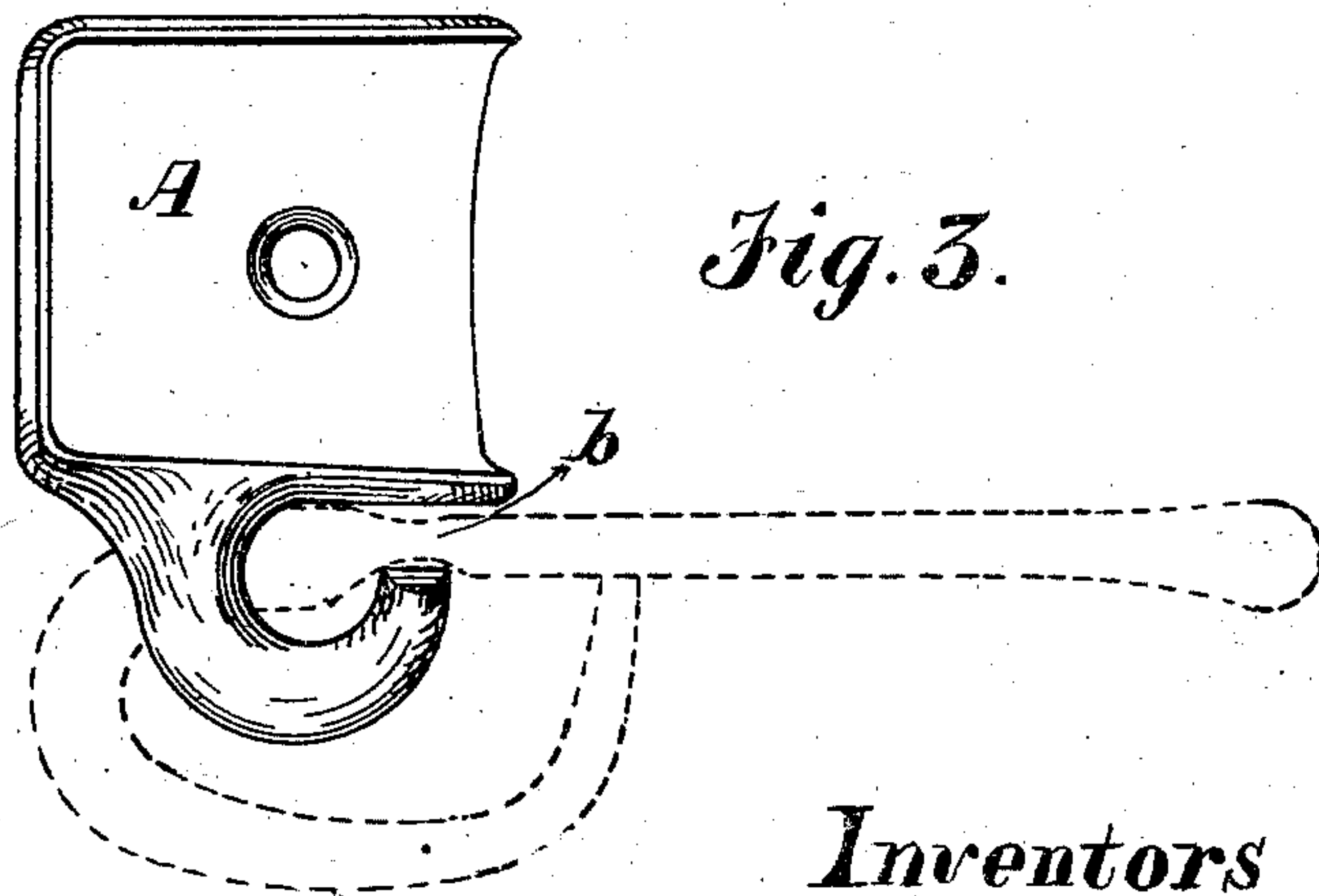
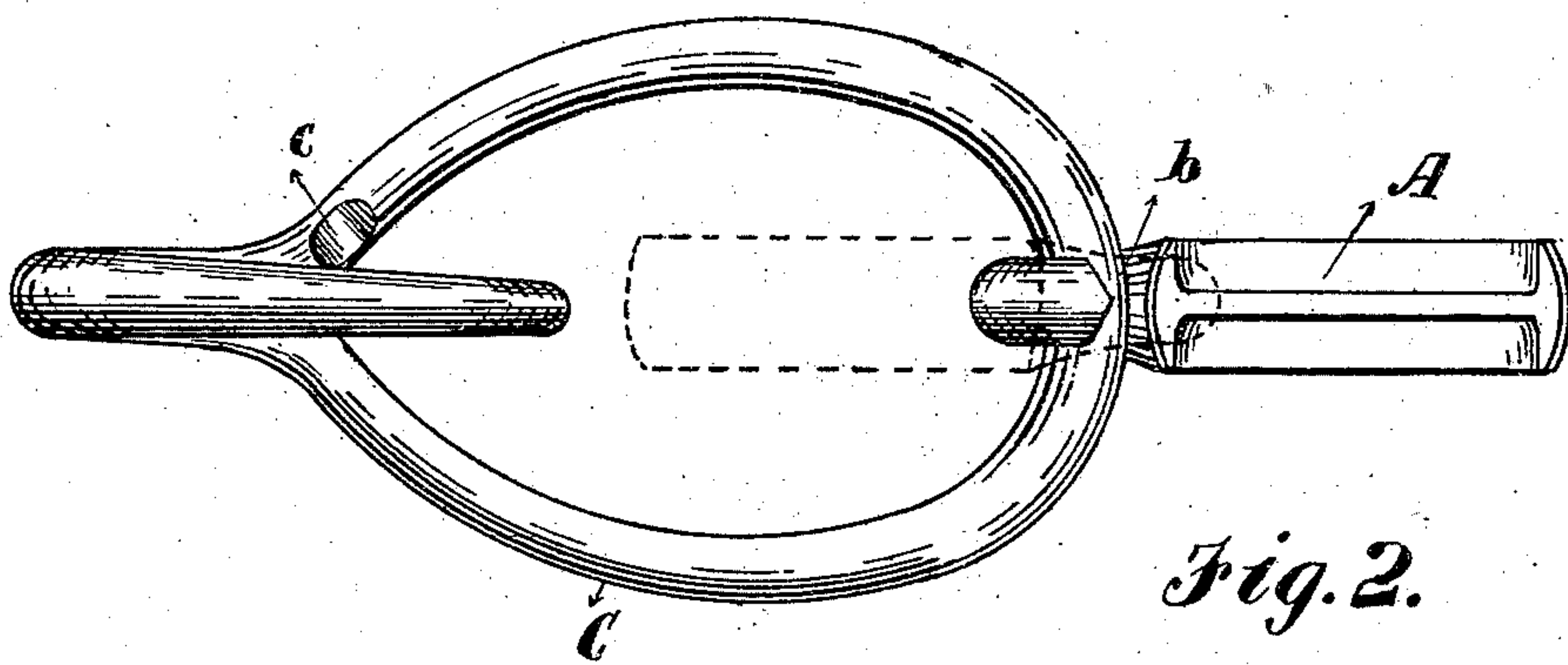
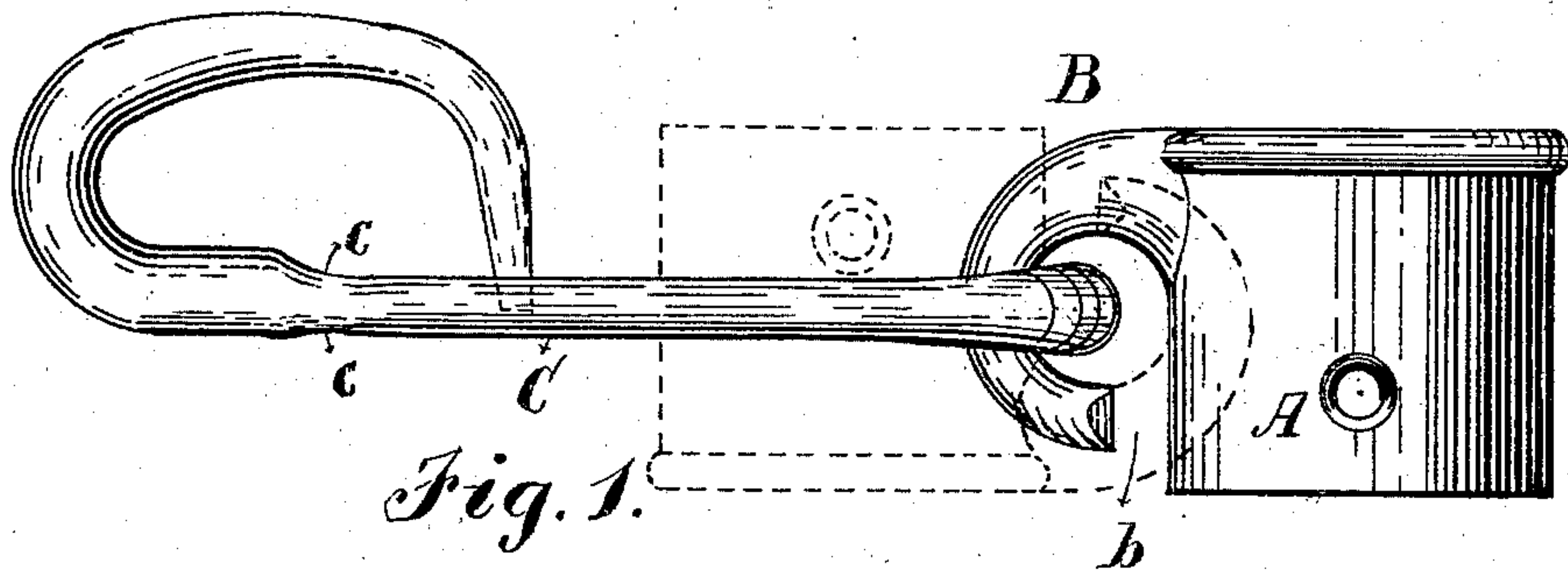


W. D. EWART & J. C. COONLEY.

WHIFFLETREE HOOK AND CLIP.

No. 190,019.

Patented April 24, 1877.



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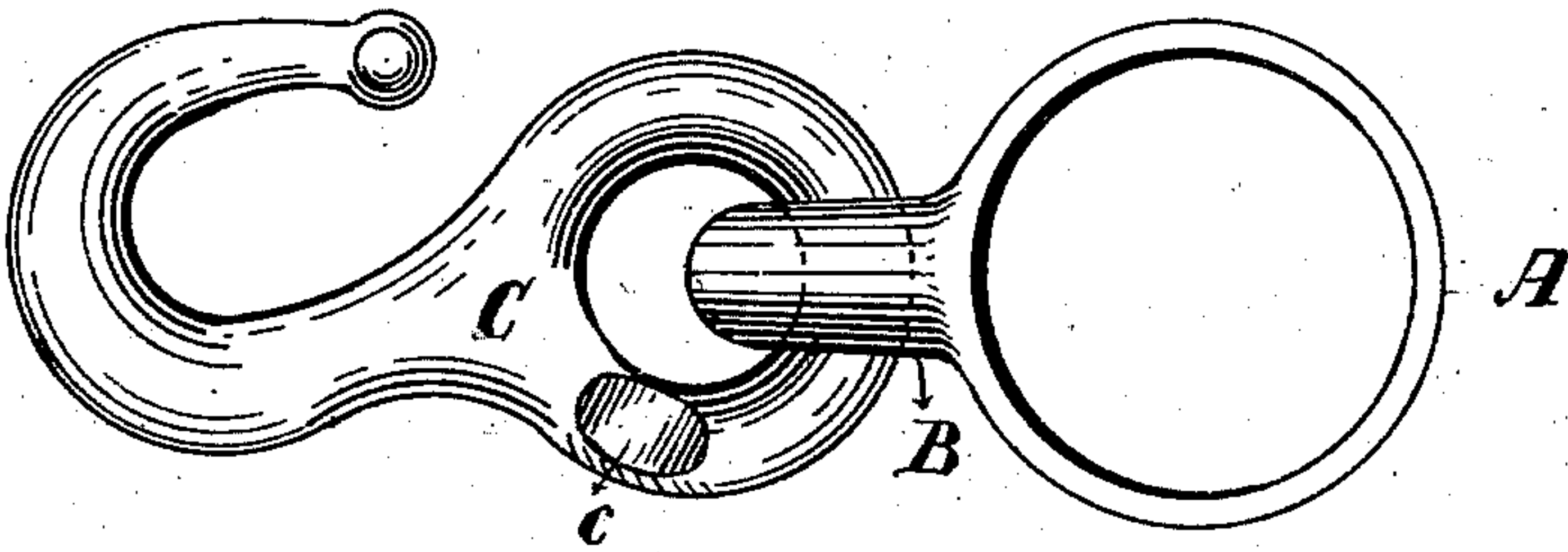


Fig. 4.

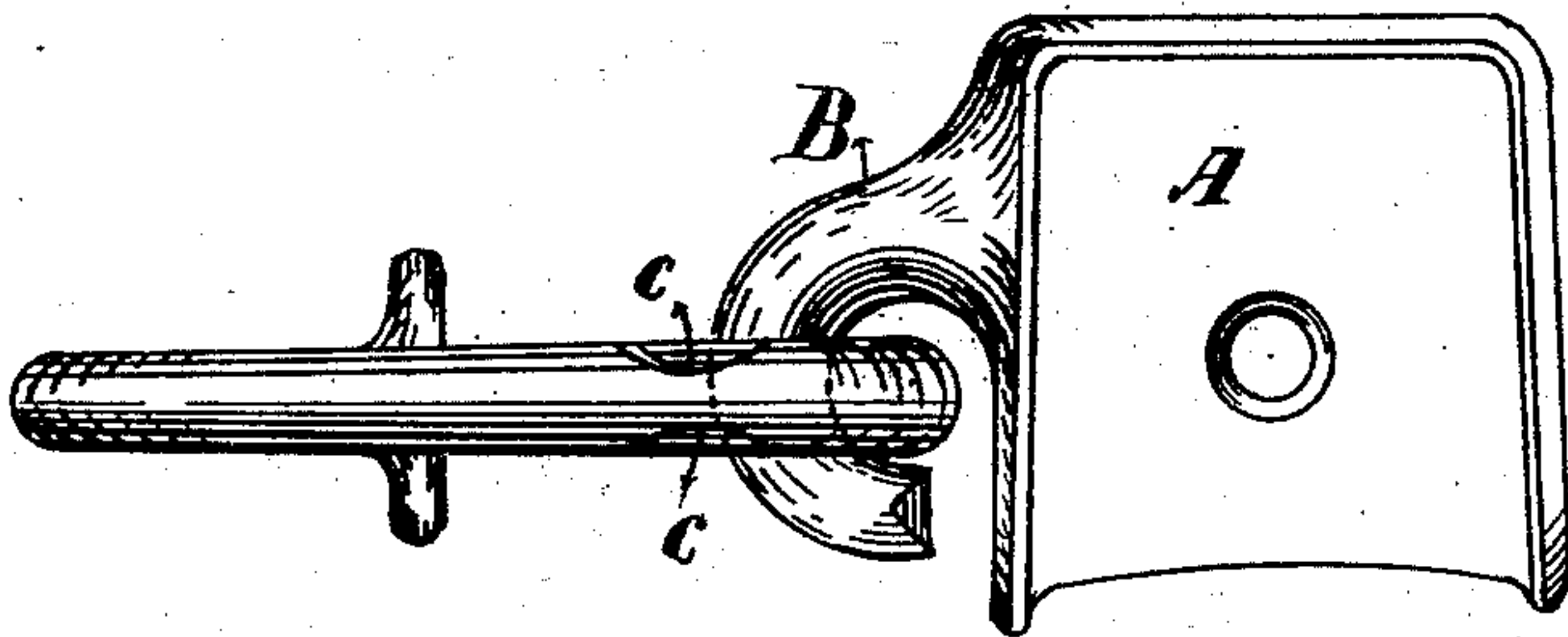
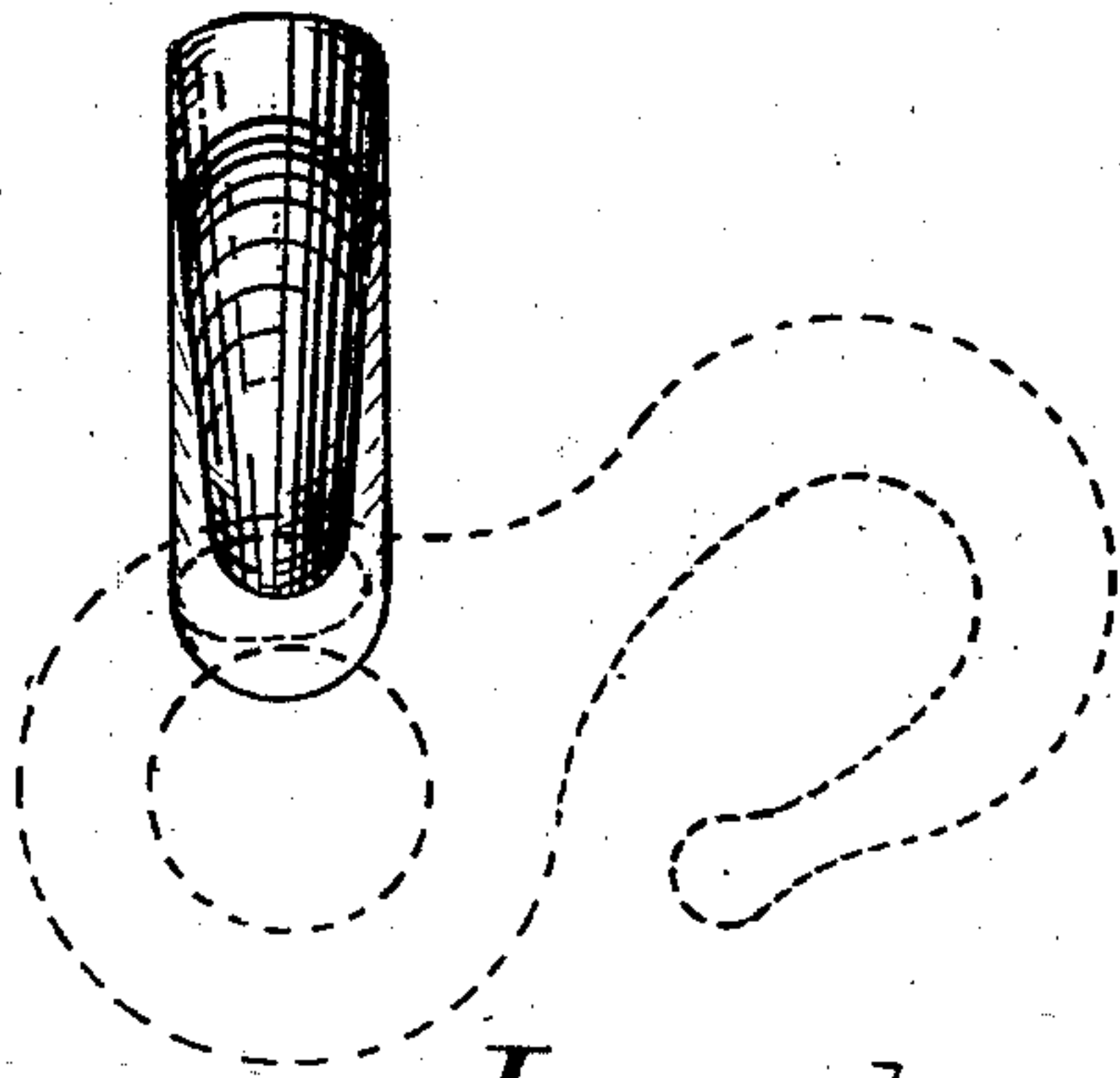


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM D. EWART AND JOHN C. COONLEY, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN WHIFFLETREE HOOKS AND CLIPS.

Specification forming part of Letters Patent No. **190,019**, dated April 24, 1877; application filed March 26, 1877.

To all whom it may concern :

Be it known that we, WILLIAM D. EWART and JOHN C. COONLEY, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Trace-Hooks and Clips or Ferrules for Whiffletrees, which is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan view of a ring-ferrule and trace-hook embodying our improvement; Fig. 2, a side view of the same, a clip being substituted for the ferrule; Fig. 3, a plan view of the clip, with hook, in dotted lines, in position for coupling and uncoupling; and Figs. 4, 5, and 6 represent the ferrule and clip with a trace-hook of different construction.

The object of our invention is to construct a trace-hook and ferrule or clip in such a manner that they may be readily coupled and uncoupled, whether attached to or detached from the whiffletree, while at the same time accidental uncoupling is measurably prevented.

The invention consists in providing a ring ferrule or clip with an open loop cast in one piece therewith, and combining with it a trace-hook, constructed with a portion of its ring depressed, to permit it to pass into the opening in the loop at this point.

In the drawings, A represents a ring ferrule or clip of ordinary construction, which is provided with a loop, B, cast in one piece therewith, but not quite closed down at one end, so that a narrow opening, *b*, into the loop is provided.

The trace-hook C is made of any of the well-known forms, and the ring portion thereof is provided at some point near the hook end with depressions *c*, which may be made in one or both sides of the ring. These depressions are sufficient to make the ring at this point so thin that it may be slipped into the loop B through the opening *b*, thereby coupling the two together.

The remaining portion of the ring is larger than the opening *b*, so that it cannot be disconnected from the loop, except at the single

point *c*, and therefore, when the two parts are coupled together and fastened to the whiffletree, there is little danger of uncoupling.

In Figs. 1, 2, and 3 a hook is shown with a large elongated ring, intended to be swung over the end of the whiffletree, so that the relative position of the trace-hook and clip or ferrule will be as shown in dotted lines in Figs. 1 and 2. But our invention is not confined to trace-hooks of this particular construction. It is equally applicable to a hook of ordinary construction, like that shown in Figs. 4, 5, and 6 of the drawings, which illustrate the application of the depressions to a trace-hook of the most common form.

The depressions *c* may be made by cutting away a portion of the body of the ring; but it is preferable to form them by compression, or in any manner which will flatten out or expand the ring at this point, for the body of the ring will not then be diminished in substance, and consequently it will be as strong as though the depressions were not made.

The rings can be made without depressions, the body being reduced so as to enter the passage into the loop; but the construction with depressions is preferable, as it permits the passage into the loop to be made very narrow, without correspondingly reducing the amount of metal in the ring at the coupling-point, and therefore the coupling can be made safe without impairing the strength of the trace-hook.

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

A ring ferrule or clip provided with a loop having a narrow opening at one end, in combination with a trace-hook, the ring of which is depressed at some one point, to adapt it to be passed through the opening in the loop for coupling and uncoupling, substantially as and for the purpose described.

WILLIAM D. EWART.
JNO. C. COONLEY.

Witnesses :

L. A. BUNTING,
W. C. CORLIES.