

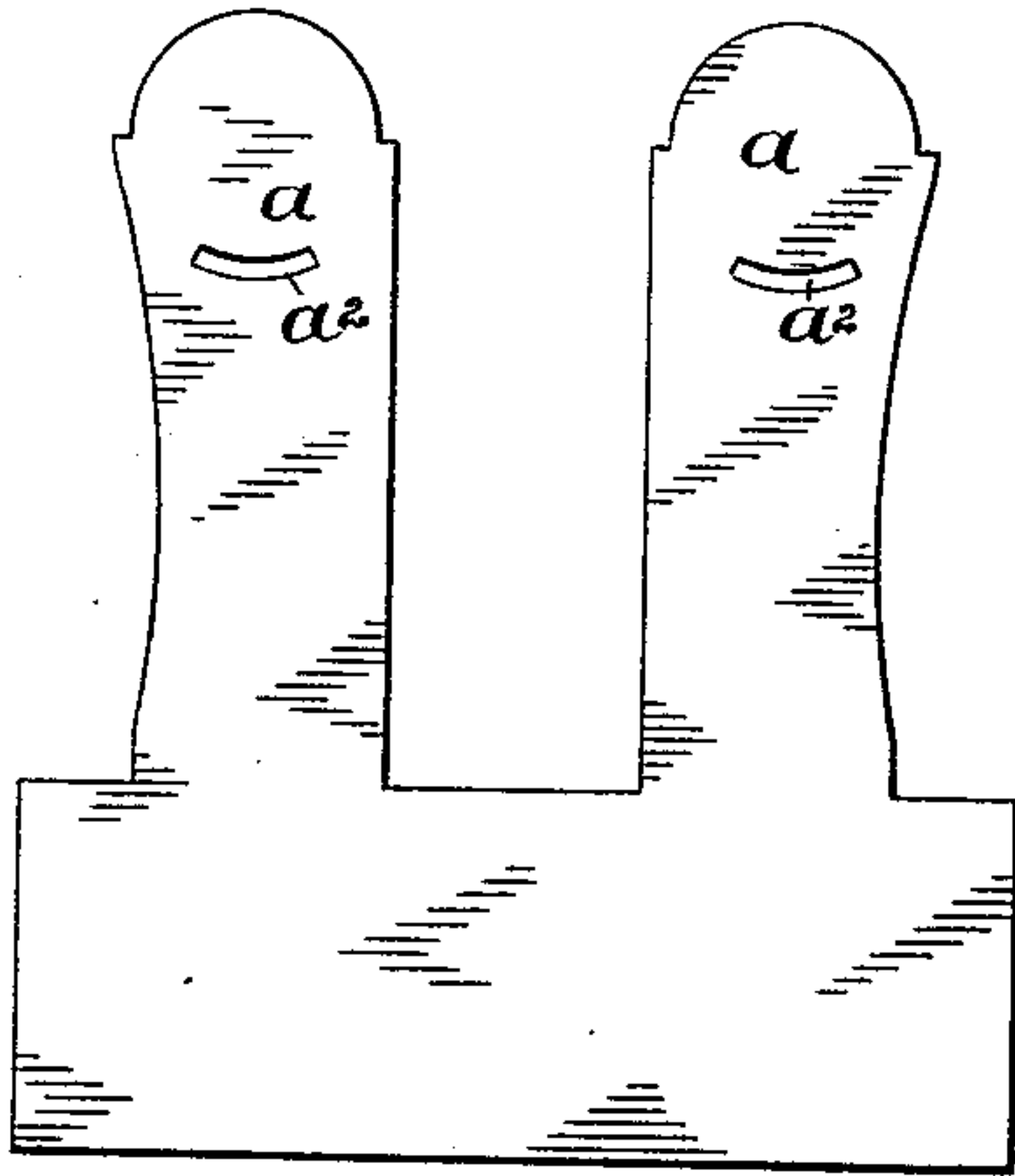
(No Model.)

J. O. MANTOR.  
METALLIC SHOVEL HANDLE.

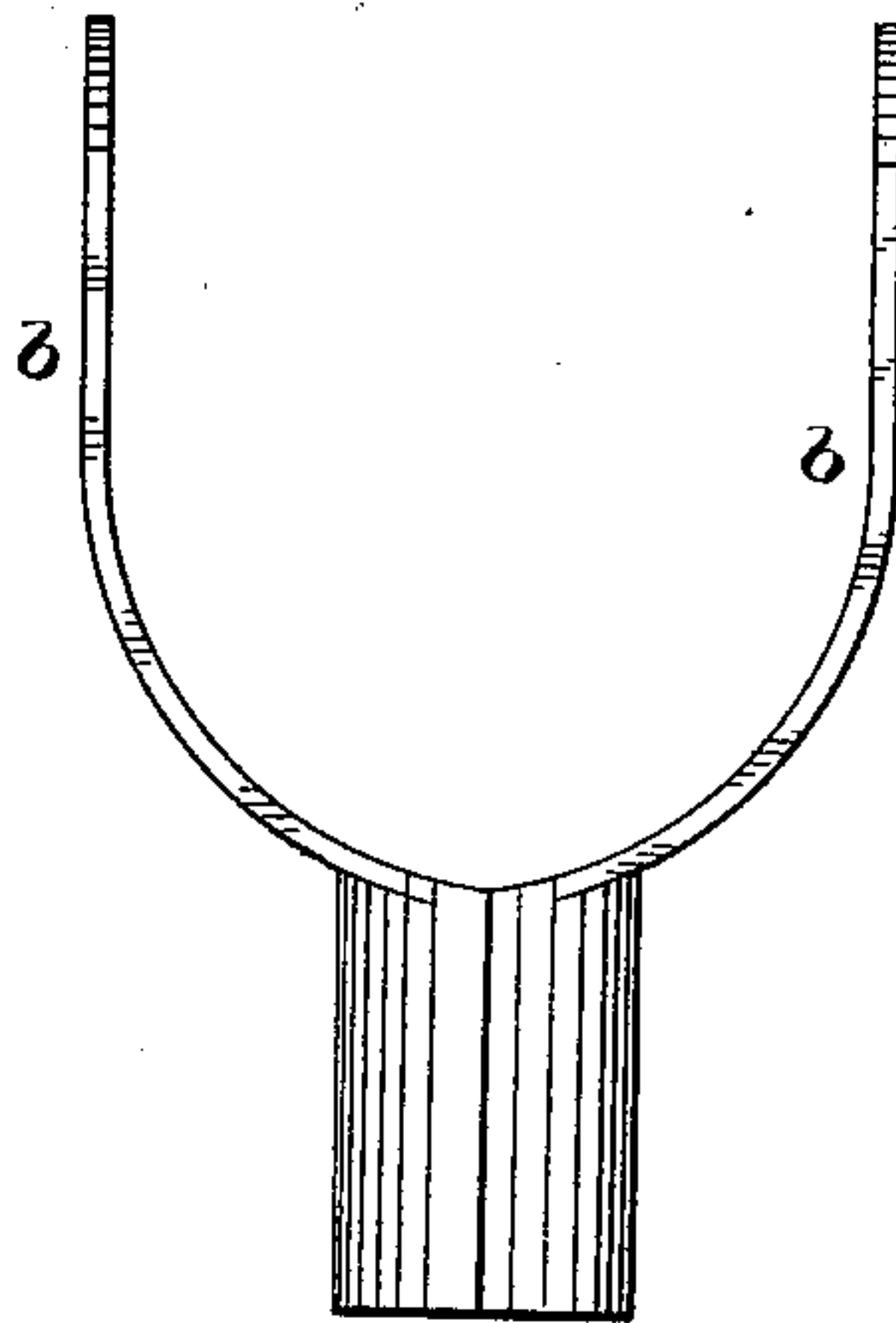
No. 370,150.

Patented Sept. 20, 1887.

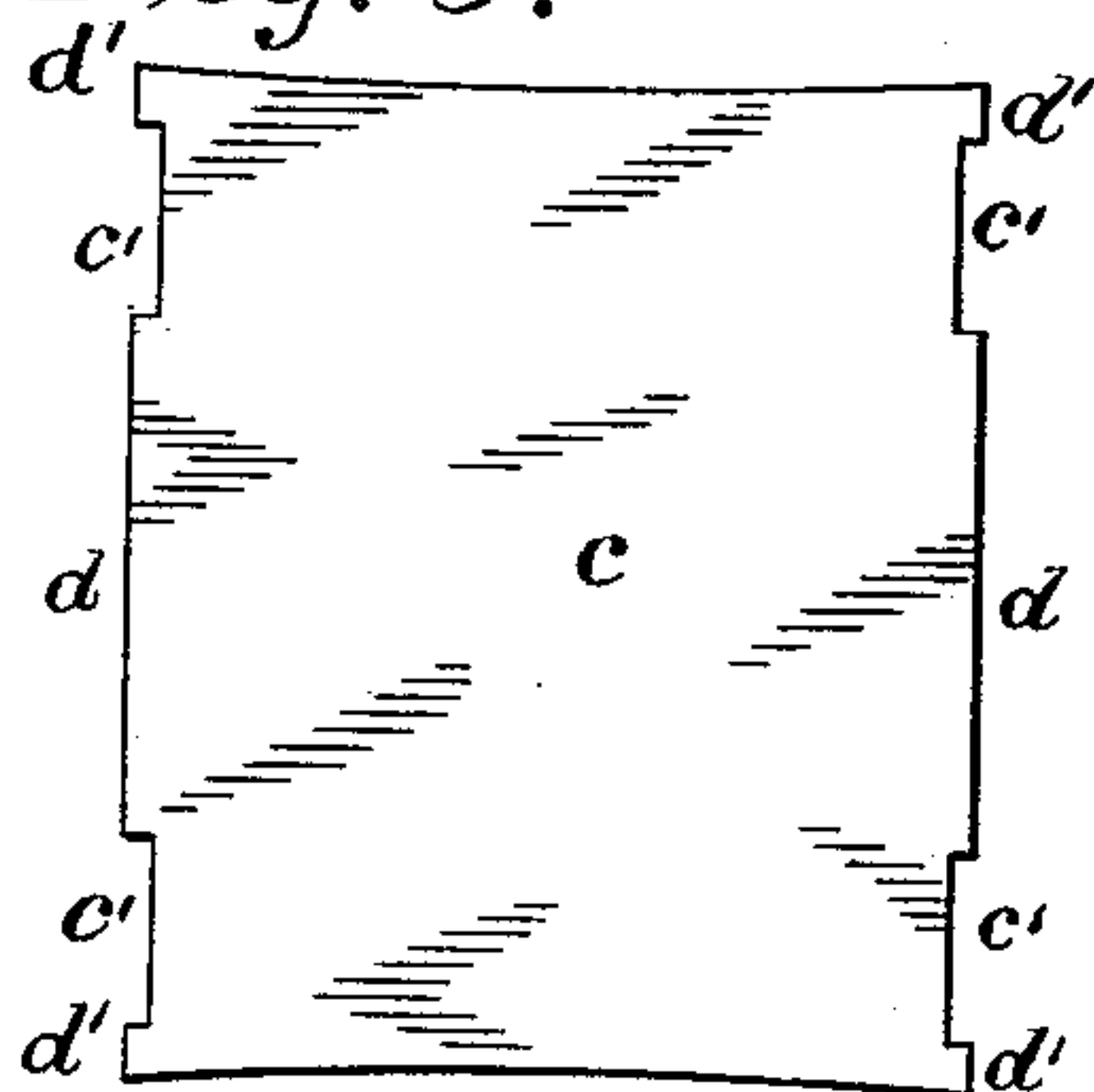
*Fig. 1.*



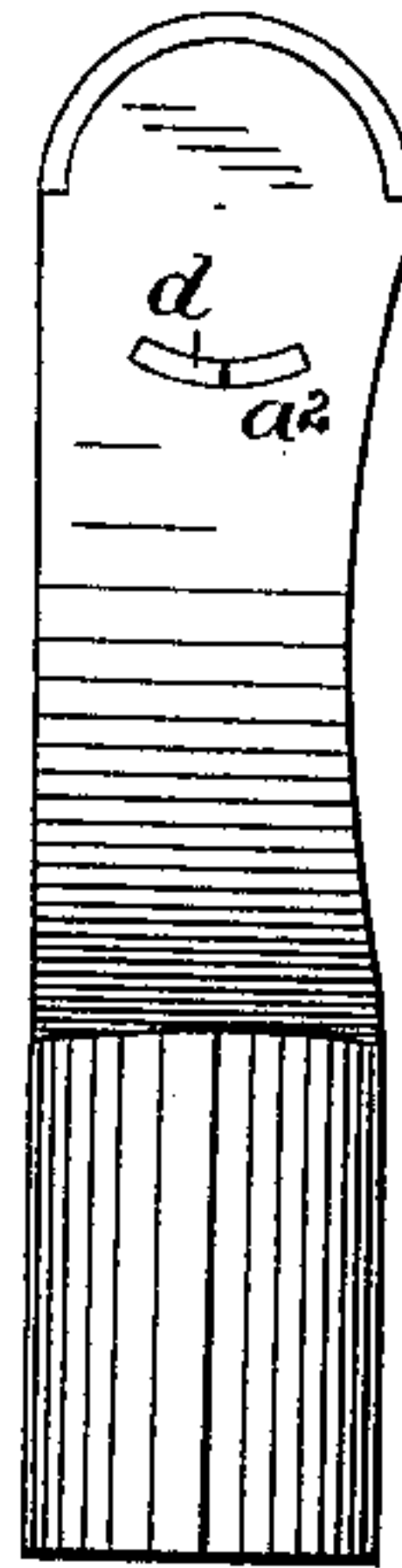
*Fig. 2.*



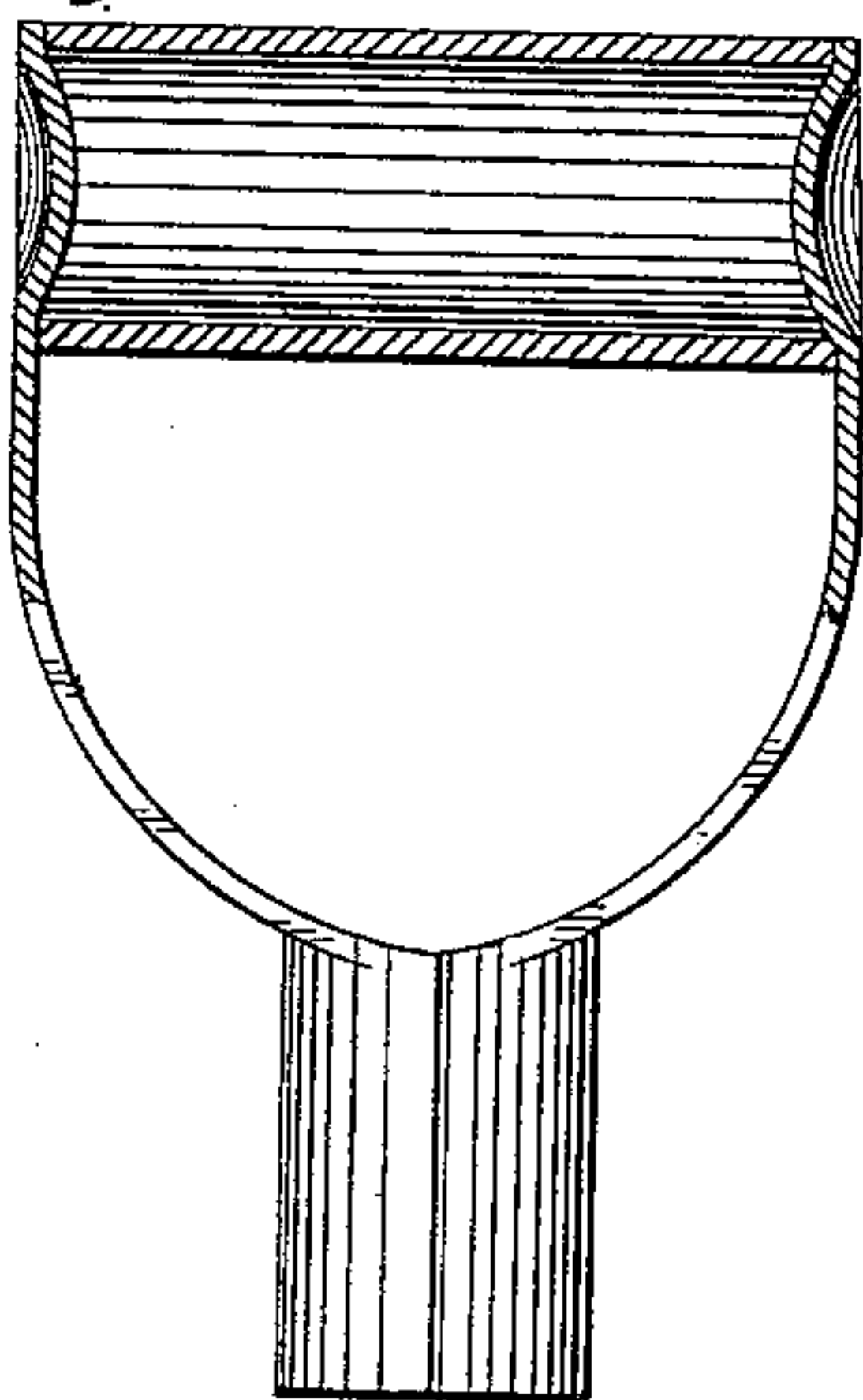
*Fig. 3.*



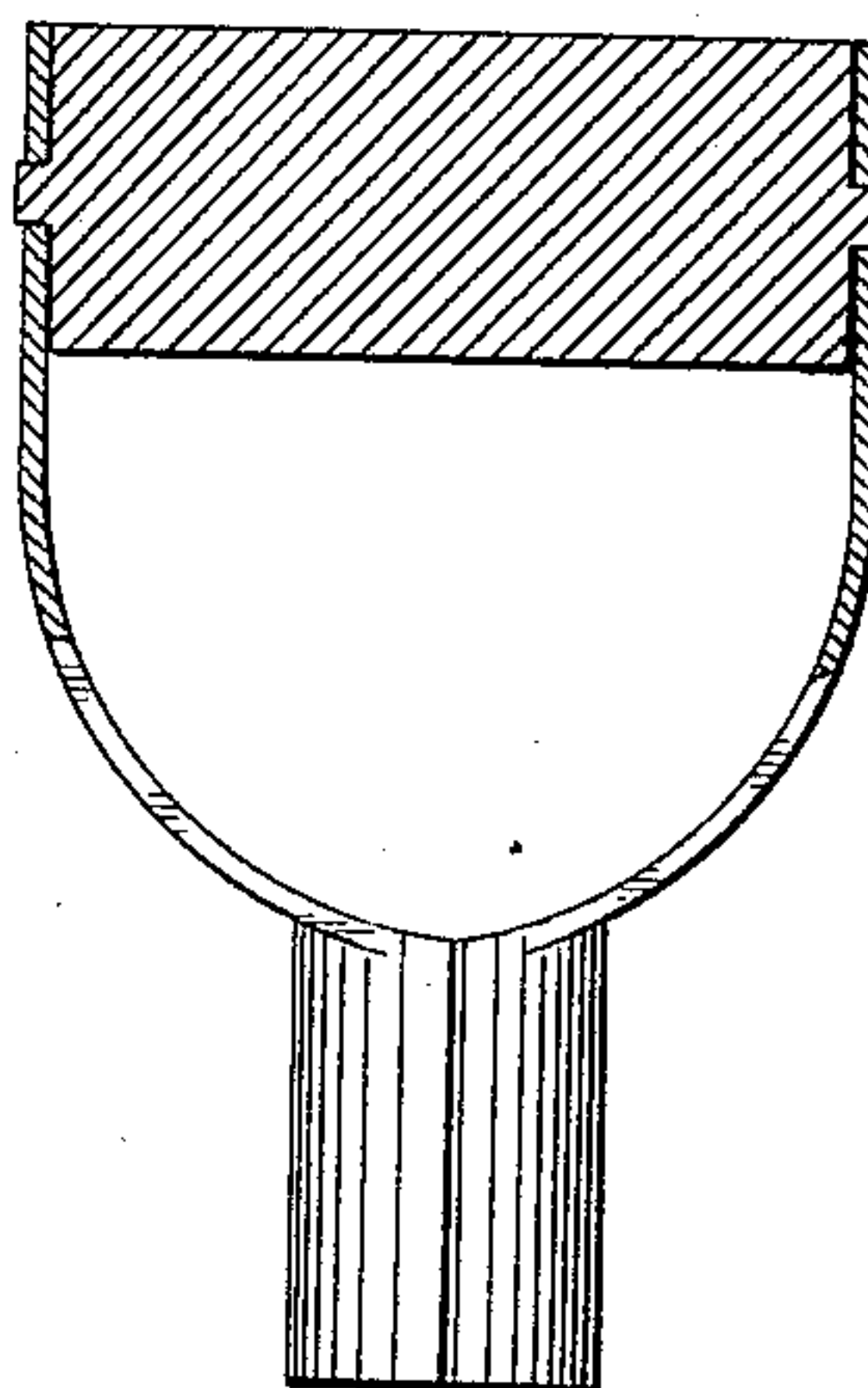
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES OTIS MANTOR, OF NORTHAMPTON, MASSACHUSETTS.

## METALLIC SHOVEL-HANDLE.

SPECIFICATION forming part of Letters Patent No. 370,150, dated September 20, 1887.

Application filed January 17, 1887. Renewed August 26, 1887. Serial No. 247,988. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES OTIS MANTOR, of Northampton, in the county of Hampshire and State of Massachusetts, have invented an Improved Metallic Shovel-Handle, of which the following is a specification.

The object of my invention is to provide a light strong metal shovel-handle of simple structure. To accomplish this I preferably form the side pieces of the handle and the socket for the reception of the ordinary wooden stem of a single piece of metal. The grasp-bar is by preference formed of a separate piece of metal and secured in place by being interlocked with the ends of the side pieces, as appears more fully from the following description.

Figure 1 is a view of a blank from which the side pieces and socket are formed of a single piece of metal. Fig. 2 is a view illustrating the blank bent or forged into shape. Fig. 3 is a view of a blank of sheet metal from which the grasp-bar may be formed. Fig. 4 is a side view illustrating the manner in which each end of the grasp-bar may be interlocked or connected with its side bar. Fig. 5 is a detail view illustrating another plan for connecting the grasp-bar and side pieces, and Fig. 6 still another plan.

The blank illustrated in Fig. 1 is formed of two narrow elongated projecting portions,  $a$ , which form the side bars of the handle when the enlarged rectangular portion  $b$  is bent up in the manner illustrated in Fig. 2. By this means the side bars and socket are formed of a single piece of metal. The construction is simple, light, and strong, and the metal is readily worked into the required shape.

$c$  is a sheet-metal blank from which the grasp-bar may be formed. In order to provide for an interlocking joint between the grasp-bar and the side bars, the blank  $c$  is preferably cut away at each end, at  $c'$ , so as to leave a central projection,  $d$ , and a projection,  $d'$ , at each corner when bent into circular shape to form the

grasp-bar. The corner projections,  $d'$ , come together, as clearly shown in Fig. 3, and fit into a slot,  $a^2$ , in the side bar. The side bar fits in the depressions  $c'$  in the end of the grasp-bar, and is cut away around its end, so as to form a seat for the elongated projection  $d$  on the end of the grasp-bar. The face of the projection  $d$ , the face of the side bar, and the faces of the corner projections,  $d'$ , will then be flush. This construction gives a strong, simple interlocking joint.

As illustrated in Fig. 5, the side bars may be formed with concave depressions  $a^3$ , the concave bulge being turned inwardly on each side, so as to fit in the open end of the hollow grasp-bar, as will be obvious from the drawings.

As illustrated in Fig. 6, a cast grasp-bar,  $e$ , having central lugs,  $e'$ , on each end, which fit into apertures  $e^2$  in the ends of the side bars, is formed; or, as also shown in this figure, the grasp-bar may be formed of wood and provided with a central pin,  $e'$ , which fits into apertures  $e^2$  in the ends of the side bars.

I claim as my invention—

1. A shovel-handle having the socket-piece and side bars formed or wrought of a single piece of sheet metal and the socket-piece having but a single seam.

2. A shovel-handle having the socket-piece and side bars struck up or forged from a single piece of sheet metal, in combination with a separately-formed grasp-bar.

3. A shovel-handle consisting of the socket-piece and side bars struck up or forged from a single piece of metal, in combination with a grasp-bar connected with the side pieces by an interlocking joint, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

JAMES OTIS MANTOR.

Witnesses:

OLIVER WALKER,  
WALTER M. KIDDER.