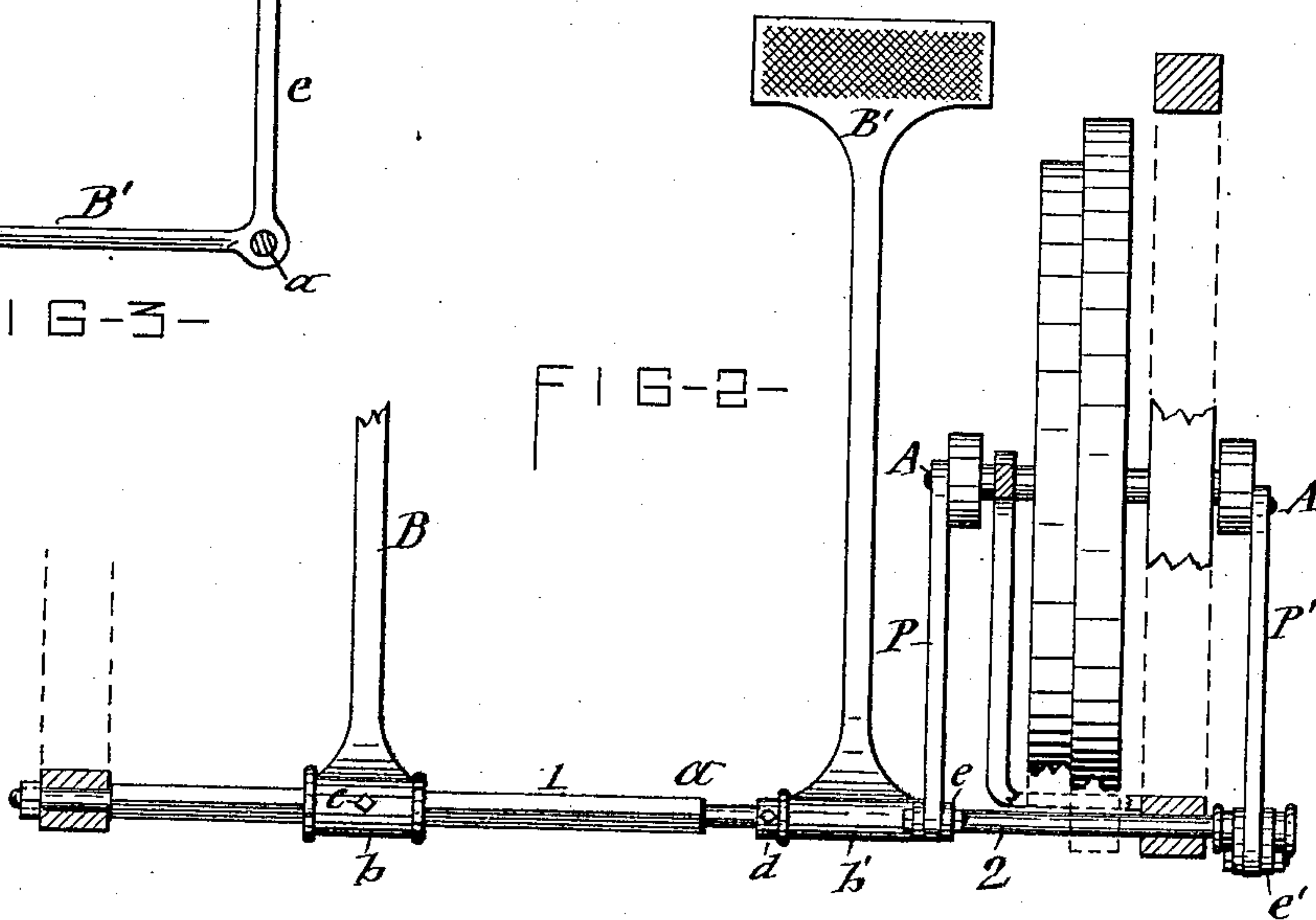
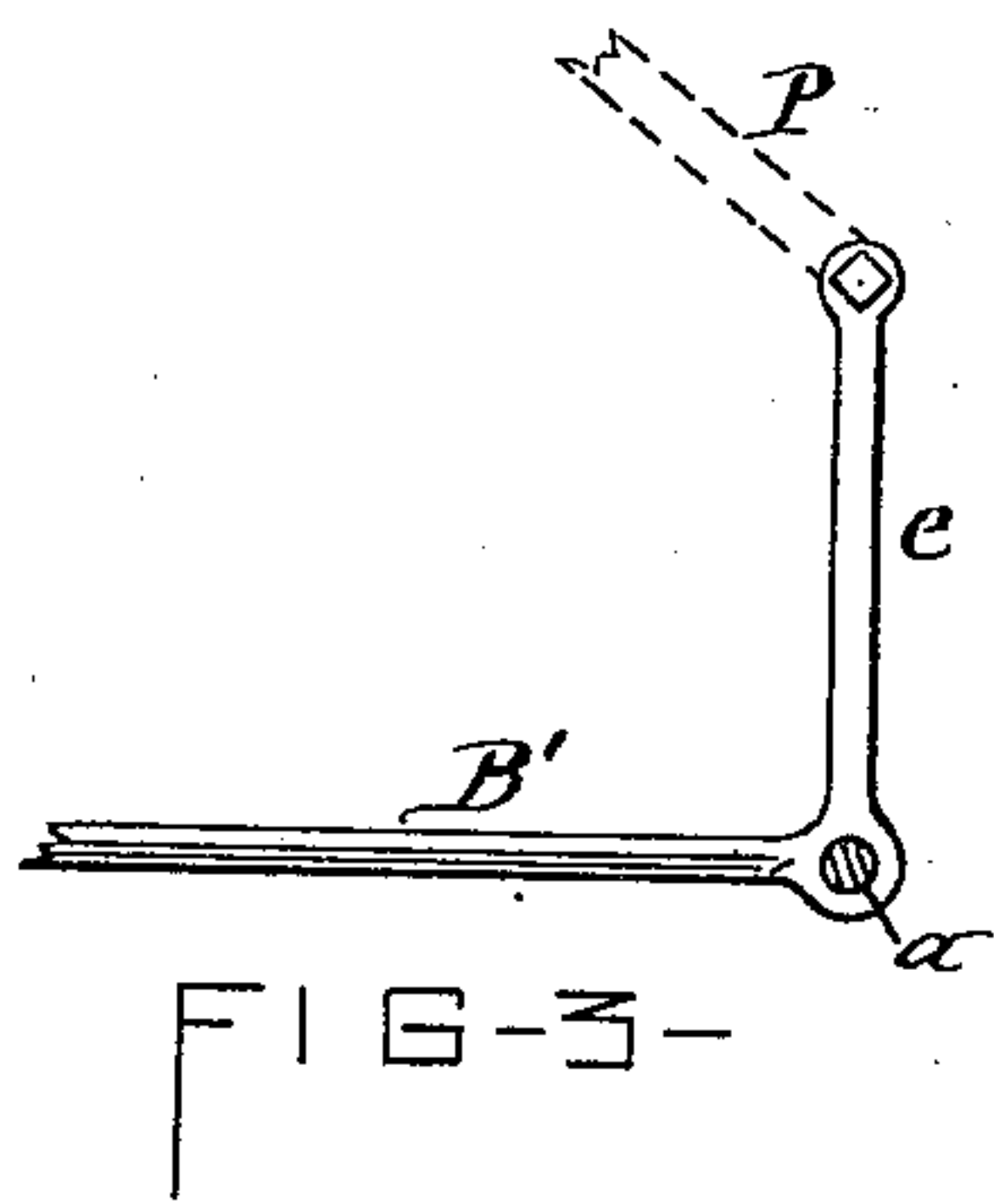
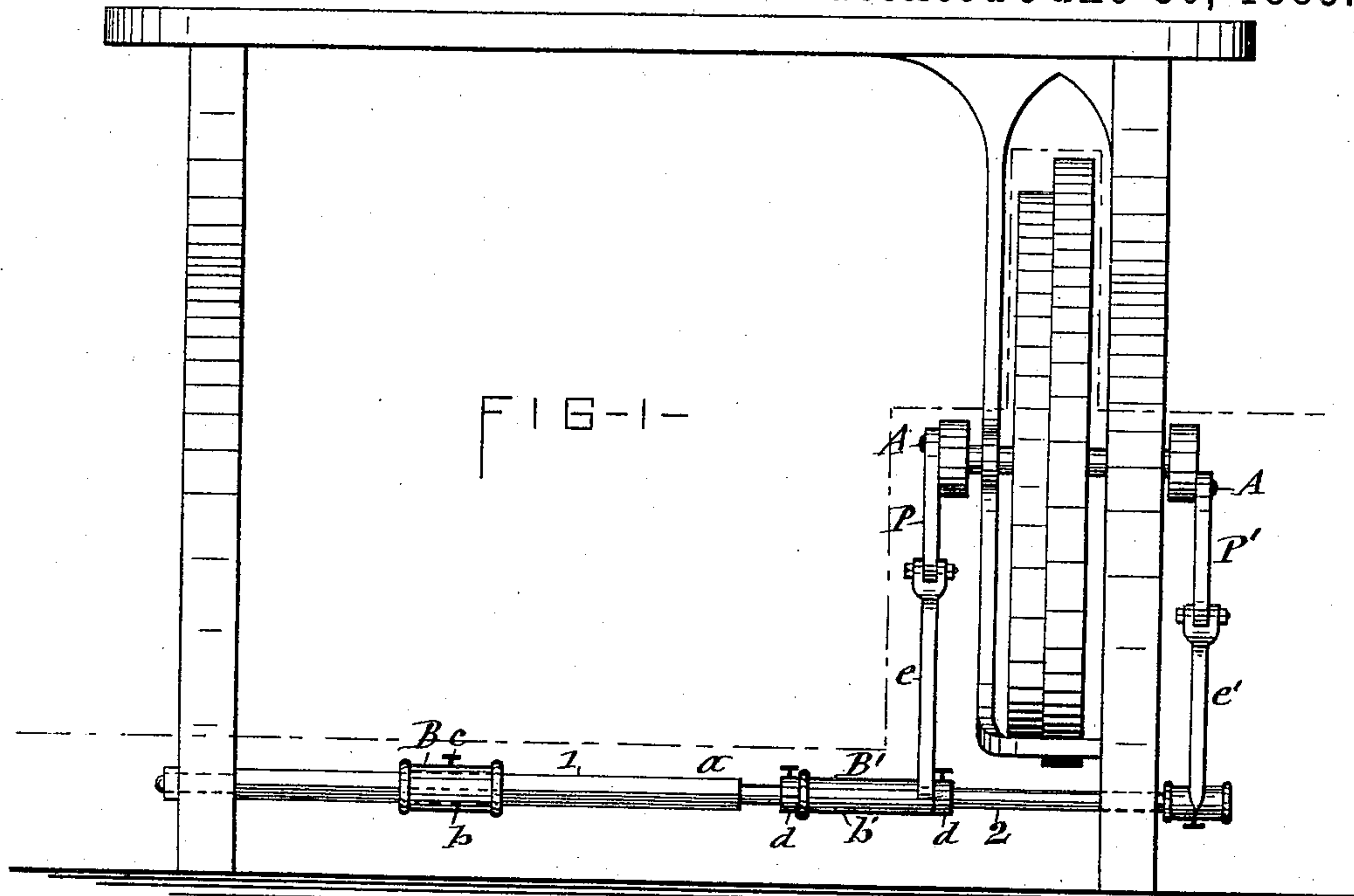


(No Model.)

A. BALL.  
TREADLE.

No. 320,996.

Patented June 30, 1885.



ATTEST—  
Wm. C. Raymond  
J. H. Gibbs

INVENTOR—  
Ansel Ball  
per D. L. L. & W. H. L.  
his Atty

# UNITED STATES PATENT OFFICE.

ANSEL BALL, OF SENECA FALLS, NEW YORK, ASSIGNOR TO ADELBERT S. DAVIS, OF SAME PLACE.

## TREADLE.

SPECIFICATION forming part of Letters Patent No. 320,996, dated June 30, 1885.

Application filed May 7, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, ANSEL BALL, of Seneca Falls, in the county of Seneca, in the State of New York, have invented new and useful Improvements in Treadles, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

In said drawings, Figure 1 is a rear elevation of my invention; Fig. 2, a plan view of the same, and Fig. 3 is a detached side view of the portion of the pivoted treadle which has integral with it the pitman-lever.

Similar letters of reference indicate corresponding parts.

This invention consists in a novel organization of a treadle-power designed to operate two cranks or a double crank-shaft, and to afford a walking motion to the operator, and also to have its treadles adjustable in their positions, so as to conform to the position of the cranks to be operated or to the various positions the operator may be required to assume in operating on the lathe or machine driven by the treadle-power.

In the drawings, A A denote the two cranks to be operated. Said cranks may be either in the form of wrist-pins projecting from the sides of wheels or disks, as illustrated in the annexed drawings, or formed by offsets of a shaft. *a* represents a rock-shaft, which constitutes the axis of the treadles B B', one of which is rigidly attached to said rock-shaft, and the other is pivoted on said shaft, preferably in the following manner:

The shaft *a* is formed with a square or polygonal portion, 1, and a cylindrical portion, 2. From the portion 1 of the rock-shaft is made to rigidly project the treadle B, which is formed with a corresponding square or polygonal sleeve, *b*, on one end, and which sleeve is slipped onto the aforesaid part of the rock-shaft and may be set to conform to the position of the cranks to be operated; or to suit the convenience of the operator, by means of a set-screw, *c*, passing through the sleeve *b* and engaging the rock-shaft, the aforesaid treadle is retained in its required position.

The other treadle, B', is formed with a cylindrical sleeve, *b'*, on one end, and this sleeve

is slipped onto the cylindrical portion 2 of the rock-shaft, said treadle being thus pivoted on said shaft. It is held laterally in its position by collars *d d*, clamped on the rock-shaft at opposite ends of the sleeve *b'*. This pivoted treadle has rigidly attached to it or is cast in one piece with a pitman-lever, *e*, to the free end of which one of the pitmen, P, is connected. The other pitman, P', is connected with a pitman-lever, *e'*, rigidly clamped or otherwise secured directly on the rock-shaft.

The two pitmen are set at such angles in relation to each other and to the cranks to be operated as to allow the two treadles to be operated alternately. Said treadles being fulcrumed at their ends afford a walking motion to the operator, and thus greatly facilitate the operation of the machine.

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

1. A treadle-power comprising a rock-shaft, two treadles, one of which is rigidly attached to the rock-shaft and the other is pivoted on said shaft, and two pitman-levers rigidly attached, respectively, to the rock-shaft and to the pivoted treadle, substantially as shown and set forth.

2. The combination of a rock-shaft formed with a cylindrical portion and a square or polygonal portion, a treadle pivoted on the cylindrical portion, and a treadle clamped on the square or polygonal portion of the rock-shaft, substantially as described and shown.

3. In a treadle-power, the combination, with a rock-shaft and a pitman-lever rigidly attached thereto, of a treadle rigidly attached at one end to the rock-shaft, a secondary treadle pivoted at one end on said shaft, and a pitman-lever rigidly attached to the pivoted treadle at the pivot thereof, substantially as described and shown.

4. The combination of the rock-shaft formed with a cylindrical portion and a square or polygonal portion, a treadle having a cylindrical sleeve embracing the cylindrical portion of the rock-shaft and having integral with it a pitman-lever, collars clamped on the rock shaft at opposite ends of the aforesaid sleeve, a treadle having a square or polygonal sleeve



embracing the correspondingly-shaped portion of the rock-shaft, a set-screw clamping said sleeve on the shaft, and a pitman-lever rigidly attached to the rock-shaft, all constructed and combined substantially in the manner described and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence

of two attesting witnesses, at Seneca Falls, in the county of Seneca, in the State of New York, on this 4th day of May, 1885.

ANSEL BALL. [L. S.]

Witnesses:

GEORGE W. PONTIUS,  
JASPER N. HAMMOND.