

F. E. SUTHERLAND & J. A. BROWN.

DISK CRANK.

APPLICATION FILED NOV. 9, 1909.

982,545.

Patented Jan. 24, 1911.

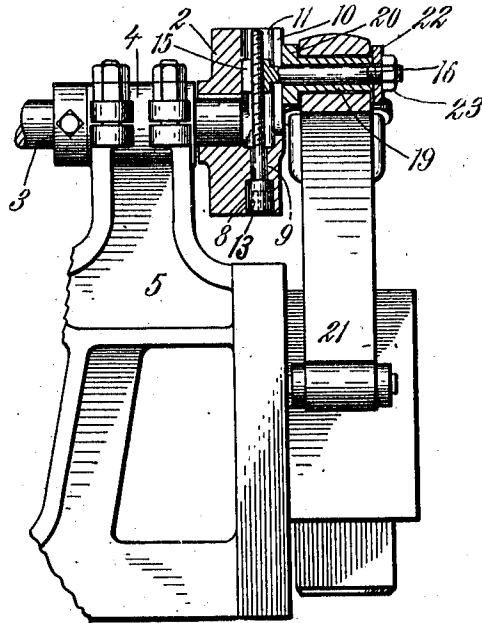


Fig. 1.

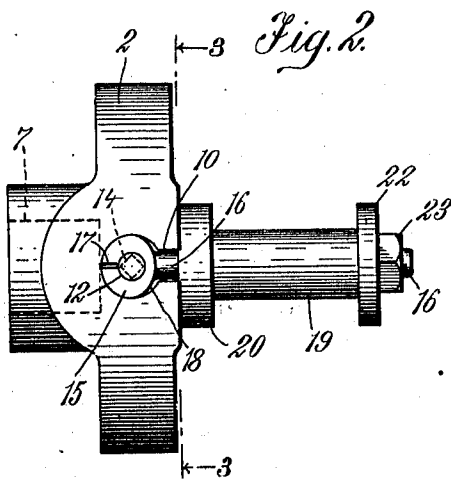


Fig. 2.

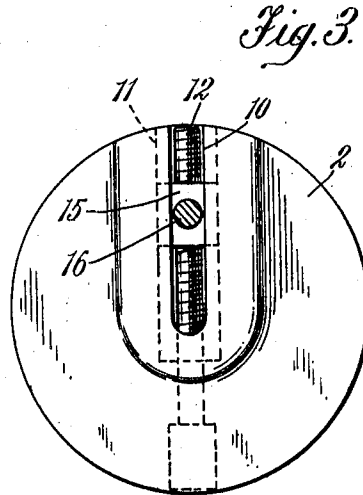


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

FRED E. SUTHERLAND AND JAMES A. BROWN, OF LOS ANGELES, CALIFORNIA, ASSIGNORS TO THE RADIAL POWER HAMMER COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

DISK CRANK.

982,545.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Original application filed May 27, 1909, Serial No. 498,765. Divided and this application filed November 9, 1909. Serial No. 527,088.

To all whom it may concern:

Be it known that we, FRED E. SUTHERLAND and JAMES A. BROWN, citizens of the United States of America, residing at Los Angeles, county of Los Angeles, State of California, have invented a certain new and useful Disk Crank; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This application is a division of application Serial No. 498,765, filed May 27, 1909.

The invention relates to disk cranks, and one of its objects is to provide simple and effective means whereby the crank pin may be very readily and accurately adjusted in any desired position toward or away from the center of rotation of the disk crank to fix the amount of throw.

With the above and other objects and advantages in view, as will be apparent to those skilled in the art, the invention consists in the peculiar construction, arrangement and combination of the various parts of the device as set forth in this specification and particularly pointed out in the claims.

In the accompanying drawings, which illustrate one form of construction for a device embodying the invention, Figure 1 is a sectional elevation of the disk crank, showing it operatively connected with hammer mechanism; Fig. 2 is a plan view of the disk crank shown in Fig. 1, removed; Fig. 3 is an elevational view of the disk crank taken on line 3—3 of Fig. 2.

Referring to the drawings, the disk 2, which in this instance is shown rigidly mounted on shaft 3 journaled in bearing 4 on frame 5, is provided with a rear central opening 7 whereby it may be fitted on the shaft 3. Through the disk 2 near the front portion thereof is provided a diametrical cylindrical opening 8 having a portion 9 thereof, to one side of the center of the disk, of reduced diameter. A slot 10, less in width than the diameter of the enlarged portion 11 of opening 8, is formed centrally in the front face of the disk to communicate with the opening 8 substantially throughout the length of the enlarged portion 11. In the opening 8 is disposed a screw 12, the head 13 of which may be provided with a

squared socket 14 and formed to fit in that portion of the opening shown in Fig. 1 below the reduced portion 9. On the threaded portion of the screw 12 is mounted the hub 15, which may be an integral part of the pin 16 extending through the slot 10 and forwardly of the front face of the disk 2. The hub 15, as shown at 17 in Fig. 2, is split centrally longitudinally to the screw 12 at the rear thereof, and it also has the front portion 18 thereof toward slot 10, formed to provide a curved surface having a greater radius than that of the enlarged portion 11 of opening 8. On pin 16 may be freely mounted the sleeve 19 having a flange 20 and which in this instance is shown as having mounted thereon the hammer mechanism 21. A washer 22 and a nut 23 are fitted on the forward end of pin 16. As will be understood from the foregoing description, when it is desired to change the throw of the crank disk, it can be accomplished very readily by first rotating the crank disk to bring the screw head 13 above the reduced portion 9 and then loosening the nut 23 on the pin 16 to free the front surface of the hub 15 from pressure against the interior wall of opening 8, after which screw 12 can be turned by means of a key applied in socket 14 to move the pin 16 the necessary distance toward or away from the center of rotation of the disk 2, whereupon the nut 23 can be tightened to lock the parts in position by causing a closing of the hub on the screw by pressure of the curved surface of portion 18 against the interior wall of opening 8.

While one form of construction in which the invention may be embodied has been illustrated and described, it is obvious that various modifications and changes can be made which do not depart from the spirit and scope of the invention as defined in the appended claims.

We claim:

1. The combination of a disk having a slot communicating with an opening therein, a screw disposed within said opening, a pin having a split hub on said screw, and means whereby said hub is drawn against the interior wall of said opening to lock the screw against rotation.

2. The combination of a disk having a

slot in communication with a cylindrical opening therein, with a pin having a split hub with a portion thereof having a greater radius than that of the opening, a screw
5 passing through said hub, and means to draw the aforesaid portion of the split hub against the interior wall of said opening.

3. The combination of a disk having a slot in communication with a cylindrical
10 opening therein, with a pin having a split hub with a portion thereof having a greater radius than that of the opening, a screw passing through said hub, a sleeve on said

pin, and a nut threaded on the end of said pin.

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In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses at Los Angeles, county of Los Angeles, State of California, this 2d day of November A. D. 1909.

FRED E. SUTHERLAND.
JAMES A. BROWN.

Witnesses:

ALEX. CURRIE,
GEO. H. DOWNS.