

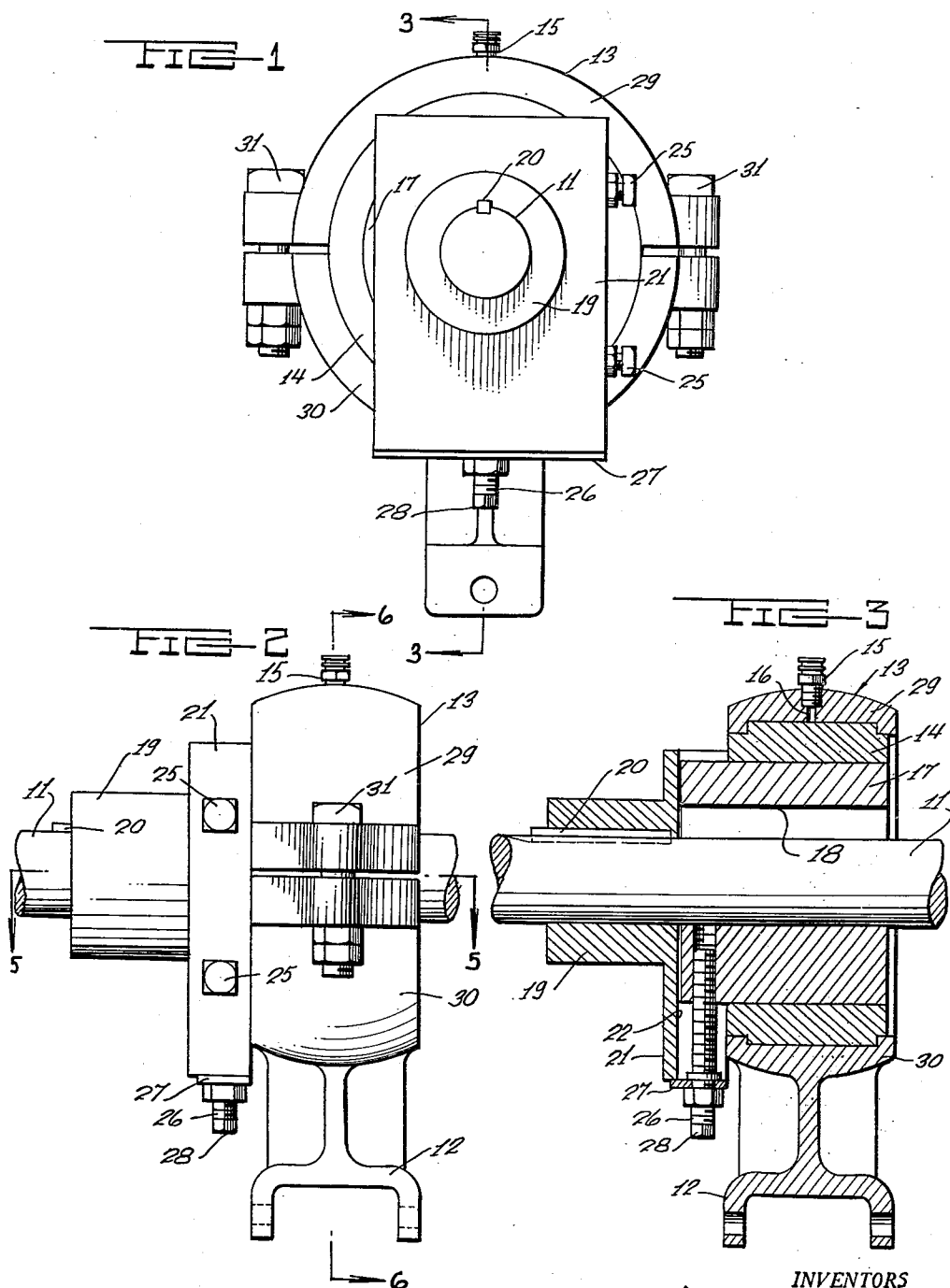
April 29, 1952

A. G. WUNDERLICH ET AL
ADJUSTABLE THROW ECCENTRIC

2,594,836

Filed Sept. 16, 1949

2 SHEETS—SHEET 1



INVENTORS
ALBERT G. WUNDERLICH
BY JAMES BONATO

McMorrow, Burman & Davidson
ATTORNEYS

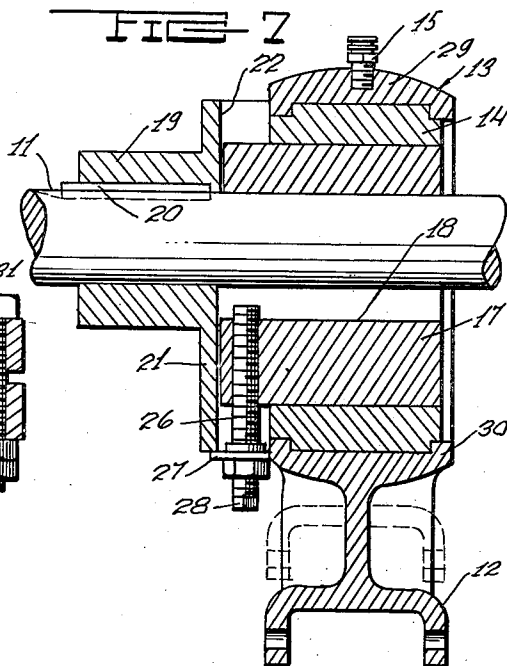
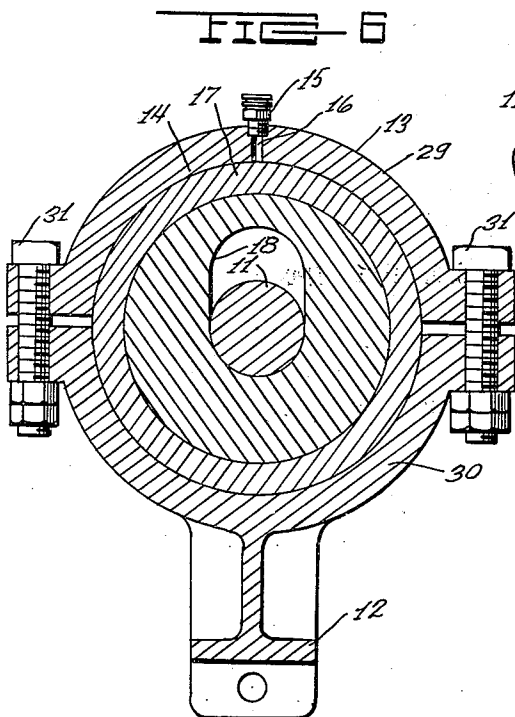
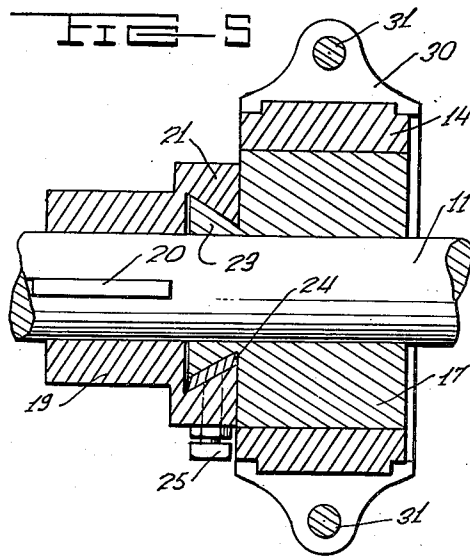
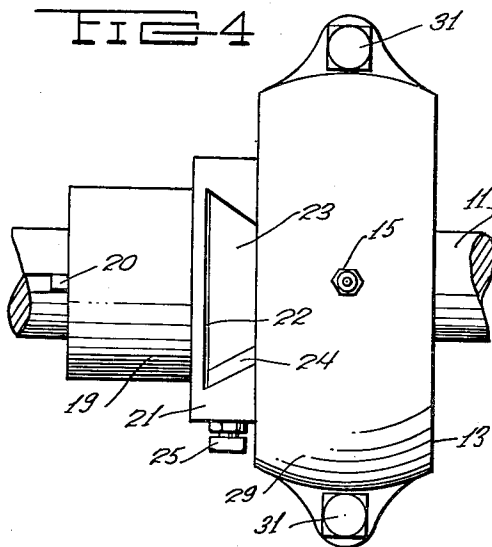
April 29, 1952

A. G. WUNDERLICH ET AL
ADJUSTABLE THROW ECCENTRIC

2,594,836

Filed Sept. 16, 1949

2 SHEETS—SHEET 2



INVENTORS
ALBERT G. WUNDERLICH
BY  JAMES BONATO

McMorrow, Berman & Davidson
ATTORNEYS

UNITED STATES PATENT OFFICE

2,594,836

ADJUSTABLE THROW ECCENTRIC

Albert George Wunderlich and James Bonato,
Telluride, Colo.

Application September 16, 1949, Serial No. 116,122

4 Claims. (Cl. 74—571)

1

This invention relates to eccentric connections, and more particularly to an eccentric of the type provided with means for adjusting the degree of eccentricity.

A main object of the invention is to provide a novel and improved eccentric of the adjustable type, said eccentric being very simple in construction, being easy to adjust, and which retains its adjustment without slipping.

A further object of the invention is to provide an improved eccentric structure which involves only a few parts, which has easily operable means for adjusting the stroke of the eccentric, and where the stroke of the eccentric may be accurately adjusted to any desired length, whereby the mechanism is particularly useful in mining machinery, such as mineral jigs and the like.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is an end elevational view of an eccentric device constructed in accordance with the present invention;

Figure 2 is a side elevational view of the eccentric device of Figure 1;

Figure 3 is a vertical cross-sectional view taken on line 3—3 of Figure 1;

Figure 4 is a top plan view of the eccentric device of Figure 1;

Figure 5 is a horizontal cross-sectional view taken on line 5—5 of Figure 2;

Figure 6 is a vertical cross-sectional view taken on line 6—6 of Figure 2;

Figure 7 is a longitudinal vertical cross-sectional view similar to Figure 3, but showing the eccentric in a different position of adjustment than shown in Figure 3.

Referring to the drawings, 11 designates the driving shaft of the mechanism. Designated at 12 is the reciprocating arm which is driven by shaft 11 by the mechanism presently to be described. Arm 12 is carried by an annular ring member 13, a bushing 14 being secured inside of the annular ring member 13. Designated at 15 is a suitable lubricating fitting which is mounted on ring member 13, said fitting communicating with a bore 16 leading to the bushing 14. Designated at 17 is a hub member fitting rotatably within the bushing 14, said hub member being formed with a longitudinally-extending slot 18 through which the driving shaft 11 extends. Designated at 19 is a hub member which is keyed to shaft 11, as shown at 20, and which is formed with a right-angled extension 21 having

2

a dovetailed passage 22 formed therein, said passage extending at right angles to shaft 11. Designated at 23 is a dovetailed lug formed on hub member 17 and received within the dovetailed passage 22. Between one side surface of the lug 23 and the adjacent side surface of the passage 22 is a wedge key 24. Threaded through the side wall of extension 21 are a pair of set screws 25, 25 engageable with the wedge key 24 to transmit clamping pressure to the dovetailed lug 23, so as to lock hub member 17 in a desired position of adjustment with respect to hub member 19. Designated at 26 is a radial adjusting screw which is threaded into hub member 17 and which is rotatably secured in a plate element 27 welded on the end walls of the extension 21, as shown in Figure 3. With the set screws 25, 25 released, the position of the eccentric hub 17 may be adjusted relative to the hub member 19 by rotating the adjusting screw 26. Screw 26 is formed with a squared end 28 whereby said end may be engaged by a suitable wrench. Figure 3 shows the eccentric 17 adjusted to a relatively centered position with respect to the shaft 11. Figure 7 shows the hub member 17 adjusted to a position of maximum eccentricity. The eccentricity of the hub member 17 may be adjusted to any position intermediate between the positions of adjustment shown in Figures 3 and 7. When the hub member has been adjusted to its desired position, it may be securely locked in said position by tightening the set screws 25, 25.

The annular ring member 13 may comprise a top section 29 and a bottom section 30, said bottom section carrying the arm 12, the top and bottom sections being fastened together by bolts 31 passing through opposing flanges formed on the ends of the sections.

While a specific embodiment of an adjustable eccentric device has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. An eccentric drive comprising a drive shaft, a first hub member secured to said shaft, said first hub member being formed with a dovetailed channel extending normal to said shaft the center line of said channel intersecting the axis of the shaft, a second hub member loosely receiving said shaft, a dovetailed lug on said second hub member slidably received in said channel, a plate

3

element carried by said first hub member and overlying an end of said channel, a screw rotatably journaled in said plate element and extending radially inwardly, said screw being fixed against axial movement and said screw being threadedly engaged with said second hub member, a driven member rotatably carried on said second hub member, and releasable means carried by the first hub member and clampingly engaging said lug.

2. An eccentric drive comprising a drive shaft, a first hub member secured to said shaft, said first hub member being formed with a dovetailed channel extending normal to said shaft the center line of said channel intersecting the axis of the shaft, a second hub member formed with a longitudinal slot receiving the shaft, said shaft being movable transversely in said slot, a dovetailed lug on said second hub member slidably received in said channel, a plate element carried by said first hub member and overlying an end of said channel, a screw rotatably journaled in said plate element and extending radially inwardly, said screw being fixed against axial movement and said screw being threadedly engaged with said second hub member, a driven member rotatably carried on said second hub member, and a set screw carried by the first hub member and clampingly engaging said lug.

3. An eccentric drive comprising a drive shaft, a first hub member secured to said shaft, a face of said hub member being formed with an open ended channel extending normal to the shaft, the center line of said channel intersecting the axis of the shaft, a second hub member, a lug on said second hub member slidably received in said channel, said channel and lug having interengaging means to prevent axial separation of

4

the first and second hub members while permitting adjustment longitudinally of the channel, a plate element carried by said first hub member and overlying an open end of the channel, a screw rotatably journaled in said plate element and extending radially inwardly, said screw being fixed against axial movement in the plate and being threadedly engaged with said second hub member, and a driven member rotatably carried on the second hub member.

4. An eccentric drive comprising a drive shaft, a first hub member fixedly secured to said shaft, a second hub member loosely embracing said shaft, a face of the first hub member abutting a face of the second hub member, the abutting faces of said hub members being formed with interengaging dovetailed means, the axis of the dovetailed means intersecting the axis of the shaft and a screw journaled in said first hub member and threadedly engaged in said second hub member for relatively adjusting said members.

ALBERT GEORGE WUNDERLICH.
JAMES BONATO.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
980,760	Clark	Jan. 3, 1911
1,310,114	De Martino	July 15, 1919
1,453,417	Stone	May 1, 1923
1,533,763	Schimek	Apr. 14, 1925
2,013,468	Klocke	Sept. 3, 1935
2,132,377	Bird et al.	Oct. 11, 1938
2,310,209	Bousman	Feb. 9, 1943