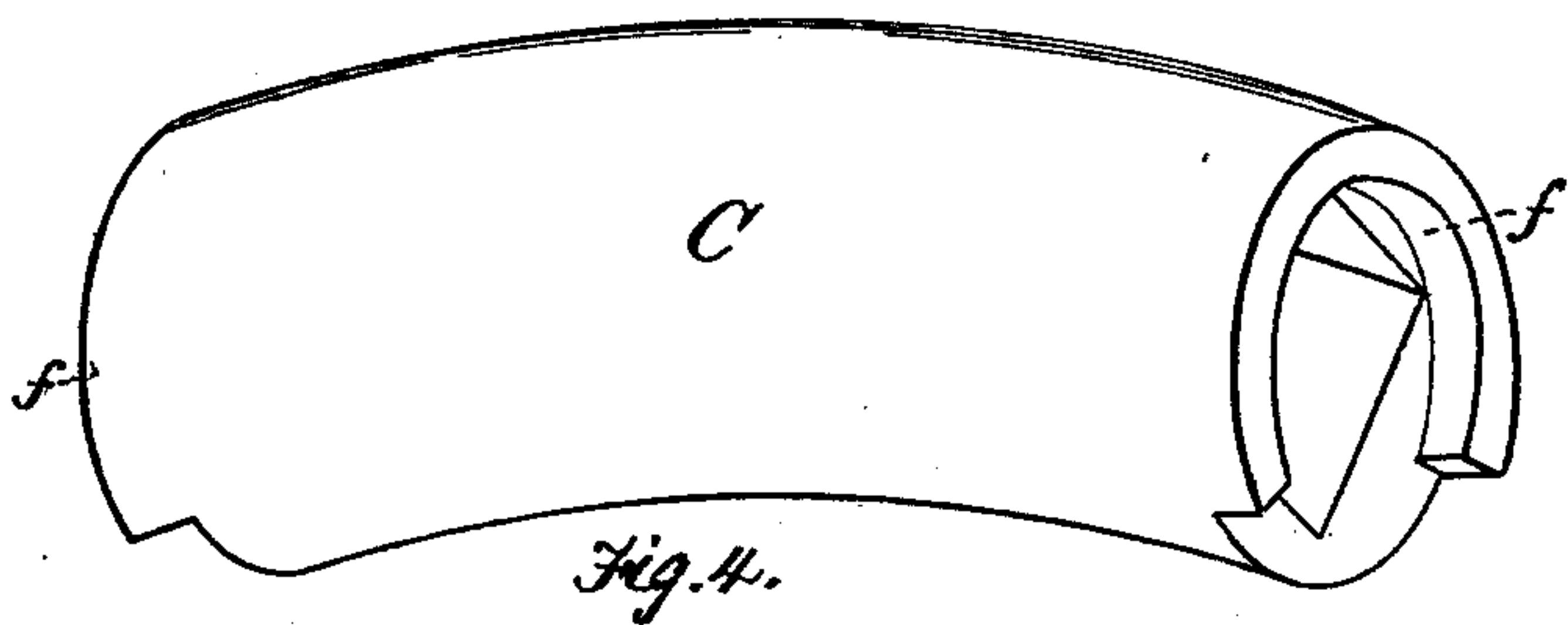


Fig. 4.

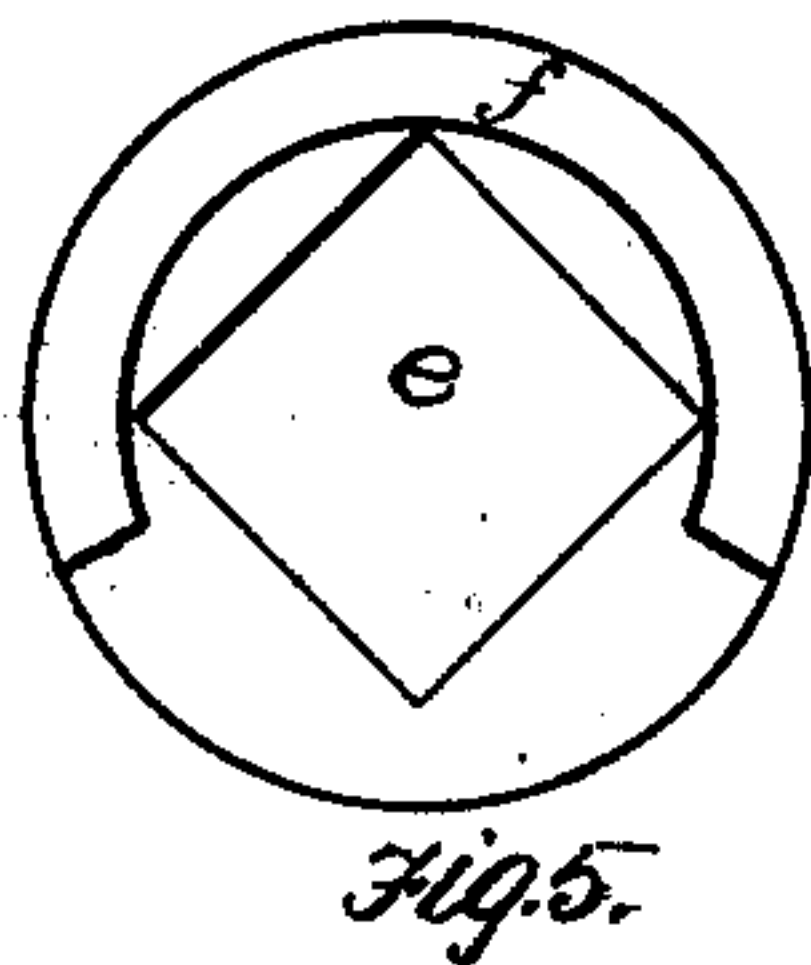


Fig. 5.

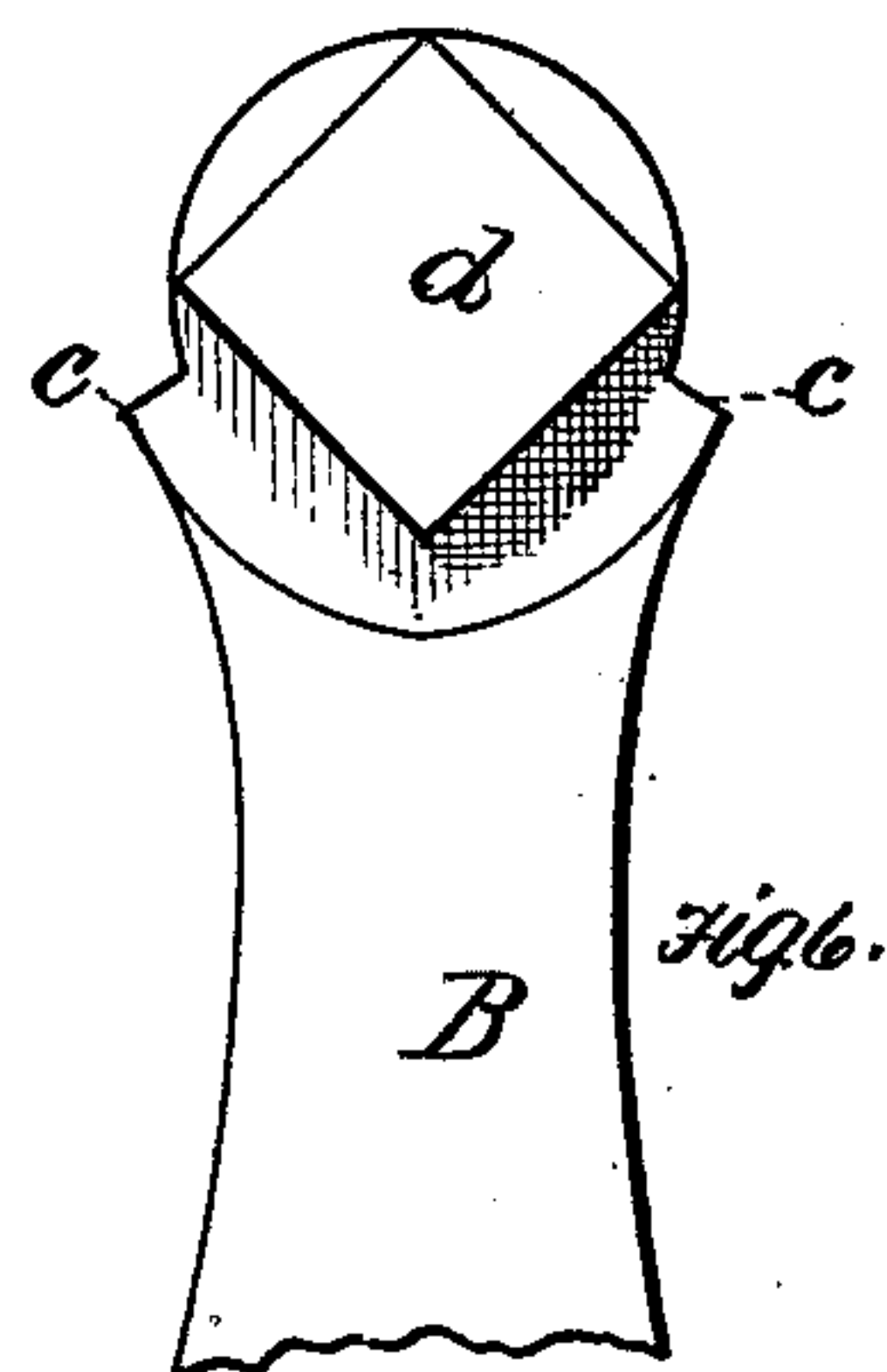


Fig. 6.

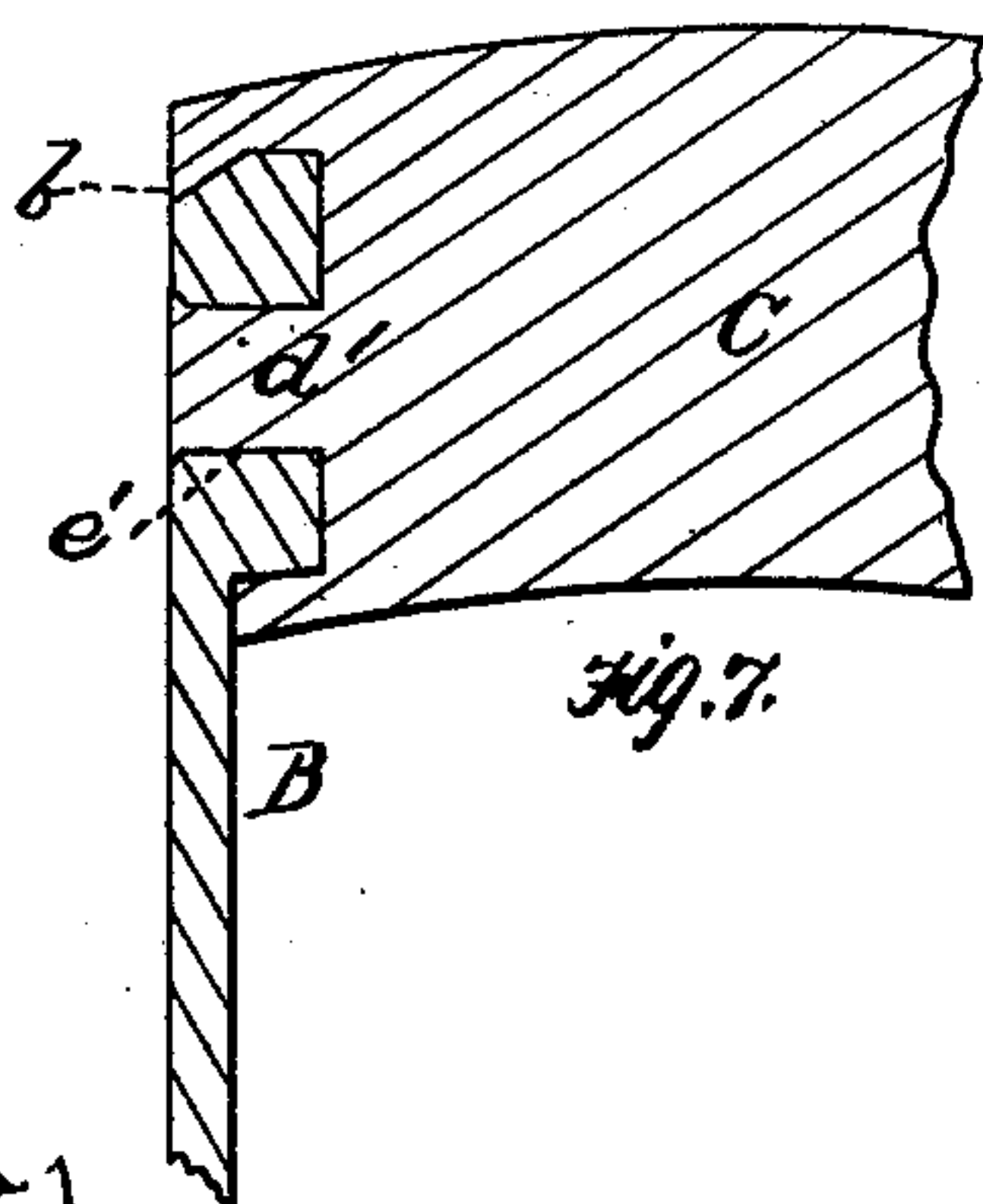


Fig. 7.

Witnesses.

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UNITED STATES PATENT OFFICE.

EPHRAIM SMITH, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HUSSEY, BINNS & CO., OF SAME PLACE.

IMPROVEMENT IN SHOVEL-HANDLES.

Specification forming part of Letters Patent No. **214,464**, dated April 15, 1879; application filed March 19, 1879.

To all whom it may concern:

Be it known that I, EPHRAIM SMITH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Shovel-Handles; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view of a shovel-handle embodying my invention. Fig. 2 is a side view of the same. Fig. 3 is a section on line *x x*, Fig. 2. Fig. 4 is an elevation of the grasp-bar. Fig. 5 is an end view of the same. Fig. 6 is a view of the inner face of the side bar, the grasp-bar removed. Fig. 7 is a detail view, showing a modification.

Like letters refer to like parts wherever they occur.

My invention relates to the construction of tamping-handles for shovels and like articles; and consists, generally, in forming the side bars and grasp-bar with entering or interlocking parts, whereby a detachable grasp-bar may be secured to the handle, either with or without the use of the rivet-rod or bolt.

In laying railroad-tracks and similar work, the handle of the shovel is frequently used by the workman, instead of a tamping-bar, for compacting or tamping the earth, and in such use the grasp-bar becomes roughened and uncomfortable to the hand and is often broken, so that the whole or a portion of the handle must be replaced.

Heretofore, in the construction of tamping-handles for shovels, several plans have been adopted, the side bars being formed of wood, and the grasp-bar of either a hollow metallic cylinder filled with wood or a solid metallic cylinder, the parts being secured by the usual bolt or rivet-rod; but in such case, the side bars being of wood, the parts were liable to become loose from wear, and thus render the handle less durable and serviceable. A second plan has been to form the handle with socket and side bars of metal, and in a single piece, and the grasp-bar in two sections, the top or outer section or cap-plate of metal, and the lower or inner section of wood, the parts

being held together by bolts, rivet-rods, and screws; but such construction is complicated and expensive, without corresponding advantages. A third plan has been to cast the handle in a single piece; but this is objectionable, for the reason that the grasp-bar could not be readily or rapidly polished, or replaced when broken.

The object, therefore, of the present invention is to so connect the grasp-bar to the handle, the parts being of metal, that it can be readily removed and replaced, may be easily and rapidly smoothed or polished, so as to render it comfortable to the hand of the user, and a very cheap and durable handle will be obtained.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the socket, and B B the side bars, cast in a single piece, the socket being, by preference, left open at the top, as at *a*, the better to secure and tighten the handle to the shaft. The upper ends of the side bars, B B, are rounded and more or less chamfered, as at *b*, and are provided with shoulders *c* on the sides, and lugs or projections *d* on their inner faces. The shoulders *c* alone will prevent the turning of the grasp-bar, and the projections *d*, whose principal function is to assist in locking the grasp and side bars together, may be round, or of any desired shape; but a polygonal form for *d* is preferred, as said lugs may be made to aid the shoulders *c*; or the shoulders *c* may be omitted, if desired.

C indicates the grasp-bar, which may be either solid or hollow, but is preferably hollow, for two reasons—first, lightness, and, secondly, because it can be more readily held when smoothing or polishing it. The grasp-bar is of malleable metal, and in casting or otherwise forming is cored, as at *e*, to correspond to the lugs or projections *d*, which enter the grasp-bar at *e*, and has lips or projections *f*, corresponding to the rounded ends of the side bars, B, between the shoulders *c*.

The construction of the ends of the side bars and the grasp-bar being substantially that specified, or its equivalent, the parts are united

by springing the side bars and inserting the grasp-bar, so that lugs *d* enter the recesses *e*, and the lips *f* rest on the chamfered or beveled parts *b*, after which the ends of the lips *f* are hammered down or swaged to firmly clasp the rounded beveled edges of the side bars, and form, together with lugs *d*, a strong and secure riveting or locking of the parts. Though not necessary, yet if deemed desirable the usual rivet-rod or bolt (indicated by dotted lines, Fig. 1) may be employed.

In Fig. 7 is shown a modification, wherein lugs *d'* (the equivalents of *d*, Fig. 6) are formed on the ends of the grasp-bar, and are adapted to enter slots *e'* (the equivalents of *e*, Fig. 5) in the side bars, B B; but such a construction, though mechanically the equivalent of that first recited and equally simple, is yet objectionable, as tending to weaken the side bars, B B, upon which much strain is necessarily brought in tamping.

In some cases the lugs *d* and recess *e* may be omitted, and the locking of the parts effected by extending the lip *f* around more than half the circle, which, when the lip is swaged or hammered down on the bevel *b*, will securely rivet or connect the parts equally well.

The advantages of my invention are the simplicity of construction, the ease with which the grasp-bar can be removed and replaced, and the facility and rapidity with which the grasp-bar can be polished.

Having thus described the nature and advantages of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In handles for tamping-shovels, &c., the combination of a grasp-bar and side bars having interlocking parts, the grasp-bar having lips or projections which project over and are set down, or adapted to be set down, upon the beveled ends of the side bars, substantially as and for the purpose specified.

2. The combination, in the handle of a tamping-shovel, of side bars, chamfered at their ends, and a grasp-bar having projecting lips, which take over the chamfered ends of the side bars, substantially as and for the purpose specified.

In testimony whereof I, the said EPHRAIM SMITH, have hereunto set my hand.

EPHRAIM SMITH.

Witnesses:

R. H. WHITTLESEY,
F. W. RITTER, Jr.