

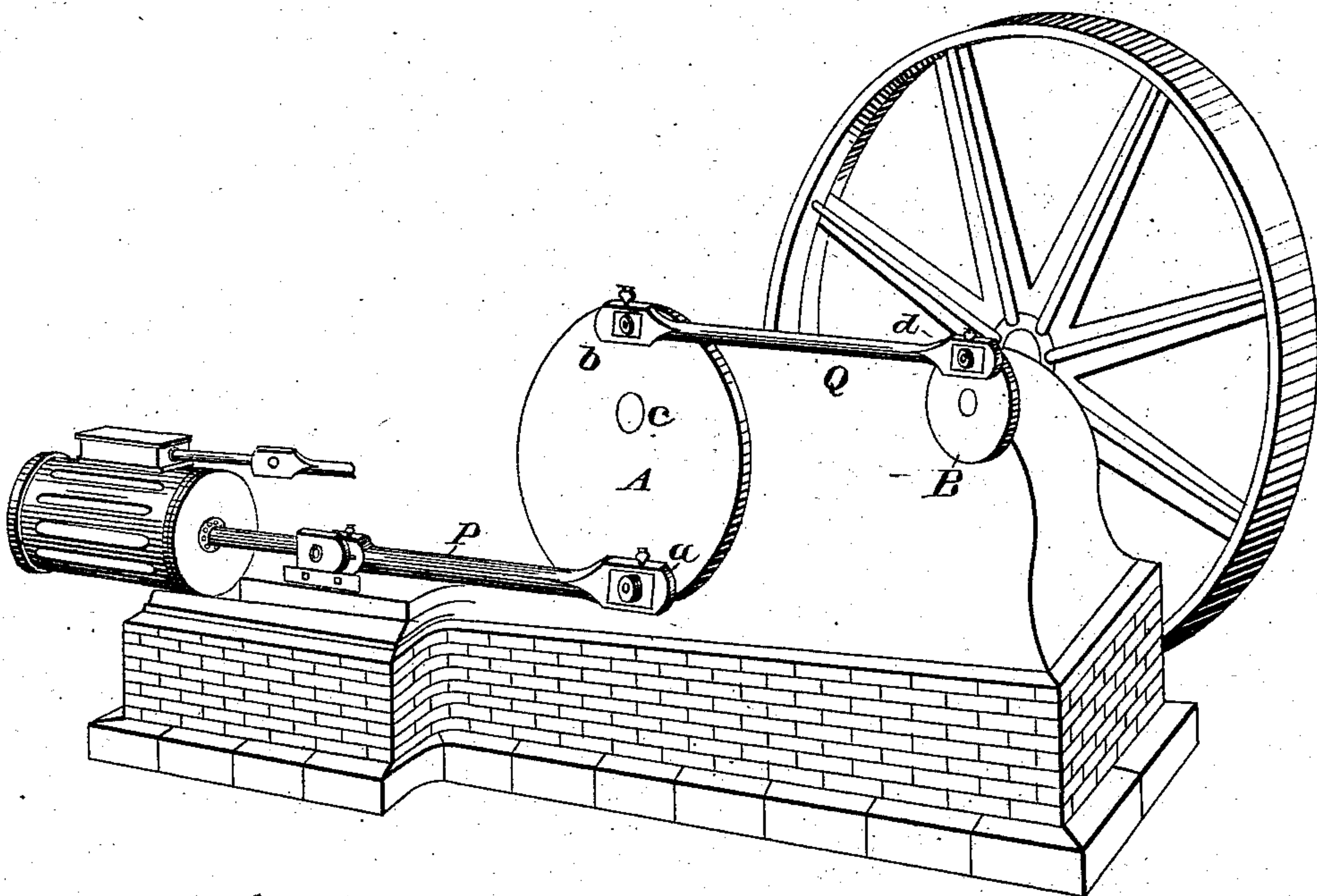
(No Model.)

A. M. BARTON & P. Z. DAVIS.

STEAM ENGINE, &c.

No. 290,167.

Patented Dec. 11, 1883.



Witnesses:

A. Gornert.

Declarator Barton

Inventor:

A. Mander M. Barton

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# UNITED STATES PATENT OFFICE.

ALEXANDER M. BARTON, OF STRICKLING, AND PHILIP Z. DAVIS, OF SOUTH GABRIEL, TEXAS.

## STEAM-ENGINE, &c.

SPECIFICATION forming part of Letters Patent No. 290,167, dated December 11, 1883.

Application filed April 5, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, ALEXANDER M. BARTON and PHILIP Z. DAVIS, citizens of the United States, residing, respectively, at Strickling and at South Gabriel, both in the county of Burnet and State of Texas, have invented a new and useful Improvement in Steam-Engines, (or other machines similarly run by rotary motion,) which improvement is fully set forth in the following specification and the accompanying drawing, which is a perspective view of such parts of a steam-engine as serve to illustrate the nature of our invention.

The object of our invention is to furnish a device by which to connect the piston-rod of the steam-cylinder with the disk or crank that is attached to the fly-wheel shaft by means of a lever, or a disk acting as such, in a manner that enables the piston-rod to operate upon its connecting-bar in a longitudinal direction, instead of the oblique one, which is necessitated by its being connected directly with the rotating disk or crank, and thereby to avoid angular vibration of the connecting-rod and reduce the friction of sliding surfaces.

In the drawing, the connecting-bar P is, at *a*, connected with the disk A, which takes the place of a lever, having its fulcrum at *c* and forming two lever-arms, the longer *a c* and the shorter *b c*. As the points *a* and *b* of the disk

A move in a longitudinal forward and backward direction only, the piston-rod is enabled to move uniformly, and as the lever-arm *a c* is of double the length of the lever-arm *b c*, or of any greater length generally, it operates from the point *b* with a force increased by the proportion of the lever-arms. The connecting-bar Q connects the disk A with the disk or crank B, which is to be of such a diameter as corresponds with the distance of the longitudinal forward and backward movement of the point *b* in a disk A.

The operation of our device is not confined to steam-engines only. It is obvious that any other rotary motion may be benefitted by applying our lever in a similar manner as set forth above.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The disk or lever A, forming a medium of connection between the piston-rod and the disk or crank B on the fly-wheel shaft, as shown and described.

ALEXANDER M. BARTON.  
PHILIP Z. DAVIS.

Witnesses:

ADOLPH GOMERT,  
DECATER BARTON.