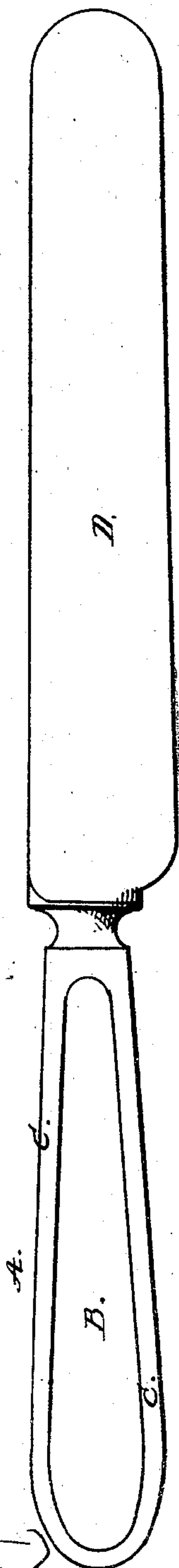


*J. W. Gardner,  
Solid Steel Knives.*

*Nº 74,907.*

*Patented Feb 25. 1868.*



*attest;*

*J. D. Patten  
Morris Pool*

*J. W. Gardner  
By atty A. B. Stoughton.*

# United States Patent Office.

J. W. GARDNER, OF SHELBURNE FALLS, MASSACHUSETTS.

*Letters Patent No. 74,907, dated February 25, 1868.*

## IMPROVEMENT IN MANUFACTURE OF SOLID-STEEL KNIVES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. W. GARDNER, of Shelburne Falls, in the county of Franklin, and State of Massachusetts, have invented certain new and useful Improvements in the Manufacture of Solid-Steel Knives from Steel; and I do hereby declare the following to be a full, clear, and exact description of the manner of making the same, reference being had to the accompanying drawing, which represents one of the knives in question.

My invention consists in making a solid wrought-steel knife or fork in one piece, and with a skeleton handle, for the sake of lightness, neatness, and cleanliness, as well as for the economy of the manufacture.

To enable others skilled in the art to make the knife in question, I will proceed to describe the mode I have successfully practised.

A piece of steel of suitable size having been prepared, the handle portion A of the knife to be produced from it is first swaged between dies under a trip-hammer, and then struck up between other dies under a drop-hammer, which leaves a thin film of metal in the centre or hollow portion, B, surrounded by a thicker margin, C, which, after the film is cut out in a press, becomes the handle of the knife.

The blade D is forged from the square piece of steel, of suitable size, by being drawn out under a trip-hammer to a proper width and length, and then cut and trimmed off. The blade is then plated or flattened to suitable taper and thickness under trip-hammer dies, and afterwards cut into the proper shape by a die-press or dies, and then hardened and tempered. The knife is now ready to be ground and polished, and, if desired; it may be silver-plated in the usual way.

The operation as herein set forth may be reversed; that is, the blade D may be first shaped, and afterwards the handle A, the whole being made out of one and the same piece of metal, so as to be what is termed a solid knife; and, though I have described only a table-knife as so made, a fork to match it, with skeleton handle, may be similarly made; and I claim both knife and fork, when so made, with a skeleton handle, and out of one piece of metal.

The advantages of such knives and forks are economy of construction, strength, durability, lightness, and, at the same time, balanced, and the readiness with which each and every part may be cleansed and wiped, leaving no place or part where corrosion can take place.

I am aware that a solid-steel knife, such as an oyster-knife, has been wrought out of steel, and that a solid knife has been cast out of iron and case-hardened; but in neither of these cases has the handle been made in skeleton, that is, with a rim alone, the centre portion within the rim being cut or left out, so as to be light and readily cleansed.

Having thus fully described my invention, what I claim as a new article of manufacture, is—

A solid wrought-steel knife or fork, with a skeleton or open handle, and formed out of one piece of metal, substantially as described.

J. W. GARDNER.

Witnesses:

SAM'L T. FIELD,  
F. A. BALL.