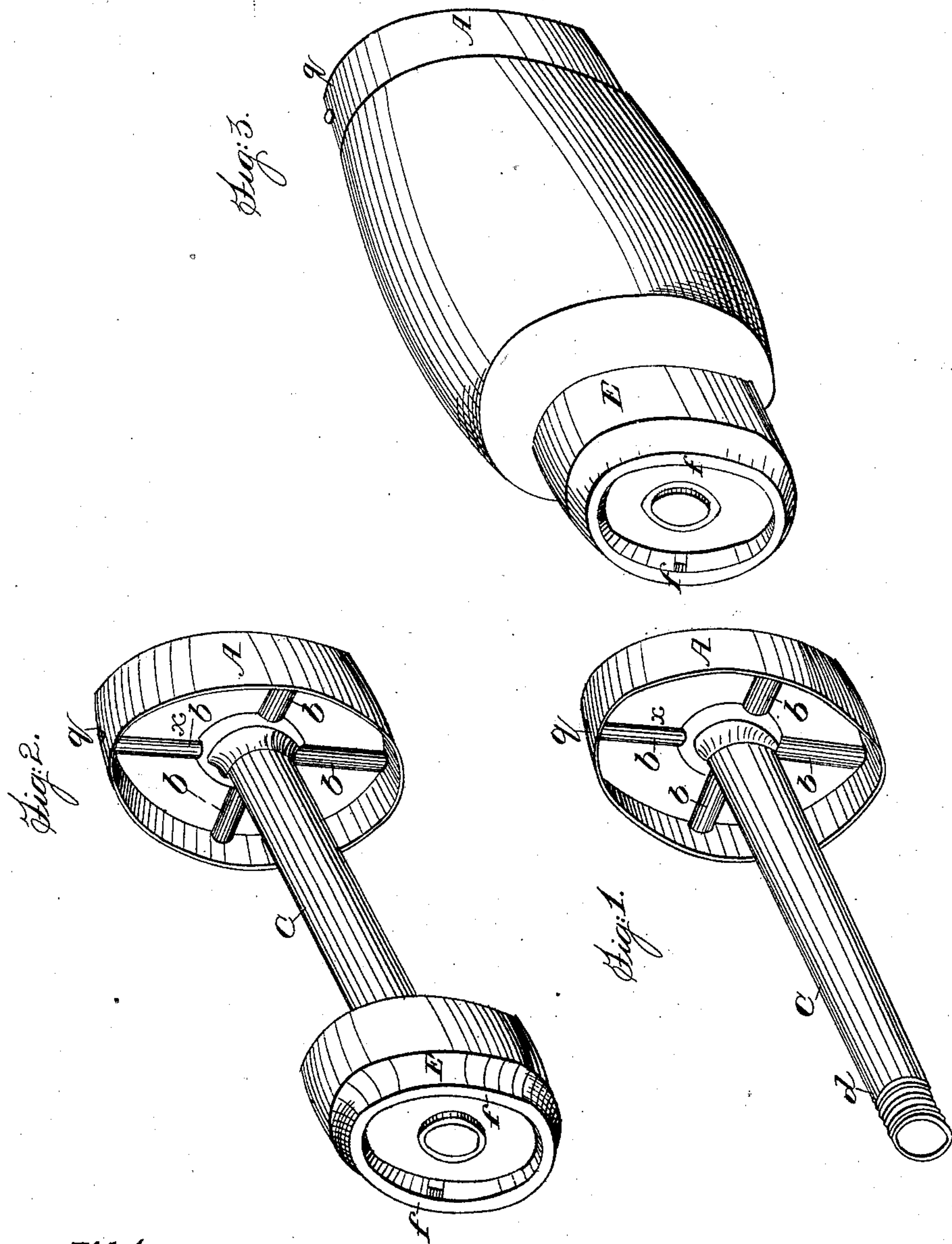


T. C. MARIS.

Attaching Hubs to Axles.

No. 62,551.

Patented Mar. 5, 1867.



Witnesses  
Alvin E. Brown  
J. Vandaw

Inventor;  
Thos C Maris

# United States Patent Office.

THOMAS C. MARIS, OF ATHENS, OHIO.

*Letters Patent No. 62,551, dated March 5, 1867.*

## IMPROVEMENT IN THE METHOD OF ATTACHING HUBS TO AXLE-BOXES.

*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, THOMAS C. MARIS, of Athens, in the county of Athens, State of Ohio, have invented a new and improved Combined Box, Band, and Cap for Wheel-Hubs; and I hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, which are made part of this specification, in which—

Figure 1 is a perspective view of the but-cap, band, and box in one piece.

Figure 2 is the caps and box attached, as when in use; and

Figure 3 is the hub with the caps and box attached, complete.

The separate parts of the invention are more particularly described thus: A (figs. 1 and 2) represents a perspective view of the but-cap, with its rim, A, adjustable to the turned surface of the hub. *b b b b* are ribs in the but-cap to strengthen the cap, and, by being let into the end of the hub, to prevent the box from turning. One of these ribs, *b<sup>x</sup>*, is made hollow for the purpose of introducing oil to the spindle through the opening *q*. C (figs. 1 and 2) represents the box, either cylindrical or tapering, having a screw, *d*, at the end to receive the point-cap. E (figs. 2 and 3) shows the point-cap as attached to the box at *d* (fig. 1) by its centre, and the rim E adjustable to the turned surface of the hub, as represented in fig. 3. These rims A and E serve the double purpose of banding the hub and truing and securing the box to the centre.

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

1. The cap A, with its ribs *b b*, substantially as above described and set forth in my specification.
2. I claim the cap E, in combination with the box C and screw-thread, as substantially described.
3. I claim securing the hub to the box C, by means of caps A and E, when one of said caps is rigidly attached to the box and the other adjustable, substantially as described.
4. I claim constructing the cap A with one or more of its ribs hollow, for the purpose of introducing oil to the spindle, substantially as described.

Athens, Ohio, December 13, 1866.

THOS. C. MARIS.

Witnesses:

HENRY F. BROWN,  
THOS. F. WILDES.