

(No Model.)

C. G. LARSON.
DEVICE FOR DRAWING TUBES.

No. 561,327.

Patented June 2, 1896.

FIG:1.

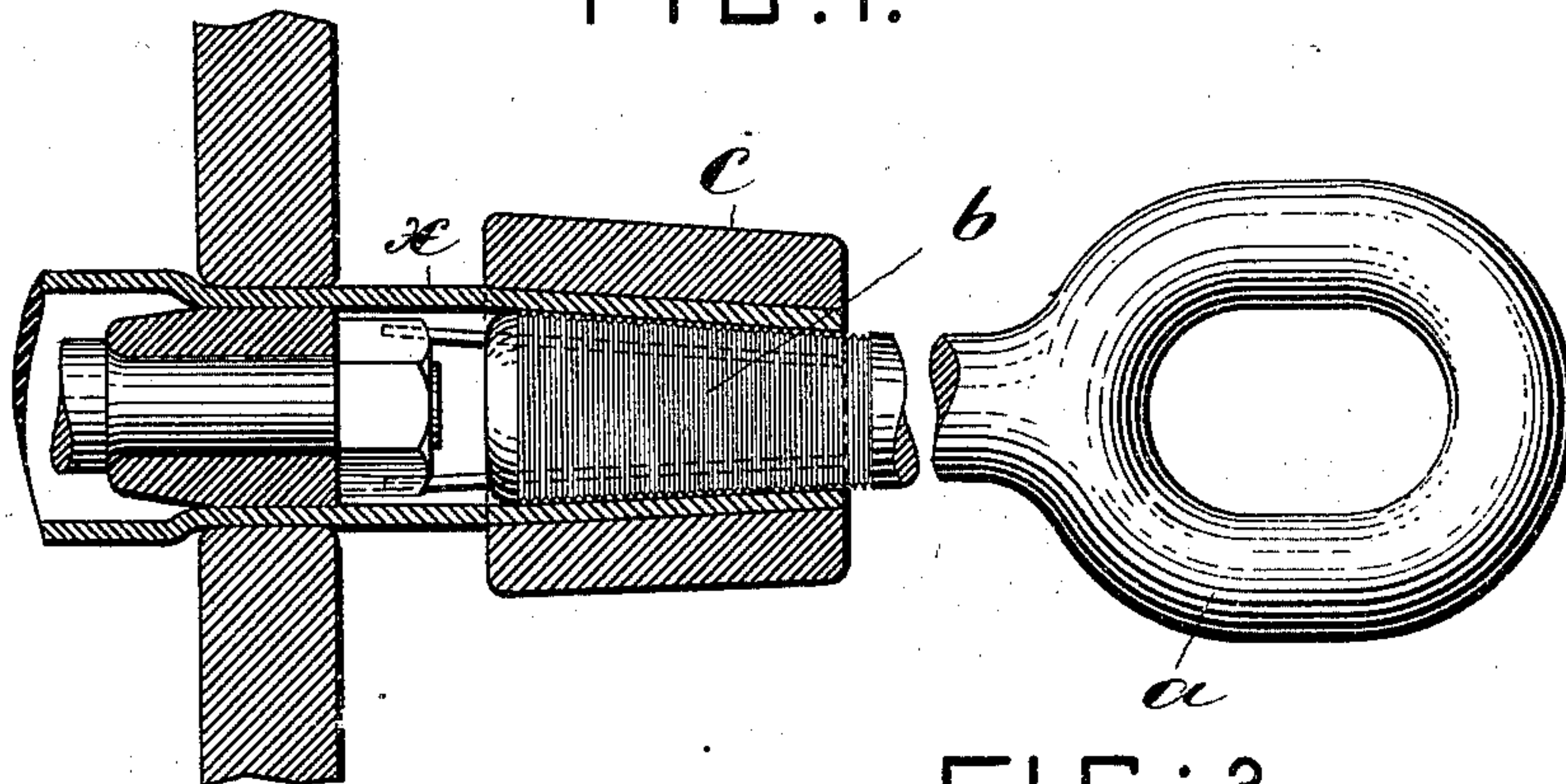


FIG:3.

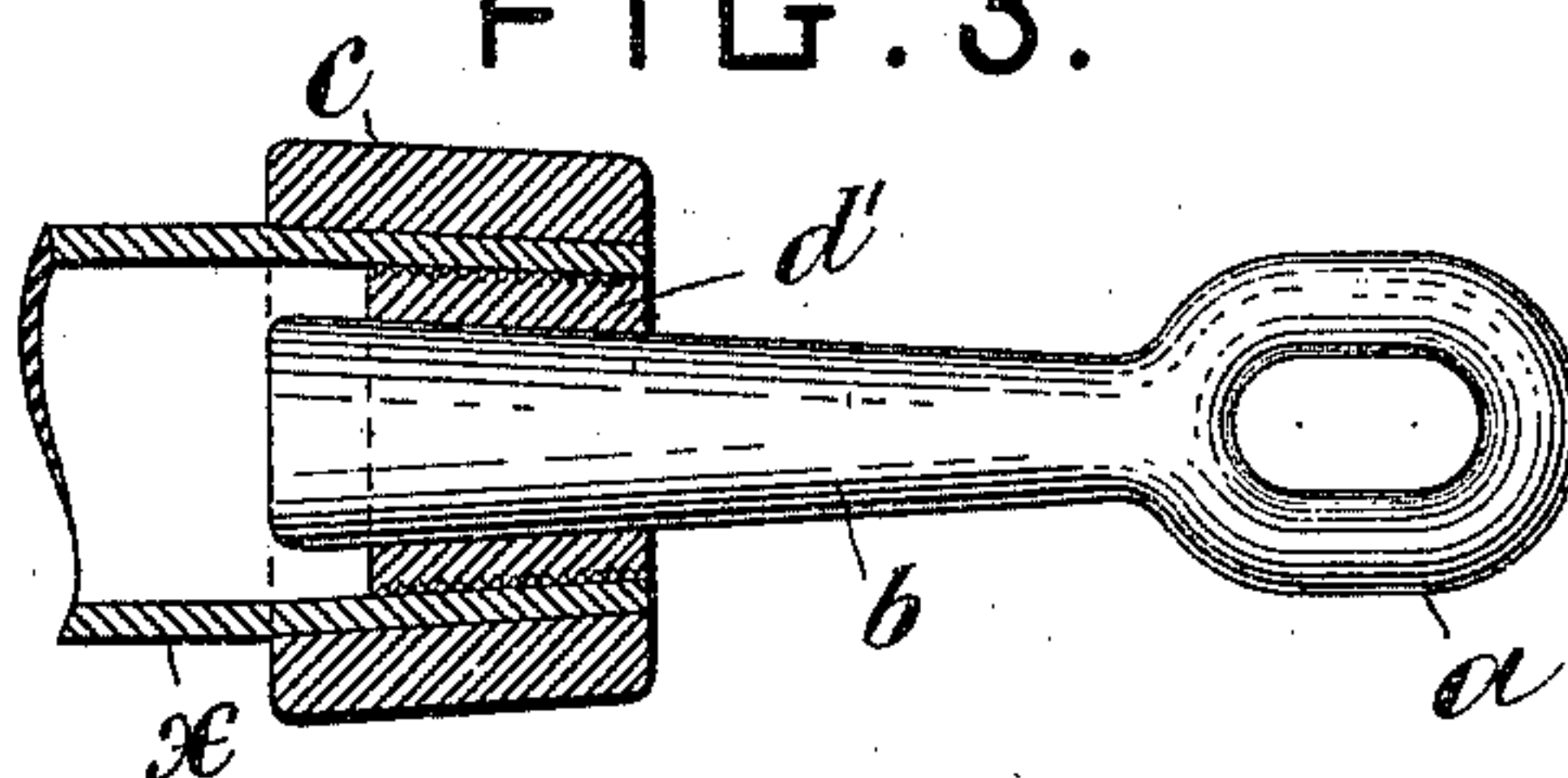


FIG:2.

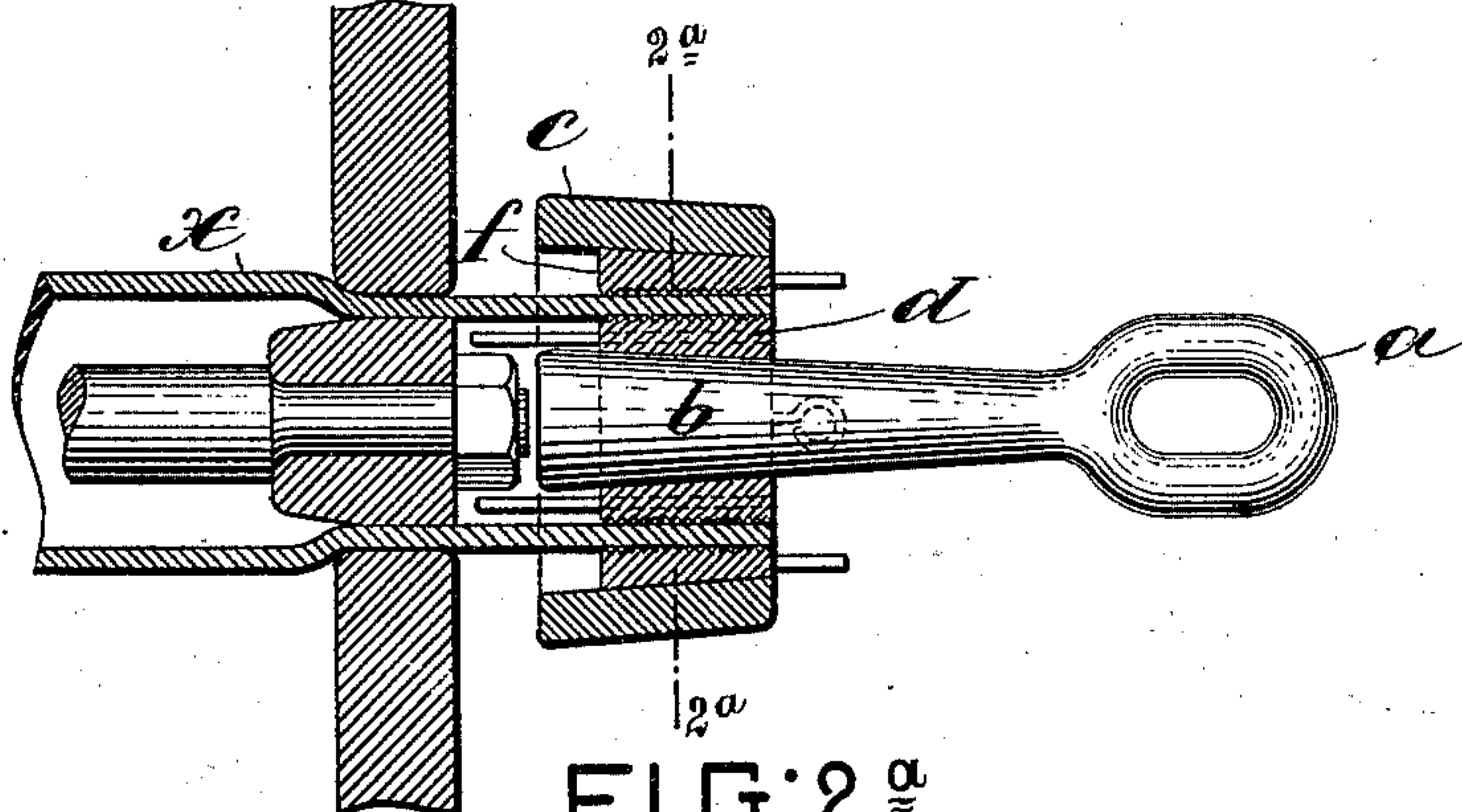
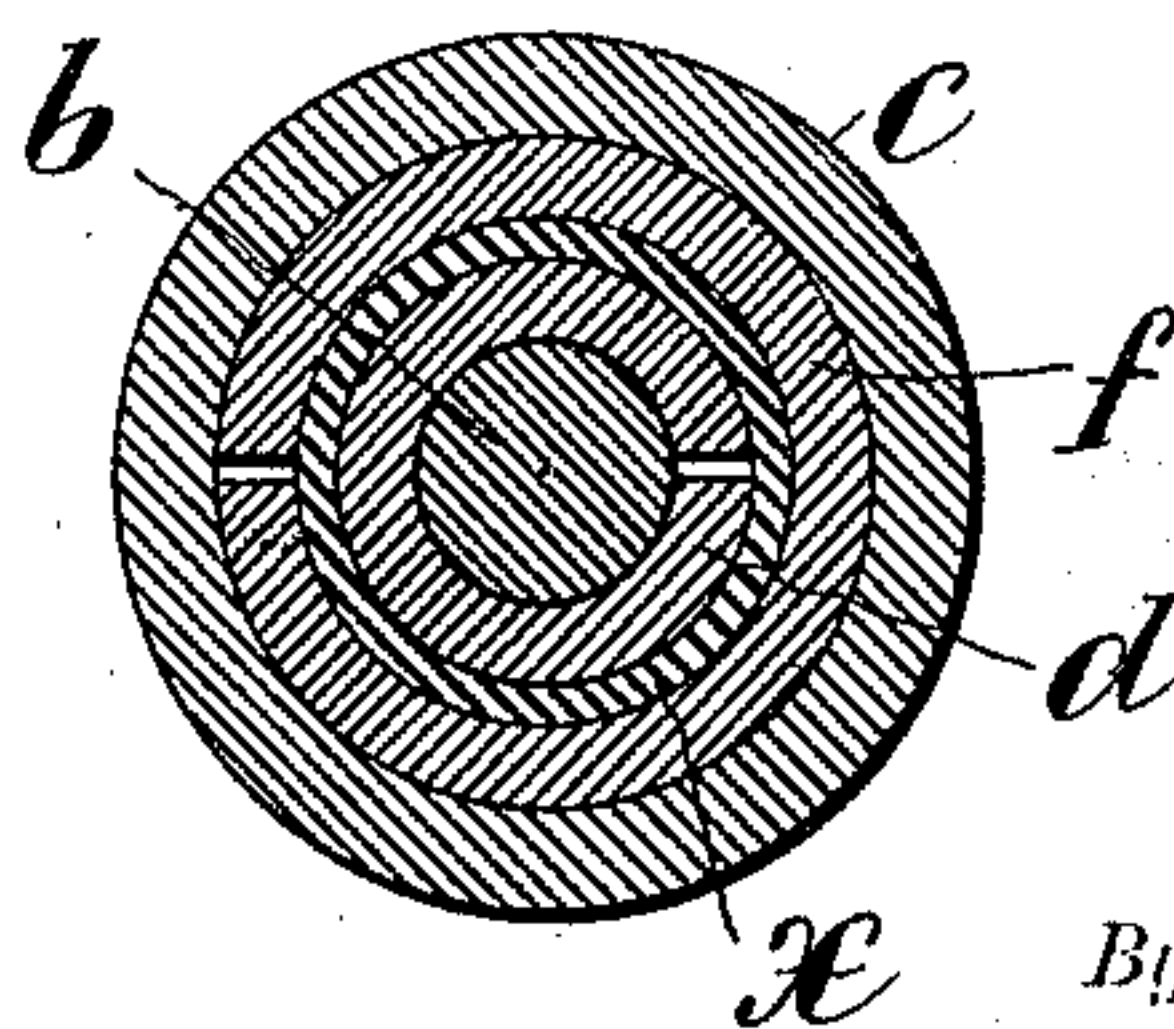


FIG:2^a.



WITNESSES:

J. M. Wiman
Peter A. Ross

INVENTOR:

Carl Gustaf Larson
By *Henry Corns*
Attorney.

UNITED STATES PATENT OFFICE.

CARL GUSTAF LARSON, OF SANDVIKEN, SWEDEN.

DEVICE FOR DRAWING TUBES.

SPECIFICATION forming part of Letters Patent No. 561,327, dated June 2, 1896.

Application filed July 8, 1895. Serial No. 555,219. (No model.) Patented in England June 20, 1895, No. 12,032.

To all whom it may concern:

Be it known that I, CARL GUSTAF LARSON, a subject of the King of Sweden and Norway, residing in Sandviken, Sweden, have invented certain new and useful Improvements in Devices for Drawing Tubes, (for which a patent has been granted to me in Great Britain, No. 12,032, dated June 20, 1895,) of which the following is a specification.

My invention relates to a device to be substituted for tongs, which latter have heretofore been very commonly used for gripping the tube in drawing it. These tongs present a good many inconveniences and disadvantages, one being that they mark the tube, and another is that special means must be provided to prevent them from crushing the tube.

My invention has for its object to provide a simple gripping device which will avoid the disadvantages incident to the use of tongs. This device is illustrated in the accompanying drawings, wherein—

Figure 1 is a longitudinal sectional view of the device in its simplest form. Fig. 2 is a similar view illustrating a form of the device where split sleeves are employed, and Fig. 2^a is a transverse section on line 2^a in Fig. 2. Fig. 3 illustrates a form where only one split sleeve is employed.

Referring primarily to Fig. 1, *a* represents the drawing-eye, and *b* represents a tapered core, which is connected with or integral with the eye *a* and tapers toward the latter. This core is roughened exteriorly by a screw-thread or circumferential grooves.

The tube *x* to be drawn is split up or slitted at the end and the core *b* inserted. The slitted part of the tube is then compressed on the core and a tapered sleeve *c* slipped over it and driven on. When power is applied to the eye *a* in drawing the tube, the conical core *b* tends to jam the tube tightly between the core and the sleeve *c*, whereby the stronger the pull is the tighter will be the grip on the tube.

The slitting of the tube may be avoided by using the rather more complex form of the device seen in Figs. 2 and 2^a. In this construction two split sleeves *d* and *f* are employed, the former being placed inside of the tube and the latter outside, so that the latter is clamped between the roughened faces of the said sleeves. The inner smooth face of the sleeve *d* is coned or tapered and the outer smooth face of the sleeve *f* is tapered.

Fig. 3 shows a construction like that of Fig. 1, except that a split sleeve *d'* is employed inside of the tube.

If the tube be quite thin and the tapers be slight, the device, as illustrated in Fig. 1, may be employed without slitting the tube.

The drawing-eye *a* is merely to afford a convenient means of coupling the drawing mechanism to the core *b*. The core may be provided with any form of coupling attachment for this purpose.

Having thus described my invention, I claim—

1. A gripping device for use in drawing tubes and for similar work, comprising a core for insertion in the tube provided with a coupling attachment at its outer end, said core being tapered and smallest at its outer end, and a plain, outer sleeve adapted to embrace the tube, said sleeve being also tapered and smallest at its outer end, the inner surface of said sleeve and the outer surface of said core being substantially parallel, as shown.

2. A gripping device for use in drawing tubes and for similar work, comprising a core for insertion in the tube provided with a coupling attachment at its outer end, said core being tapered and smallest at its outer end, a plain outer sleeve adapted to embrace the tube, said sleeve being also tapered and smallest at its outer end, the inner surface of said sleeve and the outer surface of said core being substantially parallel, and a tapered split sleeve embracing said core and adapted to fit within the tube to be drawn, as set forth.

3. A gripping device for use in drawing tubes and for similar work, comprising a tapered core *b*, which is smallest at its outer end where it is provided with a coupling attachment, an outer, tube-embracing sleeve, *c*, also tapered internally and smallest at its outer end, the inner surface of said sleeve being parallel with the surface of the core, a split sleeve, *d*, tapered interiorly to fit the core *b* and cylindrical exteriorly, and a split sleeve *f*, tapered exteriorly to fit within the sleeve *c* and cylindrical interiorly, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CARL GUSTAF LARSON.

Witnesses:

ERNST SVANQVIST,

CARL TH. SUNDHOLM.