

(No Model.)

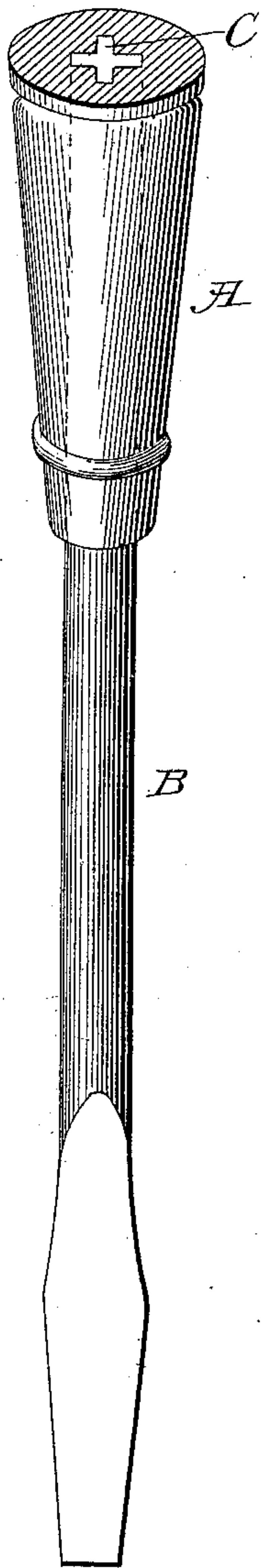
G. E. GAY & J. H. PARSONS.

SCREW DRIVER.

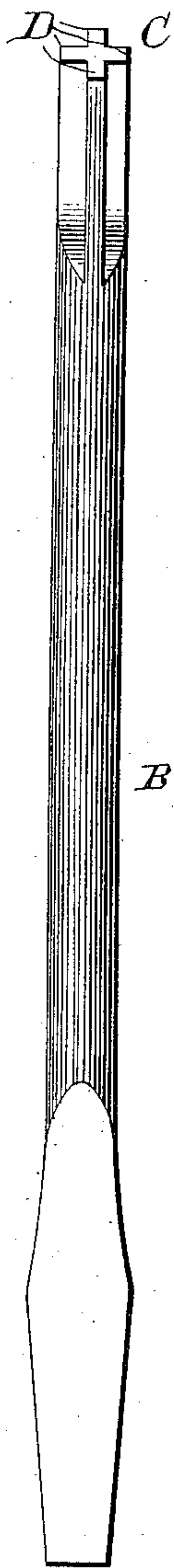
No. 387,409.

Patented Aug. 7, 1888.

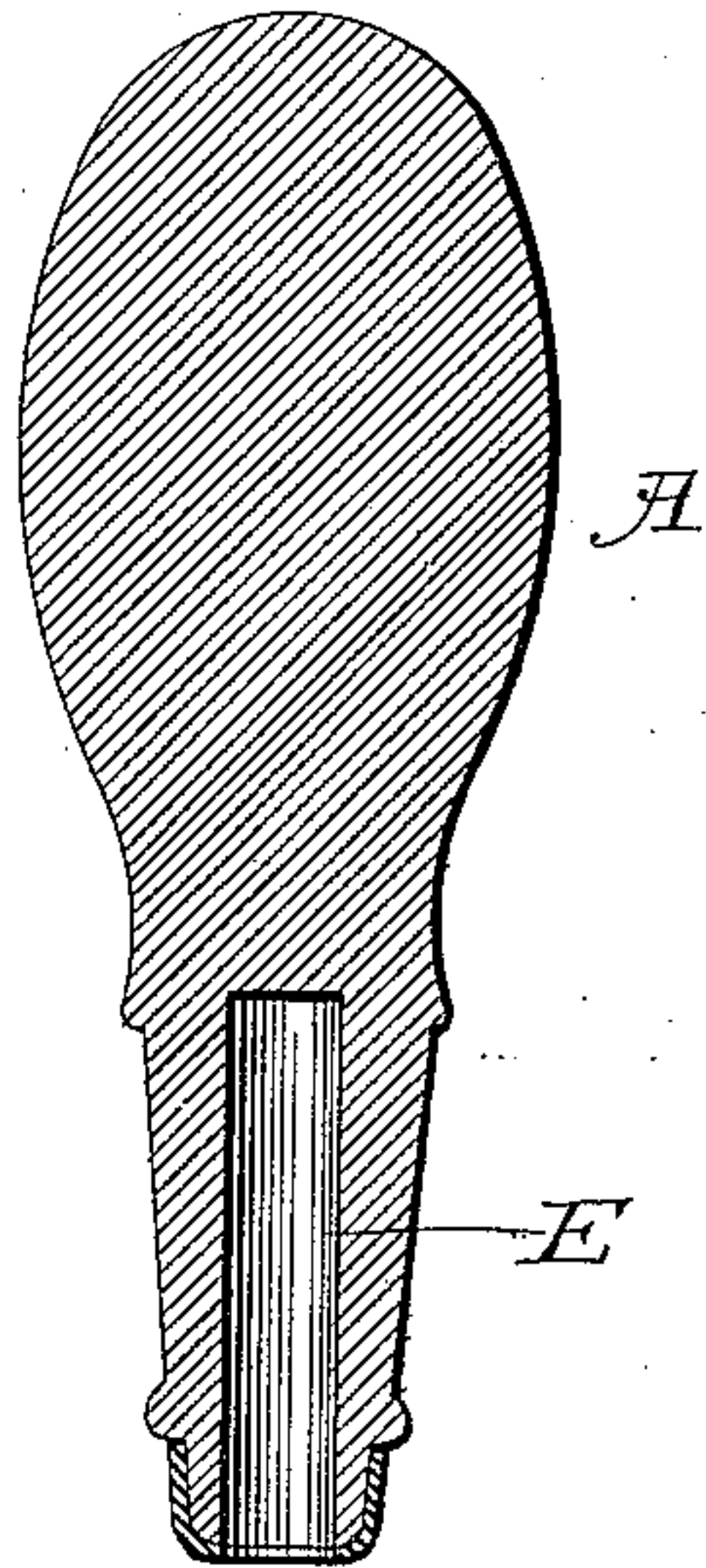
*Fig. 1.*



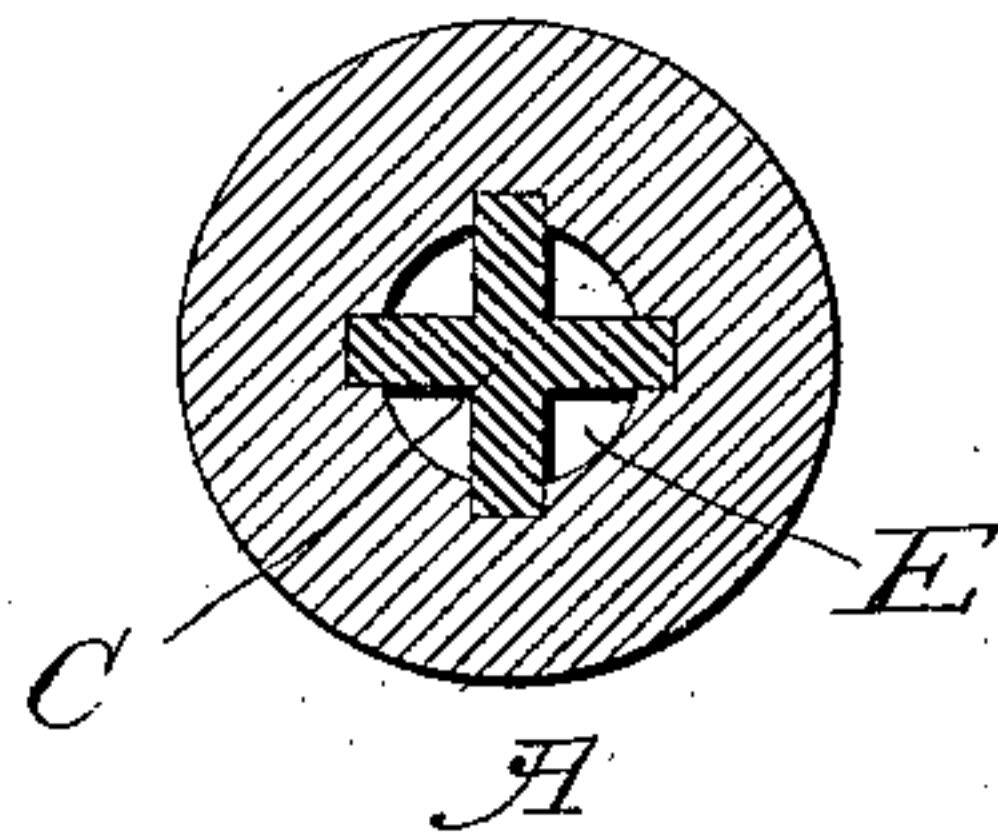
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:  
E. H. Gardner.  
F. J. Clark.

Inventors:  
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# UNITED STATES PATENT OFFICE.

GEORGE E. GAY AND JOHN H. PARSONS, OF AUGUSTA, MAINE.

## SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 387,409, dated August 7, 1888.

Application filed December 14, 1885. Serial No. 185,663. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE E. GAY and JOHN H. PARSONS, citizens of the United States, residing at Augusta, in the county of Kennebec and State of Maine, have invented a new and Improved Screw-Driver, of which the following is a full, clear, and exact description.

Our invention is an improvement upon that class of round-bladed screw-drivers in which the blade is secured in the handle by having its upper end driven or forced into the wood of the handle.

Our improvement consists of so forming the upper end of the blade that by simply forcing it into the handle the screw-driver is completed without the expense of using any other device to connect the blade and handle.

In order to fully describe our improvement, reference is hereby made to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents the lower part of the screw-driver, having the blade B in position in the handle A, showing a cross-section, C, of the blade B at the point where the handle and blade are sawed off. Fig. 2 shows the blade B out of the handle, the upper end of which is shaped substantially as shown by D at C. Fig. 3 is a sectional view of the handle, showing the hole E bored in the lower part. Fig. 4 is an enlarged cross-sectional view showing the handle A, the hole E, and cross-section of the blade B at C.

To make the screw-driver by our improved method, the upper end or shank of the blade is feathered, toothed, ribbed, or corrugated longitudinally by grooving or fluting in a form substantially as shown by D at C, Fig. 2. The blade so formed may now be forced into the handle, the feathers, teeth, ribs, or corrugations cutting their way into the wood of the handle, Fig. 4 showing a cross-section of the screw-driver so constructed. If so desired, a hole may be bored in the handle smaller than the external diameter of the blade, as shown at E, Fig. 3, and also in Fig. 4. This hole allows the blade to be forced in more readily, and as the external diameter of the blade is greater than that of the hole the external part of the blade is bedded in the wood and unites the handle A and blade B in a very strong manner.

In defining our invention with greater clearness we would state that we are aware that the tang of a tool has been secured in a wooden handle by being forced into a socket in the handle and kept from turning by flanges or ribs on the tang, which extend beyond or outside the line of the tang. This not only necessitates the boring of a socket, but the ribs are troublesome to form on the tang and do not fill the grooves that they plow in going in.

Our invention is distinctive in the respect that the round metal forming the blade or body of the screw-driver is formed into ribs or wings, not by adding to its cross-section by wings that project beyond the line of the tang, but by reducing the cross-section so that the outside edges of the wings are on a line with the outer line of the round metal tool. This not only gives a proper resistance to torsional action when embedded in the wood, but as the cross-section is so reduced the tool may be driven directly into the wood without any hole being bored, as the quarter spaces between the ribs D D give sufficient room for the wood to crowd into which is displaced by the ribs. Where the ribs project beyond the tang, the wood would have to be displaced not only from the entire cross-section of the tang, but also the cross-section of the ribs, which would result in splitting the handle unless a hole were previously bored. In very large tools we may use a socket in the handle to prevent too great a displacement of the wood; but our tang is always formed into ribs by reducing the cross-section of the metal, in contradistinction to increasing the cross-section at this point.

Having thus described our invention, what we claim as new is—

A screw-driver consisting of a round metal body, B, flattened at one end to adapt it to the neck of the screw, and having its other end reduced to a cross-shaped cross-section having the same external dimensions as the round body part, combined with and forcibly driven into a wooden handle, A, substantially as and for the purpose described.

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Witnesses:

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