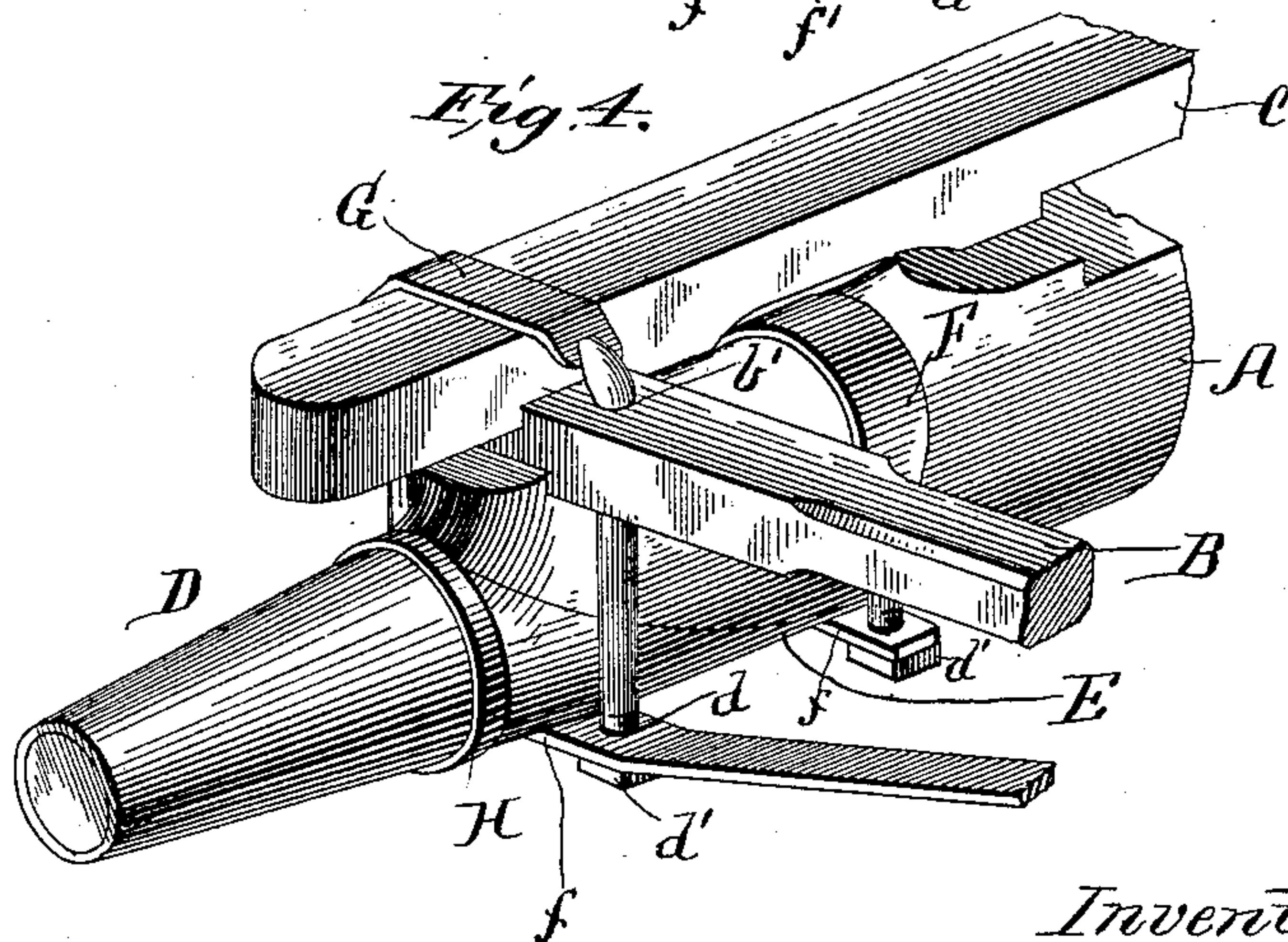
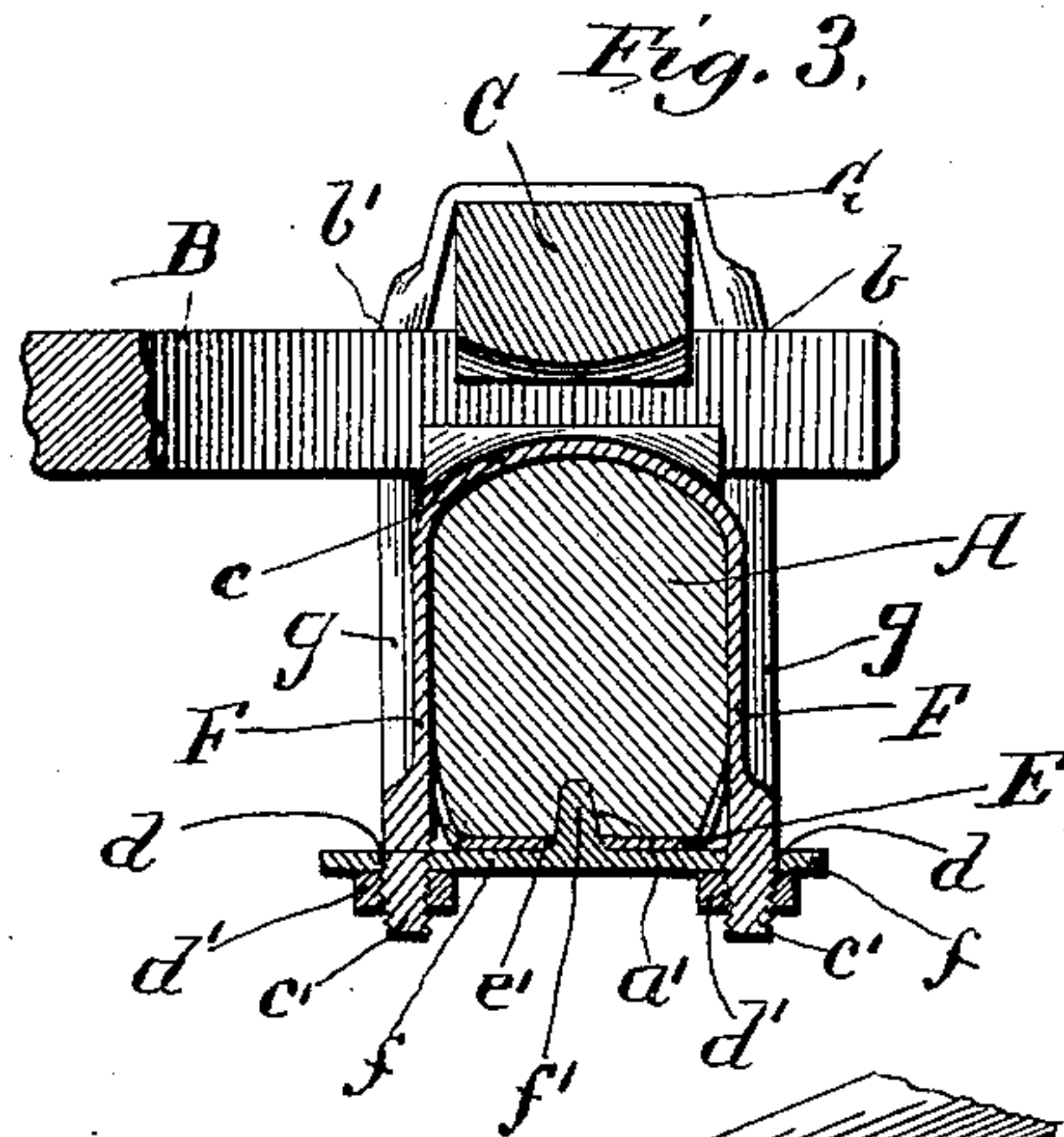
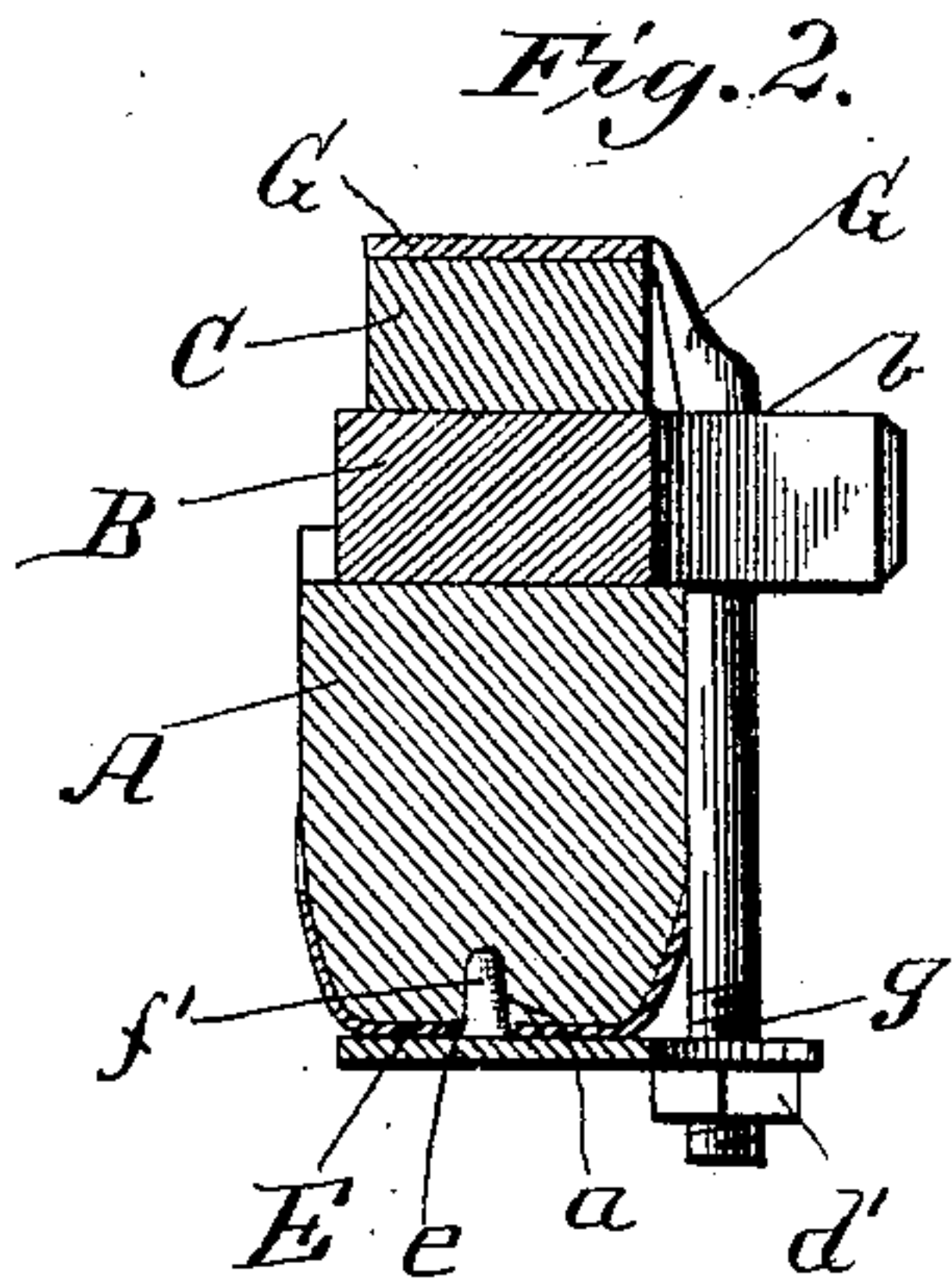
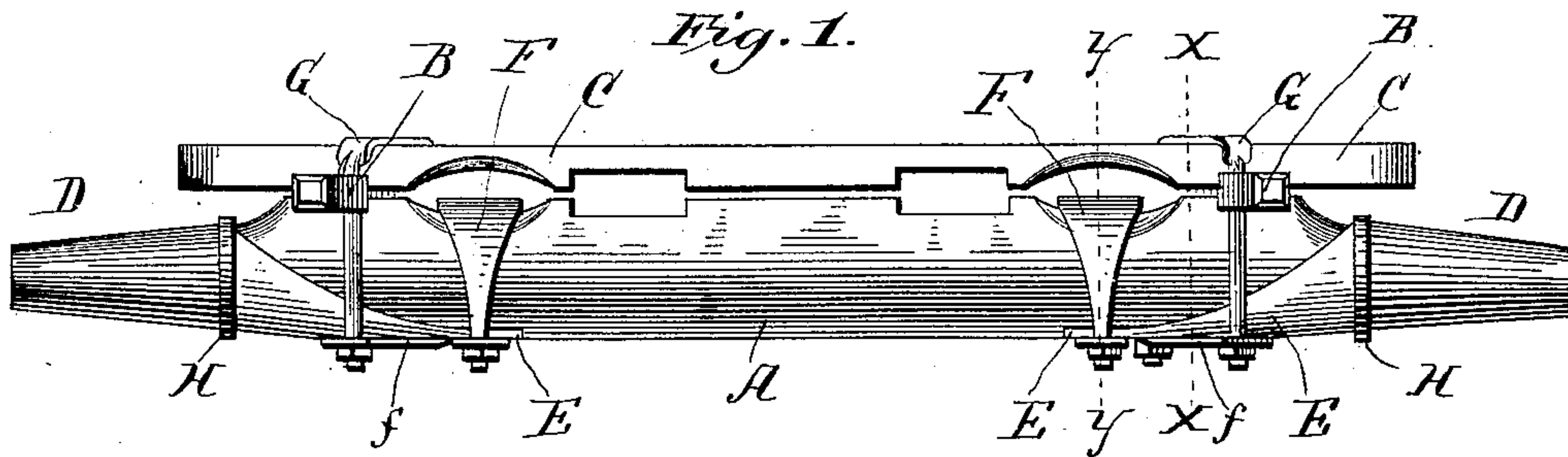


(No Model.)

T. DE LA MARE.
AXLE SKEIN.

No. 435,407.

Patented Sept. 2, 1890.



Witnesses
F. W. Cornwall
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UNITED STATES PATENT OFFICE.

THOMAS DE LA MARE, OF TOOEELE CITY, UTAH TERRITORY.

AXLE-SKEIN.

SPECIFICATION forming part of Letters Patent No. 435,407, dated September 2, 1890.

Application filed January 29, 1890. Serial No. 338,445. (No model.)

To all whom it may concern:

Be it known that I, THOMAS DE LA MARE, a citizen of the United States, residing at Tooele City, in the county of Tooele and Utah Territory, have invented certain new and useful Improvements in Axle-Skeins; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to axle-skeins and means for attaching the same to axle-trees; and the object of the invention is to provide a skein which can be readily attached to the axle-trees of heavy road-wagons, carts, &c.

A further object of the invention is to provide a device in the form of a clip for attaching the skein to axle-trees, as will be hereinafter fully described, and set forth in the claim.

Great inconvenience has been experienced in attaching skeins or thimbles to axle-trees of heavy draft-wagons, which are usually made of wood, in that the axle-tree is often split, or the skein invariably becomes loose by the immense strain and the incapability of the means of attachment, and therefore has to be continually tightened so as to be in useful condition, which of course weakens the axle, for such repairing usually consists in driving additional nails or rivets through the skein and axle or removing the old bolts and replacing them with new. According to my invention no screws, bolts, nails, or rivets are driven into the skein or axle, and hence the splitting or weakening of axles and skeins is entirely obviated.

In the accompanying drawings, forming part of this application, Figure 1 is a front elevation of an axle-tree, bolster, and hounds, showing my skein and attaching device in position. Fig. 2 is a sectional view taken on the line $x x$, Fig. 1. Fig. 3 is a sectional view taken on the line $y y$, Fig. 1. Fig. 4 is a perspective view of my invention.

Like letters of reference denote like parts throughout the several figures.

A denotes the axle-tree, having in its under side small holes or depressions a and a' .

The hounds B have perforations b and b' , and are let into the axle-tree at its top and into the bolsters C at the bottom.

The skeins or thimbles D are preferably made of wrought-iron; but they may be cast in suitable sizes to conform to the end of the axle-tree to which they are to be fitted. On the inner end of the skein and in the same piece therewith is formed a projection or plate E, provided with perforations e and e' .

The attaching device consists wholly of two clips F and G, similar to the ordinary vehicle-clip. The usual ring H is provided, and is shrunk on the skein to form a bearing for the inner face of the hub of a wagon-wheel and to keep the skein from coming apart should it become cracked or broken.

The clip F is constructed with a semicircular bow c , having depending screw-threaded ends c' , which pass through perforations d in a straight bar f and receive suitable nuts d' .

The bar f is provided about its center with a projection f' , formed integral with the inner face of the said bar, so as to extend upward at right angles therefrom, and is of cone shape, as shown in Figs. 2 and 3.

The clip G has a perforated straight bar, like the bar f , and its whole construction is similar to the clip F, except the bow, which is formed straight and at right angles to the depending screw-threaded ends g , said ends being much longer than the ends c' of the clip F, so as to include two or more parts of a wagon in addition to the axle-tree.

The skein may be readily attached to the axle-tree of any ordinary wagon without removing any of the parts of said wagon, except the wheels, in the following manner: Drive the skein onto the end of the axle-tree until it reaches the position desired and shrink the ring on. Then through the perforations e and e' in the plate E make the holes or depressions a and a' by boring or burning to receive the cone-shaped projection f' , which extends through the plate E from the bar f of the clip F, which is next placed in position by passing one of the ends c' between the axle-tree A and the bolster C, and screwing on the nuts d' . The perforations b and b' are next bored in the hounds B on either side of the bolsters C. The ends g of the clip G are passed through said perforations, the straight bar f , with its

cone-shaped projection f' , put in position, and the nuts d' screwed on. By this arrangement the clip G, with its bar f , surrounds the bolster C, the hounds B, the axle A, and the plate E 5 of the skein and holds them all firmly together, at the same time rendering the removal of the skein very simple and convenient.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 The combination of the skein D and the clips F and G with the axle-tree A, bolster C,

and hounds B, the said skein adapted to be held securely in place by the clip F, surrounding the axle-tree, and also the clip G, 15 encompassing the axle-tree, bolster, and hounds, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS DE LA MARE.

Witnesses:

JAMES GOWAN,

I. N. DUNYON.