

No. 704,819.

Patented July 15, 1902.

J. W. EAST.

TOOL.

(Application filed Apr. 14, 1902.)

(No Model.)

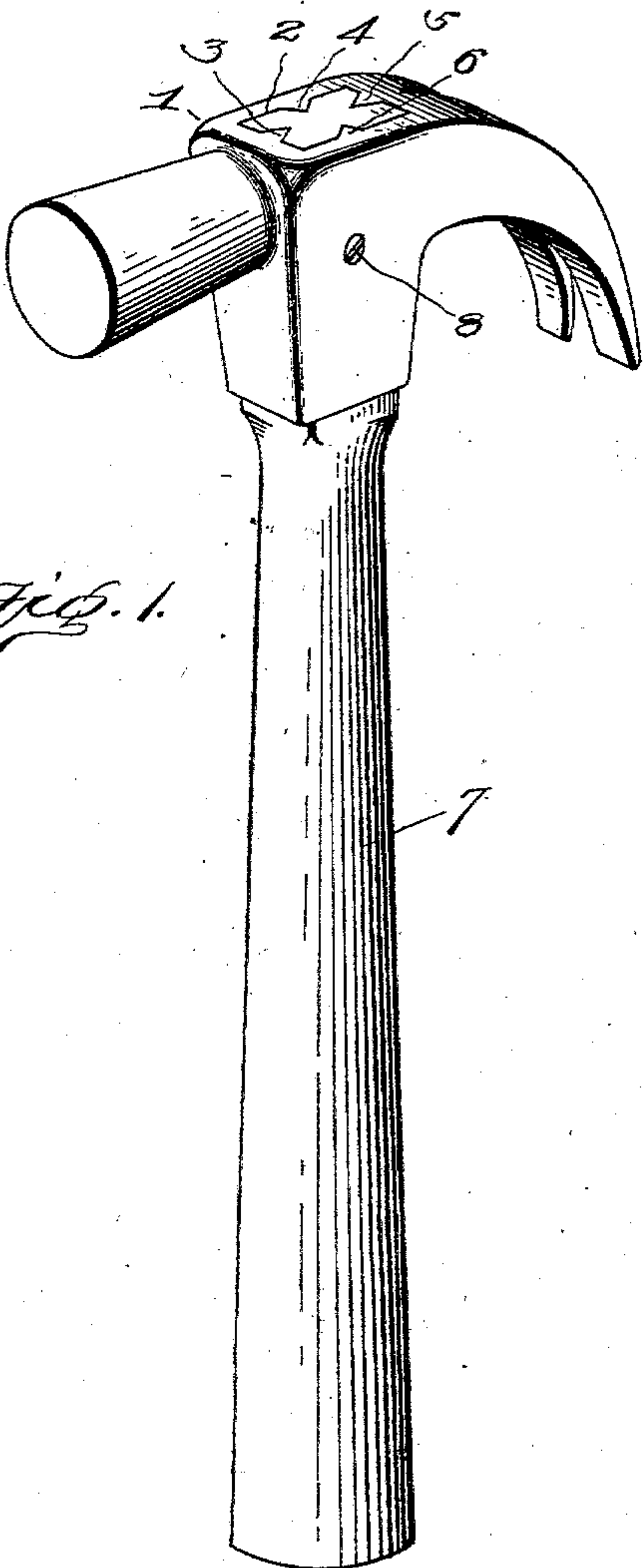


Fig. 1.

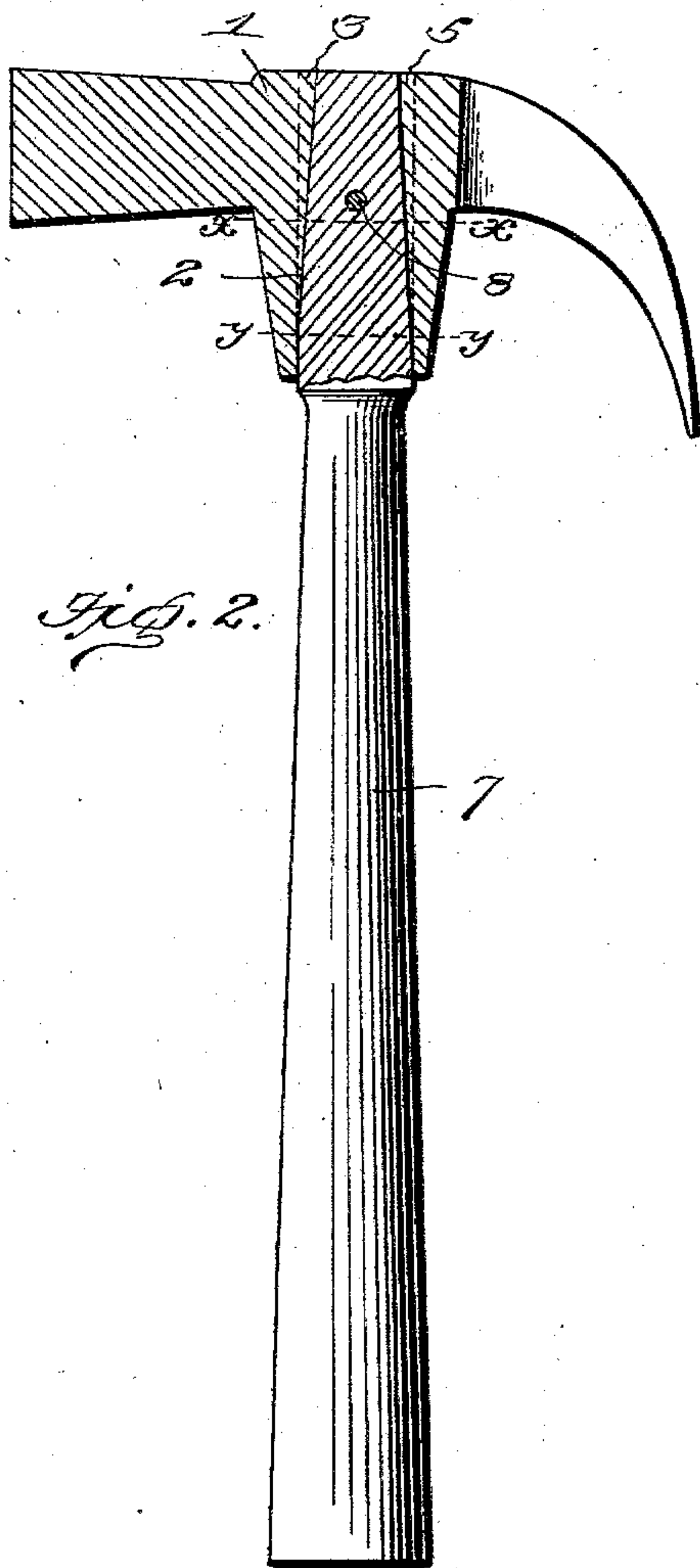


Fig. 2.

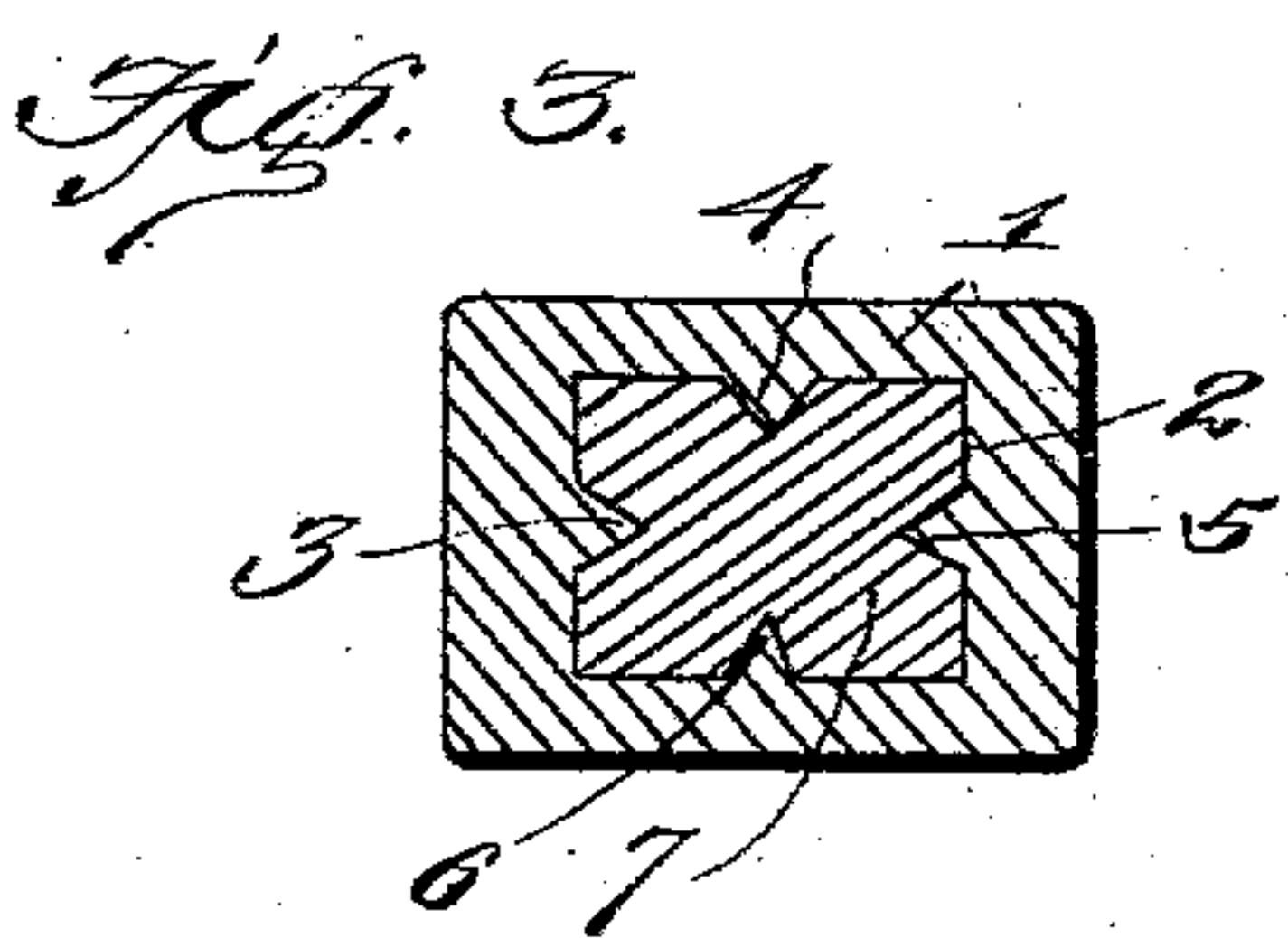


Fig. 3.

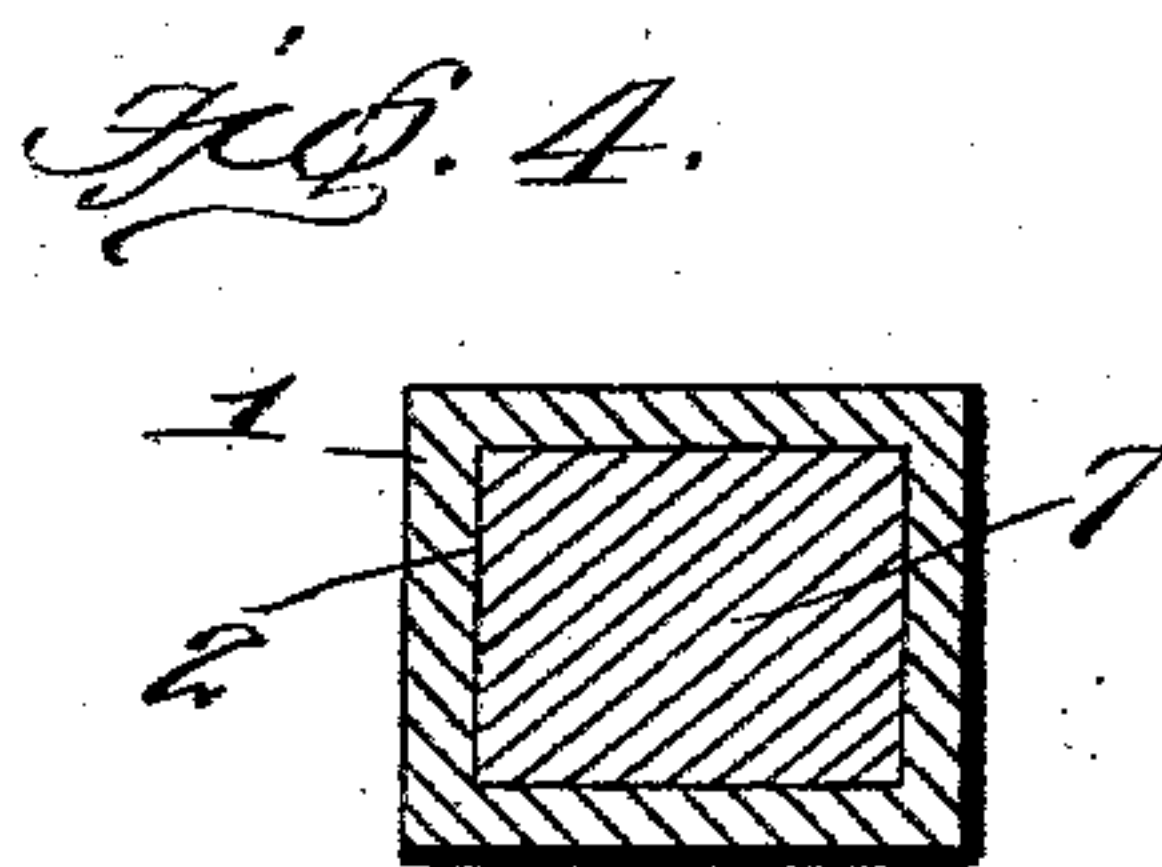


Fig. 4.

Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES W. EAST, OF TATE SPRINGS, TENNESSEE.

## TOOL.

SPECIFICATION forming part of Letters Patent No. 704,819, dated July 15, 1902.

Application filed April 14, 1902. Serial No. 102,795. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. EAST, a citizen of the United States, residing at Tate Springs, in the county of Grainger and State of Tennessee, have invented certain new and useful Improvements in Tools; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to tools, and more particularly to that class of tools formed with eyes to receive a handle—such, for instance, as axes, hatchets, hammers, adzes, and, in fact, any other class of tools.

The object of the invention is to provide a tool with a handle-receiving eye which is constructed or has cast integral with the walls thereof wedge-shaped pins which merge from the plane of the eye and gradually increase in thickness and breadth as they extend upwardly and in addition to serving as means for securely retaining the handle in position also serve to strengthen the eye.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully explained, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view illustrating the application of the invention to a hammer and showing the handle in position. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a cross-sectional view on line *xx* of Fig. 2, and Fig. 4 is a similar view on line *yy*.

Referring to the drawings, 1 denotes the tool, and 2 the eye, which may be of any shape or outline desired—that is, either square, oblong, circular, or elliptical—and is provided on one or more of its sides with one or more integral wedge-shaped fins 3, 4, 5, and 6, which merge from the plane surfaces of the eye and extend upwardly and increase in breadth and thickness.

7 denotes a handle the end of which is shaped to fit the lower end of the eye. The handle is driven into the eye, and as the up-

per end of the handle reaches the upper end of the eye the wedge-shaped fins will have buried themselves into the fiber of the handle and will have spread the fiber, so as to increase or tend to increase the diameter of the handle, and thus securely bind it in the eye. If desired, as an extra safeguard I may use a screw 8, which passes transversely through the eye and handle.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily understood without requiring an extended explanation.

Various changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

1. A tool-head having a handle-receiving eye and having projecting inside such eye longitudinal wedge-shaped fins tapering from one end of the eye toward the other, substantially as described.

2. A tool-head having a handle-receiving eye and having projecting inside such eye longitudinal wedge-shaped fins, substantially as specified.

3. A tool-head having a handle-receiving eye and having projecting inside such eye longitudinal wedge-shaped fins tapering from one end of the eye toward the other, in combination with a handle adapted to be forced into said eye and have its texture or fiber spread by the wedge-shaped fins to increase the frictional contact of the inclosed surface of the handle with the wall of the eye, substantially as and for the purpose set forth.

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

JAMES W. EAST.

Witnesses:

E. L. FARRELL,  
L. T. JARNAGIN.