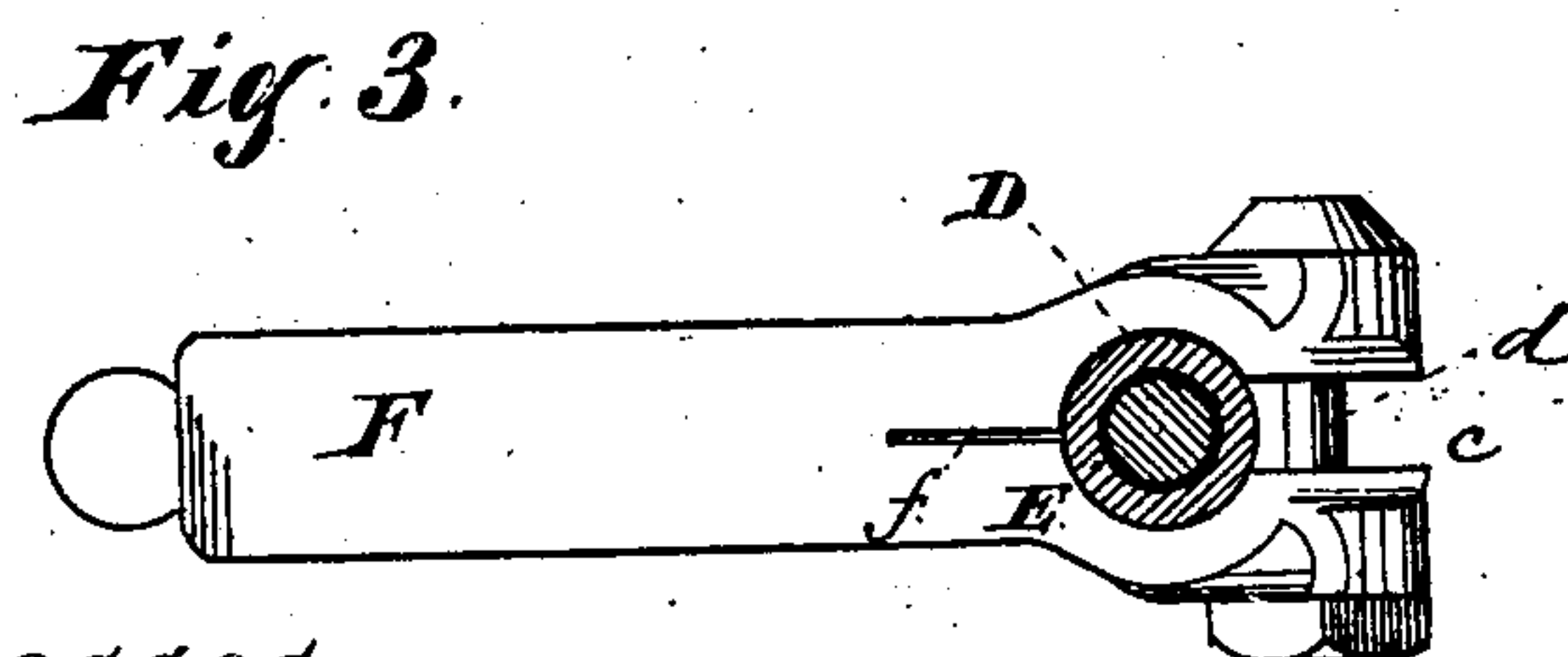
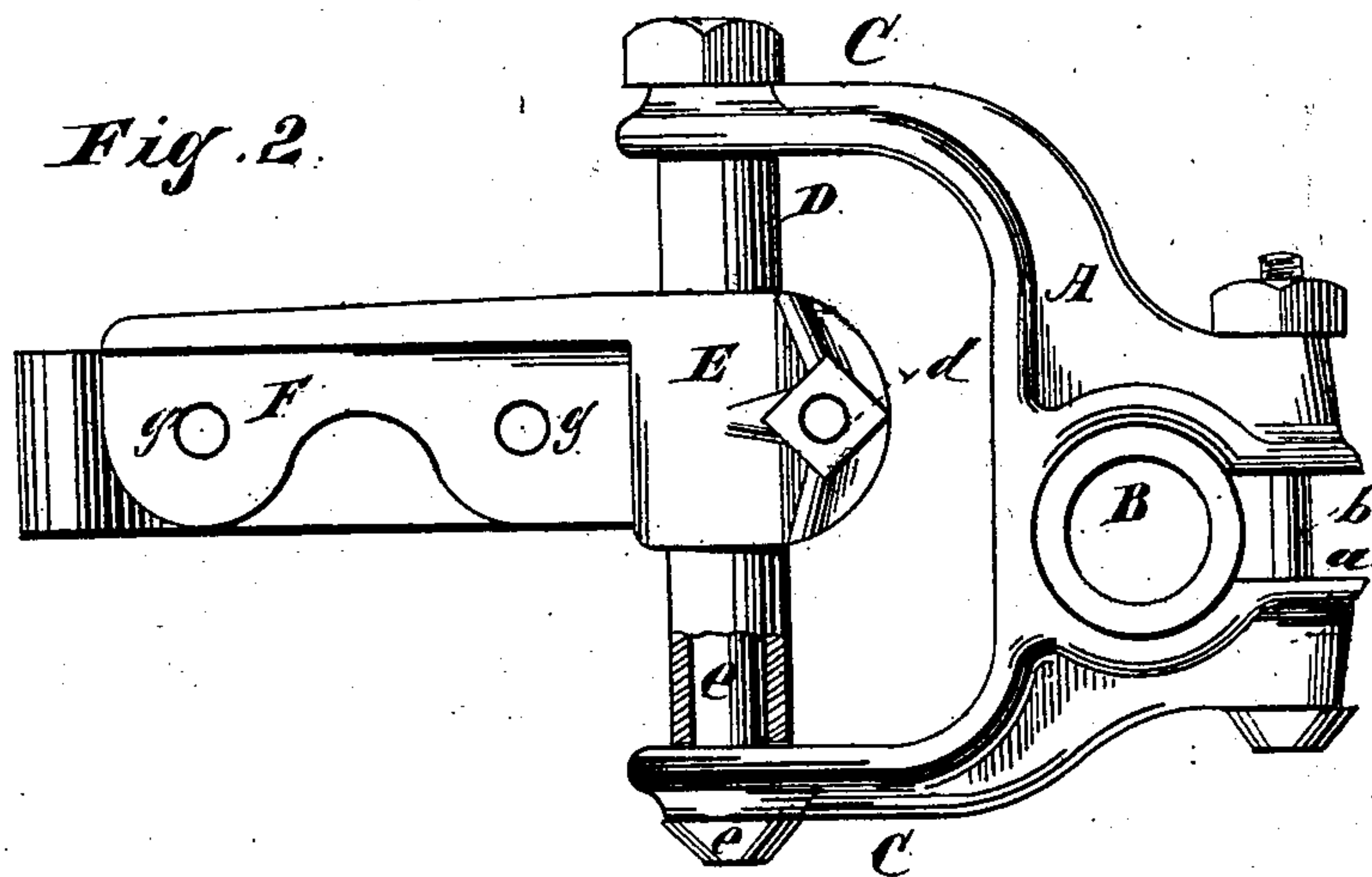
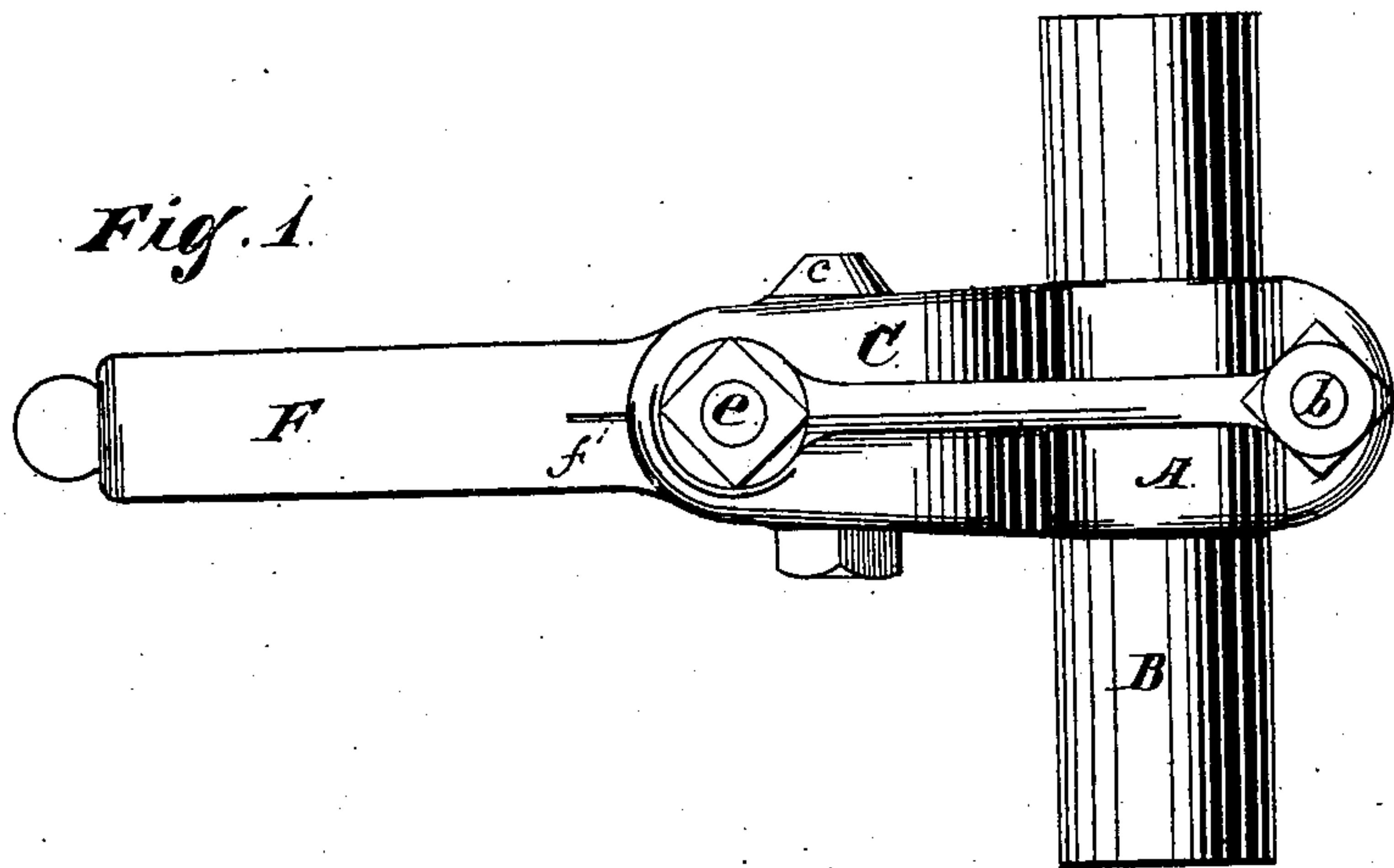


C. A. HAGUE.
Cultivator Coupling.

No. 243,122.

Patented June 21, 1881.



Witnesses:

O. W. Bond
H. W. Murphy

Inventor:

Charles A. Hague

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Fig. 4.

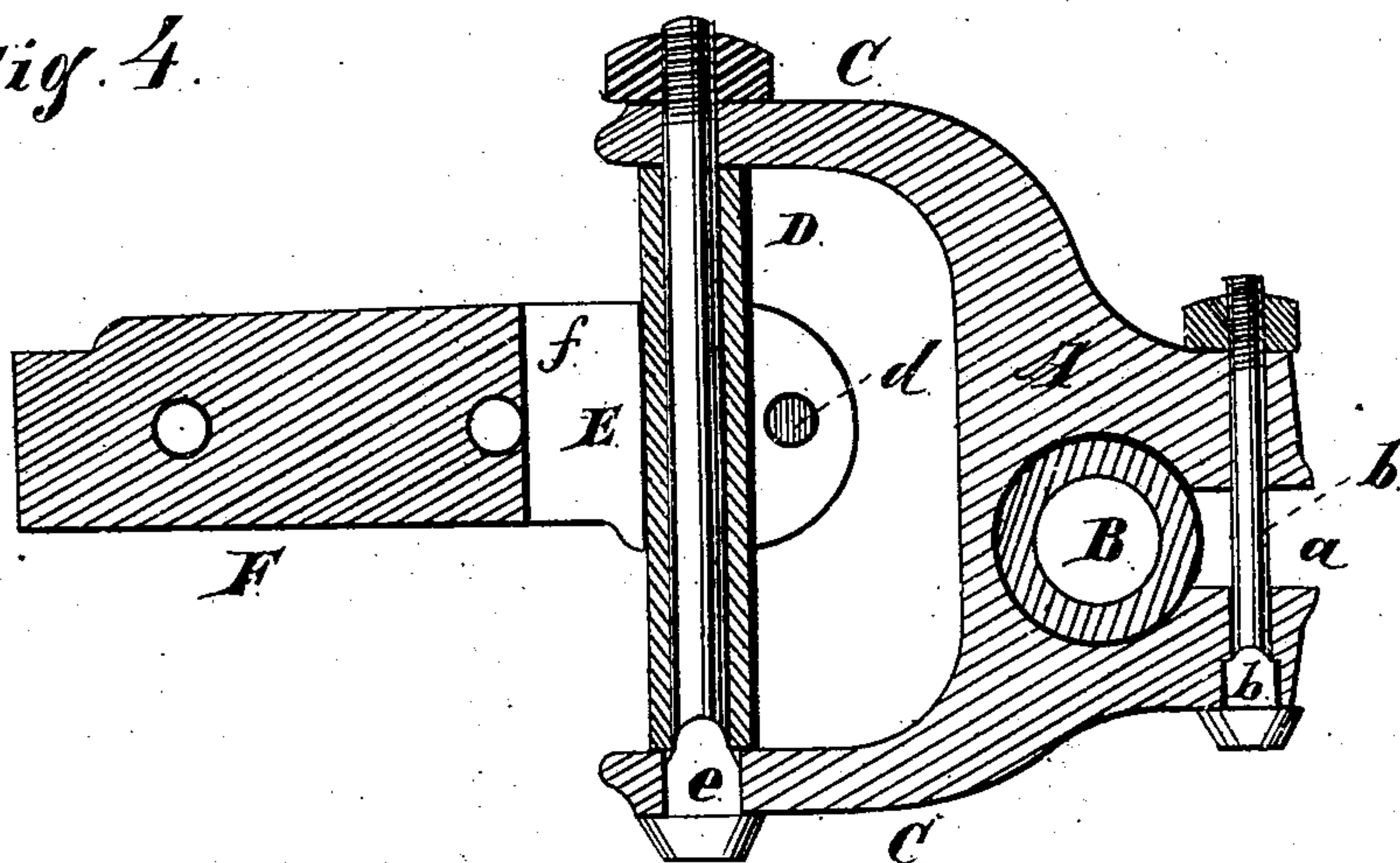
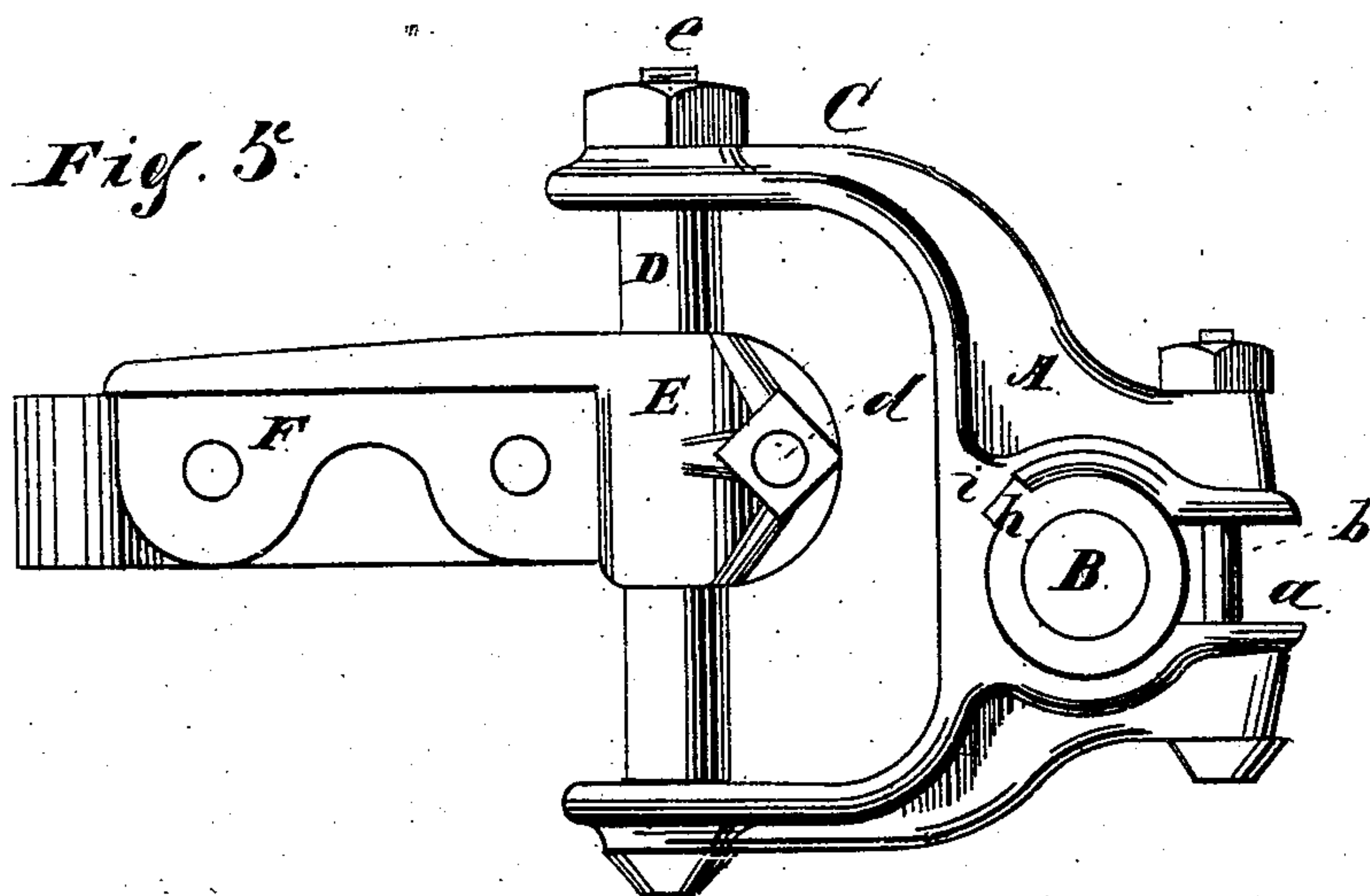


Fig. 5.



Witnesses.
O. W. Bond.
H. W. Murphy.

Inventor
Charles A. Hague.

UNITED STATES PATENT OFFICE.

CHARLES A. HAGUE, OF CHICAGO, ILLINOIS, ASSIGNOR TO FURST & BRADLEY MANUFACTURING COMPANY, OF SAME PLACE.

CULTIVATOR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 243,122, dated June 21, 1881.

Application filed November 25, 1879.

To all whom it may concern:

Be it known that I, CHARLES A. HAGUE, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented new and useful Improvements in Cultivator-Couplings, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a top or plan view; Fig. 2, a side elevation; Fig. 3, a top or plan view of the beam-socket; Fig. 4, a vertical longitudinal section; Fig. 5, a side elevation, showing an additional means for preventing rotation in the pipe-box which attaches the coupling to the axle.

This invention relates to couplings primarily designed for attaching the beams of a cultivator to the axle in such manner as to allow both lateral and vertical movements to an extent required for use. It is also desirable that the coupling should have a lateral adjustment on the axle for bringing the beams nearer together or locating them farther apart, and a vertical adjustment for raising and lowering the beams to plow shallower or deeper, and the attaining of the vertical and lateral adjustments, and the retaining of the coupling in the positions to which it is adjusted, and the formation of a strong coupling, simple and cheap in construction, easily adjustable, and, when adjusted, readily secured in position through friction, constitute the objects of this invention; and its nature consists in providing an axle socket or head formed from a single piece and adapted to receive the axle-thimble or pipe-box, and be clamped thereon so as to be held wholly or in part by friction, and having rear projecting arms, between which is located the thimble or pipe box, on which is secured the beam socket or head, also made of a single piece, which can be clamped so as to be held on the thimble or pipe box, wholly or in part by friction, and in forming the heads or sockets from a single piece adapted to spring or yield and be clamped tightly on their respective thimbles or pipe-boxes by a clamping-bolt on one side of the coupling head or socket.

In the drawings, A represents the axle socket or head; B, the axle-thimble or pipe-box; C, the rear projecting arms; D, the beam-thimble or pipe-box; E, the beam socket or head; F,

the extension to which the beam is attached; *a*, the slot or opening in the axle socket or head; *b*, the clamping-bolt; *c*, the slot or opening in the beam socket or head; *d*, the clamping-bolt; *e*, the bolt on which the thimble D rotates, and by which it is held in position; *f*, the slit in the beam-head and leaf or extension for producing the required spring or yield; *g*, the bolt-holes in the extension or leaf, to receive the bolts which attach the beam.

The head or socket A is made of malleable iron or other suitable material, cast or otherwise formed so as to have an opening for the reception of an ordinary thimble or pipe-box, B, and rearward arms or extensions C, at a sufficient distance apart to receive a thimble or pipe-box and allow or permit of a vertical adjustment on the thimble, between the two arms. The head or socket A around the pipe-box or thimble-opening is not solid, but has a portion cut away, leaving an opening or slot, *a*, which divides the head or socket on one side, so as to form ears through which are vertical openings to receive the clamping-bolt *b*, and the side of the socket or head opposite this slot or opening *a* is somewhat narrow, so that by tightening the nut of the bolt *b* the socket or head around the pipe-box or thimble B will spring or yield, so as to clamp the box or thimble, and be held thereon by the friction between the faces of the pipe-box or thimble and its opening. This head or socket A is formed from a single piece, and, as shown, has a central rib or flange, for strengthening purposes, on the top and bottom, and is of sufficient width to furnish a firm bearing on the pipe-box or thimble B and at the same time not interfere with the yielding or springing for clamping purposes.

The head or socket E is made of a single piece of malleable iron, or other suitable material, cast or otherwise formed so as to have an opening to receive a suitable thimble or pipe-box, D, located between the arms *c* and held in position by and rotating on a bolt, *e*. This head or socket E has a leaf or extension, F, for the attachment of the plow-beam by means of suitable bolts passing through the beam and the holes *g* in the leaf or extension, which leaf or extension, in the form shown, enters a mortise in the beam, and has the flange

on its upper edge resting on the top of the beam. The head E is of sufficient width to furnish a firm bearing on the thimble D, but does not extend entirely around the thimble or pipe-box, a portion being removed, so as to leave an opening or slot, *c*, on one side, forming ears through which is a hole for the passage of the clamping-bolt *d*; and in order to permit a springing or yielding for clamping purposes without breakage, a vertical slit, *f*, is cut through the leaf at a point opposite the slot *c*, so that by setting up the nut of the bolt *d* the two portions of the socket or head will yield and clamp the pipe-box or thimble, and be held firmly thereon by the friction between the faces of the thimble and its opening.

To adjust the beams, either laterally or vertically, all that is necessary to be done is to loosen the nuts of the respective clamping-bolts *b* *d*, when the socket or head A can be moved laterally on the pipe-box or thimble B; or the head or socket E can be moved vertically on the pipe-box or thimble D, so that the plow-beam can be adjusted to different widths or to different depths of plowing, and when adjusted the nuts of the respective bolts can be tightened, when the heads or sockets will be clamped upon their respective pipe-boxes or thimbles and held firmly by friction.

By this arrangement a coupling is produced simple in construction, easy of manipulation, and employing only a single bolt for fastening on the pipe-boxes or thimbles, and held in place by friction. For ordinary use the friction will be found sufficient for attaching purposes; but in addition thereto a spline or rib, *h*, running the entire length of the box or thimble B, and fitting a corresponding groove, *i*, in the head or socket A can be used, and will be found beneficial, and corresponding devices may be used on

the thimble or pipe-box D and beam-socket E. Such devices will not interfere with the respective adjustments.

For some uses, and where it is not desired to have a vertical adjustment, the socket or head E may be made solid, so as to form an eye, in which case the length will be the same as the distance between the arms C, and the thimble D can be dispensed with, a suitable opening for the passage of the bolt *e* being provided through the socket or head.

By means of the compressing slots in the edge of each socket A E the sockets or heads can be made to bind or clasp the thimble or pipe-boxes, and be held thereon by the use of a clamping bolt or bolts on one side only of the socket or head, which construction furnishes a very efficient means for the purposes of the respective adjustments, and enables each section of the coupling to be formed from a single piece.

What I claim as new, and desire to secure by Letters Patent, is—

1. A coupling head or socket formed from a single piece, having an opening to receive a pipe-box or thimble, and an end opening for compression, and a slit to facilitate clamping and prevent breakage, and held in place by a clamping-bolt, substantially as specified.

2. A coupling consisting of two heads or sockets, each formed from a single piece with openings for the pipe-box or thimble, and provided with compressing-slots to enable a bolt to clamp each head or socket on its pipe-box or thimble, substantially as and for the purposes specified.

CHARLES A. HAGUE.

Witnesses:

O. W. BOND,
H. W. MURPHY.