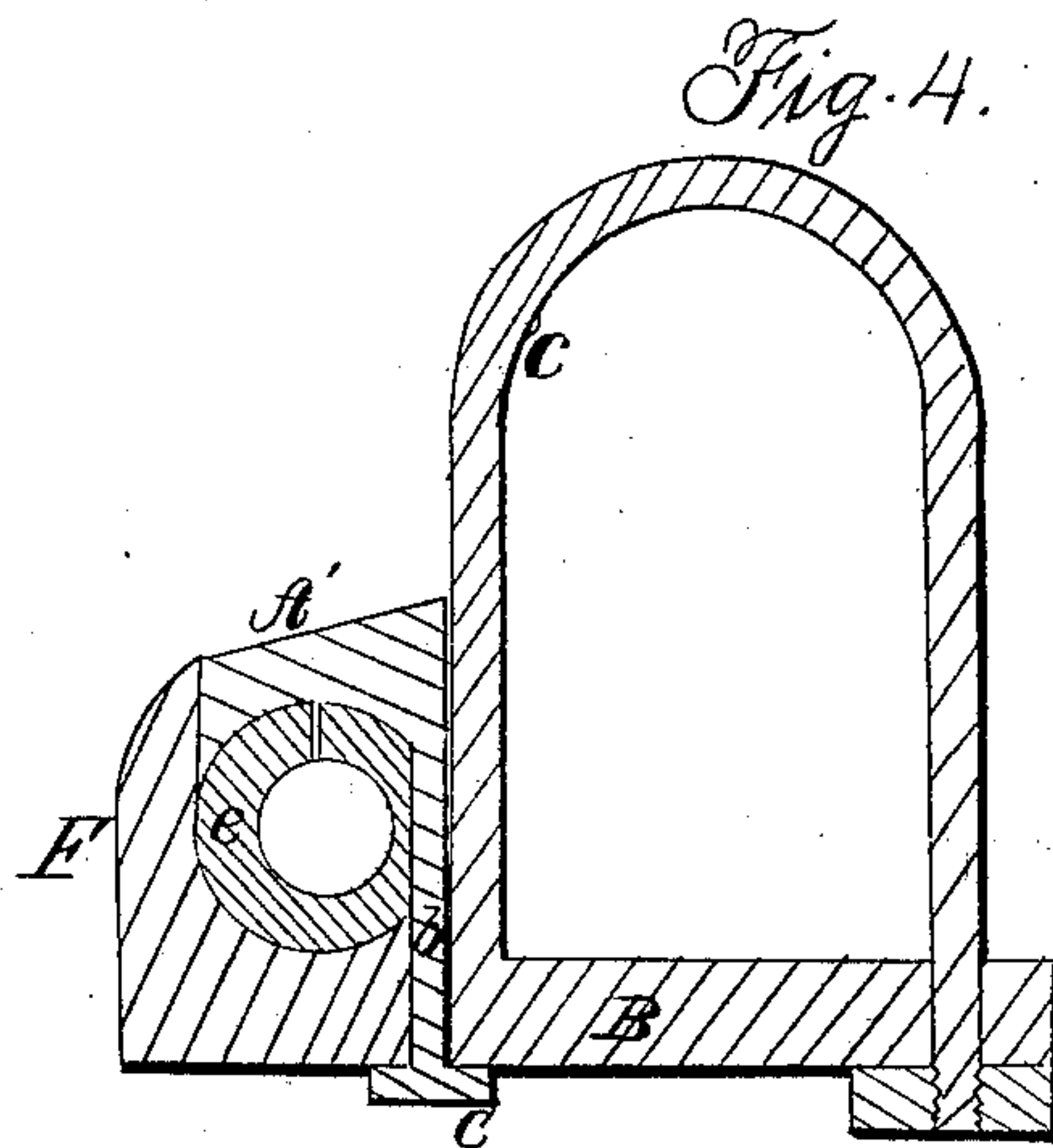
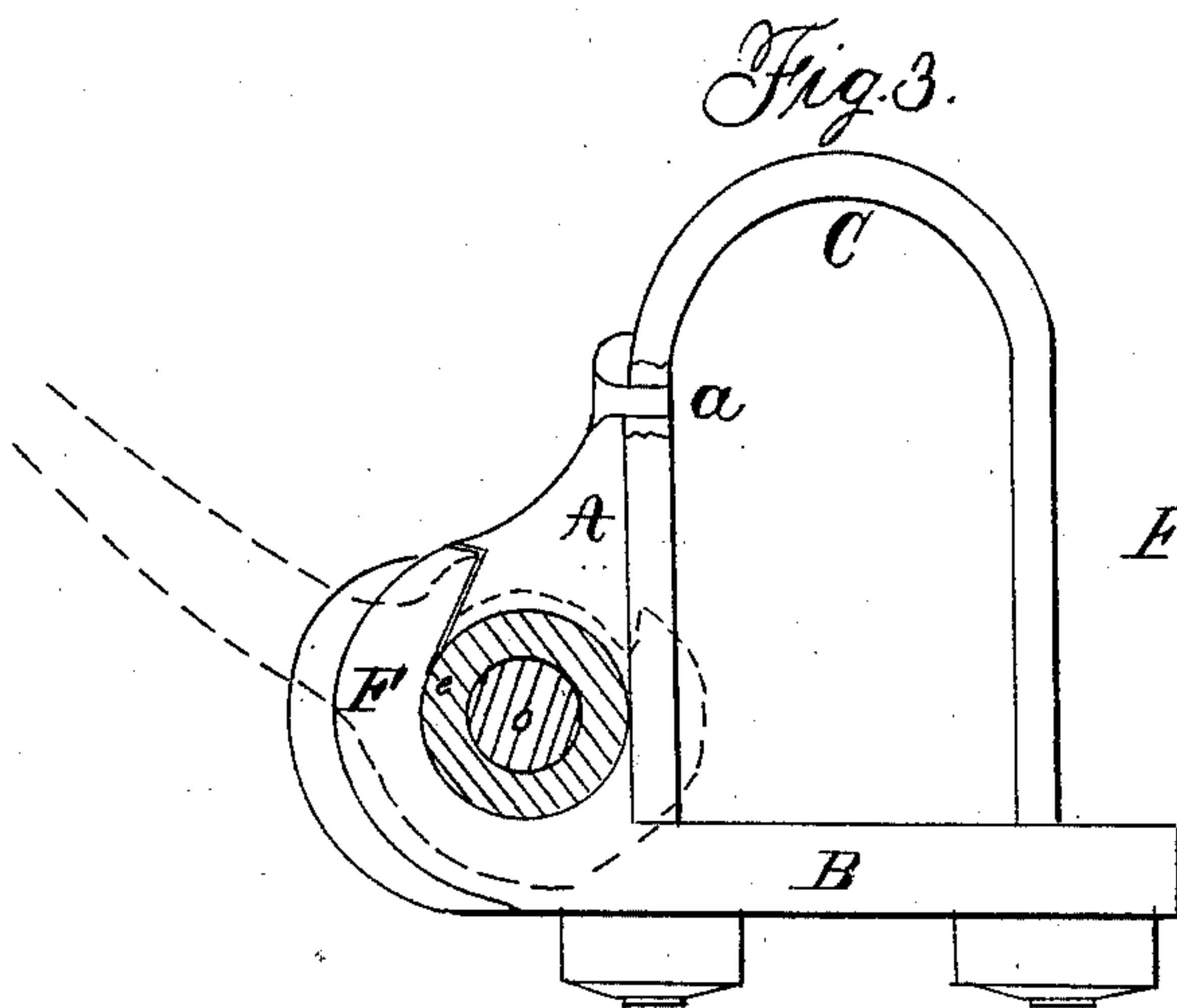
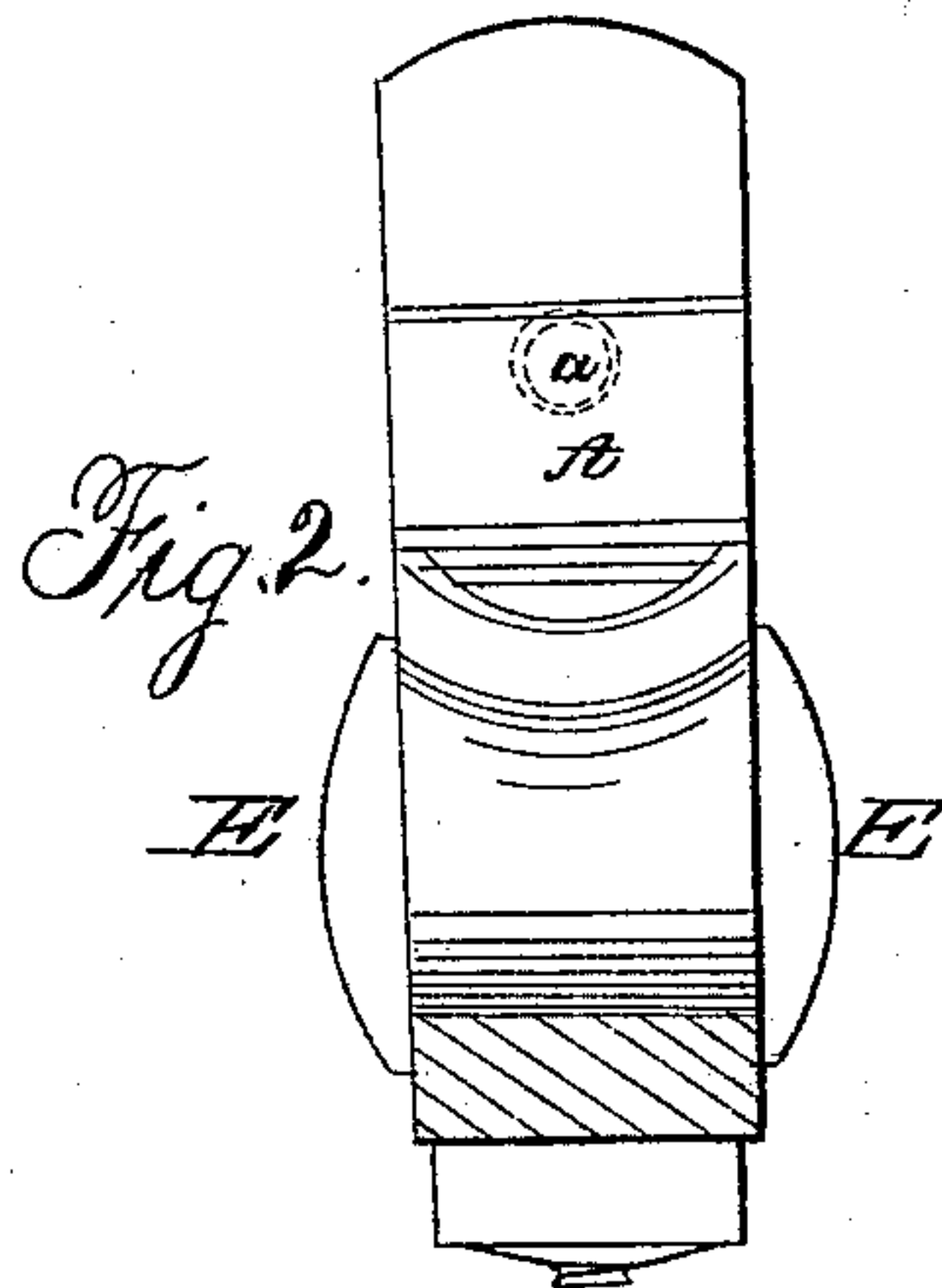
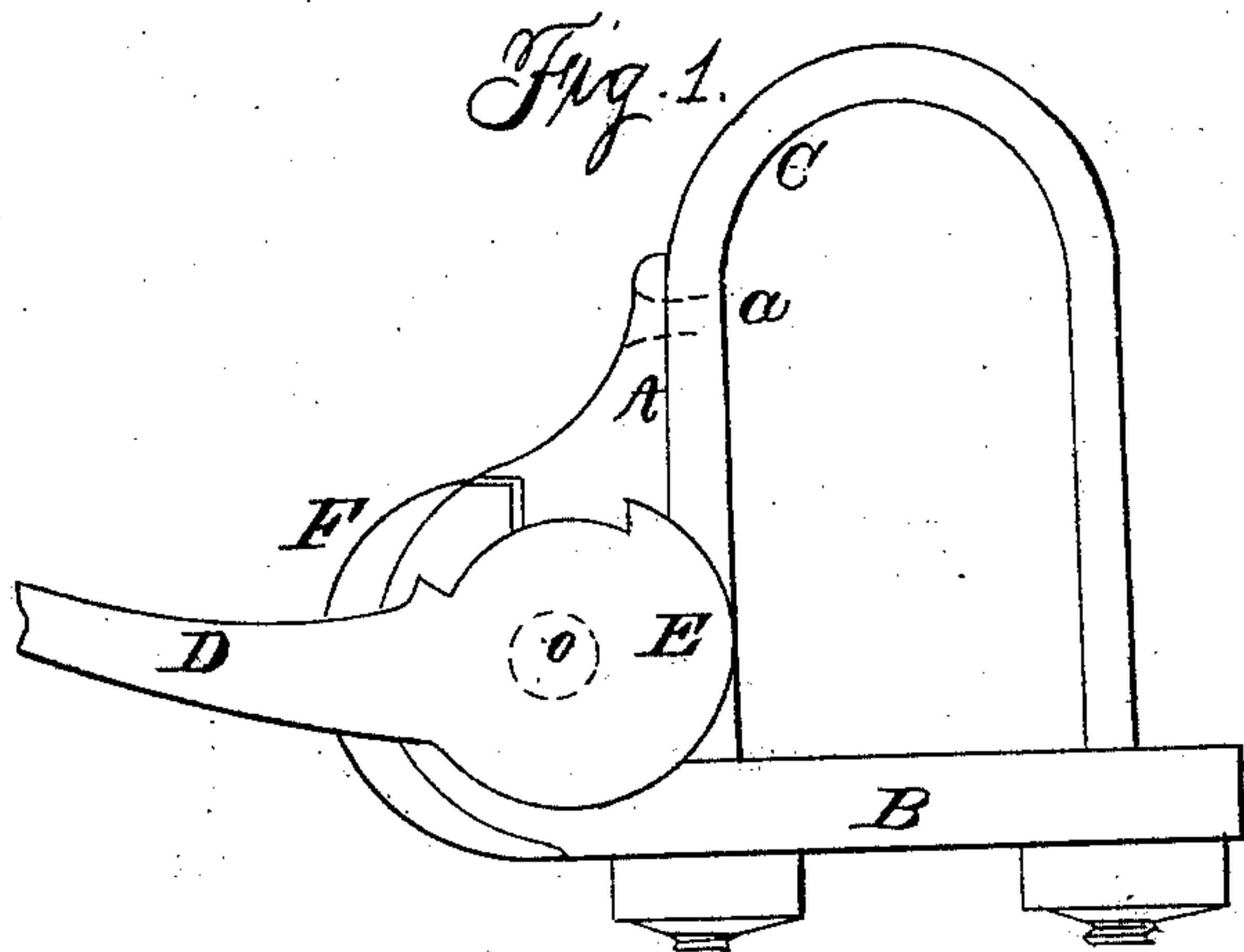


J. J. BROWN.

Thill-Coupling.

No 57,854

Patented Sept. 11, 1866.



Witnesses.

O. J. Dodge
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UNITED STATES PATENT OFFICE.

JAMES J. BROWN, OF MADISON, WISCONSIN.

IMPROVEMENT IN THILL-COUPPLINGS.

Specification forming part of Letters Patent No. 57,854, dated September 11, 1896.

To all whom it may concern:

Be it known that I, J. J. BROWN, of Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Attaching Thills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon—like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use the invention, I will proceed to describe it.

My invention consists in a novel method of constructing a thill attachment and clip, by which the thill can be securely fastened, and at the same time can be readily attached or detached without difficulty, as hereinafter explained.

Figure 1 is a side view of the parts in position. Fig. 2 is a front view; Fig. 3, a longitudinal vertical section; and Fig. 4 represents a modification of the same.

I construct the clip C in the usual manner, and secure it to the axle by the bar B, which has its front end extended forward and curved upward, as shown in Figs. 1 and 3, in the form of a hook, F. By these means a cavity is formed between the front bar of the clip C and the rear side of the hook, as shown clearly in Fig. 3, to receive the bolt *o*, attached to the rear end of the thill-iron, and the packing *e*, which surrounds said bolt.

D represents the thill-iron, which consists of a stem or bar, bolted to the end of the thill or tongue in the usual manner. At the rear end this iron D is bifurcated or forked, so as to embrace the hook F. The rear end of the iron D, where it is forked, is enlarged vertically, and made in a circular form, as shown at E, Figs. 1 and 2. These cheeks E are united by a bolt, *o*, which extends across from one to the other, the cheeks E being made of sufficient diameter to wholly cover the cavity and the packing therein on each side. A packing of rubber or leather is placed so as to surround the bolt *o*, as represented by *e* of Fig. 3, whereby all jar or rattling of the parts is prevented when united as there shown.

The bolt *o* and its packing *e* are held in the

cavity by a button, A, which is pivoted at *a* to the front side of the clip C in such a position that when it stands vertically, as shown in Figs. 1 and 3, its lower end will rest upon the upper surface of the packing. This button A has its lower end made concave, to fit the upper surface of the packing, as shown in Fig. 3, and is of such a length that when arranged as shown its lower end will be embraced between the cheeks E, whereby it is prevented from being accidentally turned or displaced.

In order to permit the button A to be turned to one side and reversed in position, as is necessary when it is desired to remove the thill, a recess is cut in the periphery of one of the cheeks E, as shown at *n*, Fig. 1, so that when the thill is elevated until said recess coincides with the lower end of the button, as shown in red in Fig. 3, the button can then be swung to one side, away from over the bolt and packing, when the latter can be at once lifted out, thus detaching the thills or tongue, as the case may be.

To attach the thills or tongue it is only necessary to swing the button to one side, drop the bolt *o* into the cavity, swing the bottom back—the thills, of course, being elevated so as to permit the end of the button to pass through the notch *n*—and then lower the thills into position.

It will be observed that the cheeks E not only hold the button in place when the thills are in their normal position, but they also cover and protect the ends of the packing on both sides, and also have a bearing against the sides of the hook F and the front part of the clip C, thus receiving whatever side strain and wear there may be.

Fig. 4 represents the same plan, somewhat modified. In this case the bar B and clip C are made in the same form, except that instead of the front end of the clip passing through the bar and being secured by a nut, they are either forged in one piece or are united at that point by having the front end of the clip riveted to the bar, either plan being adopted as may be most convenient in the manufacture.

The button A, instead of being pivoted to the clip, as before described, is provided with

a stem, *b*, which passes down through a hole in the bar *B*, and is there secured by a nut, *c*, as shown, a recess being cut in the rear side of the packing *e* for the reception of the stem *b*. The object of this arrangement is to tighten up the packing as the latter becomes worn by use; and this is accomplished by simply screwing up the nut *c*, which draws the button or head *A'* down upon the packing *e* and compresses it.

When the packing becomes worn or loose with the previously-described arrangement, it is readily tightened by simply inserting a small strip of rubber or leather between the packing and the bottom of the cavity, or between the button and the packing.

By these means I construct an attachment for thills or tongues of vehicles which is absolutely safe against becoming accidentally detached, which is so packed as to prevent all rattling, and which can be attached or detached with great ease and rapidity.

Having thus described my invention, what I claim is—

1. The thill-iron *D*, having its rear end divided, and provided with the cheeks *E*, one or both of which is provided with the notch *n* for the button to move in, as and for the purpose set forth.

2. Forming the cavity for the reception of bolt *o* and its packing *e* by means of the bar *B*, having its front end bent, as shown, and the front leg of the clip *C*, as herein shown and described.

3. The button *A*, pivoted to the clip *C*, in combination with the cheek *E*, provided with the notch *n*, arranged to operate as and for the purpose set forth.

4. Securing the button *A'* by means of the stem *b* and nut *c*, when used in connection with the packing *e*, surrounding the bolt *o*, as shown, for the purpose of tightening up the packing, as shown in Fig. 4.

JAMES J. BROWN.

Witnesses:

W. C. DODGE,

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