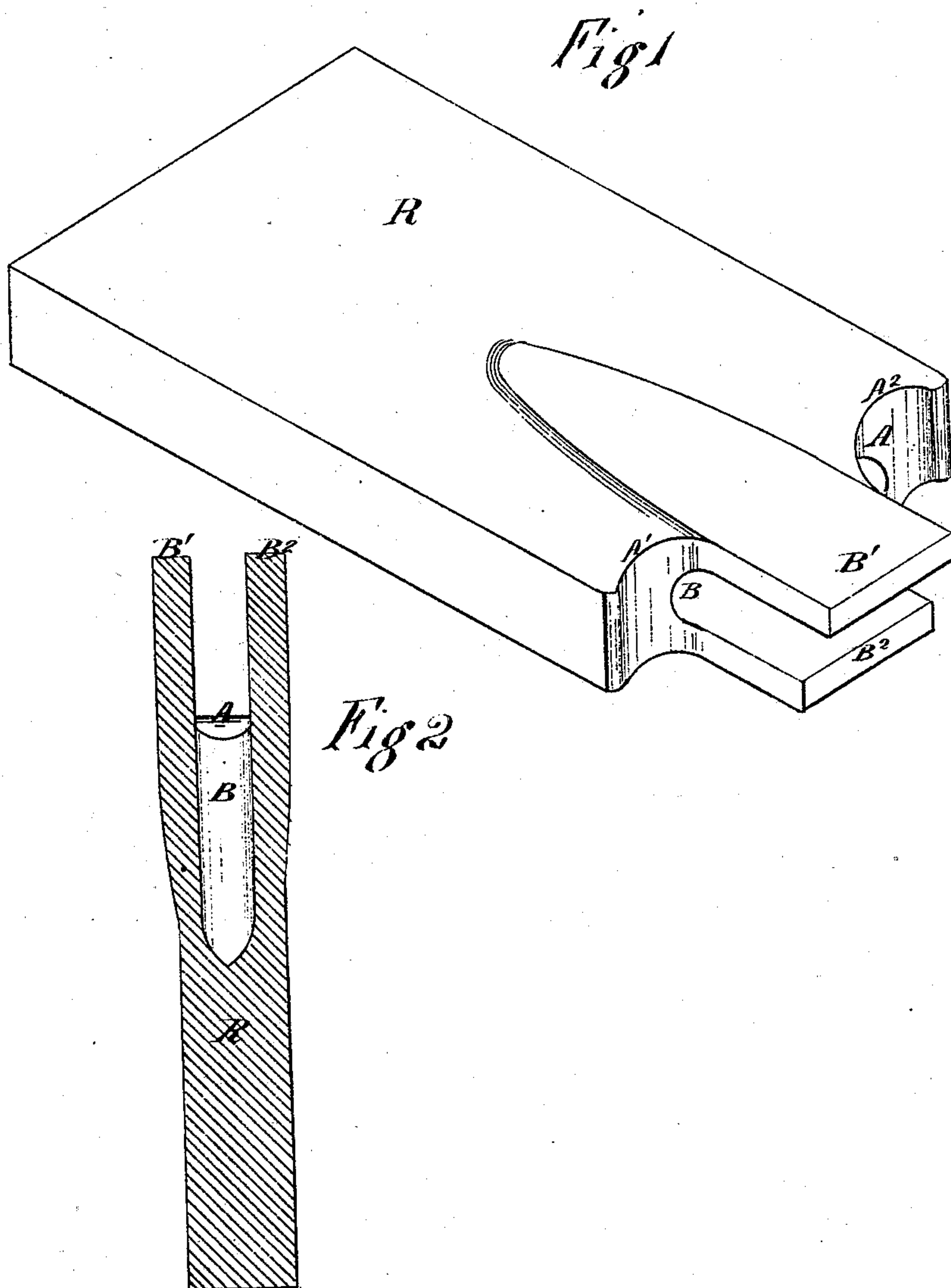


*G. W. Jope,*

*Shovel Blank.*

*No. 99775.*

*Patented Feb. 15. 1870.*



**WITNESS.**

*Perceval Beckett*

*A. S. France*

**INVENTOR.**

*George W. Jope.*  
*per his Attorney*  
*Beckett*

# United States Patent Office.

GEORGE W. JOPE, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND WILLIAM BUNTAN.

*Letters Patent No. 99,775, dated February 15, 1870.*

## IMPROVED SHOVEL-BLANK

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, GEORGE W. JOPE, of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Shovels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

This invention consists of a shovel-blank of specific form, which will be fully described hereinafter.

In the drawings—

Figure 1 represents a perspective view of the blank, and

Figure 2, a cross-section of the same.

To enable others skilled in the art to make my blank and use it advantageously, I will proceed to describe my method of making it.

Ordinary bar-iron is rolled to the required thickness, which is usually about an inch, and cut into suitable lengths. The quadrangular blank resulting from these operations is then placed in a swaging machine and caused by suitable dies to assume the form shown in fig. 1.

The tangs  $B^1 B^2$ , the indentation  $B$ , and the curving lines  $A^1 A^2$  are all formed at one and the same operation, and at one heating.

This specific form of the blanks is of special importance. The projections formed at the upper edges of the shovel, by means of the curving lines  $A^1 A^2$ , furnish a surplus of metal, so that when the metal is drawn downward by the operation of rolling a sufficient quantity is left to form square edges of the proper thickness. If, on the contrary, the blank should be left square across the top, when rolled the metal would be drawn away in such manner as to leave the corners vacant. To remedy this, it would require that the metal should be hammered back to place again, by which means it would be made thin and weak. After the blank is reduced to the required thickness by rolling, it is finished, if desired, by cutting it any desired shape.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The blank  $R$ , of specific form shown, with curving lines  $A^1 A^2$ , as and for the purpose described.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

GEO. W. JOPE.

Witnesses:

PERCEVAL BECKETT,  
BENJAMIN FALLOWS.