

(No Model.)

W. G. DODD.

CRANK PIN.

No. 313,481.

Patented Mar. 10, 1885.

FIG. 1.

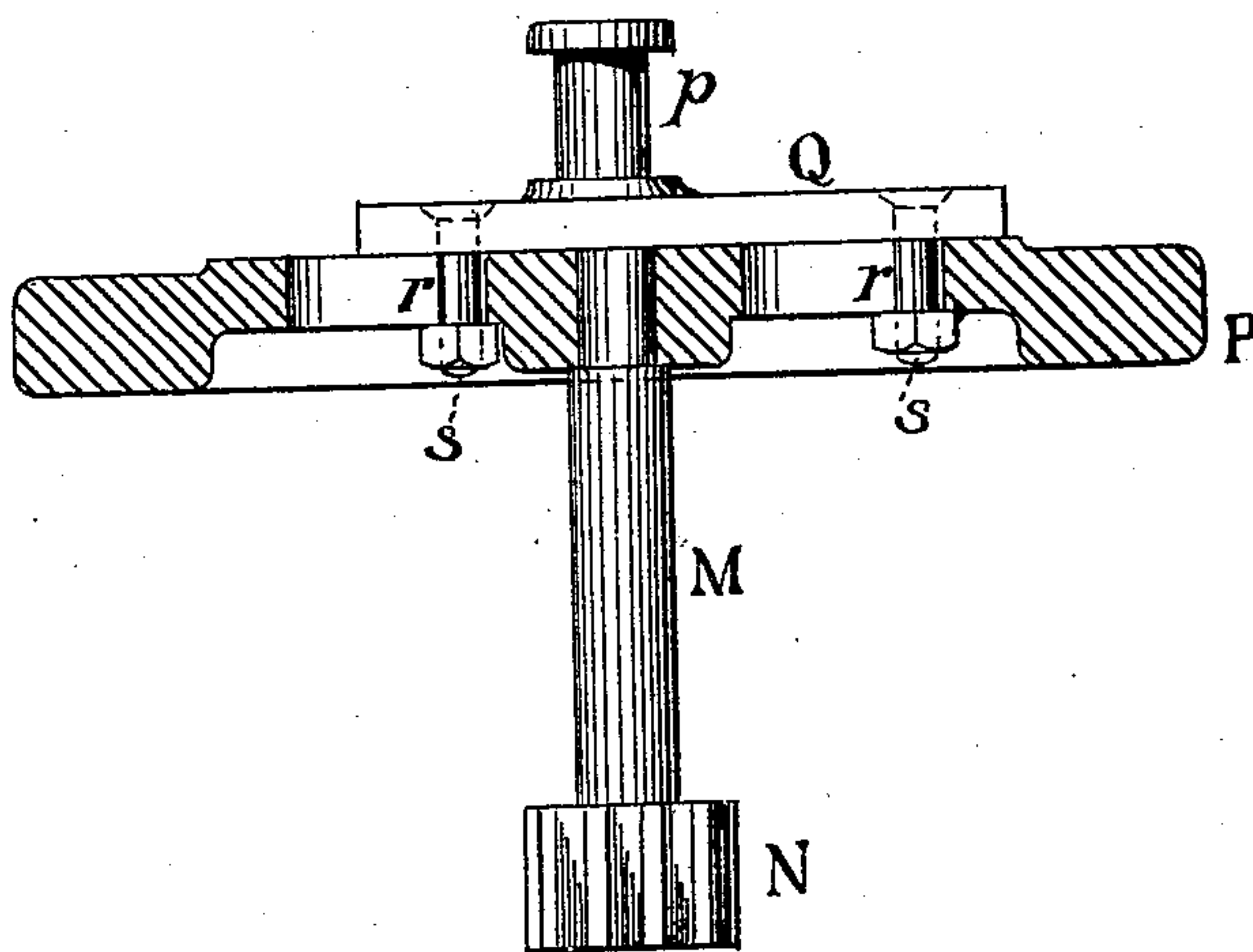
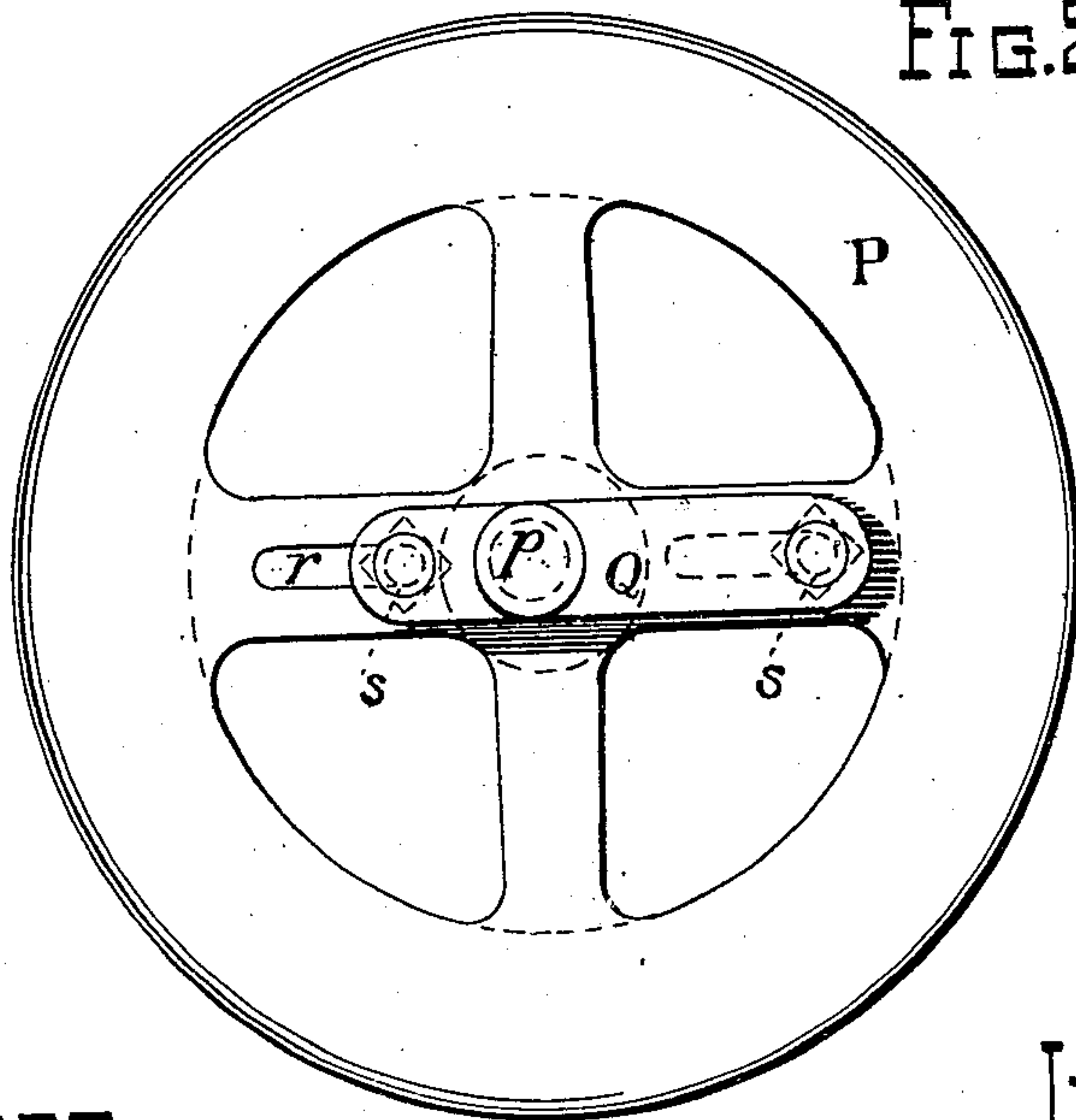


FIG. 2.



WITNESSES.

*J. E. Monteverde.*  
*Frank Warner*

INVENTOR.

*Willis G. Dodd*

# UNITED STATES PATENT OFFICE.

WILLIS G. DODD, OF SAN FRANCISCO, CALIFORNIA.

## CRANK-PIN.

SPECIFICATION forming part of Letters Patent No. 313,481, dated March 10, 1885.

Application filed August 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIS G. DODD, of the city and county of San Francisco, State of California, have invented a new and useful  
5 Improvement in Adjustable Crank-Pins; and I do hereby declare the following to be a full and exact and clear description thereof.

My invention relates to that class of crank-pins which can be moved or adjusted nearer  
10 to or farther from the center of gyration, thereby shortening or lengthening the stroke or movement of the crank or eccentric motion, and it more particularly applies to the eccentric motion and apparatus used in the "ore-  
15 concentrator" described in Letters Patent No. 254,123, dated February 28, 1882, granted to Joseph S. Duncan, assignor. The eccentric movement heretofore given to this machine was not susceptible of great variation, and as  
20 it is a most important requisite in a concentrator to adapt its movements to the class and quality of the ore or material that is being treated to thoroughly settle its heavier particles by giving it a greater or lesser shock or  
25 motion according as these latter are lighter or heavier. To obviate this difficulty in working all classes of ores in the above-mentioned machine, I have constructed the crank-pin shown in accompanying drawings.

30 Figure 1 is a part vertical section of my device. Fig. 2 shows a plan of same.

Let P represent a disk or wheel revolving

upon its shaft M. *p* is the crank-pin and forms part of the sliding plate Q. *r r* are two ob-  
long slots on either side of the center of wheel 35 P. Through these slots pass the screws *s s*, which fasten and secure the plate Q in position after the pin *p* has been adjusted to the required throw from the center of gyration of the wheel P. N is a pinion by means of 40 which the wheel P receives its rotary motion, and in this case takes this motion from the main gear in the concentrating-machine already quoted. This eccentric motion given to the crank-pin *p* is from *nil* to any desired length, 45 this only being subject to the diameter of the wheel P, and consequently the length of the slots *r r* in same. By these means it will be seen that I am enabled to give the before-mentioned machine or any other any required 50 shock or motion with great facility.

I am aware that many adjustable crank-pins have been constructed prior to my invention; but

What I claim, and desire to secure by Let- 55 ters Patent, is—

The combination of the adjustable plate Q, pin *p*, bolts *s s*, and slots *r r* in the wheel or disk P, substantially as described.

WILLIS G. DODD.

Witnesses:

F. E. MONTEVERDE,  
E. D. JUDD.