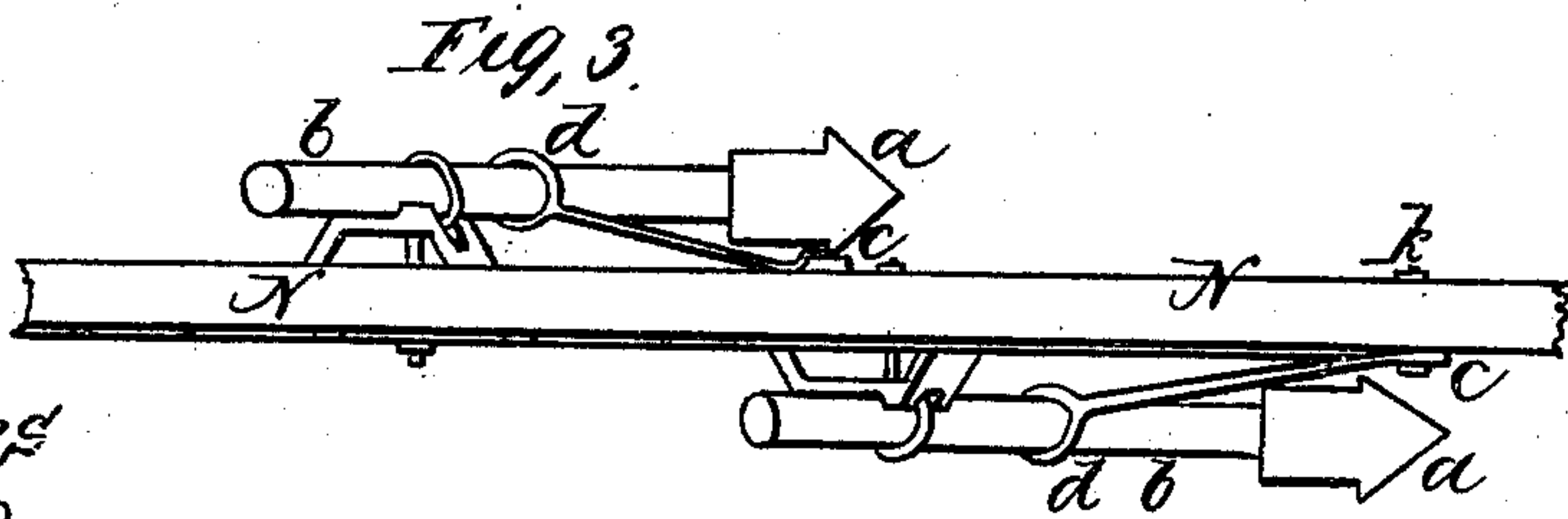
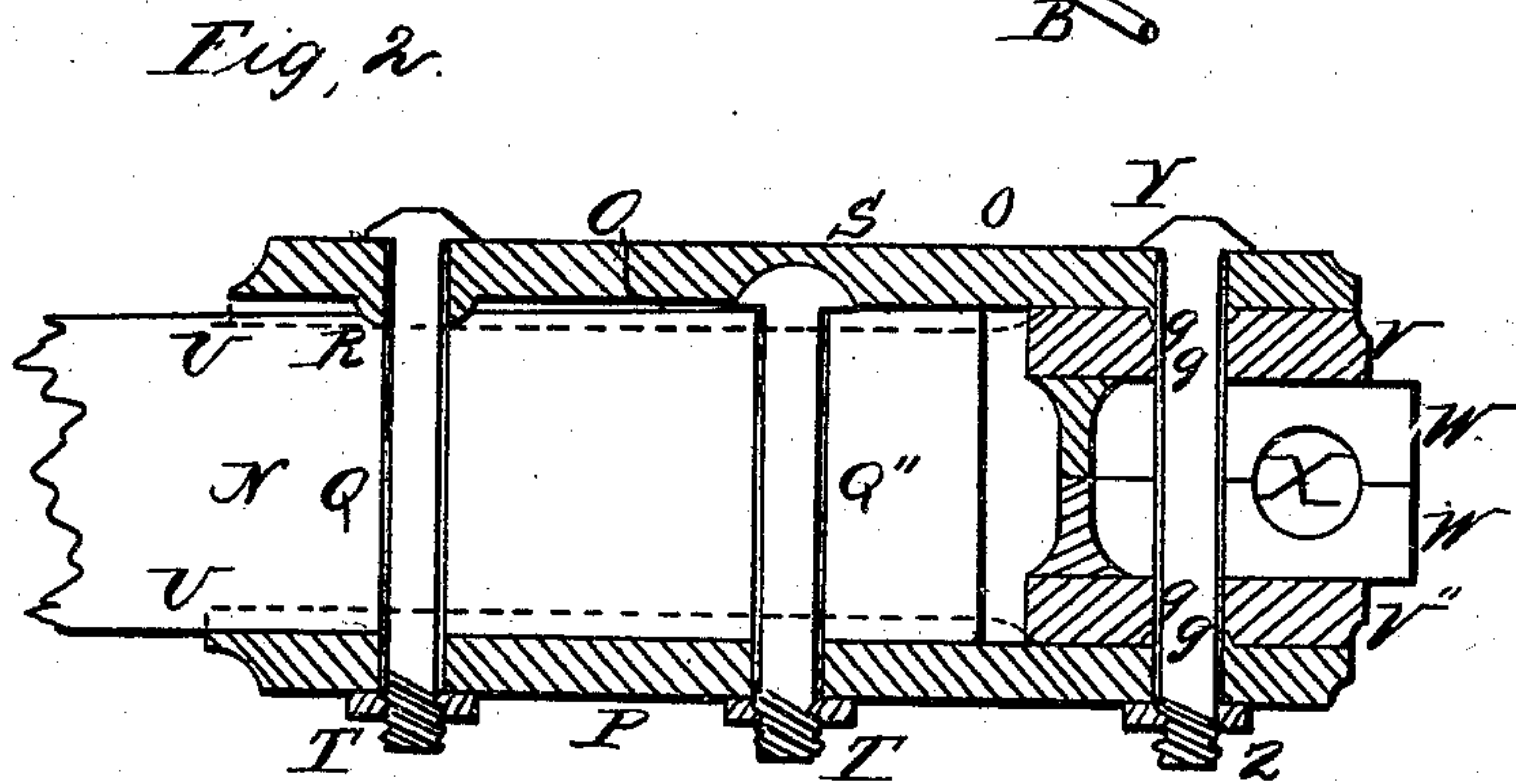
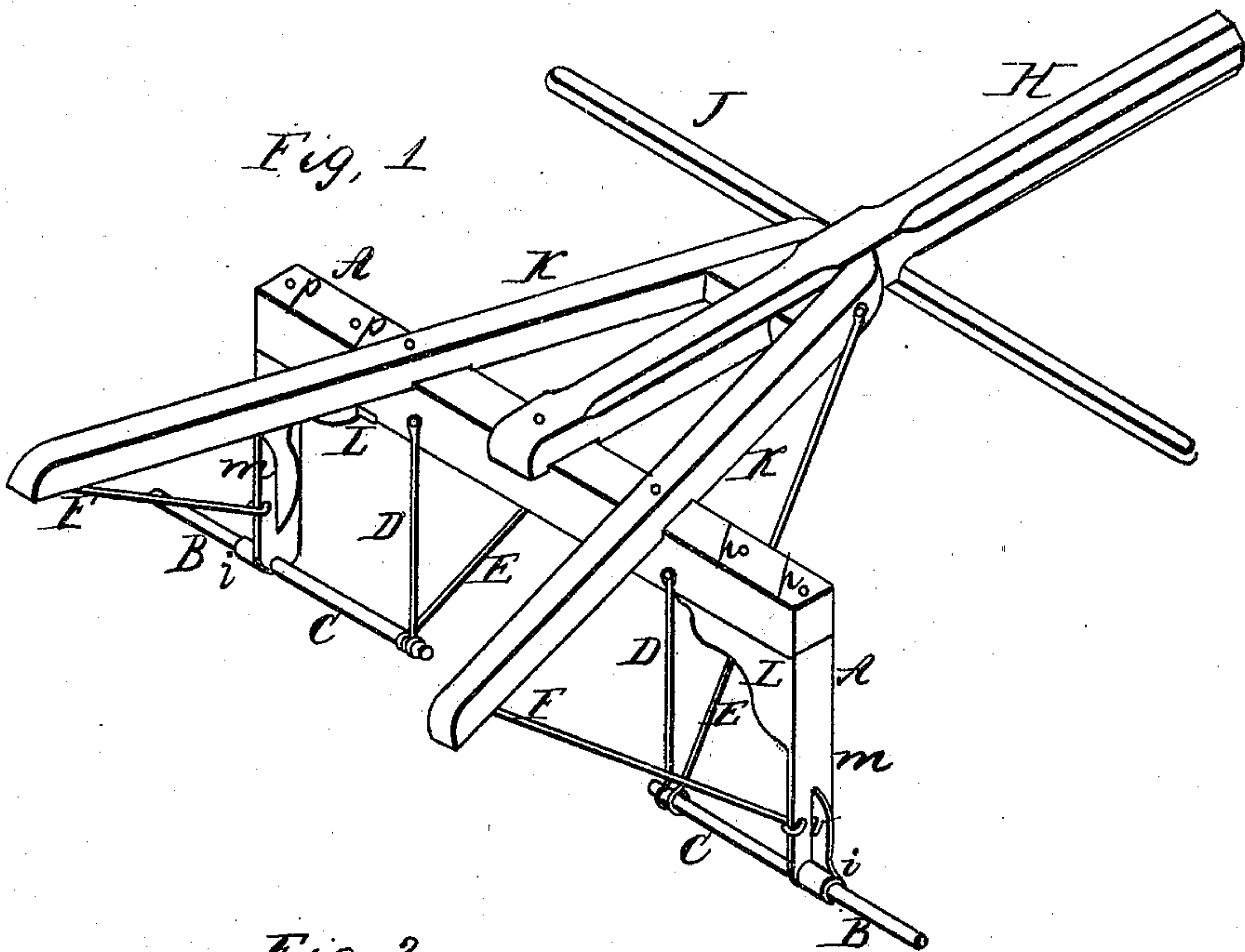


J. R. Little.

Cultivator.

Nº 88,311.

Patented Mar. 30, 1869.



Witnesses

*H. B. Richards,
J. M. Martin*

Inventor,

J. R. Little

United States Patent Office.

JAMES R. LITTLE, OF GALESBURG, ILLINOIS.

Letters Patent No. 88,311, dated March 30, 1869.

IMPROVEMENT IN CULTIVATOR.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JAMES R. LITTLE, of Galesburg, county of Knox, and State of Illinois, have invented a new and improved Cultivator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to an improved frame for cultivators; also, to an improved joint, or coupling for attaching the beams of the plows to the main frame; also, to the manner of constructing and attaching the braces from the standards forward to the beams; and

The invention consists in the simplicity of the frame and its adaptability to all the purposes of a walking-cultivator, especially the arrangement of its parts, whereby the plows may be set further apart or nearer together.

It also consists in a peculiar coupling, allowing free vertical and lateral movement of the plows at the same time they are held steady in running.

The invention further consists in shank-braces, of simple and cheap construction, and of such shape as to admit of adjusting or regulating the pitch of the shanks and shovels.

Figure 1 is a perspective view of the main frame.

Figure 2 is a vertical longitudinal sectional view of the coupling.

Figure 3 is a top plan of one beam, and the shanks, shovels, and attachments.

Similar letters of reference indicate corresponding parts.

Letter A, fig. 1, represents the axle;

K, the hounds; and

H, the draught-pole, with the double-tree J in place.

The uprights *m*, fig. 1, and the flange L, and spindle B, are cast in one solid piece.

The wheel-spindle B has an enlargement, *i*, next the main frame, to prevent the wheel wearing on the upright, *m*, and to keep the wheel in proper place.

Letter C, fig. 1, is the inner, or coupling-spindle, to which the plows are to be attached. This spindle C, is supported and stayed by the rods, or braces F, D, and E, and is made of wrought-iron, and cast into the enlargement *i* on the wheel-spindle B.

Fig. 2 is a vertical section of the coupling for attaching the beams to spindles C of the main frame.

Letter N, fig. 2, is the end of the plow-beam.

Letters W W represent grooved bearing-plates, the groove X corresponding with and fitting on to the spindle C.

These plates, W, are held between the beam-plates O and P, by the bolt Y, and the elevations *g g*, which surround the bolt Y, and fit into corresponding recesses in the plates V V, allowing free lateral movement of the beams N on the bearings *g*.

The beam-plates O and P have flanges, shown by dotted lines *u v*, which embrace the sides of the beam.

The upper plate O has a lateral elevation, R, on its under side, at the point through which the bolt Q passes. By means of the elevation R, the distance of the plates O and P apart at the bolt Y may be adjusted, the head of the forward bolt, Q, not passing through the upper plate O, allowing the said plate O to work freely on the pivot R, relieving the upper plate O of all strain when tightened down, except the natural working-strain, allowing also considerable play of the forward end of the plate O, for the purpose of tightening it, in case of wear, &c.

By means of the bolt Y, the bearing-plates W may be tightened at any desirable place, or point on the spindle C, thereby allowing lateral adjustment of the distance of the plows apart.

Vertical movement of the plows is obtained between the bearing-plates W and spindle C.

Fig. 3 is a top plan, or view of one of the plow-beams N, and showing the manner of attaching the braces C.

The braces C are connected with the shanks *b*, by means of eyes, and are made wedge-shaped in front where the bolt *k* passes through the beam N, and having a slot for the bolt *k* to pass through, allows of the braces being lengthened or shortened, the pitch of the plows thereby adjusted, and all, at the same time, held perfectly secure.

Having thus described my invention,

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

1. The journal-spindle C, upright, *m*, wheel-spindle B, flange L, braces F, D, and E, arranged substantially as described, and combined with the axle A, hounds K, and draught-pole H, in the manner and for the purpose set forth.

2. The upper plate O, when provided with the elevations R *g* and recess S, and operating in combination with the lower plate P, beam N, and bolts Q Q and Y, and clamping-plates W W, in the manner set forth, so as to secure the adjustments described.

J. R. LITTLE.

Witnesses:

W. B. RICHARDS,

J. B. HARSH.