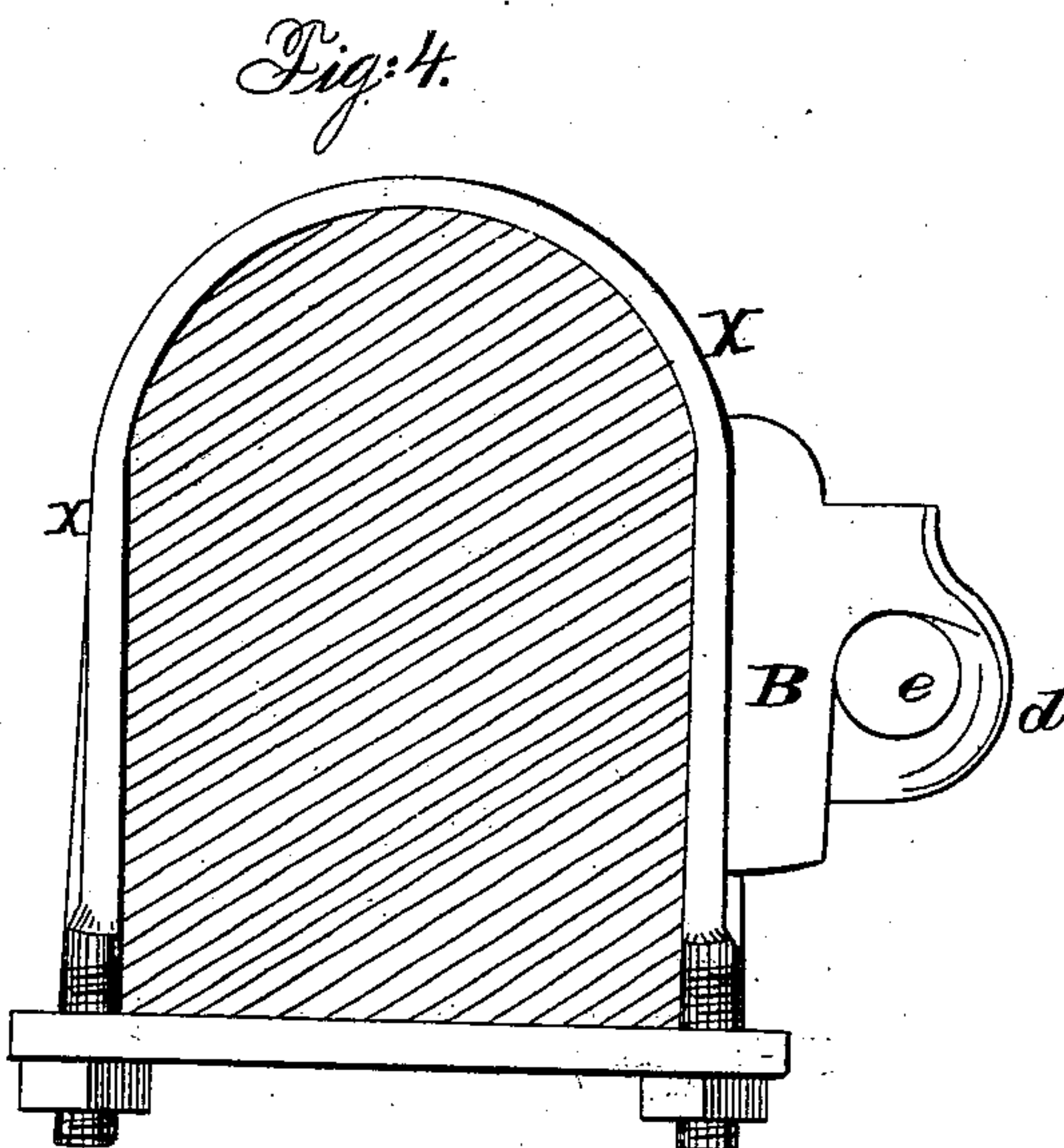
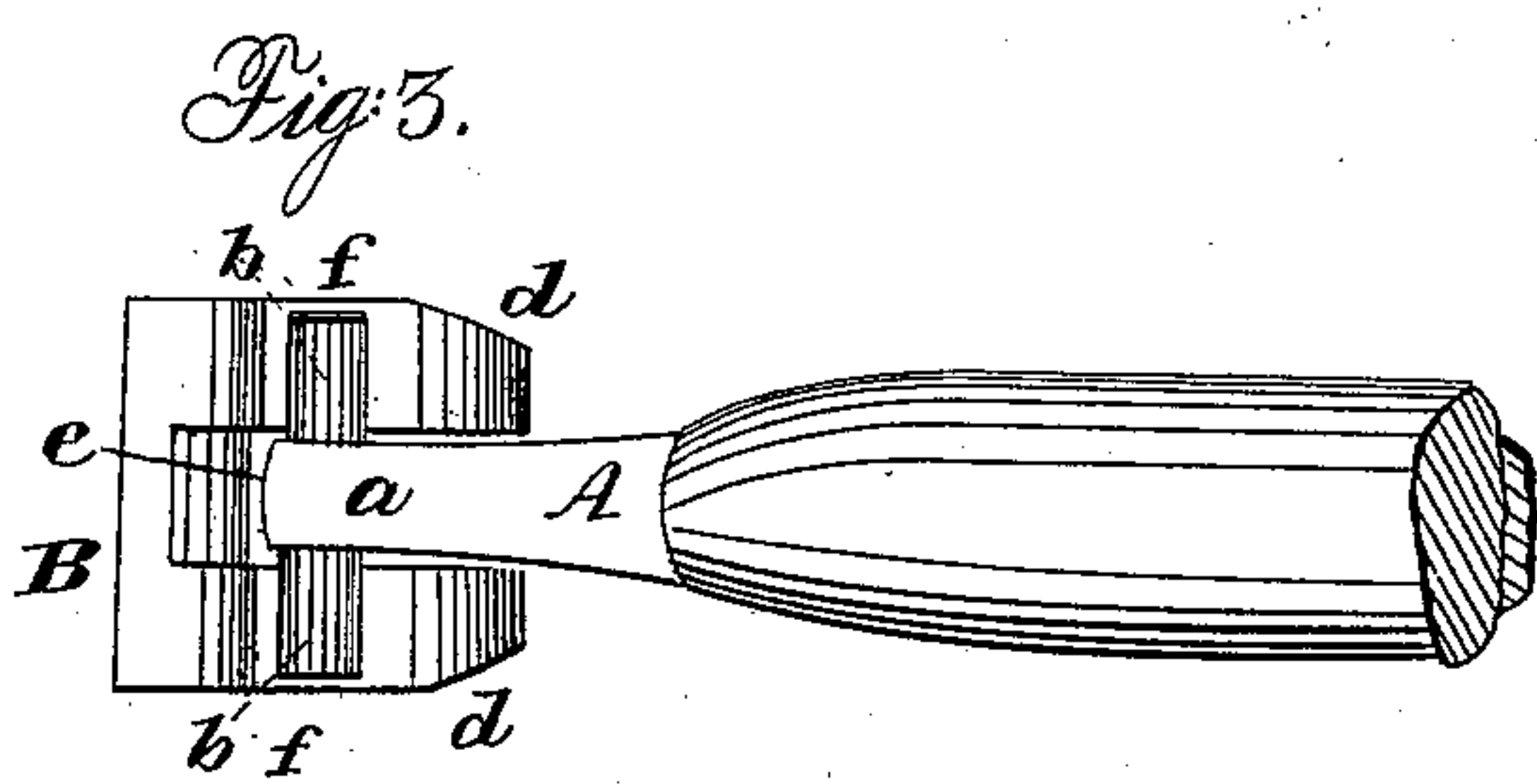
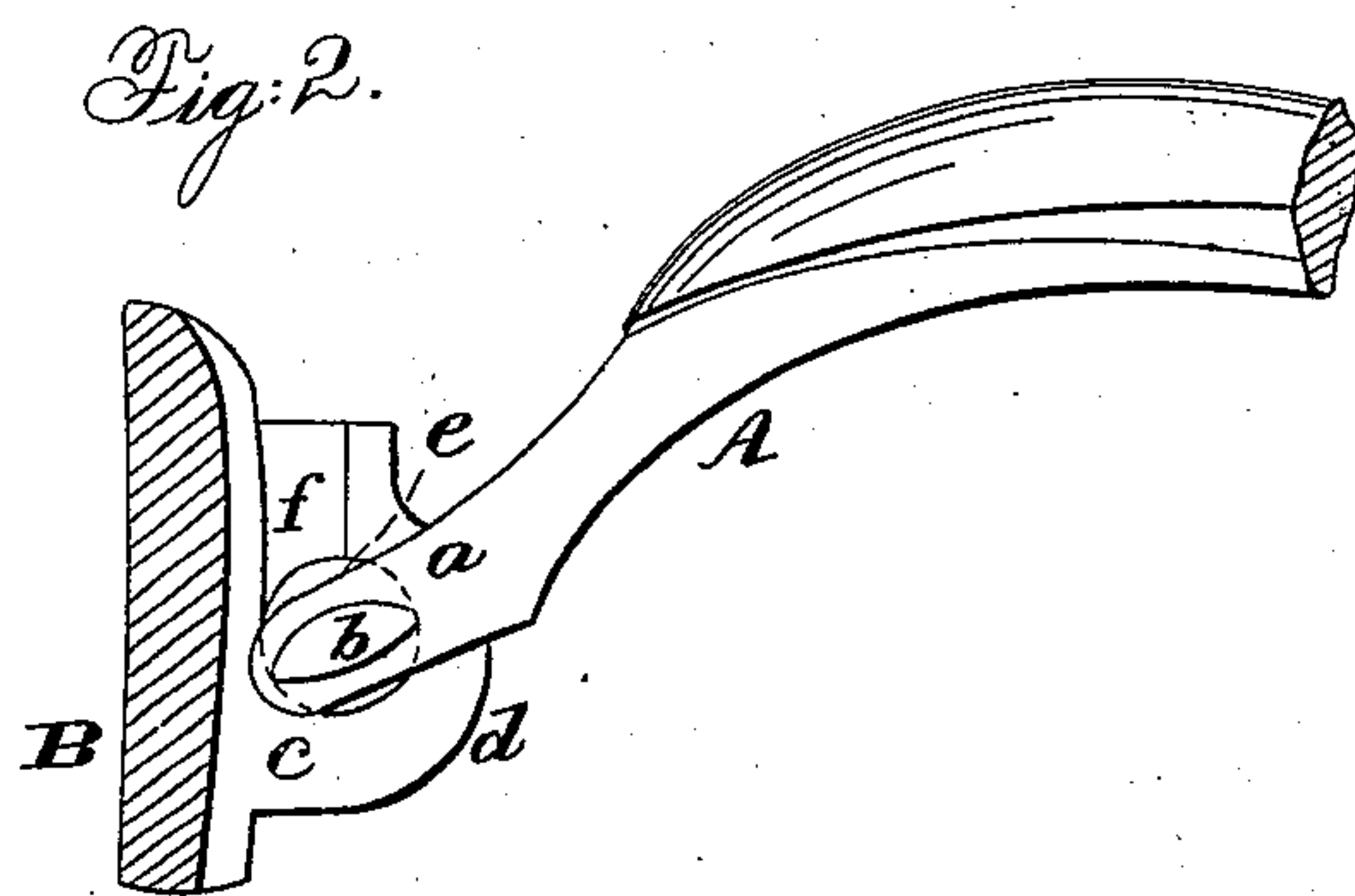
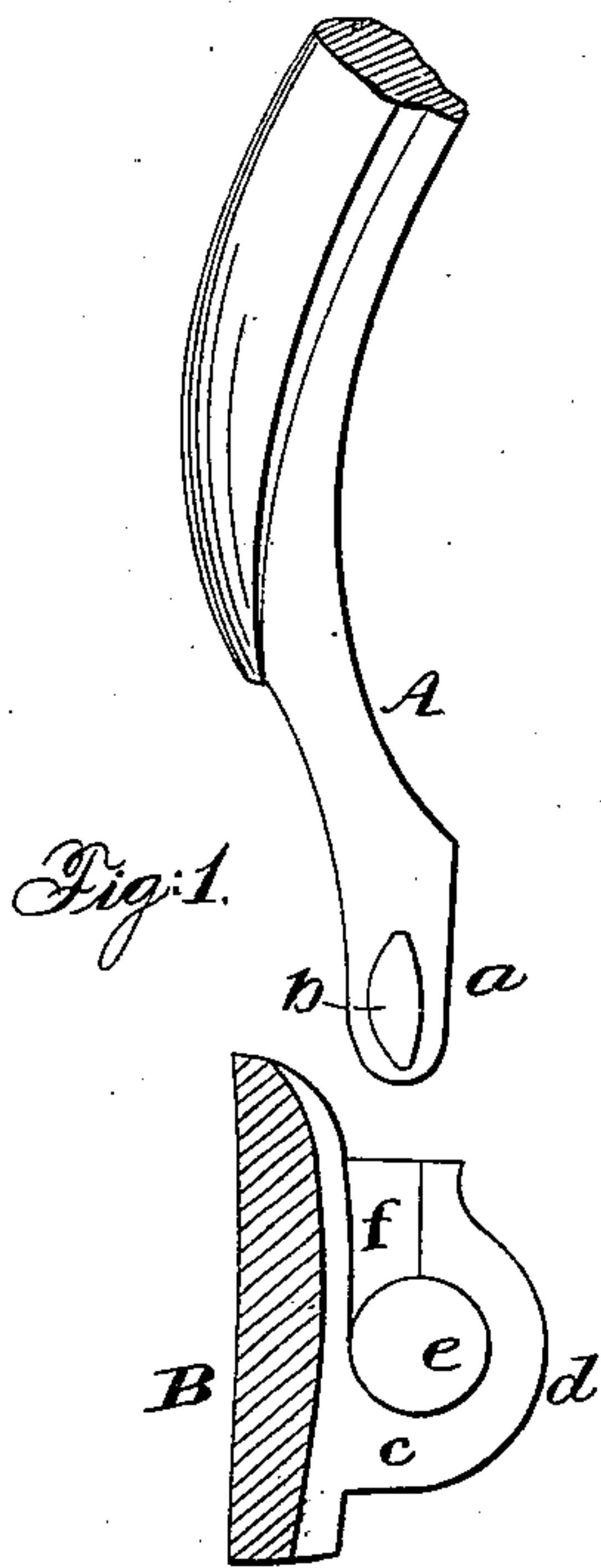


W. STARKEY.

Thill-Coupling.

No. 71,078.

Patented Nov. 19. 1867.



Witnesses

Wm. Albert Steel  
John Puckler

Inventor

Wm. Starkey  
By his Atty  
J. H. Rowson

# United States Patent Office.

WILLIAM STARKEY, OF BRIDGEPORT, ASSIGNOR TO HIMSELF AND E. L. REEVES, OF PAULSBORO, NEW JERSEY.

*Letters Patent No. 71,078, dated November 19, 1867; antedated November 8, 1867.*

## IMPROVEMENT IN ATTACHING THILLS TO CARRIAGES.

*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, WILLIAM STARKEY, of Bridgeport, Gloucester county, New Jersey, have invented an Improved Carriage-Coupling; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to a device, fully described hereafter, for facilitating the coupling and uncoupling of the shafts or pole of a carriage.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a sectional view of my improved carriage-coupling as it appears when the parts are detached from each other.

Figure 2, the same, with the two parts connected together.

Figure 3, a plan view, and

Figure 4, a side view of that part of the coupling which is attached to the axle.

Similar letters refer to similar parts throughout the several views.

A bent bar, A, of iron, is secured to each shaft or to the pole of a carriage, and on each side, near the outer end *a* of this bar, is a projecting pin, *b*, of the peculiar shape shown in the drawing. In a metal block, B, secured to the axle of a carriage, or to the clip X of the same, is formed a recess, *c*, for the reception of the end *a* of the bar A, thus separating the front of the block into two projections, *d d*. In each of these projections *d* is a circular opening, *e*, communicating with the recess *c* between the projections *d*, and on the inner side of each of the latter is a vertical groove, *f*, the object of which will be rendered apparent hereafter.

When it is desired to connect the shafts to the axle, they are elevated, as shown in fig. 1, until the pins *b* are directly over the grooves *f* of the block B. The shafts are then lowered, the end *a* of the bar A passing into the recesses *c* of the block, and the pins *b* into the grooves *f* of the same, the pins passing down the grooves *f*, and into the circular openings *e e* of the blocks, after which the shafts are turned down to the proper position for being harnessed to the horse. When the shafts are thus connected to the blocks B, they may be raised or lowered to any desired extent, turning upon the pins *b* as a centre, without risk of becoming detached. It will also be impossible for the shafts to become uncoupled by jolting, for when they are in proper position the flat and wide portions of the pins *b* are presented to the grooves *f*, which are only of a width sufficient to allow the pins to pass endways through them. To uncouple the shafts, it is only necessary to raise them to a vertical position, or until the narrow ends of the pins *b* are presented to the grooves *f*, after which the shafts may be readily disconnected from the blocks.

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

The block B, with its projections *d d*, their openings *e e*, and recess *c*, in combination with the bar A and its pins *b*, the whole being constructed, arranged, and operating as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. STARKEY.

Witnesses:

JOHN WHITE,  
W. J. R. DELANY.