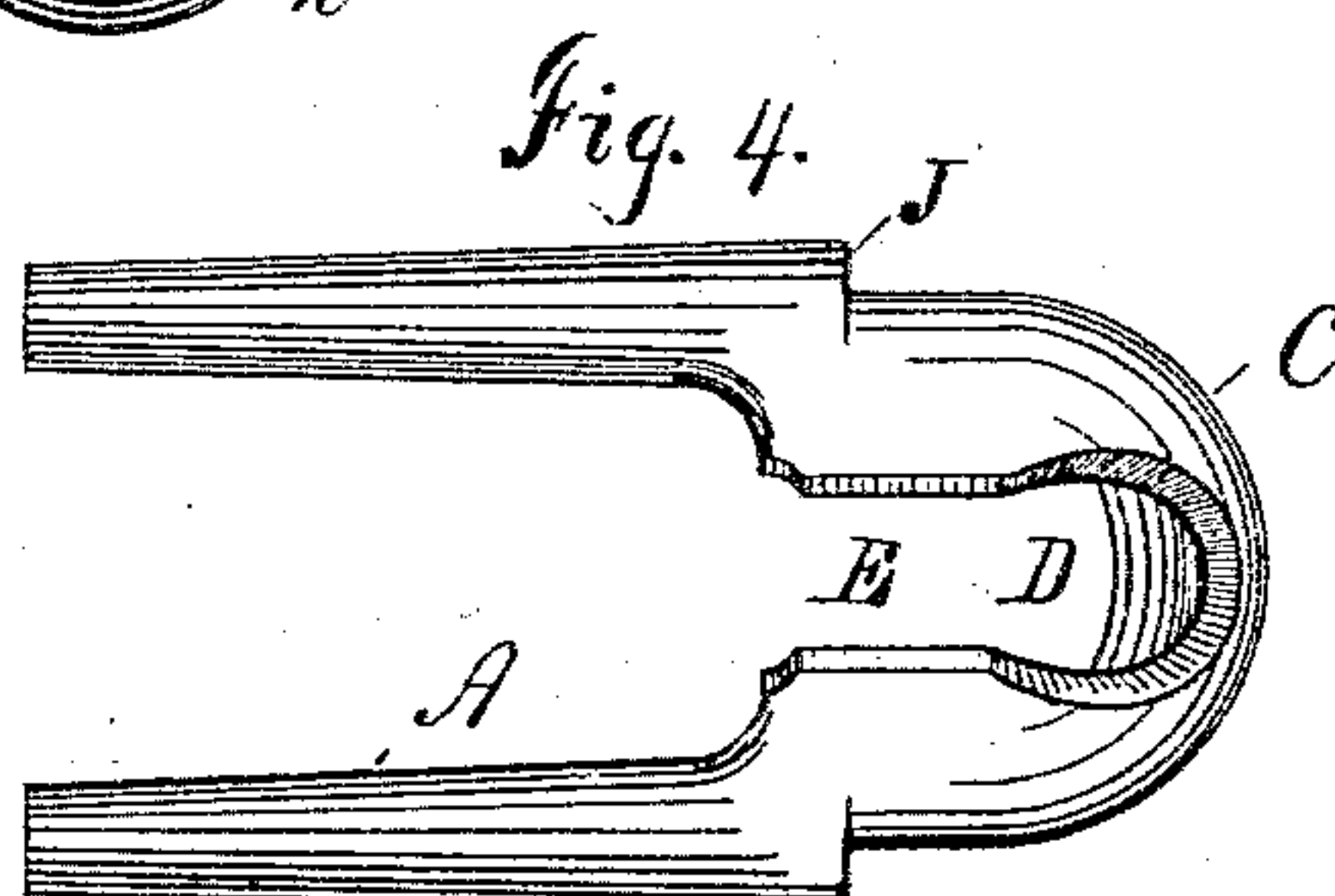
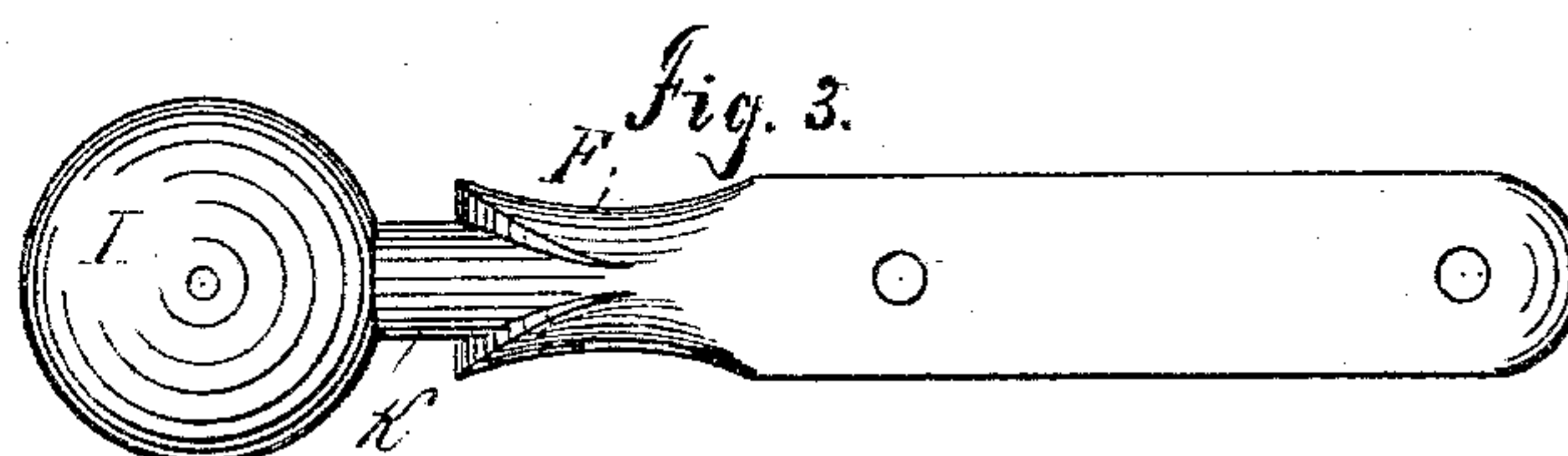
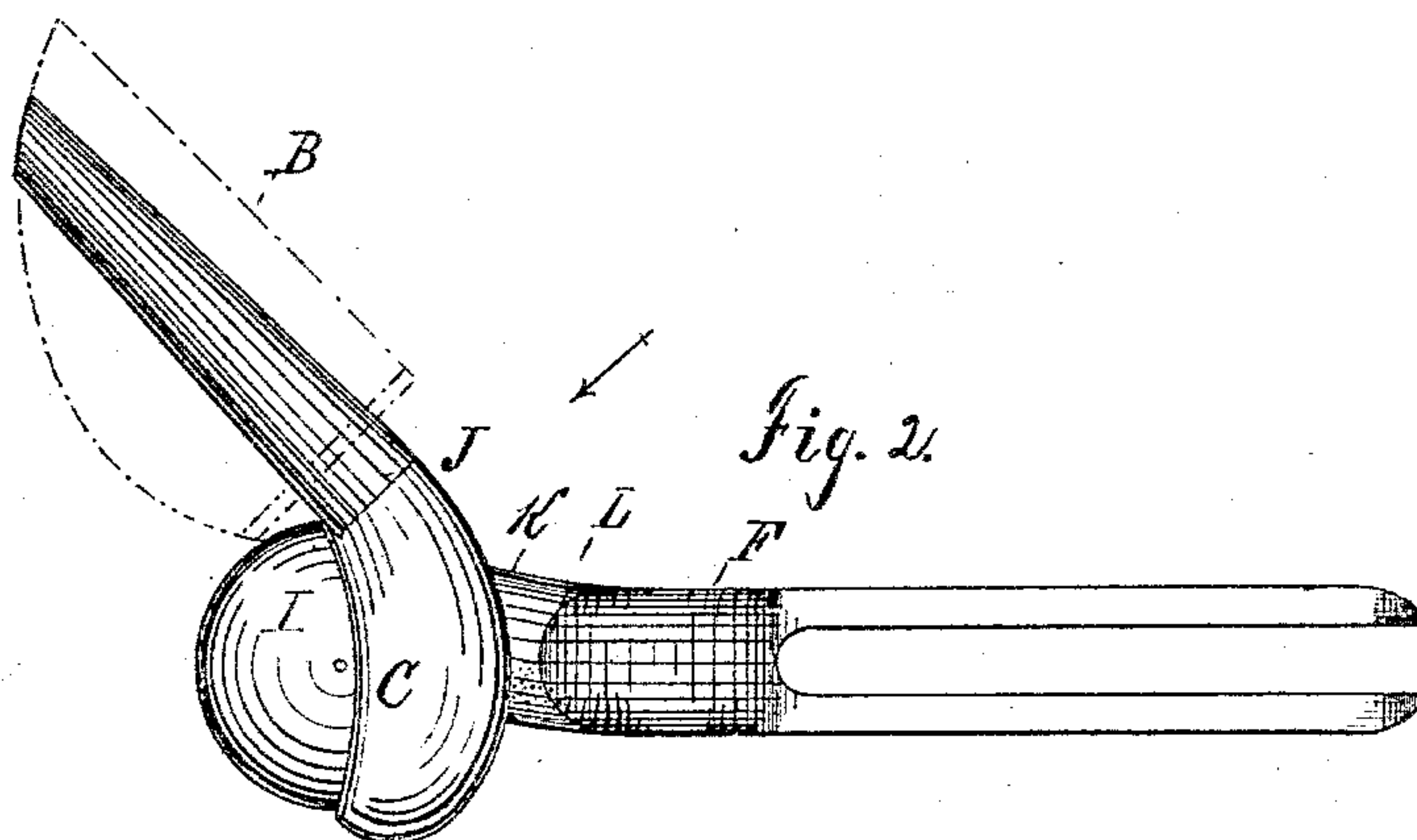
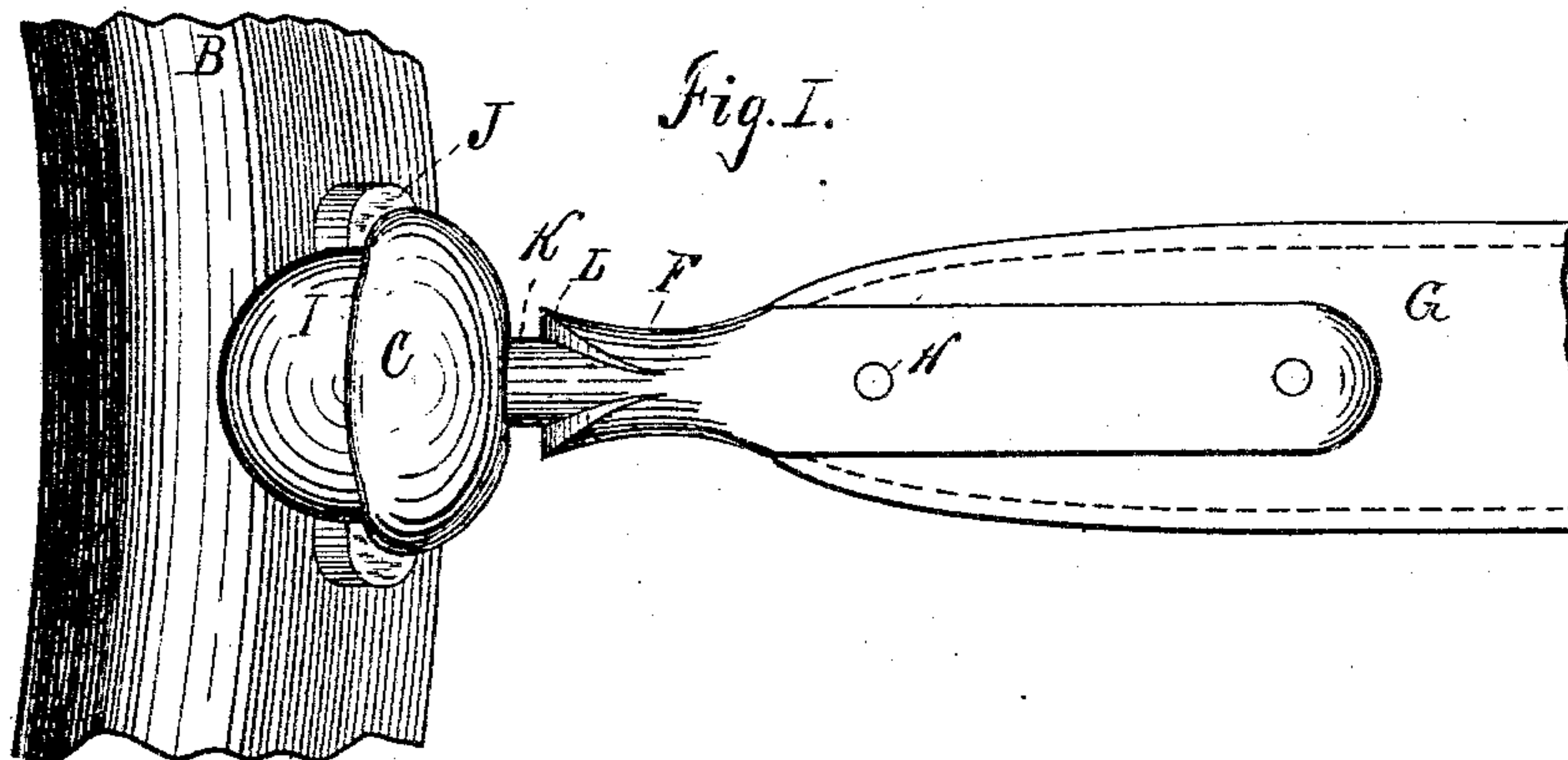


(No Model.)

F. W. HOEFER.  
HAME COUPLING.

No. 369,338.

Patented Sept. 6, 1887.



Witnesses.

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# UNITED STATES PATENT OFFICE.

FREDERICK W. HOEFER, OF FLORENCE, ILLINOIS.

## HAME-COUPLING.

SPECIFICATION forming part of Letters Patent No. 369,338, dated September 6, 1887.

Application filed May 14, 1887. Serial No. 238,218. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK W. HOEFER, a resident of Florence, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Hames; 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 pertains to make and use the same.

Referring to the accompanying drawings, Figure 1 shows the device, seen from one side, in the position it occupies when in use. Fig. 2 shows the same seen from above. The remaining figures are detail views, which are hereinafter fully described.

It is well known that the links which usually connect the hames and hame-traces of a harness are less durable than most other parts, and that they have certain other disadvantages. These faults it is sought to remove by substituting for the links the devices set forth in this application. For this purpose a staple, A, is passed through the hame B at the usual point and in the usual manner, and secured by riveting. The loop or outer end of the staple is bent outward until its plane is nearly at right angles to the ordinary line of draft, and is formed into a hemispherical cup, C, having the central oval aperture, D, from which proceeds the radial slot E, joining the central aperture with the space between the legs of the staple. A short bifurcated rod, F, is fastened to the end of the hame-trace G by rivets H, and is provided with a head, I, which lies in the socket C, the neck K passing through the aperture D. The neck K is bent, as shown, in order that the parts may pass the body of the collar without having the socket C carried too far outward. It is non-cylindrical, so that, although it fits only very loosely in the aperture D, it cannot rotate therein, and consequently the trace G cannot be faced inward by rotation. It is provided with shoulders L, adapted to prevent forward displacement of the head I.

The walls of the aperture D are beveled outward to allow the neck greater range of motion, and the slot E permits the neck to pass into the central opening before the sta-

ple is inserted in the hame. After the staple has been headed, the two parts cannot be disengaged. The shoulders J upon the staple serve to support it, resting upon any unyielding body, while the ends are being headed. The staple should be of such length that when properly inserted in the hame the ball I is nearly in contact with the hame's outer edge.

It is evident that the ball I will in practical use need to rotate only through a small angle, and that consequently nearly half its surface will never come in contact with the surface of the socket. It follows that nearly half the ball may be removed, leaving the surface plane, concave, or convex without interfering with the operation of the device. With the ordinary interlocked links the rapid wear is due to putting the entire strain of the draft upon a small surface, and this surface cannot be materially increased without impairing the universality of the action or giving the links a disproportionate appearance.

My device, without offending the eye, greatly increases the bearing-surface, and at the same time allows perfect freedom of motion, while limiting the departure of the hame-trace from its normal position.

Fig. 3 is a view similar in direction to Fig. 1; but the hame and cup are omitted. Fig. 4 shows the socket C, seen in the direction of the arrow of Fig. 2.

Having now fully set forth the nature and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hame and trace coupling, the combination, with a cup-shaped socket having an elongated central opening and provided with means for attaching it to the hame, of a ball adapted to lie in said socket and provided with a flattened neck adapted to move longitudinally in said opening, but not to rotate therein, said neck being formed with shoulders for limiting its longitudinal motion in said opening, and with means for attaching it to a trace, substantially as and for the purpose set forth.

2. The combination, with the hame B, of

the staple A, having its outer end formed into a cup-shaped socket, C, with a central opening, D, and slot E, the trace G, and the ball I, fastened thereto and having the neck K,  
5 substantially as shown and described, and for the purpose set forth.

In testimony whereof I have signed this

specification in the presence of two subscribing witnesses.

FREDERICK W. HOEFER.

Witnesses:

W. H. WILCOXON,

C. W. GRAHAM.