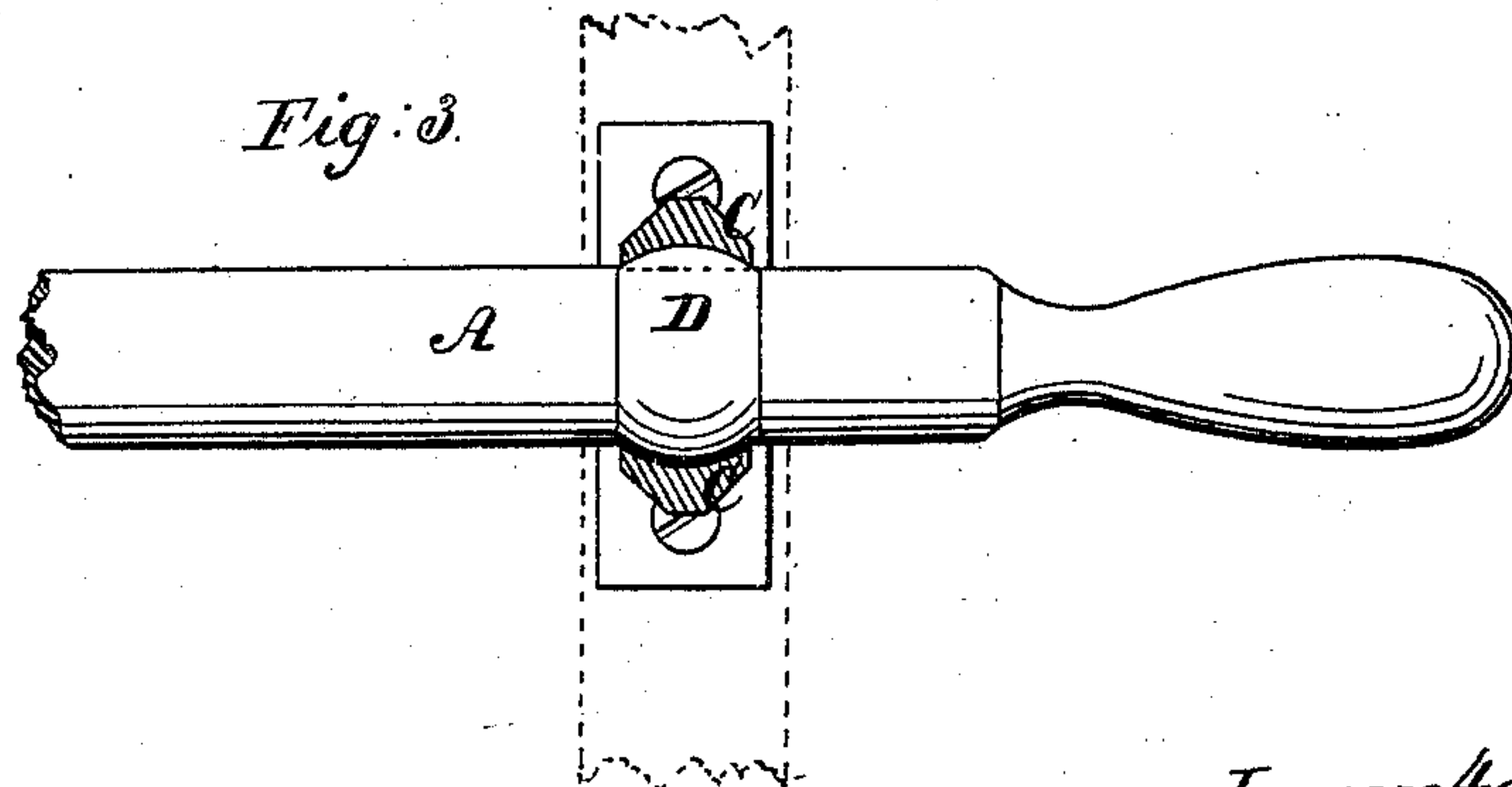
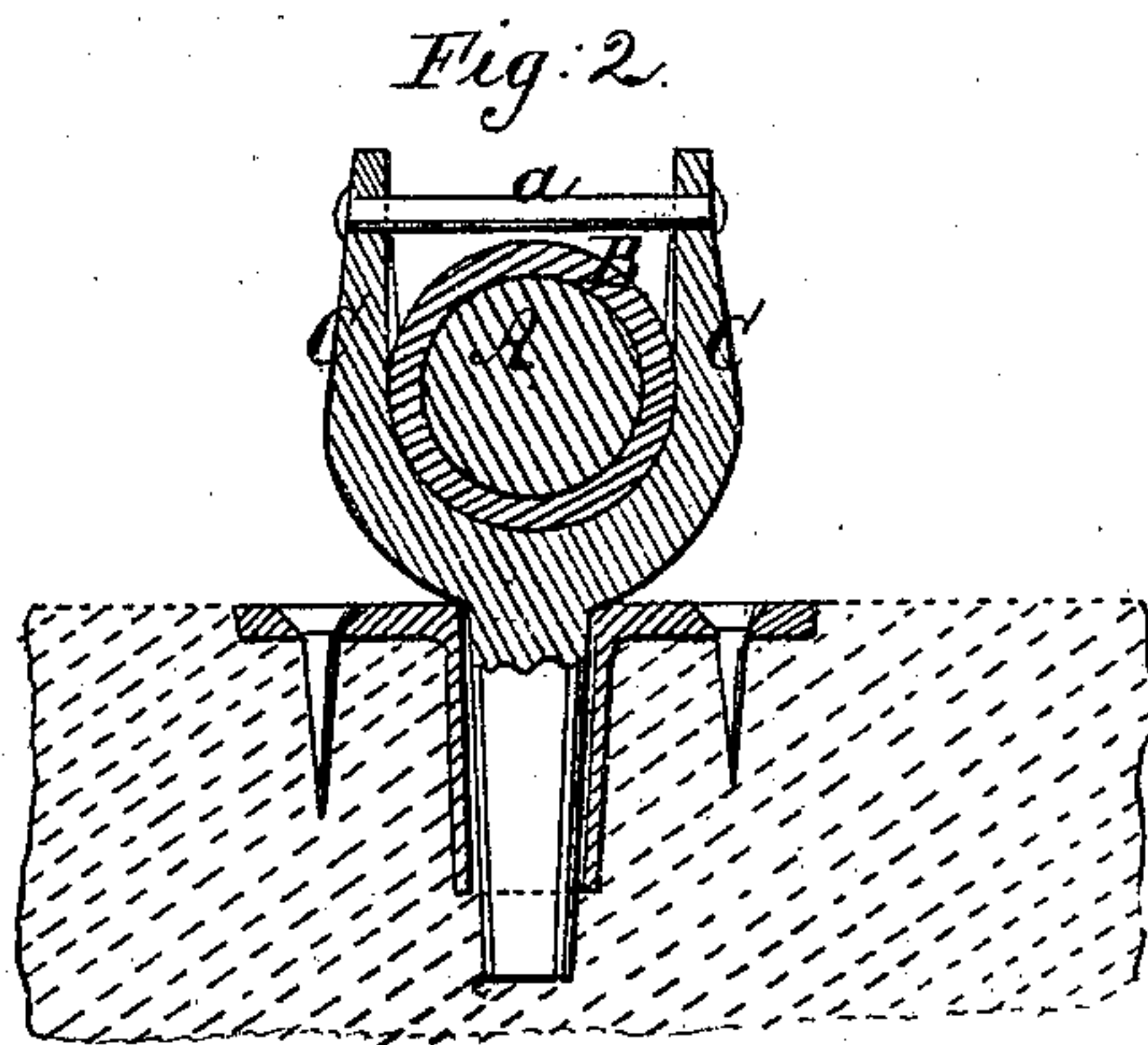
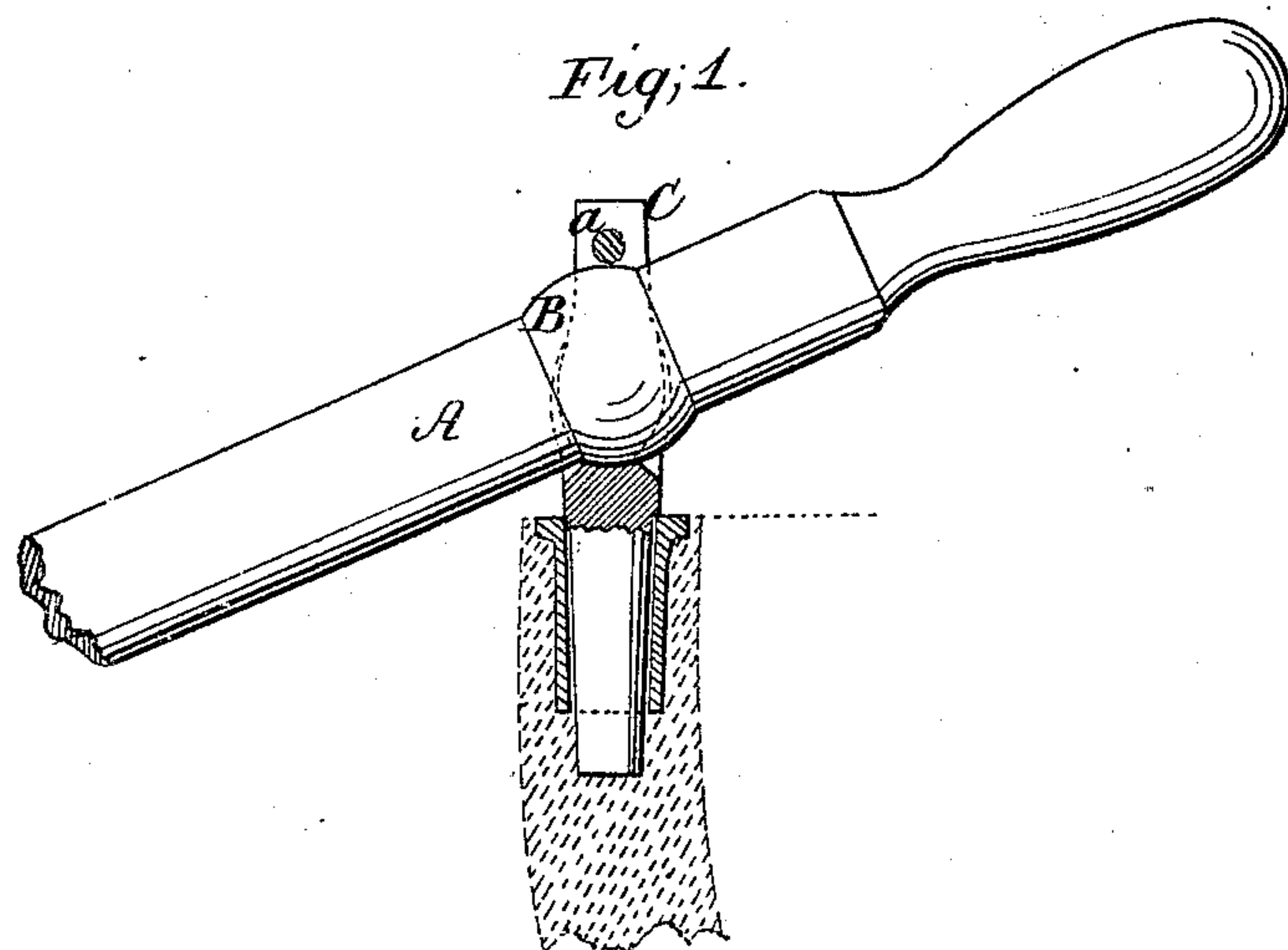


J. W. Norcross.
Oar Lock.

Nº 86,244.

Patented Jan. 26, 1869



Witnesses;
E. F. Hasterhuber
C. W. W. W. W.

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JOSEPH W. NORCROSS, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 86,244, dated January 26, 1869.

IMPROVEMENT IN ROW-LOCKS.

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, JOSEPH W. NORCROSS, of Boston, in the county of Suffolk, State of Massachusetts, have invented a new and improved Row-Lock; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 represents a longitudinal section of this invention.

Figure 2 is a transverse section thereof.

Figure 3 is a sectional plan or top view of the same.

Similar letters indicate corresponding parts.

This invention relates to the arrangement of a segmental spherical band on the handle of the oar, in combination with a concave seat formed by the horns of the row-lock and with the pintle of said row-lock, in such a manner that by the action of the spherical band the oar is permitted to assume the required vertical and rolling motion, and by the action of the pintle said oar is enabled to make the necessary horizontal motion, while the handle is perfectly protected by the spherical band against all wear, and a row-lock is obtained which is simple in its construction and very convenient in its operation.

The horns of the row-lock are narrowed down toward their bottoms, and their bottom edges are chamfered off, both inside and outside, so as to provide for the unobstructed dip of the oar.

A represents the handle of an oar, to which is secured a segmental spherical band, B, of cast-iron, or other suitable material.

This band fits into the horns C of an ordinary row-lock, said horns being made concave on their inner surfaces, so as to form a seat for the reception of the spherical band, as clearly shown in the drawing.

A pin, *a*, secured in the tops of the horns, holds the oar down into its seat in the row-lock.

The horns C, instead of being made to increase in width toward the bottom ends, are made widest in the middle, opposite the centre of the spherical band B, and their bottom edges are chamfered off, both inside and outside, so that the oar is free to move the required distance in a vertical plane, or, in other words, to provide for the requisite dip of the oar.

By these means a row-lock is obtained which provides for the vertical and rolling motion of the oar, by

means of the spherical band fastened to the handle of the oar, and for the horizontal motion by means of the pintle or pivot extending from the horns into a socket in the gunwale.

In this respect my present improvement is different from the improvement described in Letters Patent for a row-lock, granted to me, September 20, 1864. In this patent, I have described a ball-and-socket joint connected with the handle of an oar, so as to provide both for the vertical and horizontal motions of the oar.

The essential difference between this former improvement and my present invention, however, is, that in the former case, the socket containing the ball was stationary, while in my present improvement the socket revolves on the pintle or pivot of the horns.

When the socket is stationary, the ball must necessarily be very large, so as to provide for the horizontal as well as the vertical motion of the oar, and the weight of the ball becomes so great that it prevents the oar from floating when unshipped.

With my present improvement, a thin light band is secured to the handle of the oar, whereby the floating capacity of the oar is not impaired, and a light, cheap, and very convenient row-lock is produced.

When the oar is unshipped, the horns adhere to the handle, being retained by the pin *a*, and all danger of having the row-lock injured by striking against a vessel or other object is avoided.

It is obvious that any other swivel-motion than the pivot on the row-lock would produce the same effect; therefore I do not confine myself to this particular device, but adopt it as the most convenient to illustrate the principle of producing the necessary motion for a perfect-working row-lock by the aid of the segmental band and the ordinary swivel-motion.

Having thus described my invention,

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

The arrangement of the movable seat, formed by the horns of the row-lock, and supported by the pintle thereof, or its equivalent, in combination with the segmental spherical band secured to the handle of the oar, substantially as and for the purpose set forth.

JOSEPH W. NORCROSS.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.