

(No Model.)

G. F. COPE.
THILL COUPLING.

No. 532,948.

Patented Jan. 22, 1895.

Fig. 1.

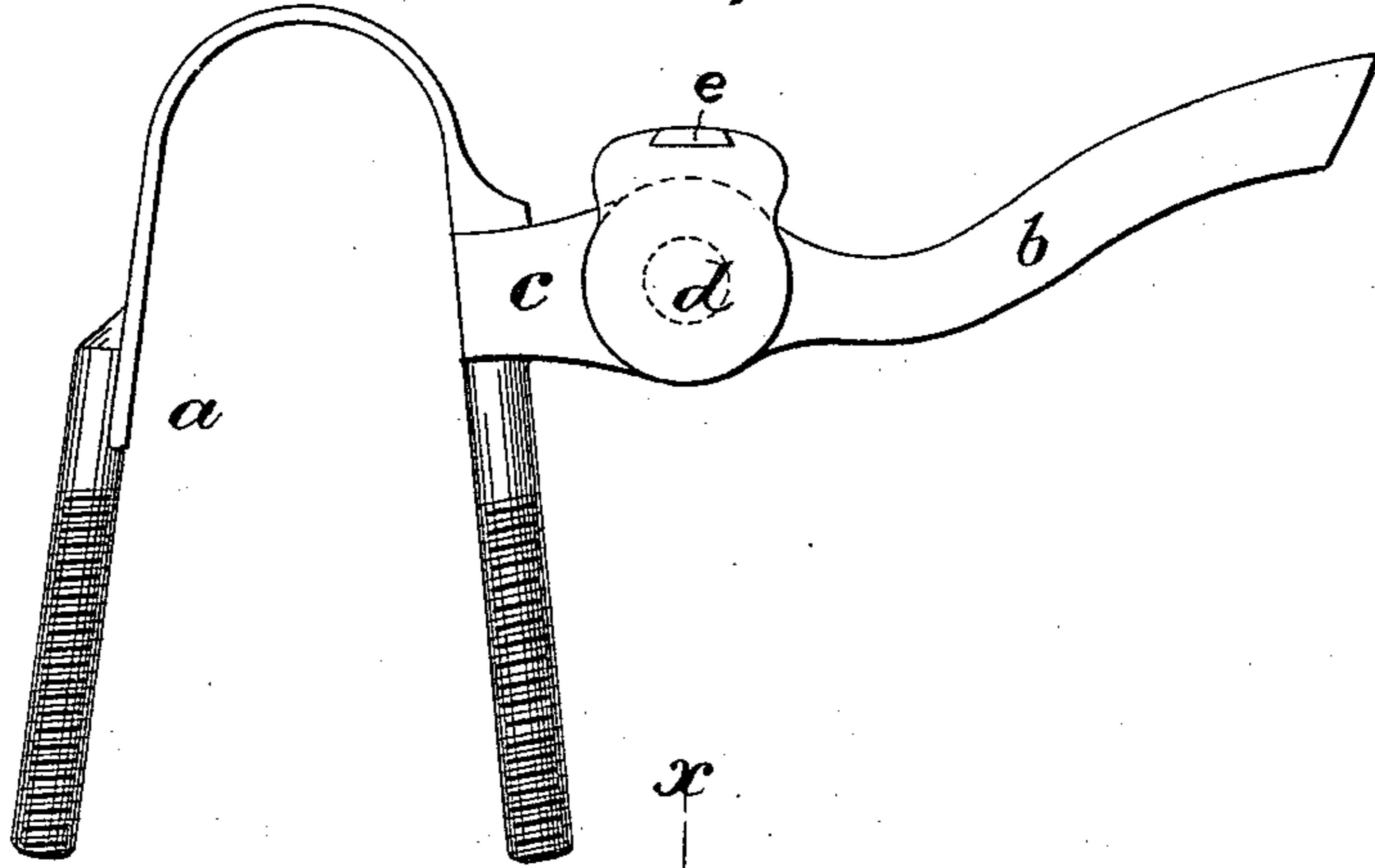


Fig. 2.

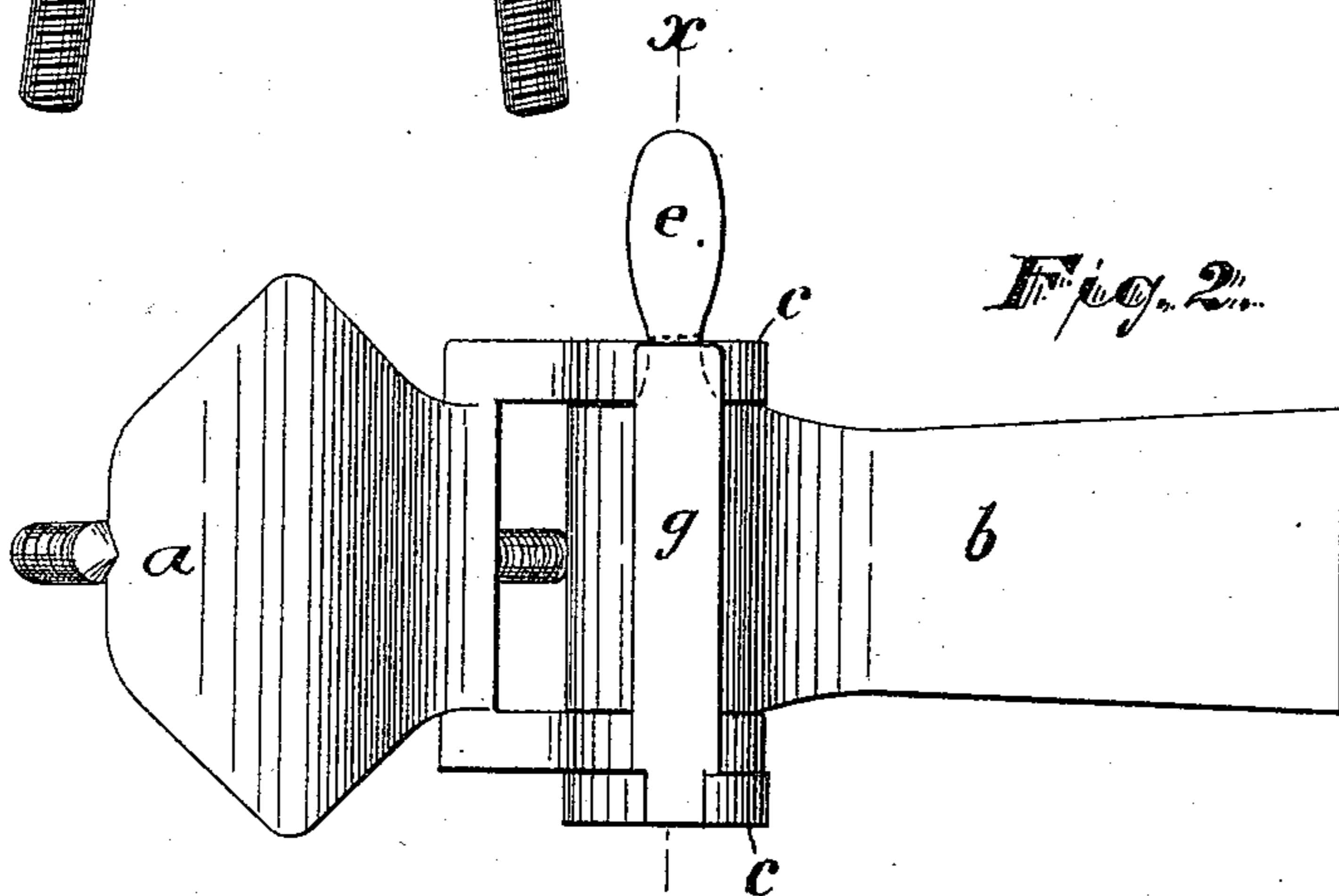


Fig. 3.

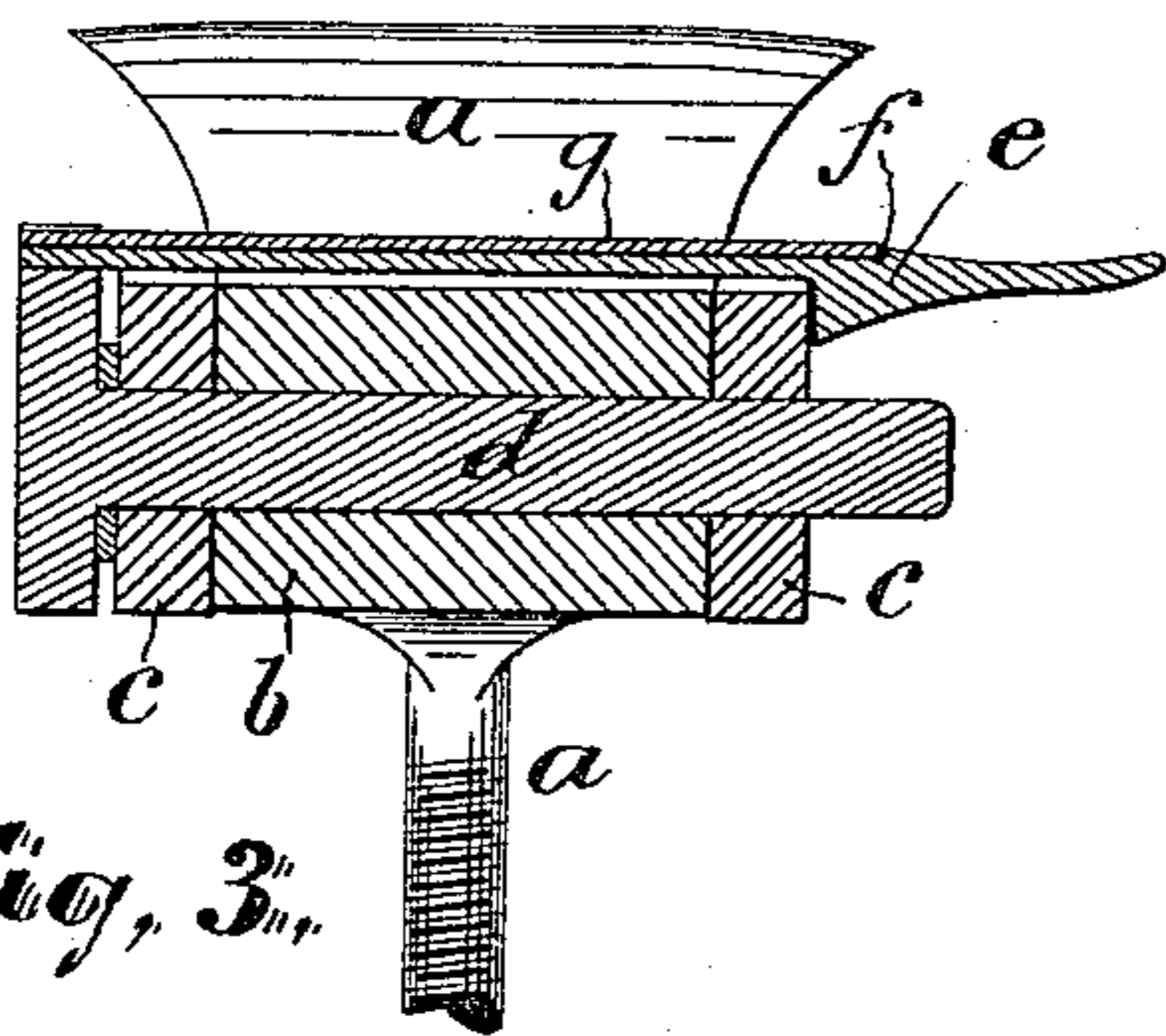
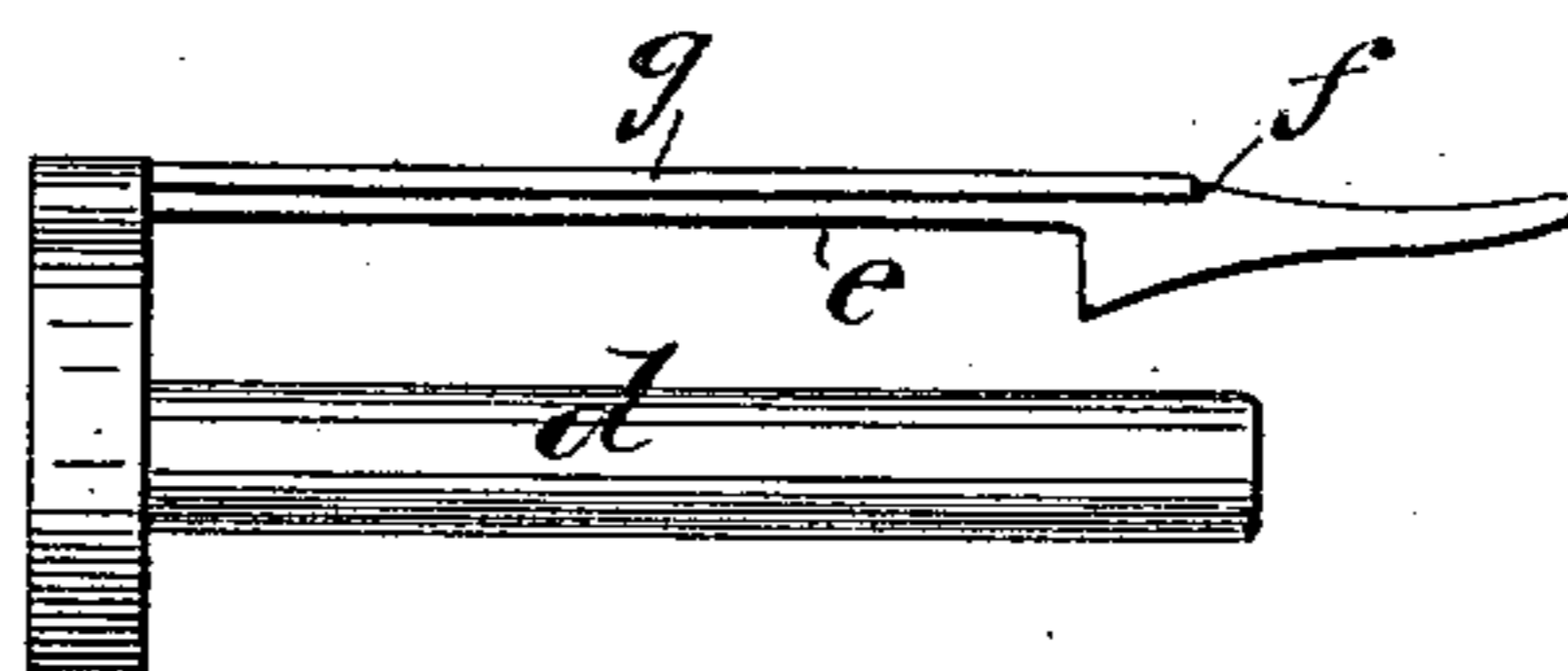


Fig. 4.



Witnesses

Inventor

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UNITED STATES PATENT OFFICE.

GEORGE F. COPE, OF HILTON, NEW JERSEY.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 532,948, dated January 22, 1895.

Application filed December 9, 1893. Serial No. 493,205. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. COPE, a citizen of the United States, residing at Hilton, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby 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 letters of reference marked thereon, which form a part of this specification.

The object of this invention is to prevent the coupling- or jack-bolt from becoming accidentally detached from the thill-irons and to do away with the use of nuts upon said bolts; and the invention consists in the improved coupling- or jack-bolt and in the arrangement and combination of the parts connected therewith, as herein set forth and finally pointed out in the claim.

Referring to the accompanying drawings, in which similar letters of reference designate corresponding parts in each of the figures where they occur, Figure 1, represents, in side elevation, a thill coupling embodying my improvement and Fig. 2 a top plan of the same. Fig. 3, is a section through line *x*, of Fig. 2, and Fig. 4 is a detail, in elevation, of the coupling-bolt, &c.

In said drawings *a* designates an axle-clip, *b* the thill-irons, and *c* the jaws in which said thill-irons are secured, all of which are of the ordinary construction.

In devices of this kind heretofore constructed it has been common to form the spring catch or retaining device and the bolt which it is to secure integral, or to secure them together in such a manner that it is impossible to separate them without either destroying them or requiring more work than it would require to make a new one. It is well known that the constant movement of the parts will, in time, wear away the shoulder of the catch and the side of the clip against which it bears to such an extent that the catch is liable to slip over the clip and permit the bolt to escape. To obviate these defects resort has been had to making the

spring catch so stiff and strong that it would hold even if the parts did become worn, but this makes it so hard to unfasten the catch when it is desired to remove the bolt that it virtually renders it impracticable and therefore of no account. I have found, however, that by making the spring very light and providing it with a brace or latch which will engage with a shoulder at its outer end, it can be detached when it is desired to remove the bolt. This obviates the last mentioned difficulty, and by making the catch and brace detachable from the head, the first mentioned difficulty is also obviated.

My improvement consists in a non-threaded bolt *d* having a head with an enlargement or portion *d'*, projecting beyond one of the said jaws, as shown, and a dove-tail or undercut seat formed therein, and a spring-catch *e* removably but firmly secured in said undercut seat and projecting therefrom parallel with the bolt and adapted, when the bolt is thrust through the jaws and thill-irons, to automatically engage with one of said jaws and thereby hold the parts firmly and securely in position, as will be understood upon reference, more particularly, to Figs. 3 and 4. The bolts may at any time be readily removed and the thills uncoupled, &c., by simply raising the spring-catch until the latter is disengaged from the jaw, as will be manifest.

The advantages of this improvement will be readily seen and appreciated by those having a practical knowledge of the art to which it appertains.

Should the spring-catch become useless from any cause or out of repair, it can be readily removed from its seat by punching it out with a suitable punch and a new one be inserted and secured in its place as will be obvious. To prevent the catch from being thrown out of engagement with the jaw by any unusual or very severe jar or usage I form a shoulder *f* near the free end thereof and attach a spring-brace, *g*, to the catch, the free end of which engages, normally, with said shoulder so as to prevent such accidental disengagement, as will be understood.

In order to remove the bolt, when provided with the brace, the latter must be raised to

clear the shoulder before the catch can be disengaged from the jaw, as will be obvious.

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

5 A bolt for thill couplings, the head of which is provided with a catch, and a brace secured thereto, the upper surface of the outer end of the catch being provided with a shoulder, and
10 the outer end of the brace being adapted to

engage therewith and lock the catch against movement, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of December, 1893.

GEORGE F. COPE.

Witnesses:

OLIVER DRAKE,

ROBERT SOLLBERGER.