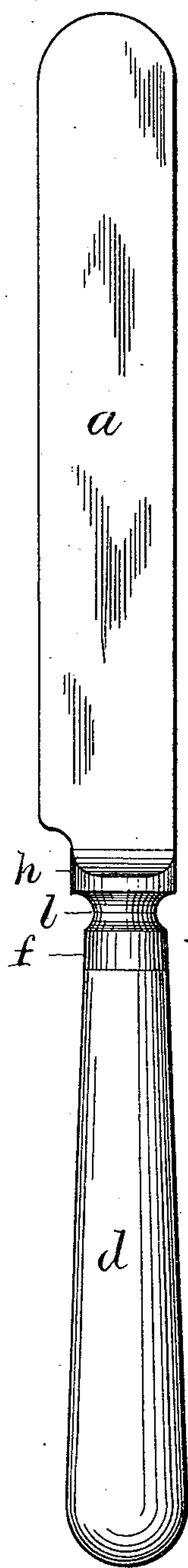


(No Model.)

G. HAVELL.  
KNIFE BOLSTER.

No. 336,107.

Patented Feb. 16, 1886.



*Fig. 1.*

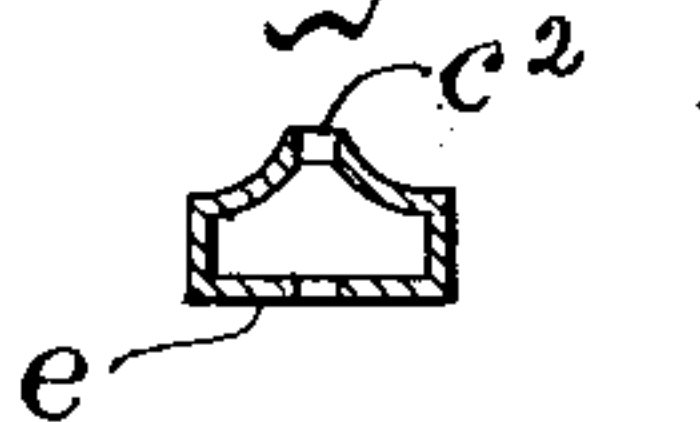
*Fig. 3.*



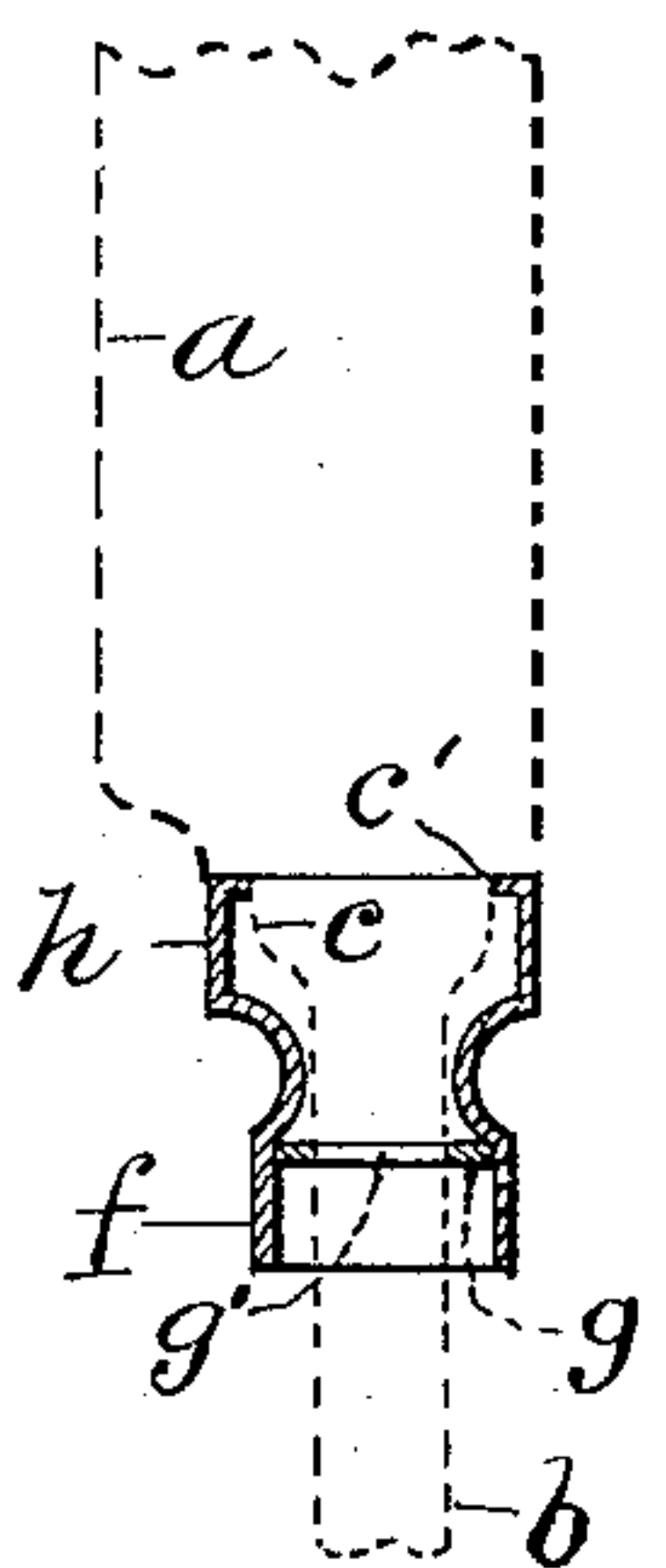
*Fig. 4.*



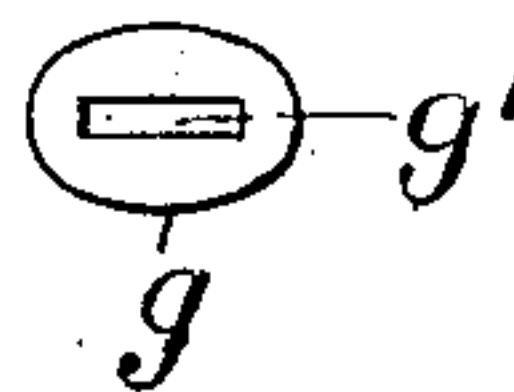
*Fig. 5.*



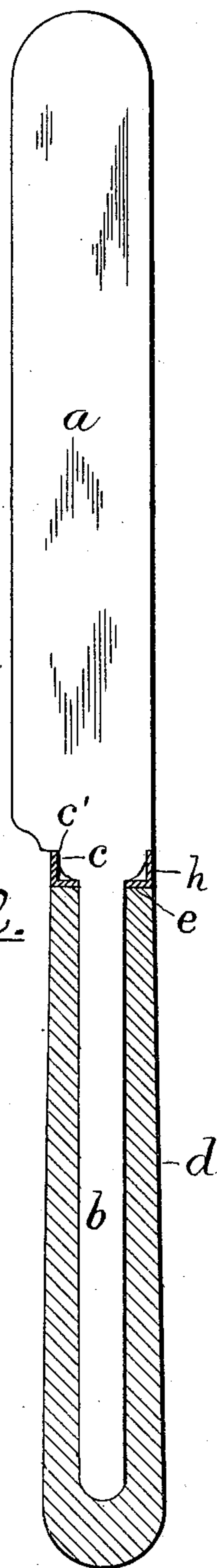
*Fig. 6.*



*Fig. 7.*



*Fig. 2.*



*Attest;*

*L. Lee*  
*Henry J. Shebrath*

*Inventor.*

*George Havell per*  
*Crane & Miller, Atty.*

# UNITED STATES PATENT OFFICE.

GEORGE HAVELL, OF NEWARK, NEW JERSEY.

## KNIFE-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 336,107, dated February 16, 1886.

Application filed October 8, 1885. Serial No. 179,344. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE HAVELL, a citizen of the United States, residing in Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Knife-Bolsters, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of this invention is to combine a sheet-metal blade and tang with a solid knife-handle; and in order to properly bolster the blade at the point where the neck of the tang projects from the handle I have devised a sheet-metal bolster of peculiar construction, and am thereby enabled to form the entire metal-work of the knife of sheet metal, so that it may be produced with the ordinary stamping-tools employed in making sheet metal.

The nature of my improvements will be understood by reference to the annexed drawings, in which Figure 1 is a side view of a complete knife constructed with my combined bolster and ferrule. Fig. 2 is a side view of a knife provided with the bolster only, the handle and bolster being shown in section to exhibit the fitting of the bolster to the neck of the blade. Fig. 3 is a plan of the bolster; Fig. 4, a side view of the same. Fig. 5 is a vertical section of the bolster shown in Fig. 4, as on line  $z z$  in said figure; Fig. 6, a vertical section of a combined bolster and ferrule, taken longitudinally, as on line  $x x$  in Fig. 3, a slotted collar being secured within the ferrule to brace the tang of the knife, which is indicated by dotted lines therein; and Fig. 7 is a plan of such collar before its insertion in the ferrule.

Fig. 1 shows the application of the combined bolster and ferrule to a knife with a solid handle.

$a$  is the knife-blade;  $b$ , a narrow tang adapted for insertion within the handle  $d$ , and  $c$  is the neck of the knife, formed wider than the tang, and provided with shoulders to rest upon the ends of the bolster.

$e$  is a flange formed within the bolster to bear upon the end of the handle.

$f$  is the ferrule, and  $g$  is the guide, formed apart from the ferrule, and secured within the

same when the latter is combined with the bolster.

The blade  $a$  is formed in one piece with the tang  $b$  by cutting the same from sheet metal with a punch or stamp, and the bolster and ferrule are also made from sheet metal in the following manner:

The bolster  $h$  (shown in Figs. 2 to 5, inclusive) may be used apart from the ferrule, and is constructed by forming the opposite halves (as upon each side of the line  $x x$  in Fig. 3) from a sheet metal blank of suitable shape stamped to the required form by means of a punch and die, (as is common in sheet-metal manufacture,) and finally united together at their joint by soft or hard solder. The outer end of the bolster is slotted to receive the neck  $c$ , as shown in Fig. 2, and fitted to the shoulder  $c'$  upon the neck of the blade, so as to brace the blade edgewise, and the throat of the bolster is fitted, as at  $c''$  in Figs. 3 and 5, to fit closely upon the flat sides of the blade and brace it laterally. The handle being properly secured to the tang, with its open end in contact with the flange  $e$ , the bolster is perfectly stayed upon the blade, and imparts to its neck nearly the same stiffness as if it were integral therewith.

To ornament the knife, and to impart additional stiffness to the bolster, I sometimes construct it with an attached ferrule, as shown in Figs. 1 and 6, the opposite longitudinal halves (as at either side of the line  $x x$  in Fig. 3) being formed in a single piece, and when the two are united by solder upon their vertical joint they form a combined bolster and ferrule, as shown in Figs. 1 and 7.

The slot  $c'$  is formed in the outer end of the bolster to fit the neck of the blade; but the guide  $g$  for the tang must be situated within the body of the ferrule, (to permit the insertion of the handle in the latter,) and cannot therefore be stamped from the same piece of metal as the other parts. Such guide is therefore formed by stamping it from sheet metal separately with its exterior fitted to the inside of the ferrule, and its center formed with a slot,  $g'$ , to fit the tang  $b$ , as shown in Fig. 7. The bolster and ferrule being preferably united by a contracted neck, as at  $l$  in Fig. 1, the



guide may be placed within the ferrule in contact with such neck, and without fastening therein would serve to guide and steady the tang effectually when the ferrule is secured upon the handle and the tang cemented in the blade.

I am aware that it is not entirely new to stamp a knife bolster from sheet metal, as such a construction is shown in German Patent No. 18,528, of 1881; and I am also aware that cast-metal bolsters of form analogous to mine have already been used, as in United States Patent No. 277,932, of 1883. I therefore disclaim the said patents and any construction different from that specifically claimed herein.

The method of manufacture—namely, the use of sheet metal for both the bolster and the blade—enables me to dispense with the labor of forging or casting any of the parts, and to secure an article practically equal in strength and beauty to those produced by a more expensive and tedious process.

Having thus described the nature and objects of my invention, what I claim is—

The combined knife bolster and ferrule formed of sheet metal, in two parts, soldered together, as herein shown and described, and adapted for use with a sheet-metal blade having an integral tang, the construction being provided with the slot  $c^2$ , to receive the neck of the blade, and the ferrule  $f$  being provided with a neck,  $l$ , and with a sheet-metal guide,  $g'$ , slotted to receive the tang of the blade and fitted within the ferrule against the neck  $l$ , substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE HAVELL.

Witnesses:

THOS. S. CRANE,  
L. LEE.