No. 619,166. Patented Feb. 7, 1899.

E. W. GRAGERT.

CRANK.

(Application filed Apr. 23, 1898.)

(No Model.)

Fig. 1.

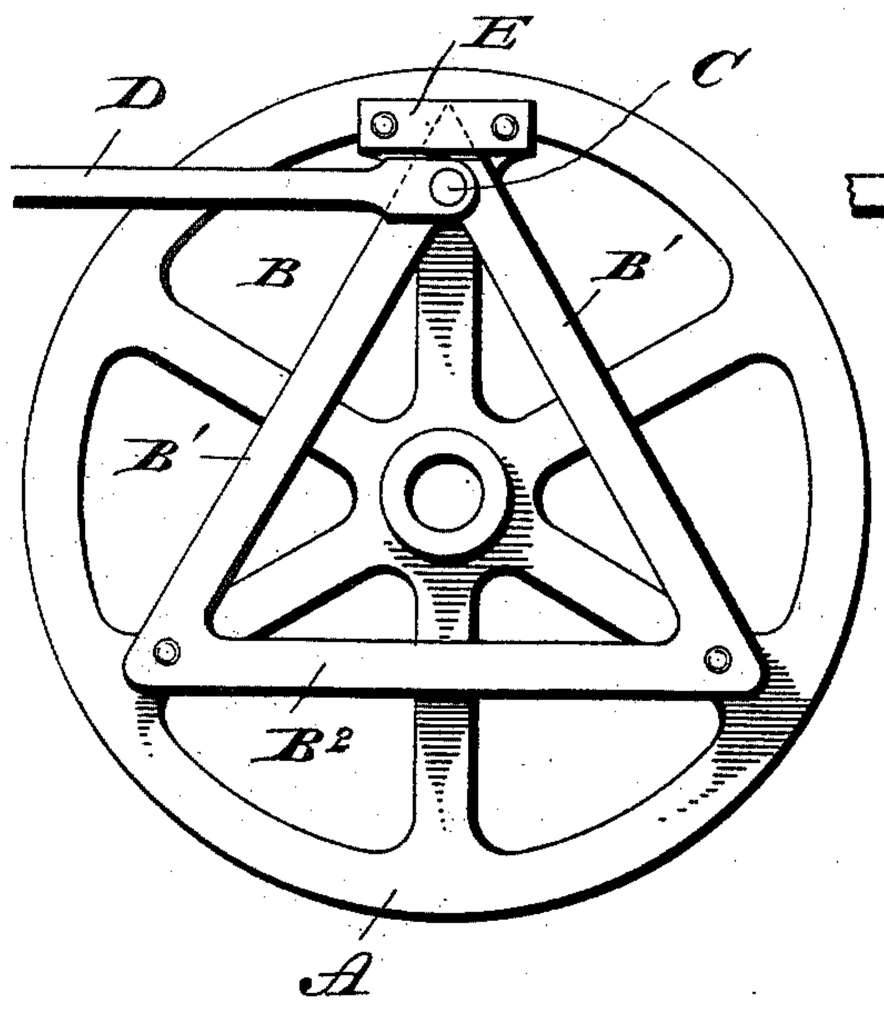
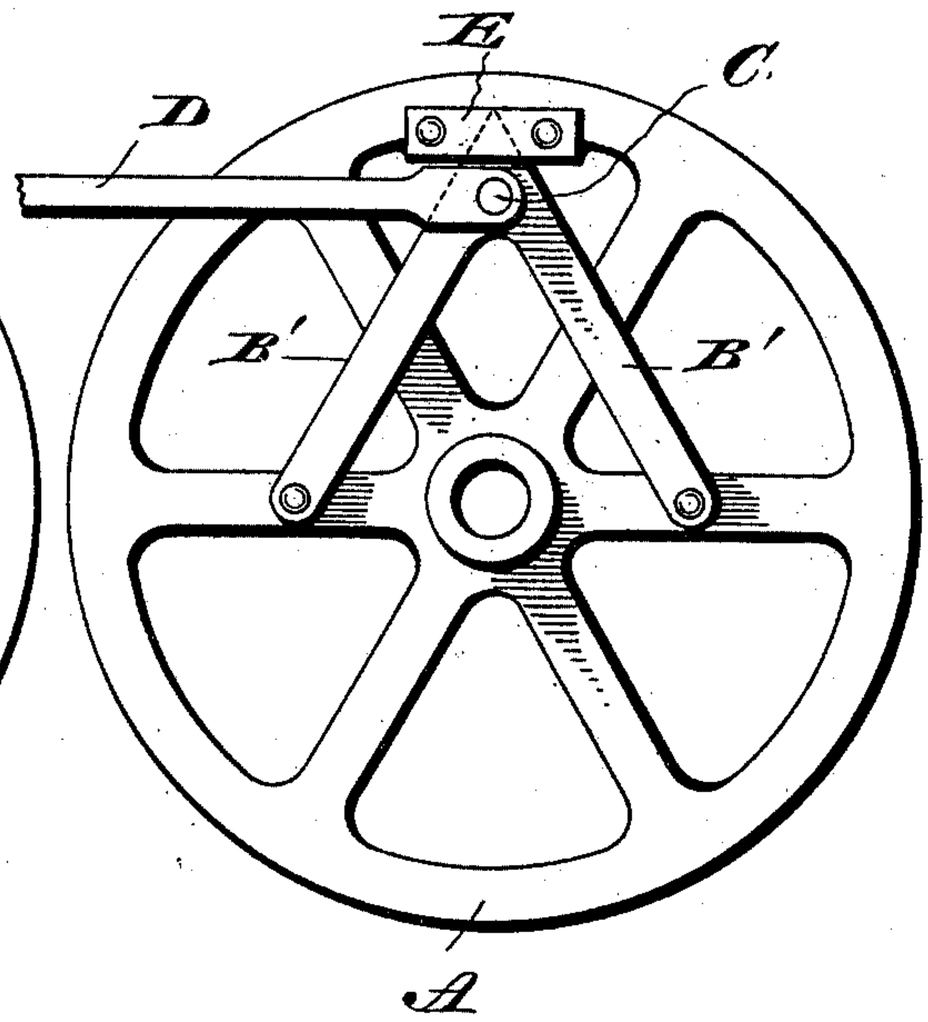


Fig. 2.



WITNESSES

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CRANK.

SPECIFICATION forming part of Letters Patent No. 619,166, dated February 7, 1899.

Application filed April 23, 1898. Serial No. 678,613. (No model.)

To all whom it may concern:

Be it known that I, ELMER W. GRAGERT, a citizen of the United States, residing in the county of Roberts and State of South Dakota, (my post-office address being White Rock, in the State of South Dakota,) have invented new and useful Improvements in Cranks, of which the following is a specification.

This invention relates to certain new and useful improvements in means for actuating wheels, shafts, &c., the object of my improvement being to provide a crank connection which will operate more effectively and is designed to overcome the pounding of a shaft in its bearings, and consequently the uneven wearing of the same, the crank being so connected with a disk, wheel, or shaft that in operation it will exert a thrust and pull upon opposite sides of the center or axis of the object to which it is attached, as will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation showing one manner of applying my invention, and Fig. 2 is a modification.

A refers to a drive-wheel or similar structure, as a disk, pulley, or other machine element. To the wheel I attach a suitable triangular frame B, comprising, essentially, bars B′, which diverge from each other adjacent to the point to which the wrist-pin C is connected. The wrist-pin or bolt C may serve as a handle or have attached thereto in the usual manner a pitman D. The diverging ends of the bars are rigidly attached to the drive-wheel or disk A, or they may be connected to each other by a cross-bar B^2.

In Fig. 1 of the drawings I have shown a structure which embodies a triangular frame, and to one of the points or apex of the triangle is attached a wrist-pin, to which the pitman is secured. The other two points or the ends of the hypotenuse of a triangle which are positioned on opposite sides of the disk, shaft, or wheel are provided with openings, through which pass bolts for connecting the open frame rigidly to the disk or wheel. E refers to a clasp or plate which is adapted to lie over the end or apex of the triangular frame and prevent its being moved outward or away from the disk, said plate merely holding the triangular frame against outward movement, the frame having no positive or rigid connection at this point with the disk or drive-wheel, to which the other corners are secured. In Fig. 2 the same result is obtained, the cross-bar being dispensed with.

In operation the power or motion from the pitman applied to the wrist-pin will draw upon one member of the frame or side of the triangle and push upon the other. The points of fixed connection being on opposite sides of the axis will avoid hammering or pounding of the shaft in its bearings, the frame carrying the wrist-pin having a limited range of movement sufficient to take up through the frame the shock incident to the change in direction of the movement of the pitman, and will insure much smoother running than cranks of ordinary construction. By the arrangement described it will be noted that the power applied by the pitman-rod is exerted through the wrist-pin on opposite sides of the axis, so as to give a more even bearing through the entire revolution of the shaft on its axis.

The invention embodies, essentially, diverging members, which are fixedly attached to the disk or shaft to be turned, and a wrist-pin carried by the frame adjacent to the point of junction, and I consider it desirable that there should be an open space between the shaft and wrist-pin, so that the power exerted may be on different sides of the shaft or the axis thereof.

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

1. As a means for actuating or rotating a drive wheel or shaft, the combination with a frame comprising diverging bars or members, a wrist-pin adjacent to the point of connection of the members with each other, the opposite ends being rigidly connected to the wheel or shaft on opposite sides of the axis thereof, and a clasp or plate attached adjacent to the periphery of the drive-wheel so as to lie over the end of the frame, substantially as shown and for the purpose set forth.

2. In combination with a drive-wheel, a pitman-attaching frame comprising diverging bars, the ends thereof being attached to the

drive-wheel, a retaining-plate attached to the drive-wheel adjacent to its periphery so as to lie over the converging ends of the bars of the frame, and a wrist-pin which projects from the frame and is engaged by the pitman, substantially as shown.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ELMER W. GRAGERT.

Witnesses:
G. S. ELLIOTT,
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