

J. L. SCOTT.
MECHANICAL MOVEMENT.

No. 171,053.

Patented Dec. 14, 1875.

Fig. 1.

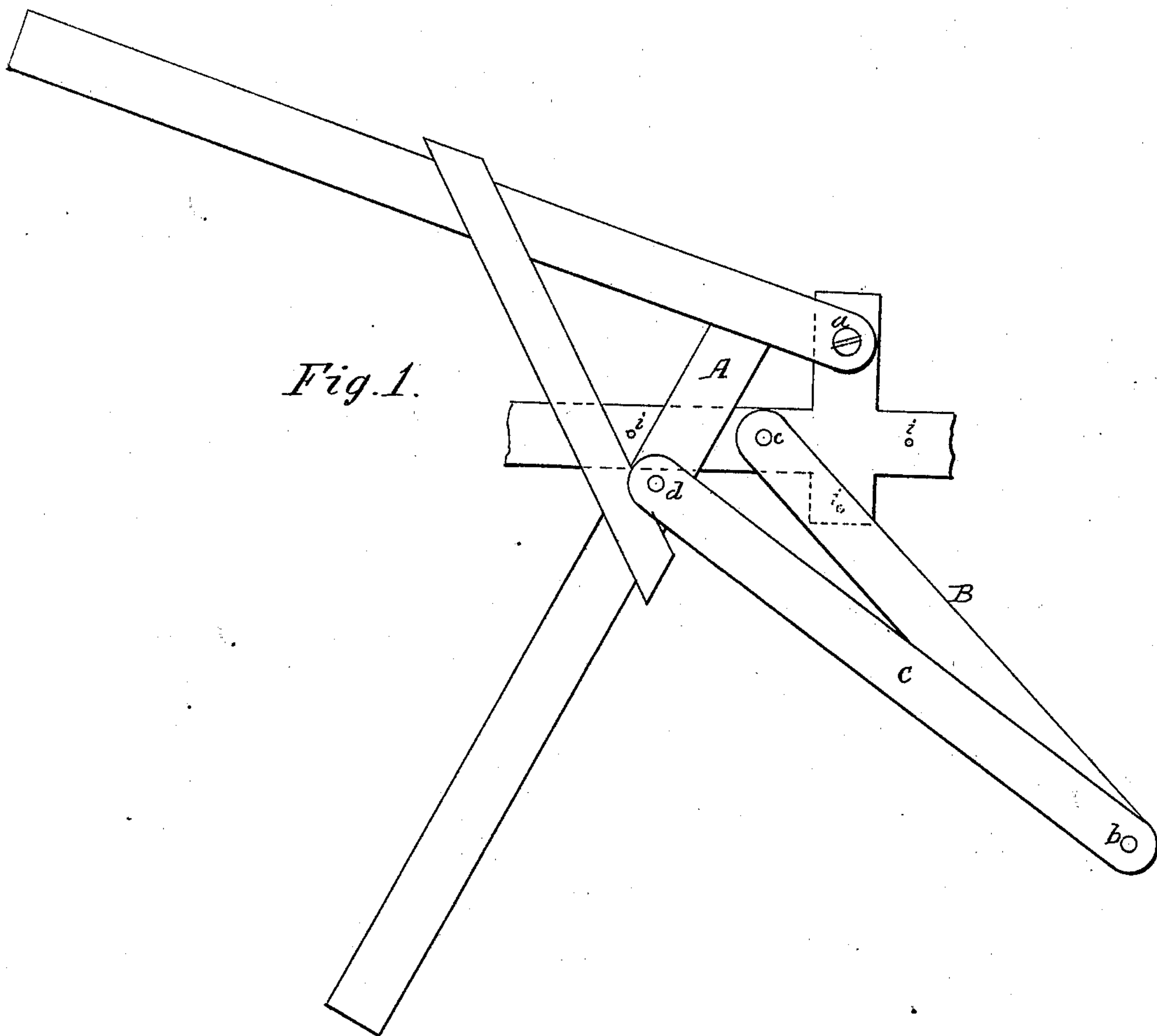


Fig. 2.

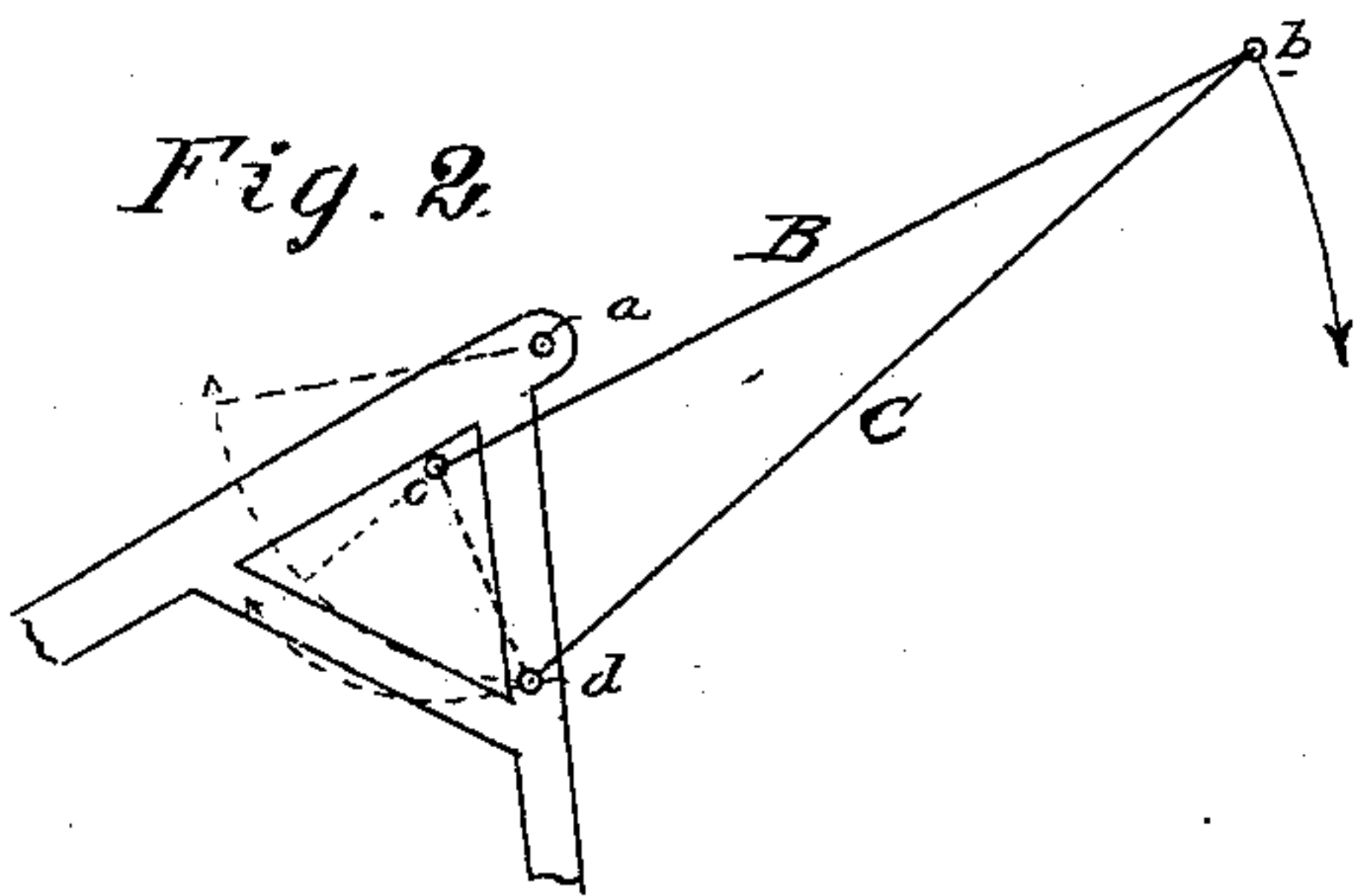
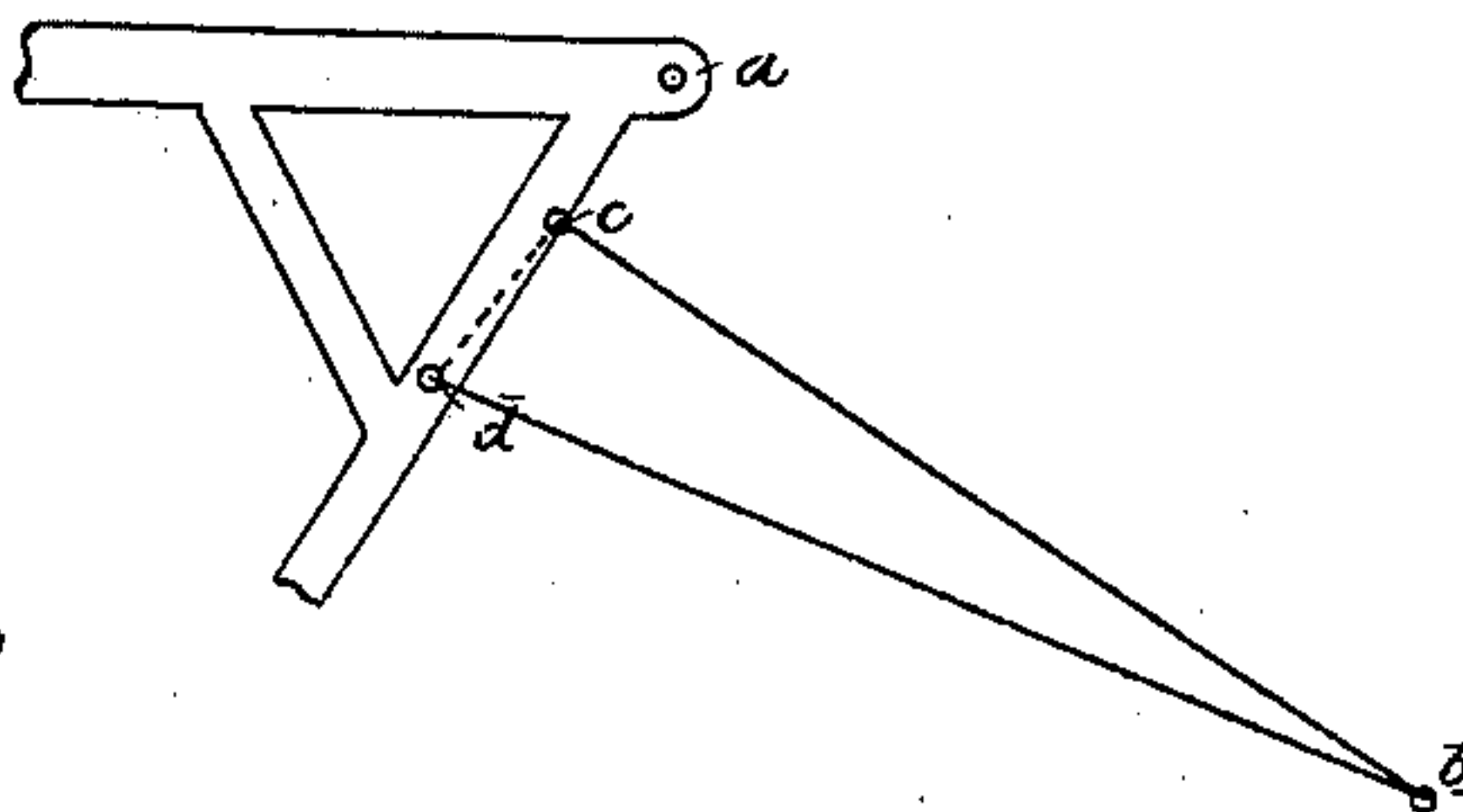


Fig. 3.



Witnesses:
Chas. F. Preskey
Courtney A. Cooper.

J. L. Scott
By his atty
Charles E. Foster

UNITED STATES PATENT OFFICE

JAMES L. SCOTT, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **171,053**, dated December 14, 1875; application filed November 8, 1875.

To all whom it may concern:

Be it known that I, JAMES L. SCOTT, of the city of Brooklyn, in the State of New York, have invented an Improvement in Device for Transmitting Motion, of which the following is a specification:

The object of my invention is to transmit motion from a vibrating arm to a swinging arm frame or plate with a gradually-increasing power; and this I accomplish by the means illustrated in the accompanying drawing, in which—

Figure 1 is a side elevation, showing the arrangement of arms and levers which I employ; and Figs. 2 and 3, diagrams illustrating the invention.

Upon a pivot, *a*, vibrates an arm, frame, or disk, A, which may be horizontal or vertical, and to which a reciprocating motion is to be imparted. The device used for imparting this motion consists of a lever, B, and connecting-arm C, jointed by a pin, *b*, at their outer ends. The fulcrum *c* of the lever B is adjacent to the pivot *a* of the frame or arm A, and the end of the arm C is pivoted to the frame A at a point, *d*, at one side of the fulcrum *c* of the lever, so that the arms B C form an acute angle.

By the proper relative arrangement of the points *a c d* motion may be transmitted from the lever B to the frame A with a gradually-increasing leverage, and consequently increasing power. This will be readily seen on reference to the diagrams, Figs. 2 and 3.

In Fig. 2 the lever B is elevated, and, with the arm C pivoted to the frame A at *d*, is the equivalent of a bell-crank lever, the short arm of which coincides with the dotted line *c d*.

On moving the lever B in the direction of the arrow 1 the pin *b* will travel in a circle of which the point *c* is the center, while the pin *d* will travel in a circle having its center at *a*. The distance between the points *c d*, (which corresponds to the short arm of the lever,) therefore, continually decreases until the points *a c d* are in a line with each other, as shown in Fig. 3.

It will be apparent that this decrease in the distance *c d* is equivalent to an increase in the length of the lever B, and to a corresponding increase in the power exerted by the said lever.

The pin *a* is movable, so that the axis of vibration of the arm A may be changed.

I claim—

The combination of the pivoted arm A, the lever B, having its fulcrum near the pivot of the arm A, and the bar C, connected to both arm and lever, and forming an acute angle with the latter, all as set forth.

JAMES L. SCOTT.

Witnesses:

K. L. DUELL,
J. M. FOSTER.