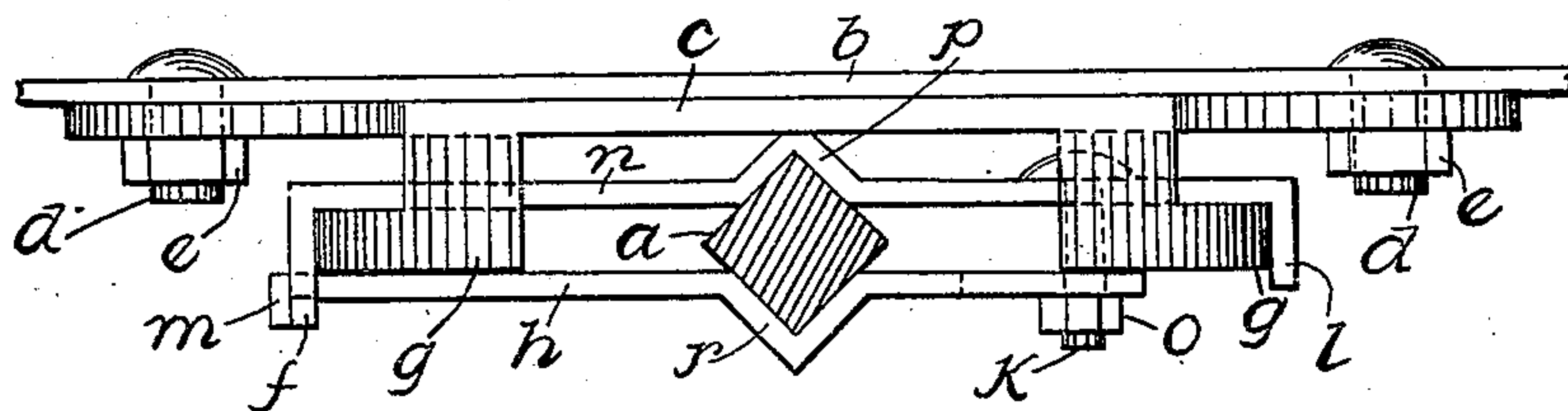
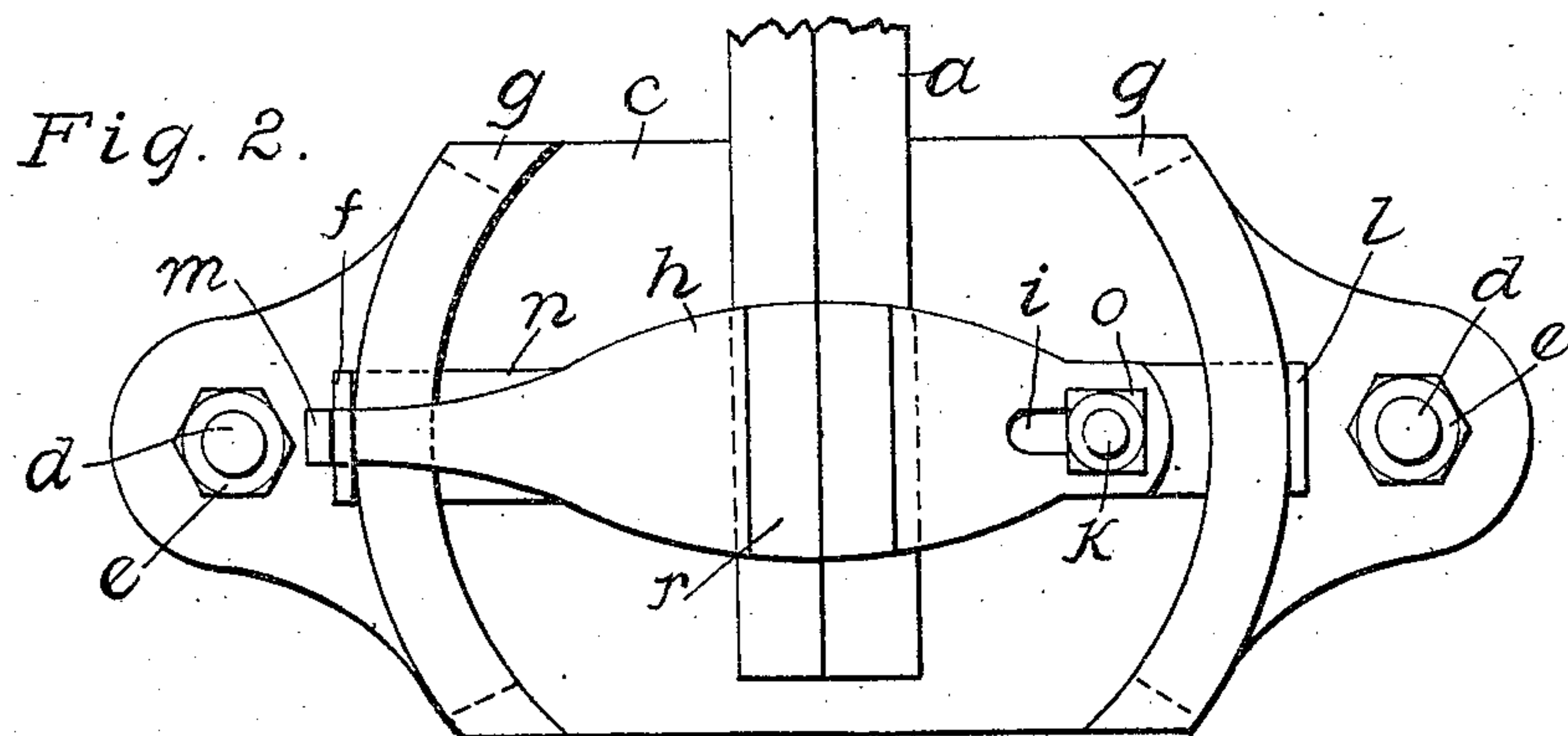
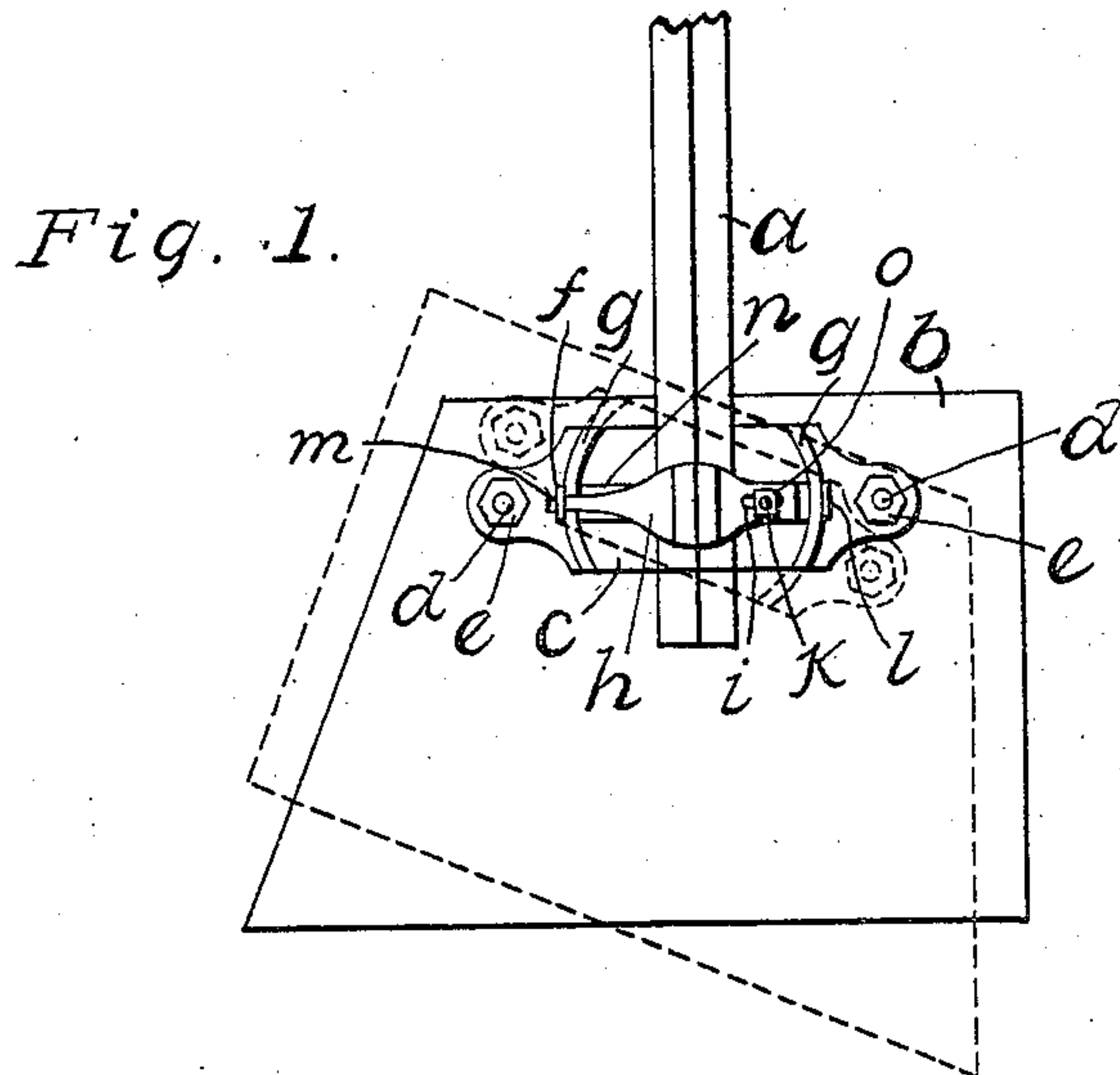


No. 855,487.

PATENTED JUNE 4, 1907.

J. W. ST. JOHN.
ADJUSTABLE CLAMP FOR CULTIVATOR SHOVELS.
APPLICATION FILED MAR. 6, 1907.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES W. ST. JOHN, OF JANESVILLE, IOWA.

ADJUSTABLE CLAMP FOR CULTIVATOR-SHOVELS.

No. 855,487.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed March 5, 1907. Serial No. 360,698.

To all whom it may concern:

Be it known that I, JAMES W. ST. JOHN, a citizen of the United States of America, and a resident of Janesville, Iowa, have invented certain new and useful Improvements in Adjustable Clamps for Cultivator-Shovels, of which the following is a specification.

My invention relates to improvements in adjustable clamps for cultivator shovels, and the object of my improvements is to furnish a clamp which can be so adjusted as to be secured to a hanger arm removably, and fitted to hanger arms of different sizes, and which also can be adjusted so as to vary the positions of the shovel, either horizontally or vertically. This object I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the drawings hereto annexed, in which—

Figure 1 is a rear elevation of a cultivator shovel connected by means of my improved clamp to a hanger arm. Fig. 2 is an enlarged rear elevation of my said clamp, and Fig. 3 is a top edge view, with the hanger-arm in cross-section.

Similar letters refer to similar parts throughout the several views.

The shovel-blade *b* is shown as removably secured to a plate *c* by means of the bolts *d* and nuts *e*, and the plate *c* is supplied with the laterally slotted guides *g*. The guides *g* are formed on arcs of the same circle, are spaced away from the plate *c*, but connected thereto at each end. The space between the guides *g* and the plate *c* is made sufficient for the ends of the clamp-member *n* to freely play therein. The clamp-member *n* has each end bent rearwardly at right angles at *f* and *l* to engage the outer edges of the guides *g*—*g*. The part *f* is perforated to receive the narrow end *m* of the other clamp-member *h*. The narrow end *m* of the latter clamp-member is bent rearwardly in order to engage the outer side of the part *f*. The other end of the clamp-member *h* is provided with a slot *i*, the same end of the clamp-member *n* having a perforation, and through such perforation and said slot the bolt *k* is introduced, which with its nut *o*, serve to secure these ends of said clamp-members together. The middle parts of the said clamp-members are formed with the angular seats *p* and *r* respectively, to engage the angles of a hanger arm *a*. The

narrow end of the clamp-member *h* with its rearwardly bent part *m* is introduced into the perforation in the part *f*, and then the said member brought about the arm *a* so that said arm is clasped in the seats *p* and *r*, when the members may be secured together by means of the bolt *k* and nut *o*, the slot *i* providing room for adjustment when the arm *a* by its size requires it.

The right-angled lower corner of the blade *b* is used as the working corner when the earth is in soft or medium condition of compactness, but in case the ground is quite hard, and it is desired to use the acute-angled corner opposite, the shovel may be reversed to a position shown by the dotted lines in Fig. 1, as follows. The clamp-member *h* is separated from the member *n* to permit the half turn of the shovel *b*, and then said shovel is moved vertically, the ends of the clamp-members moving along the guides *g* to the required position. The clamp-members are then secured together by the bolt *k* and nut *o*. In this position the acute-angled lower corner of the shovel has its working edge in nearly a vertical direction, the sharp angle however, efficiently cutting the compact earth. The right-angled corner may, however, also be adjusted somewhat, if desired, in a vertical direction by the means shown, without reversing said shovel.

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

1. A device of the character described, composed of the combination with a shovel-blade and a hanger arm, of curved guides removably secured to and spaced away from said blade, and clamping-members removably secured to said hanger-arm and adapted to be removably and adjustably secured about said curved guides.

2. A device of the character described, composed of the combination with a shovel-blade and a hanger arm, of a plate removably secured to said blade, guides formed on arcs of the same circle secured to and spaced away from said plate, and clamping-members adapted to be adjustably secured to said hanger arm and to be adjustably connected to said guides to tilt said blade vertically.

3. A device of the character described,

composed of the combination with a shovel-
blade and a hanger-arm, of a plate adapted
to be secured to said shovel-blade, means for
removably securing said plate to said blade,
5 raised guides integral with and spaced away
from said plate, clamping-members slidable
on said guides and having a seat for said
hanger-arm, and means for removably and

adjustably securing said clamping-members
together and to said hanger-arm.

Signed at Waterloo, Iowa, this 14th day of
Feb. 1907.

JAMES W. ST. JOHN.

Witnesses:

G. C. KENNEDY,
D. A. KENNEDY.