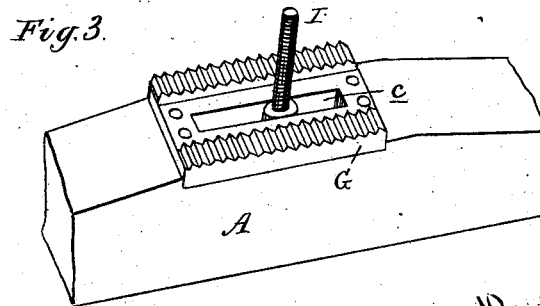
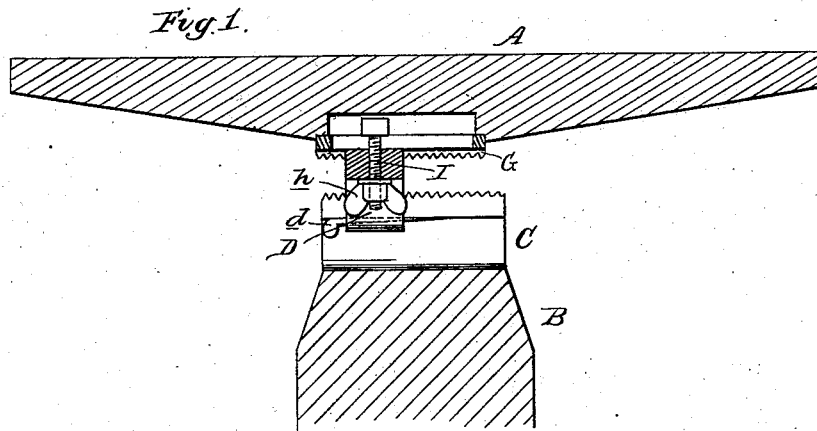
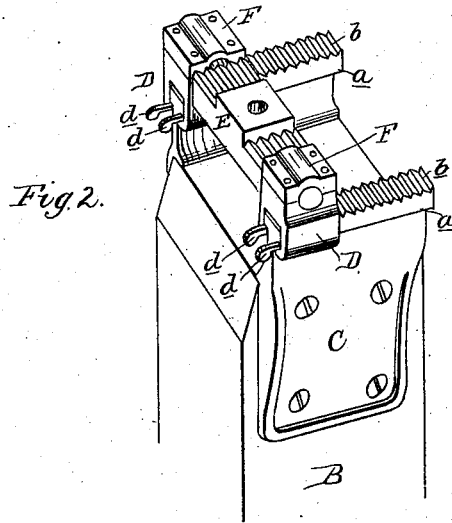


(No Model.)

D. A. CAMERON.  
ADJUSTABLE FULCRUM.

No. 260,839.

Patented July 11, 1882.



Attest:  
*[Signature]*  
A. M. Robertson

By

Inventor:  
Daniel A. Cameron.  
*[Signature]*  
Atty.

# UNITED STATES PATENT OFFICE.

DANIEL A. CAMERON, OF PORT HURON, MICHIGAN, ASSIGNOR OF ONE-HALF  
TO FRANK WHIPPLE, OF SAME PLACE.

## ADJUSTABLE FULCRUM.

SPECIFICATION forming part of Letters Patent No. 260,839, dated July 11, 1882.

Application filed May 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, DANIEL A. CAMERON, of Port Huron, in the county of St. Clair and State of Michigan, have invented new and useful Improvements in Adjustable Fulcrums; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The nature of this invention relates to certain new and useful improvements in the construction and combination of devices for providing for the adjustment of fulcrums; and the invention consists in the peculiar construction, arrangement, and various combinations of the parts, all as more fully hereinafter set forth.

Figure 1 is a section through a walking-beam and standard provided with my improvement. Fig. 2 is an enlarged perspective with walking-beam removed, and Fig. 3 is a sectional view of a portion of the walking-beam inverted.

While my device and invention will be found applicable in many places in mechanics, I will describe its construction and application to a walking-beam and standard such as are employed in drilling oil-wells; and in the accompanying drawings, A represents a walking-beam, and B the standard upon which it has its oscillating motion, said beam being operated by means of a connecting-rod, which in turn is operated by means of an engine, or in any other suitable and convenient manner.

To the top of the standard B, and upon two opposite sides thereof, I rigidly secure the plates C, which are provided with the heads *a*, the upper faces of which are serrated, as at *b*.

D represents slide-bearings, which embrace the heads *a* of the plates C, the inner face of each bearing being serrated to engage with the serration *b*, and they are secured at the desired position in longitudinal adjustment upon such heads *a* by means of the gib-pins *d*. These bearings support and carry the rock-shaft E, the journals of which are secured

within the bearings by means of the cap-plates F.

G represents a serrated plate secured to the under side and at the center of the walking-beam, and is provided with a rectangular slot, *c*, in which the headed and threaded bolt I has a lateral adjustment. The lower end of this bolt I passes down through the longitudinal center of the rock-shaft E, and is secured in place by a proper thumb-nut, *h*, as shown in Fig. 1, the serrations upon the plate G engaging with similar serrations upon each or near each end of the rock-shaft E, so that when those two parts are bound together by the medium of the bolt described all danger or liability of slipping is entirely avoided.

It will be seen that by this construction and arrangement of parts I can adjust the bearings to or from the center of the walking-beam and its standard, so as to give the leverage of the walking-beam in favor of or against the engine, as circumstances may require, while I do not change or alter the position of the walking-beam. For instance, in the drilling of oil-wells, at the beginning of the work the bearing is adjusted so that the leverage is against the engine—that is, it is adjusted to one side of the center, toward the end upon which the engine directly operates. As the work progresses, and the amount of weight upon the drilling end of the walking-beam increases, and the operation of the device becomes laborious, I then adjust the bearing nearer the center, as circumstances may require, or toward the end of the walking-beam which operates the drill, thus decreasing the amount of leverage against the engine, and so on as the work progresses, until the leverage is in favor of the engine.

What I claim as my invention is—

1. The combination, with the walking-beam or lever A and its standard, of an intermediate fulcrum adapted to be adjusted in relation to both the standard and lever, substantially as described.

2. An adjustable fulcrum or bearing consisting of the plates C G and sliding bearings D, in combination with the rock-shaft

E, substantially as and for the purposes specified.

3. The combination, with the standard B and the serrated plates C, secured thereto, of

5 the lever A, the serrated plate G, the sliding bearings F, having serrated lower surfaces, the rock-shaft E, having serrated upper sur-

faces, and means, substantially as described, for detachably securing the rock-shaft and the bearings to the plates C G, as set forth.

DANIEL A. CAMERON.

Witnesses:

H. S. SPRAGUE,

E. SCULLY.